



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
2017-18			
Basic Mechanics and Properties of Matter	FCBS0405	2016	Employability (knowledge enhancement)
Optics and Optical Fibers	FCBS0406	2016	Employability (knowledge enhancement)
Applied Analytical Chemistry	FCBS0401	2016	Employability-Water Analysis, Soil Analysis, Chemistry of fuels. Skill- All practices
Industrial Chemistry	FCBS0402	2016	Employability-: Preparation of soap, dyes and oil analysis ,Analysis of cement Skill-All Practices
Applied Engineering Materials	FCBS0403	2016	Employability-Nano Materials, Polymers, Composites. Skill- All Practices
Environmental Science	FCBS 0101	2016	Employability-Environment and its multidisciplinary nature, Biodiversity and its conservation, Causes, effects and control measures of pollution.
Economics	FCMG0101	2016	Skill Development (to provide students with a basic understanding of the economic principles, methodologies and analytical tools that can be used in business decision making problems) Employability & Entrepreneurship (Student shall understand and apply the impact of economic policies on managerial decision-making by providing an understanding of fiscal policy, and national and global economic issues affecting business.)
Accounting & Finance	FCMG0102	2016	Skill Development-Students will be able to create, balance and deliver a budget and use budget information for planning and decision purposes; Employability & Entrepreneurship (Students to Undertake various costing techniques and information for planning and decision-making)
Management Processes and OB	FCMG0103	2016	Skill Development-Students shall be able to analyze and compare different models used to explain individual behavior; Employability & Entrepreneurship (Students shall be able to

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			resolve conflict, motivate the employees, handle stress and communicate effectively and manage diversified workforce in workplace)
Production and Operation Management	FCMG0104	2016	Skill Development (Acquire a working understanding of the roles/functions of production management in the context of business enterprise.) Employability & Entrepreneurship (Student can use specialized knowledge in Operations Management to solve business processes)
Marketing Management	FCMG0105	2016	Skill Development (Students will learn the application of various marketing tools for solving business problems). Employability and Entrepreneurship (students will acquire and develop the marketing skills to be a successful marketing person)
Introduction to Research	FCMG0108	2016	Skill Development (Students will be able to understand the process of doing a research). Employability and Entrepreneurship (Students will be able to write a research report.)
Indian Society and Culture	FCMG0113	2016	Skill Development (Students will be familiarized with the science and technology policies that would benefit modern India). Employability and Entrepreneurship (Students would develop an idea about the socio-cultural environment in which they would be working as scientists, researchers and entrepreneurs.)
Disaster Management	FCMG1201	2016	Skill Development (students would begin to understand the relationship between vulnerability, disasters, disaster prevention, risk reduction and the basic understanding of the research methodology for risk reduction measures.). Employability and Entrepreneurship (Students would develop rudimentary ability to respond to their surroundings with potential disaster response in areas where they live, with due sensitivity)



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Material Sciences	ENFC0102	2017	Employability and Skill development (Students will able to identify materials for engineering use. Students will able to select best materials for a specific design and production.)
Digital Electronic Circuits	FCEN0104	2016	Skill Development and Employability (It's an important subject in the curriculum. It's also equivalently important for facing interviews in industry.)
Analog and Digital Electronics	FCEN 0107	2016	Skill Development and Employability (It's an important subject in the curriculum. It's also equivalently important for facing interviews in industry.)
Introduction to Internet Technology	FCEN0201	2016	Skill And Employability(Develop a static, interactive and well-formed webpage using JavaScript, CSS3 and HTML5)
Analog and Digital Electronics Lab	FCEN0210	2016	Skill Development and Employability (It's an important subject in the curriculum. It's also equivalently important for facing interviews in industry.)
Introduction to Programming in C	FCEN0402	2016	Skill And Employability(Case study to be given to students on uses of C program for development of various real time applications like online examination system, online quiz competition etc.)
Object Oriented Programming Using C++	FCEN0403	2016	Skill And Employability(Case study to be given to students on uses of C++ program for development of various real time applications like online examination system, online quiz competition etc.)
Database Management System	FCEN0404	2016	Skill And Employability(Hands on training on Client/Server Architecture- System Structure , Instance and schema, Data Models, Types of DBMS Query Processing and Optimization: Evaluation of Relational algebra expressions- Query Equivalence-Transaction Processing: Built in SQL functions, Sub Queries-Joins-DCL – TCL- Views – Sequences – Index – Locks PL/SQL Basics – Exceptions – Cursors - Stored Functions



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			– Triggers Case study in industrial standards of Database Management)
Python Programming	ENFC0411	2017	Skill And Employability (Case study to be given to students on uses of python program for development of various real time applications)
Sensors & IOT	ENFC0417	2017	Employability (The students will be aware of the application and operations of the sensors used in day to day life)
Programming for Problem solving– Java	ENFC0412	2017	Skill And Employability(Understands the concepts of Threads, exception handling, file handling and even handling and applets implemented in the Java, which helps students in getting jobs in different IT firms)
Software Development Methodologies	ENFC1404	2017	Skill (Students get to apply software engineering principles and techniques learnt to a real-life project topic of their choice in a contemporary domain and design-implement novel solution by working together as a team.
Advanced Surveying	CCCE0407	2015	Employability(• Students will gain knowledge about the structure of spatial data including file associations, attribute tables, Metadata, coordinate systems, and projections. • To develop software skills in programs used for map production in the modern cartographic workflow.)
Strength of Material	MECC0411	2017	Employability(Students will acquire knowledge and skill to analyze the effect of force and motion on rigid bodies to solve engineering problems through application of basic laws of mechanics.)
MS Project 7 Based Design Project	DECP0311	2015	Employability (Identify various activities of a construction project and the critical path for executing the same. Carry out a major project and prepare a document that contains all aspects of a construction project.)



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Project	DEET0300	2015	Employability (a. Simple Residential Building with GF + FF b. Auditorium with Gallery and Indoor Sports Building c. Box Culvert / Pipe Culvert d. Water Tank e. Two lane highway.)
Internship	DEET0800	2015	Employability (Skill development course)
Smart City Planning	DESP0621	2015	Employability (designing the city features including park, garden etc. Course Outcomes: After completion of this course students will be able to design and plan a twin city model of an area. Students will get more knowledge on designing of building, road, drainage etc. through Autodesk Infracore)
Advance Database Management System	CCCS0403	2015	Skill And Employability(Hands on training on Client/Server Architecture- System Structure , Instance and schema, Data Models, Types of DBMS Query Processing and Optimization: Evaluation of Relational algebra expressions- Query Equivalence-Transaction Processing: Built in SQL functions, Sub Queries-Joins-DCL – TCL- Views – Sequences – Index – Locks PL/SQL Basics – Exceptions – Cursors - Stored Functions – Triggers Case study in industrial standards of Database Management)
Software Engineering	CCCS0105	2015	Skill (Students get to apply software engineering principles and techniques learnt to a real-life project topic of their choice in a contemporary domain and design-implement novel solution by working together as a team.)
Building of Cloud Infrastructure	DECT0901	2015	Skill and Employability (Analyze and Understanding the functioning of different components involved in Amazon web services.



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			Acquire cloud technology skill which helps students in getting jobs in different MNCs)
Deployment Architecture -I	DECT0902	2015	Skill And Employability(Ability to evaluate cloud application requirements and make architectural recommendations for implementation, deployment and provisioning applications on AWS)
Deployment Architecture - II	DECT0903	2015	Skill And Employability(Ability to evaluate cloud application requirements and make architectural recommendations for implementation, deployment and provisioning applications on AWS)
Advanced Networking	DECT0904	2015	Skill And Employability(Students had Implemented various VPC,VPN and optimization of network cost and also Understand and building the skills of sub-netting and routing mechanisms)
Oracle Database Administration and SQL	DEST0401	2015	Skill And Employability(Provides an exhaustive coverage of SQL Admin to understand the architecture and processes of the Oracle database)
Problem Solving through Coding	DEST0201	2015	Skill And Employability(Obtain skills to solve problems involving text, numbers and graphics, producing a top-level plan with refinements.)
Linux and Lamp Administration	DEST0402	2015	Skill and Employability (Obtain skills in Linux server administration. Content includes LINUX and Web server installation, system startup/shutdown, hardware configuration, disk and file system structure, package management, TCP/IP networking, system management and security, X-Windows usage and configuration, user management)
Testing and Test Automation	DEST0403	2015	Skill And Employability(students had applied various modern software testing processes in relation to software development and project management)



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Web Services using Java	DEST0404	2015	Skill And Employability(Developed knowledge-based force to serve the IT industry with the latest technologies.)
Python for Data Science and Machine Learning	DEML0201	2015	Skill and Employability (Implement ML algorithms that generates insight to high volume data and helps to make better classifications and prediction. The students are able to solve problems in areas computational finance, image processing and computer vision, energy and natural language processing.)
Supervised and Unsupervised Machine Learning	DEML0401	2015	Skill and Employability (Implement several ML algorithms that generates insight to high volume data and helps to make better classifications and prediction. The students are able to solve problems in areas computational finance, image processing and computer vision, energy and natural language processing.)
Advanced Neural Network (RNN & CNN)	DEML0402	2015	Skill And Employability (Design and train a CNN, RNN language models and also able to apply deep learning principles using tools such as Tensor Flow, Keras)
ML Techniques in Image Processing	DEML0202	2015	Skill And Employability(Implemented different Real life Projects in the field of medical and Agricultural image processing)
Deep Learning Techniques and Neural Network	DEML0403	2015	Skill and Employability (Design and train a CNN, RNN language models. Be able to apply deep learning principles using tools such as Tensor Flow, Keras)
Introduction to IT Networking & Security	DEIS0121	2015	Skill And Employability(To understand, design and implement appropriate security technologies and policies to protect computers and digital information)
Advanced Networking	DEIS0421	2015	Skill and Employability (Understand and explain Data Communications System and its components and Identify the different types of network topologies and protocols. Enumerate the layers of the OSI model and TCP/IP and explain the functions of each layer, identify the



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			different types of network devices and their functions within a network)
White Hat Hacking Techniques and Tools	DEIS0422	2015	Skill And Employability(Information technologies skill like vulnerabilities, defense-in-depth, penetration testing, the methodology for pen testing/ethical hacking, vulnerability management, incident management, and creating and implementing a security policy will be understood)
Information Technology Infrastructure Library	DEIS0122	2015	Skill And Employability(Obtain the skill about IT Service Management best practices, generic concepts, key principles, gain a comprehensive understanding of the purpose and scope of service strategy, service design, service transition, service operations, and Continual Service Improvement)
Network Security Audit of an Organization	DEIS0221	2015	Skill And Employability(To perform an IT Network security audit of an organization and prepare a detailed report identifying different weakness of the architecture)
CCNA	DEIS0222	2015	Skill And Employability(hands on training to manage Network for an Organization)
Introduction to Unity Game Engine	DEAR0241	2015	Skill And Employability(End to End Game Development Pipeline)
Game Assets & Object	DEAR0641	2015	Skill And Employability(Able to build different models, assets and objects like temple, park, agriculture field etc..)
Game Animation & Scripting	DEAR0642	2015	Skill And Employability(Able to build game environment)
Building Game Environment	DEAR0643	2015	Skill And Employability(Able to design different cartoon animations and UI)
Design & Deployments	DEAR0644	2015	Skill And Employability(Design several 3D games which supports cross platforms)
Analog Electronic Circuits	CCEC0101	2015	Skill Development and Employability (It's an important subject in the curriculum. It's



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Digital Signal Processing	CCEC0401	2015	Employability (Analyze Z-Transform , DFT,FFT and, and the Architecture of TMS320C54xx Processor and the Various Addressing modes. Design & compare Digital FIR filters using window method, Analyze the characteristics of various windows Formulate & apply Digital IIR filter design using Butterworth & Chebyshev approximations to Verify the characteristics of LPF, HPF, BPF)
VLSI Design	ECCC0407	2017	Employability (Design combinational and sequential circuit using CMOS logic Enhancement of complex digital VLSI logic design skill of students which will help them to complete any project work undertaken in higher semesters. Perform back-end physical design)
Analog Communication Systems	ECCC0405	2017	Employability (Familiar with analog radio transmitters and receivers Verify the Noise performance of different Modulation Techniques)
Digital Communication Systems	ECCC0406	2017	Employability (Illustrate the classification of channels, Entropy coding methods and different types of Error control codes along with their encoding/decoding algorithms. Examine the Performance of different Digital Carrier Modulation schemes of Coherent and Non-coherent type based on Probability of error)
ARM Processor Based System Design	ECCC0408	2017	Employability (Understand the architecture of ARM Processor Implement real time projects using 32 bits ARM Processor)



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Embedded Software and Development	ECCC0409	2017	Employability The fundamentals of embedded system hardware and firmware design explored. Concepts for embedded processor selection, hardware/firmware partitioning, circuit design, circuit layout, circuit debugging, development tools, firmware architecture, firmware design, and firmware debugging.
Microwave and Radar Communications	ECCC0410	2017	Employability (Integrate the concept of bunching and velocity modulation to summarize the operation of micro wave tubes and the high frequency limitations of conventional tubes. Analyse the principle, operation and characteristics of different Radars and its applications)
Antenna and Wave Propagation	ECCC0411	2017	Employability (Analyze antenna parameters Evaluate the features and analyze the radiation pattern of antennas by using simulation tools Compare wave propagation techniques and illustrate the radio wave behavior in different modes of communications)
Analog Electronic Circuits Laboratory	CCEC0201	2017	Skill Development and Employability (Its an important subject in the curriculum. Its also equivalently important for facing interviews in industry.)
Mobile Communication: MIMO-OFDM	DECS0431	2015	Skill Development and Employability Emerging issues for implementing MIMO wireless channels. Different fading channel distributions in multipath wireless channel. OSTBC design for multiple antenna system. Computation of performance parameters of MIMO wireless system
Microwave Engineering and Antenna Design	DECS0432	2015	Employability (Analyze antenna parameters Evaluate the features and analyze the radiation pattern of antennas by using simulation tools Compare



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			wave propagation techniques and illustrate the radio wave behavior in different modes of communications)
Optical Fiber Communication	DECS0133	2015	Employability (Knowledge of optical fiber technology and hands on practice will creates employability in optical fiber Industry.)
CCNA Routing and Switching	DECS0234	2015	Skill Development and Employability Install, operate, and troubleshoot a medium-sized network, including connecting to a WAN and implementing network security. Describe the effects of new technologies such as IoT, IWAN, and SDN on network evolution
4G LTE Communication Technology	DECS0435	2015	Skill Development and Employability Understand the system architecture and the functional standard specified in LTE 4G. Analyze the role of LTE radio interface protocols and EPS Data convergence protocols to set up, reconfigure and release data and voice from users.
Cell Site and BTS Operation & Maintenance	DECS0236	2015	Employability (Adhere and conduct site PM (preventive maintenance) and Task Reporting planes, as per organization's Norms . This will lead employment in BTS operation & maintenance engineering.)
RF Planning and Drive Test	DECS0237	2015	Employability (Students will develop skill on GSM RF Planning tool, Use of mapping software's like Map info/Google KLM, drive test tool TEMS and NEMO Tool for 4G LTE optimization with field exposure This will lead employment as RF engineer)
Advanced C Programming & Data Structure	DEES0411	2015	Employability Provides the knowledge of basic data structures and their implementations. Gives understanding for importance of data structures in context of writing efficient programs. Develops skills to



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			apply appropriate data structures in problem solving.
Embedded C Programming	DEES0412	2015	Skill Development and Employability Write programs in C to solve engineering problems. Program embedded microprocessors or microcontrollers in C. Define input and output modules for an embedded system. Design embedded systems as solutions to real-world problems
Real Time Operating System & VXWORKS	DEES0413	2015	Skill Development and Employability Provide a basic understanding of Real-Time Requirements To understand the complexities of RTOS scheduling and synchronization. To learn how to configure, boot, test and deploy real-time embedded systems. To give students the confidence to apply these concepts to their next RTOS project
Model Based System Design	DEES0414	2015	Skill Development and Employability Build mathematical models for components in a system. Follow a process of continuous refinement and improvement to generate accurate models. Connect component models together to model a larger more complex system. Set up and run Model-in-the-Loop Simulations (MIL). Set up and run real-time simulations for a physical system. Set up and run Hardware-in-the-Loop Simulations (HIL). Apply basic control algorithms to a real physical system. Deploy a control algorithm on a real-time target. Apply verification and validation methods to a model of a physical system. Use Design of Experiment methods to create models of physical systems.
Linux: Kernel Programming and Device Driver	DEES0415	2015	Skill Development and Employability Configure, compile, and install a Linux kernel/kernel module from sources. Navigate and read the Linux kernel sources. Understand



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			and use correctly the Linux kernel internal services needed by devices drivers, including mutual exclusion, memory mapping, kernel memory allocation, interrupt handling, timekeeping, and scheduling. Design and implement a kernel module. Modify, or design and implement a device driver. Measure the performance of what you have modified or implemented.
Internet of Things	DEES0416	2015	Employability, Skill development (Understand the meaning of the Internet of Things and its importance. Examine future market opportunities that can be discovered by IoT. Study of wireless sensor network protocols.)
Digital System Design using VERILOG	DEVL0421	2015	Skill Development, Entrepreneurship (Pursue a bright career as a RTL design and verification Engineer and Verilog Programmer in VLSI industry which leads to Employability)
FPGA Architecture and Design	DEVL0122	2015	Employability (Handle different FPGA architecture which results Employability)
HDL Synthesis and System Architecture	DEVL0423	2015	Employability (RTL level synthesis of digital circuits, Optimization of architecture, Solve timing issues which leads to Employability in different industrial sectors.)
Introduction to Object Oriented Programming Language	DEVL0424	2015	Employability (Write C++ programming, Handle large C++ programme and debugging which creates Employability)
Verification using System VERILOG	DEVL0425	2015	Employability (VLSI verification project using Verilog. Pursue a bright career as a RTL Verification Engineer which results Employability.)
VLSI Verification Methodologies	DEVL0226	2015	Employability (Do verification using UVM. Verification of RTL design. Do VLSI verification project using



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			Verilog. Pursue a bright career as a RTL Verification Engineer which leads to Employability)
VLSI Test Principle and Testable Design	DEVL0127	2015	Employability (Develop test pattern generation algorithm Develop different DFT techniques. Do memory testing. Develop boundary scan. Pursue career as VLSI test engineer results in Employability.)
Introduction to Linux	CCEE0207	2015	Employability(Students will familiarize with LINUX Operating system)
Power system market, economics and energy audit	DEOM0434	2015	Employability (Student will learn power market operation & energy audit process with hands on practice which will lead them to placement in power & energy trading company)
Theory of Machines	CCME0405	2015	Skill And Employability (Student will learn how to analyze the motions of mechanisms, design mechanisms)
Manufacturing Technology 1	MECC0401	2017	Skill And Employability (Students will have Knowledge and Skills to Understand Actual Manufacturing Processes used in Industry and will be Able to Correlate a Specific Process with the Part / Component being Produced. Students will be Able to Select the Most Optimum Manufacturing Process for a Specific Product Design and Application.)
Manufacturing Technology 2	MECC0402	2017	Skill And Employability (Students will be Able to Do Process Planning, Develop CNC Part Programs. Students will have Knowledge and Skills to Operate CNC Machines.)
Finite Element Analysis	MECC0404	2017	Skill And Employability (Students will be Able to Deploy Practical and Industrial Approach using FEA towards Solving Engineering Problems)
Internal Combustion Engines	MECC0406	2017	Skill And Employability (Students will be able to test internal combustion engines for various performance parameters using engine test rigs.Students will be able to carry out emission tests using various types of fuels commonly used in internal combustion engines.)



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Fluid Mechanics and Heat Transfer	MECC0414	2017	Skill And Employability (Students will be able to Analyze and Design various Equipment used in Industry using Principles of Fluid Mechanics and Heat Transfer.)
Jigs and Fixtures	DECM0101	2015	Employability and Skill development (Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Process Planning and Cost Estimation	DECM0102	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Conventional Machining for Cylindrical Shape Component	DECM0201	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and



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			machineries. Strengthens the Industrial-Institutional partnership.)
Conventional Machining for Prismatic Shape Component	DECM0202	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
CNC Machining	DECM0601	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Non-Traditional Machining and 3D Printing	DECM0602	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries.



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			Strengthens the Industrial-Institutional partnership.)
Wood Engineering	DECM0203	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Introduction to Refrigeration & HVAC	DERC0101	2015	Employability and Skill development (This helps student to have acquired relevant appropriate and adequate technical knowledge together with the professional skills and competencies in the field of Air conditioning and Refrigeration Technology so that they will be able to properly equipped to take up gainful employment in this sector.)
Control System for Refrigeration & Air Conditioning	DERC0201	2015	Employability and Skill development(This helps student to have acquired relevant appropriate and adequate technical knowledge together with the professional skills and competencies in the field of Air conditioning and Refrigeration Technology so that they will be able to properly equipped to take up gainful employment in this sector.)
Design and Maintenance of Automobile Air Conditioning	DERC0202	2015	Employability and Skill development (This helps student to have acquired relevant appropriate and adequate technical knowledge together with the professional skills and competencies in the field of Air conditioning and Refrigeration Technology so that they will be able to properly equipped to take up gainful employment in this sector.)



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Maintenance and Testing of Refrigerator	DERC0203	2015	Employability and Skill development (This helps student to have acquired relevant appropriate and adequate technical knowledge together with the professional skills and competencies in the field of Air conditioning and Refrigeration Technology so that they will be able to properly equipped to take up gainful employment in this sector.)
Maintenance and Testing of Coolers, Window and Split AC	DERC0204	2015	Employability and Skill development (This helps student to have acquired relevant appropriate and adequate technical knowledge together with the professional skills and competencies in the field of Air conditioning and Refrigeration Technology so that they will be able to properly equipped to take up gainful employment in this sector.)
Design and Maintenance of Central Air Conditioning Plant	DERC0401	2015	Employability and Skill development (This helps student to have acquired relevant appropriate and adequate technical knowledge together with the professional skills and competencies in the field of Air conditioning and Refrigeration Technology so that they will be able to properly equipped to take up gainful employment in this sector.)
Design and Maintenance of Cold Storage	DERC0102	2015	Employability and Skill development (This helps student to have acquired relevant appropriate and adequate technical knowledge together with the professional skills and competencies in the field of Air conditioning and Refrigeration Technology so that they will be able to properly equipped to take up gainful employment in this sector.)
Joining Processes & Technology	DEWD0401	2015	Employability and Skill development(This gives oppertunities for self employed by opening a



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			small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Arc Welding, Gas Welding & Brazing	DEWD0201	2015	Employability and Skill development(This gives oppertunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Metal Transfer & Weld Metallurgy	DEWD0402	2015	Employability and Skill development(This gives oppertunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Design of Welded Joints	DEWD0101	2015	Employability and Skill development(This gives oppertunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Welding of Stainless Steel, Aluminium, Copper, Cast Iron and Hard Surfacing	DEWD0601	2015	Employability and Skill development(This gives oppertunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Testing of Welded Joints (DT, NDT & Microstructure)	DEWD0602	2015	Employability and Skill development(This gives oppertunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and



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			international levels in the industry as qualified welding inspector.)
Introduction to Automobile Engineering	DEAE0101	2015	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Subsystems of Automobile	DEAE0401	2015	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Design and Maintenance of Electric Vehicles	DEAE0402	2015	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Entrepreneurship Opportunities in Automobile Trade	DEAE0102	2015	Employability and Skill development (This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Maintenance of 4 Wheeler	DEAE0201	2015	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)



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Maintenance of 2 Wheeler	DEAE0202	2015	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Operation and Maintenance of Diesel Forklift and Hydraulic Equipments	DEAE0203	2015	Employability and Skill development (This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Fundamentals of Microprocessor and Microcontroller	DEOC0111	2015	Employability Basic concept of digital fundamentals to Microprocessor based personal computer system. identify a detailed s/w & h/w structure of the Microprocessor, illustrate how the different peripherals (8255, 8253 etc.) are interfaced with Microprocessor, distinguish and analyze the properties of Microprocessors & Microcontrollers, analyze the data transfer information through serial & parallel ports.
Satellite Communication System	DEOC0112	2015	Employability The fundamentals of satellite communication. To provide them with a sound understanding of how a satellite communication system successfully transfers information from one earth station to another. To expose them to examples of applications and tradeoffs that typically occur in engineering system design, and to ask them to apply the knowledge in design problems
Radar System Engineering	DEOC0113	2015	Employability Compare working of different types of radars. Analyze the statistical parameters of Noise and



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			Radar cross section of targets. Distinguish the fixed and moving targets using different types of radar systems. Explain various techniques employed in radar receivers for detection of signals in noise. Observe the variation in parameters of radar system by the estimation of noise figure & noise temperature. Identify the different types of display devices & duplexers
Transmission Lines and Waveguides	DEOC0114	2015	Employability Discuss the fundamental concepts of wave propagation in Transmission Lines and Wave Guides. Analyze the line parameters and various losses in transmission lines. Apply smith chart for line parameter and impedance calculations. Evaluate the characteristics of parallel plane and rectangular wave guides. Evaluate the characteristics of Circular waveguides. Evaluate the characteristics of resonators.
Electromagnetic theory	DEOC0122	2015	Employability Knowledge of, physical interpretation, and ability to apply Maxwell's equations to determine field waves, potential waves, energy and charge conservation conditions. Experimental measurement of voltages induced by time varying magnetic flux. Flux determination.
Basic Metallurgy	DEOC0134	2015	Employability and Skill development (Understand the correlation between processing, structure and properties of metals. Ensure production of metallic components for use in consumer or engineering products)
PCB Fabrication and Circuit Prototyping	DEOC0211	2015	Employability To design and fabricate PCB for prototyping as well as in Industrial Production environment. This will help students to innovate faster with electronics technology.



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Fibre Optics Technology	DEOC0212	2015	<p>Employability</p> <p>Recognize and classify the structures of Optical fiber and types. Discuss the channel impairments like losses and dispersion. Analyze various coupling losses. Classify the Optical sources and detectors and to discuss their principle. Familiar with Design considerations of fiber optic systems. To perform characteristics of optical fiber, sources and detectors, design as well as conduct experiments in software and hardware, analyze the results to provide valid conclusions.</p>
MATLAB for Engineers	DEOC0213	2015	<p>Employability</p> <p>Able to use Matlab for interactive computations. Familiar with memory and file management in Matlab. Able to generate plots and export this for use in reports and presentations. Able to program scripts and functions using the Matlab development environment.</p>
Computer Graphics (2D & 3D Drafting)	ISSD1106	2016	<p>Skill development(At the end of the course, the students have a skill and employability to:</p> <ul style="list-style-type: none"> Event driven I/O and callback programming & typical structure of an interactive, real-time computer graphics program 2&3D transformations, homogeneous coordinates, post-multiplication Modelling and instantiation
Civil Engg. MATLAB Lab	ISSD1107	2016	<p>Employability (Differential equations and its application to engineering problems Soft computing applications to engineering problems)</p>
Finite Element Method	ISSE1201	2016	<p>"Skill development(</p> <ul style="list-style-type: none"> • Enable the students to identify, formulate and skill to engineering problems related to one, two and three Dimensional structures subjected to static loads. • To show the impact of engineering solutions on the society and also will be aware of



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			contemporary issues regarding failure of structures due to wrong analysis)"
CAD LAB	ISSE1204	2016	Employability (Analysis and design of a simply supported beam, Plate, Simple framed structure 1, Design and analysis of Steel Truss structure 1, Multi story building design and analysis using STAAD.Pro 1)
Basic Communication Skills	MGGM1102	2011	Competence in oral, written, and visual communication: Employability, Use current technology Practicals - Skill development
Quantitative Techniques	MBDM1104	2017	application of quantitative techniques in business decision making- Employability,
Managerial Economics	MGGM1104	2014	Analysis of demand, supply, production, market; Application of different economic paradigms using Microeconomics concepts- Employability
Accounting for Managers	MGFM1101	2011	Preparation of financial statement, preparation of cost sheet and financial analysis of financial statements: Employability & Entrepreneurship
Marketing Management	MGMK1101	2011	Interpretation complex marketing issues facing by a variety of enterprises: Employability & Entrepreneurship
Organizational Behaviour	MGGM1105	2011	Analyze and compare different models of Human Behaviour - Employability, Entrepreneurship
Indian Society and Culture	MGGM1212	2015	Analysing social issues, Societal Analysis- Employability
Human Resource Management	MGHR1201	2011	Carry out human resource planning and Job analysis, develop, implement and evaluate recruitment and selection- Employability & Entrepreneurship
Management & Market Research	MGGM1207	2011	Applying marketing research into the broader strategic planning process, with reference to existing theories, concepts and models from within the program: Employability & Entrepreneurship
Financial Management	MGFM1202	2011	Application of concepts of financial management, investment, financing, working



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			capital and dividend policy decisions: Employability & Entrepreneurship
Production & Operations Management	MGOM1201	2011	Developing aggregate capacity plans and MPS in operation environments- Employability, Entrepreneurship
Economic Environment of Business	MGGM1208	2014	Analysis of economic policy and environment- Employability, Entrepreneurship
Strategic Management and Ethics (Core)	MGGM2318	2015	Conduct analysis of competitive situations of the enterprise and introduction of ethical practices - Employability, Entrepreneurship
Aptitude and Career Enhancement-I (Practice)	MGGM1210	2014	Compete and qualify in the selection process - Employability
Career Communication and Professional Success Lab	MGGM2314	2014	Communicate appropriately using the technology - Employability
Sales and Distribution Management (Elective)	MGMK2302	2011	Manage and enhance the sales force productivity and performance: Employability & Entrepreneurship
Logistics and Supply Chain Management (Elective)	MGOM2302	2011	Analyzing the manufacturing operations of a firm- Employability, Entrepreneurship
Legal Environment for Enterprise	MGGM2315	2011	Analyze business issues and to understand broader legal issues- Employability, Entrepreneurship
Project Management	MGGM2316	2011	Describe a project life cycle, identify the resources needed for each stage, develop a project scope - Employability, Entrepreneurship
Contemporary Issues in Management	MGEL2402	2015	Advance topics, analysis and application of IT- Employability
Rural Marketing	MGMK2312	2015	Able to successfully enter the rural market for promotion of his products and services: Employability & Entrepreneurship;
Services Marketing	MGMK2313	2015	Able to deliver services successfully Employability & Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Customer Relationship Management	MGMK2314	2015	Formulate and assess strategic, operational and tactical CRM decisions: Employability & Entrepreneurship
Consumer Behaviour	MGMK2305	2011	Detect the relevance of consumer behaviour to the entire marketing process, the nature and stages of consumers' decision making and the factors influencing consumers' choices: Employability & Entrepreneurship;
Brand Management and Marcomm	MGMK2306	2011	Appraise key issues in managing brand portfolio and making strategic branding decisions: Employability & Entrepreneurship
B2B Marketing	MGMK2307	2011	Effective B2B marketing strategy design and execution: Employability & Entrepreneurship;
Retail Management	MGMK2315	2011	Make merchandise plan and to procure right merchandise: Employability & Entrepreneurship
International Marketing	MGMK2316	2015	Assess an organization's ability to enter and compete in international markets: Employability
Social Marketing	MGMK2310	2011	Develop a strategic plan for identifying opportunities for implementing social marketing in a company: Employability & Entrepreneurship
GIS for Marketing	MGMK2317	2015	Develop customer marketing applications such as acquisition, marketing, messaging, purchasing, and retention: Employability & Entrepreneurship;
Advanced Managerial Accounting	MGFM2310	2015	Preparation of cost sheet and analysis of financial statements: Employability & Entrepreneurship;
Financial Derivatives	MGFM2311	2015	Competent in derivative products such as forward, future, option & swap and to make on line trading on futures and options: Employability & Entrepreneurship;
Financial Institutions, Markets & Services	MGFM2305	2011	Use techniques for raising funds from capital market and from different sources- Employability & Entrepreneurship;
Commercial Banking and ALM	MGFM2306	2011	Use techniques for Asset/Liability Management for smooth operation of the Bank. This will help in employability in Banking Sector - Employability & Entrepreneurship



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Insurance & Risk Management	MGFM2307	2011	Use techniques for identifying, measuring and managing the risk - Employability & Entrepreneurship
Security Analysis And Portfolio Management	MGFM2308	2011	Use methods of valuations of financial instruments and evaluation of risk as well as return of an individual security and portfolio - Employability & Entrepreneurship
Project Appraisal & Financing	MGFM2309	2014	Preparation of detailed project report, identification of a project, feasibility analysis including market, technical and financial appraisal of a project; Uses project appraisal techniques for evaluating live projects: Employability & Entrepreneurship
Corporate Restructuring	MGFM2312	2015	Use techniques of Financial Corporate valuation and Engineering - Employability & Entrepreneurship
Financial Planning and Wealth Management	MGFM2313	2015	Use methods to determine the ways of personal tax planning, retirement and estate planning for an individual and design a financial plan - Employability & Entrepreneurship
Current Asset Management	MGFM2314	2015	Evaluate comparative current asset management policies and their impact on the firm's profitability, liquidity, risk and operating flexibility: Employability & Entrepreneurship;
Service Operations Management	MGOM2303	2011	Carry out optimal inventory management- Employability, Entrepreneurship
Total Quality Management	MGOM2311	2011	Use statistical approach for quality control, ISO and QS certification process- Employability, Entrepreneurship & Skill development
Technology Management	MGOM2312	2015	Technology adaptation and technology transfer- Employability, Entrepreneurship
Purchase and Materials Management	MGOM2305	2011	Develop materials requirement planning technique, handel issues related to overstocking and under stocking- Employability, Entrepreneurship
Environment & Industrial Safety	MGOM2306	2011	Formulate or design a system, process, procedure, or program to meet desired safety needs- Employability, Entrepreneurship



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Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Enterprise Resource Planning	MGOM2308	2011	Develop Generic Model of ERP and Implementation of General ERP Methodology- Employability, Entrepreneurship & Skill development
Production Planning and Inventory Control	MGOM2309	2011	Develop Production planning and handel control issues in both service and manufacturing industries- Employability, Entrepreneurship
Supply Chain Modelling	MGOM2310	2011	Value creation and revamping supply chains for becoming competitive in the market- Employability, Entrepreneurship
Industrial Relations and Labour Laws	MGHR2302	2015	Handle industrial disputes - Employability
Compensation and Reward Management	MGHR2315	2011	Designing a pay structure - Employability
Performance Management	MGHR2314	2011	Fixing performance standards and performance indicators that reflect the employees range of responsibilities- Employability
Organization Change and Development	MGHR2305	2011	Bring out appropriate changes in the organization and becoming a change agent- Employability, Entrepreneurship
International Human Resource Management	MGHR2307	2011	Design Human Resource activities in an International Context- Employability,
Knowledge Management	MGHR2308	2011	Critically apply theories and models to organisations for success- Employability, Entrepreneurship
Human Resource Planning and Sourcing	MGHR2312	2015	Development, implementation, and evaluation of employee recruitment, selection, and retention plans and processes- Employability, Entrepreneurship
Training and Development	MGHR2311	2011	Assess, design and implement various methods, techniques and sources of training- Employability & Skill development
Leadership Development	MGHR2313	2015	Develop critical thinking skills and lead the organization- Employability, Entrepreneurship



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Organization Structure and Design	MGHR2310	2014	Designing effective organizational structure keeping in view business strategies - Employability, Entrepreneurship
Rural Immersion Programme (Practice)	MGRM2305	2015	Carry out participatory planning with the community, develop strategies for intervention - Employability & Skill development
Sustainable Livelihood System	MGRM2306	2015	Introduce and train people on alternative livelihood options- Employability, Entrepreneurship & Skill development
Public System Management	MGRM2307	2015	Comprehend and apply the basic principles of public administration model - Employability, Skill development
Micro Finance Management	MGRM2308	2015	Accelerating the expansion of local microbusinesses- Employability
Natural Resource Management	MGRM2309	2015	Work effectively with, and within, interdisciplinary and diverse groups to resolve-management problems and achieve management objectives- Employability and Entrepreneurship
Gender and Development	MGRM2311	2015	Utilize the different tools and techniques for gender planning, analysis and evaluation in the development sector-Employability
Hospital Administration	MGHM2301	2017	Create policy and processes and execute decisions in compliance with the legal, regulatory and ethical considerations inherent in managing healthcare systems and organizations- Employability
Management Information Systems for Hospital	MGHM2302	2017	Analyze existing systems and design technology solutions appropriate to the hospital- Employability & Skill development
Management of Out-Patient Department	MGHM2303	2017	Deal the issues effectively in emergency services, can plan, organize and supervise the activities of Minor Operation Theatre, Manage treatments of referral & cross referral cases- Employability & Skill development
Risk and Disaster Management	MGHM2304	2017	Handle Security Management Effectively in Hospitals, Control and Prevent hospitals from getting infected, Plan and design fire protection



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			in hospitals, Handel radioactive waste collection and disposal in hospitals- Employability
Management of Quality	MGHM2305	2017	Prepare quality policy and objectives for hospitals, Plan and organize quality accreditation- Employability
Legal and Ethical Issues for Hospitals	MGHM2306	2017	Handle medico-legal issues effectively, Ensure appropriate patient relationship, Handle trade unions - Employability
Health Insurance	MGHM2307	2017	Ensure hassle free insurance facility in hospitals, Build appropriate relation with insurance providers- Employability
Project Management in Health Care	MGHM2308	2017	Plan and implement health sector projects, Carry out feasibility analysis of health sector projects, Carry out demand analysis in health care sector- Employability
Marketing of Hospital Services	MGHM2309	2017	Handle challenges in hospital services marketing, Design new hospital services, Engage appropriate channels for hospital service marketing, Use marketing communication with technical knowledge- Employability, Entrepreneurship
Clinical, Diagnostic & Therapeutic Services	MGHM2310	2017	Design and manage secondary and tertiary systems of medicine, Maintain hospital records appropriately, Handle specialist services effectively- Employability
Patient Care and Behaviour	MGHM2311	2017	Motivate patients and instrumental in shaping positive attitude towards hospital, Carry out audit on patient behaviors, Handle the role of hospital administrator effectively- Employability & Skill development
Web Traffic Generation	MBDM2201	2017	Increase traffic in any website, Popularizing websites- Employability, Entrepreneurship & Skill development
Link Building & e-WoM	MBDM2202	2017	Increase links through web, Building relationships through the web- Employability, Entrepreneurship & Skill development



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Social Media Marketing	MBDM2203	2017	Develop effective social media marketing strategies for various types of industries and businesses- Employability, Entrepreneurship & Skill development
Branded Content and the Future of Media	MBDM2204	2017	Develop and market branded contents, Employability,
Ideas, Brands and Business	MBDM2205	2017	Make strategic branding decisions- Employability, Entrepreneurship
Brand Planning and Consumer Insights	MBDM2206	2017	Design and execute intelligent and innovative research studies to scan the environment, identify consumer insights, and use those insights to manage the brand- Employability, Entrepreneurship
Digital Strategies and Planning	MBDM2207	2017	Create a digital marketing plan and budget; identify suitable measures to set objectives and evaluate digital marketing -Employability & Entrepreneurship;
Advance Business Communication	MGDA1209	2016	Able to make better business communication- Employability & Entrepreneurship
Information System in Business	MGDA1210	2016	Analyze actions affecting the business as well as prepare cost estimates and forecasts- Employability & Entrepreneurship
ETL , Data modeling and Cube Design	MGDA1215	2016	Able to analyze data objects and figuring out the relationships between them- Employability and Skill development
Project (Project Mode in Organization)	MGDA1200	2016	It will enable learner to easily cope up with harsh industry or startup environments- Employability & Entrepreneurship
Operations Research	MBDM1202	2017	Manage and enhance the sales force productivity and performance:Employability & Entrepreneurship
Aptitude and Career Enhancement- II(Practice)	MGGM2317	2014	logical analysis- Employability
Pre-liberalization Socio-Economic and political history	MGDM 1101	2014	Analyse social, economical and political background of India for decision making - Employability



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Development Project Management Planning Tools and Techniques-I	MGDM 1102	2014	Carry out Appraisal, Planning, and Monitoring & Evaluation and impact assessment of development projects - Employability, Entrepreneurship
Micro and Macro Economics	MGDM 1104	2014	Application of different economic paradigms using Microeconomics concepts- Employability
Development Marketing	MGDM 1105	2014	Able to make appropriate decision in development marketing-Employability
Accounting for Development Manager	MGDM 1106	2014	Preparation and analyse of financial statements - Employability & Entrepreneurship
Socio-Economic and Political history Post-liberalization	MGDM 1201	2014	Analyse social, economical and political background of India for decision making - Employability
Development Project Management Planning Tools and Techniques-II	MGDM 1202	2014	Carry out Appraisal, Planning, and Monitoring & Evaluation and impact assessment of development projects - Employability, Entrepreneurship
Integrated Development Communication	MGDM 1203	2014	Communicate appropriately using tools for development - Employability
Rural Entrepreneurship Development	MGDM 1204	2014	Write business proposals for rural enterprise development-Employability, Entrepreneurship
Financial Management for Development Manager	MGDM 1206	2014	Handle financial management, investment, financing, working capital and dividend policy decisions: Employability & Entrepreneurship;
Rural and Community Group Behavior	MGDM 1207	2014	Observe and analyse social issues and dynamics at rural level, design appropriate intervention for effective community group behavior towards implementation of development schemes - Employability,
Organizing Conference –I	MGDM 1221	2014	Learning skills for organizing events - Employability,
Internship-I	MGDM 2331	2014	To apply and evaluate the learned concepts, theories in real time situations-Employability, Entrepreneurship & Skill development



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Internship-II	MGDM 2332	2014	To apply and evaluate the learned concepts, theories in real time situations-Employability & Skill development
Internship-III	MGDM 2333	2014	To apply and evaluate the learned concepts, theories in real time situations-Employability & Skill development
Gender Mainstreaming for Development	MGDM 2301	2014	Being sensitive to gender issues in the society, analyse the facets of Gender and its role for development - Employability & Skill development
Skill Building and Employability Training	MGDM 2302	2014	Understand the skill ecosystem and its dimensions, Effectiveness measurement of skill training initiatives - Employability
Financial Inclusion & Micro-finance	MGDM 2303	2014	To appraise the scenario of financial inclusion in the country , acquire skills to operate in Micro Finance sector - Employability, Entrepreneurship
Rural Haat & Market Analysis	MGDM 2304	2014	Develop skills for assessing rural markets - Employability, Entrepreneurship & Skill development
Agri-Business Management	MGDM 2305	2014	Apply principles of management for food and agri business sector, develop projects on agri business by collecting and analysing data- Employability & Entrepreneurship;
HR Issues and Capacity Building of Development Organisations	MGDM 2306	2014	Analyze the key areas related to administering the human related issues such as motivation, compensation, appraisal, career planning, diversity, ethics, and training in development organizations-Employability
Mini Bharat Darshan	MGDM 2351	2014	Develop Interventions and analyse the factors for effective interventions - Employability, Entrepreneurship
Internship-IV	MGDM 2431	2014	To apply and evaluate the learned concepts, theories at real time situations-Employability, Skill development
Internship-V	MGDM 2432	2014	To apply and evaluate the learned concepts, theories at real time situations-Employability, Skill development



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Internship-VI	MGDM 2433	2014	To apply and evaluate the learned concepts, theories at real time situations-Employability, Skill development
Sustainable Development	MGDM 2401	2014	Critically analyze the social, environmental, and economic dimensions of sustainability - Employability, Entrepreneurship
Sales and Distribution in rural markets	MGDM 2402	2014	Make sales and distribution plan for products/services in rural market- Employability
Climate Change and Disaster Management	MGDM 2403	2014	Develop disaster mitigation plans - Employability
Understanding & communicating to rural consumers	MGDM 2404	2014	Develop skills to communicate with rural consumers effectively- Employability & Entrepreneurship
Value Chain Analysis	MGDM 2405	2014	To evaluate value chains for products and services Employability
Natural Resource Management	MGDM 2406	2014	Work effectively with, and within, interdisciplinary and diverse groups to resolve-management problems and achieve management objectives- Employability and Entrepreneurship
Individual and Group Behaviour	MGDA1103	2017	Deal with behavioural challenges in an organization and insights for personal and professional growth- Employability,
Agricultural Marketing	MGAM1203	2017	Effectively evaluate the challenges and prospects of agri marketing system, : Employability
Economic Environment for Agriculture	MGAM1204	2017	Developing aggregate capacity plans and agricultural policies for sustainable agricultural development, risk management strategies and MPS in operation environments- Employability,
Study of an Organization	MGAM2101	2017	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship
Field Intervention/(Ag. Development Action)	MGAM2102	2017	To apply and appraise concepts and theories learnt at the field-Employability & Entrepreneurship



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Sales and Distribution Management	MGAM2103	2017	Develop a sales and distribution plan for products/services- Employability
Agricultural Extension Management	MGAM2104	2017	Design appropriate extension strategies in agribusiness- Employability
Corporate Social Responsibility	MGAM2105	2017	Demonstrate a multi-stakeholder perspective in viewing CSR issues, Compare and contrast the multiple viewpoints and tradeoffs that exist in the area of CSR, design CSR strategies focusing agri sector- Employability
Disaster Management	MGAM2106	2017	To build skills and abilities in analyzing potential effects of disasters and the strategies to avert the disasters: Employability
Food Retail Management	MGAM2107	2017	Develop the structure of the retail industry, and handle challenges of working in the retail field: Employability,
Post-harvest and Processing Management	MGAM2108	2017	Carry out Interdisciplinary approach to post-harvest management including biology, agricultural sciences, and management, Employability,
Insurance and Risk Management	MGAM2109	2017	Adopt various types of risks and features of insurance, regulatory framework of insurance in India: Employability
Management Action Component-1	MGAM2201	2017	Apply the Learning of concepts and theories in a real time organizational context- Employability
Management Action Component - 2	MGAM2202	2017	Apply the Learning of concepts and theories in a real time organizational context- Employability
Live-stock Management	MGAM2203	2017	Manage animals for food and fiber production: Employability & Entrepreneurship
Agri-export and WTO	MGAM2204	2017	Analyse export markets and trade related aspects related to WTO agreements and impact on the welfare of the people: Employability, Entrepreneurship
Total Quality Management	MGAM2205	2017	Ensures reduction of errors: Employability



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Contract Farming	MGAM2206	2017	Develops strategies for fostering contract farming, legal aspects and skill development in planning and setting up of contracting operations : Employability
Micro-finance and FI	MGAM2207	2017	Plan financial inclusion that include risk and liquidity, financial institutions, micro-insurance, and other financial products:Employability
Aadvertising and Mass Communication	MGAM2208	2014	Introduce basic concepts of advertising and communication and different types of media, media laws, various forms of advertising and their role in society: Employability,
Commodity Market and Trading	MGAM2209	2017	Develop plans to minimize risk through trade strategies: Employability, Entrepreneurship
Comprehensive Viva Voice	MGDM2461	2014	Developing critical thinking - Employability
Proficiency in English	BBAR1101	2015	Communicate effectively: Employability
Basic Financial Accounting	BBAR1102	2015	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Management Principles and Applications	BBAR1103	2016	Application of Basic mangement principles in organizations- Employability
Micro Economics	BBAR1104	2015	Utilize micro economic concepts and techniques to take business decisions Employability & Entrepreneurship
Reading to Writing	BBAR1201	2015	Increased reading speed and using academic vocabulary in writing - Employability
Organisational Behaviour	BBAR1202	2015	Analyze and compare different models of Human Behaviour - Employability, Entrepreneurship
Business Statistics	BBAR1203	2016	Use statistical tools for managerial decision-making-Employability, Entrepreneurship
Macro Economics	BBAR1204	2015	Apply macroeconomic perspective to solve business issues and take appropriate policy decision-Employability & Entrepreneurship



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Human Resource Management	BBAR2101	2015	Carry out human resource planning and Job analysis, develop, implement and evaluate recruitment and selection-Employability & Entrepreneurship
Principles of Marketing	BBAR2102	2016	Solving marketing issues faced by a variety of enterprises : Employability & Entrepreneurship;
Cost & Management Accounting	BBAR2103	2016	Preparation of cost sheet and analysis of financial statements: Employability & Entrepreneurship
Oral Communication Skills	BBAR2104	2015	Use of strategies, such as contextualization of new vocabulary, use of previewing, skimming and scanning techniques, and knowledge of text organization and discourse markers, to demonstrate comprehension of written and spoken language-Employability,
Production & Operation Management	BBAR2105	2015	Developing aggregate capacity plans and MPS in operation environments- Employability, Entrepreneurship
Research Methodology	BBAR2201	2015	Application of modern analytical tools and techniques for management decision making, research designing, sampling, analysis of data, hypothesis formulation and testing-Employability, Entrepreneurship
Operation Research	BBAR2202	2015	Develop a report that describes the model and the solving technique, analyse the results and propose recommendations in language understandable to the decision-making processes in Management - Employability, Entrepreneurship
Financial Management	BBAR2203	2016	Application of concepts of financial management, investment, financing, working capital and dividend policy decisions: Employability & Entrepreneurship
Business Communication	BBAR2204	2015	Use of strategies to demonstrate comprehension of written and spoken language in business context-Employability,



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Financial Institution and Markets	BBAR3101	2016	Use techniques for raising funds from capital market and from different sources- Employability & Entrepreneurship;
Business Law for managers	BBAR3102	2016	Utilize legal framework for starting a business venture and running it successfully in conformity with legal parameters- Employability & Entrepreneurship
Summer Internship	BBAR3103	2016	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Business Policy	BBAR3201	2016	Discuss and define the factors that shape the SWOT analysis of a firm and develop an environment appraisal that will lead to formulation of strategic plans: Employability & Entrepreneurship; Analyze the suitability of strategies that firms have developed in the real world scenario to achieve valuable outcomes: Skill Development
International Finance	BBAF3101	2016	Use techniques for managing the financial issues in international environment - Employability
Investment Banking & Financial Services	BBAF3102	2016	Use techniques for raising funds from capital market and from different sources- Employability
Investment Analysis & Portfolio Management	BBAF3103	2016	Use methods of valuations of financial instruments and evaluation of risk as well as return of an individual security and portfolio - Employability & Entrepreneurship
Project Appraisal	BBAF3104	2016	Preparation of detailed project report, identification of a project, feasibility analysis including market, technical and financial appraisal of a project; Uses project appraisal techniques for evaluating live projects: Employability & Entrepreneurship
Business Analysis & Valuation	BBAF3105	2016	Analyse and interpret the financial statements for various decision making purposes: Employability & Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Financial Modelling & Derivatives	BBAF3106	2016	Uses techniques of Financial modeling and various Financial Derivatives including Greeks & Exotic Options - Employability
Strategic Corporate Finance	BBAF3107	2016	Use valuation principles, tools & techniques, the link between valuation and corporate finance, management buy-outs valuing real assets in the presence of risk: tracking portfolios and real asset valuation- Employability
Research Project	BBAF3108	2016	Identification of research problems, collection of data and analysis of data : Employability & Entrepreneurship
Personal Selling & Sales Force Management	BBAM3102	2016	Evaluate the role of sales manager and his/ her responsibilities in recruiting, motivating, managing and leading sales team: Employability
Advertising & Brand Management	BBAM3103	2016	Appraise key issues in managing brand portfolio and making strategic branding and advertising decisions: Employability & Entrepreneurship
Retail Management	BBAM3104	2016	Make merchandise plan and to procure right merchandise: Employability & Entrepreneurship
Distribution & Supply Chain Management	BBAM3105	2016	Design and implement distribution channel strategy: Employability, Entrepreneurship
Marketing of Services	BBAM3106	2016	Design service quality measurements to build customer loyalty and evaluate the effectiveness and efficiency of customer service offerings: Employability
International Marketing	BBAM3107	2016	Assess an organization's ability to enter and compete in international markets: Employability & Entrepreneurship;
Research Project	BBAM3108	2016	Identification of research problems, collection of data and analysis of data : Employability & Entrepreneurship
Hospitality management	BBAM3109	2016	Create policy and processes and execute decisions in compliance with the legal, regulatory and ethical considerations inherent in managing organizations in hospitality sector- Employability
HRD : Systems & Strategies	BBAH3101	2016	Prepare strategies for development of human resources in organizations- Employability



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Training & Development	BBAH3102	2016	Prepare training calendar and training contents by analysing the need-Employability
Management of Industrial Relations	BBAH3103	2016	Plan policies towards Labour Welfare and maintain sound Industrial Relations-Employability, Entrepreneurship
Performance & Compensation Management	BBAH3104	2016	Fixing performance standards and performance indicators that reflect the employees range of responsibilities, Designing a pay structure-Employability, Entrepreneurship
Counselling & Negotiation Skills for Managers	BBAH3105	2016	Negotiation with business enterprises-Employability, Entrepreneurship
Cross Cultural HRM	BBAH3106	2016	Diversity management respecting the culture of employees- Employability, Entrepreneurship
Talent & Knowledge Management	BBAH3107	2016	Develop knowledge management process in the organization- Employability
Research Project	BBAH3108	2016	Identification of research problems, collection of data and analysis of data : Employability & Entrepreneurship
International Trade Policy & Strategy	BBAB3101	2016	Analyze new opportunities in international trade, global supply and value chains, investment agreements, trade in services, competition policy and regional economic integration- Employability
Global Business Environment	BBAB3102	2016	Analyse the key decisions that multinational firms make in relation to the choice of markets and entry strategies- Employability
Transnational & Cross Cultural Marketing	BBAB3103	2016	Formulate marketing strategy taking into consideration cultural beliefs, values and customs of a specific country- Employability
International Distribution & Supply Chain Management	BBAB3104	2016	Use commonly accepted frameworks and tools to analyze supply chain situations- Employability
International Accounting & Reporting System	BBAB3105	2016	Prepare the mandatory financial statements, according to the IFRS- Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Multinational Business Finance	BBAB3106	2016	Can handle – Problems and issues in foreign investment, Manage payment settlements- Employability
International Joint Ventures, Mergers & Acquisitions	BBAB3107	2016	Handle issues in mergers and acquisitions- Employability
Research Project	BBAB3108	2016	Identification of research problems, collection of data and analysis of data : Employability & Entrepreneurship
Financial Accounting I	BCFA1102	2017	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Business Mathematics	BBAR1106	2017	Data analysis using mathematical function- Employability & Entrepreneurship
Business Economics	BCFA1104	2017	Apply macroeconomic perspective to solve business problems- Employability & Entrepreneurship
Business Law	BCOR1202	2017	Utilize legal framework for starting a business venture and running it successfully in conformity with legal parameters- Employability & Entrepreneurship
Introduction to Banking	BBAR1208	2017	Carry out operational activities in commercial banks Employability
Business Environment	BBAR1206	2017	Analyse business environment and take appropriate decision Employability and Entrepreneurship
Financial Accounting II	BCFA1207	2017	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Direct Tax	BBAR2106	2017	Can handle computation of heads of income and taxable income, TDS, advance tax etc.: Employability
Indirect Taxes / GST	BBAR2107	2017	Calculate and file GST, levy and collection of tax, input tax credit, IGST act GSTN etc.: Employability & Entrepreneurship
Cost & Management Accounting	BBAR2110	2017	Preparation of cost sheet and analysis of financial statements: Employability & Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Corporate Law	BBAR2108	2017	Utilize legal framework for starting a business venture and running it successfully in conformity with legal parameters- Employability & Entrepreneurship
E-Commerce	BBAR2209	2017	carry out entrepreneurial activities electronically (E-commerce) Employability
Quantitative Techniques for Business	BBAR2207	2017	formulate complex problems into mathematical models to solve using software- Employability
Auditing	BBAR2210	2017	Identify the areas of fraud and errors in the accounts and take corrective actions while presenting the audit report: Employability
Business Ethics & Governance	BBAR2206	2017	Introduction of ethical practices in business - Employability, Entrepreneurship
Corporate Accounting	BBAR3109	2017	Develop Accounting procedures used in corporates and the strategies involved in the corporate decisions.: Employability & Entrepreneurship
Financial Market Operation	BBAR3110	2017	Analyse Money market, Capital market, its instruments and apply the same in organizations- Employability
On Job Internship-I	BBAR3111	2017	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Global Finance	BBAR3209	2017	Apply suitable techniques and strategies to reduce risk in the foreign exchange market - Employability
Banking Law & Practice	BBAR3210	2017	Adhere to Banking laws and practices while working in banking sector- Employability
On Job Internship-II	BBAR3211	2017	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Communication Research and Advanced Research Methods	CCMC0909	2016	Analyse data with techniques of social science, media research - Skill development, Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Media Sustainability	CCMC0913	2016	Employability: Analysis of functioning. Laws relating to media and ethical aspects of media business and get jobs in Media industry and its .
Thesis Preparation	CCMC1000	2016	Employability: Practical use of research methodology and will be able to work the real field situations.
Internship	CCMC0801	2016	Employability : Industry setup and will be able to working in a real environment by understanding the industry constraints and this will help them to develop their professional skills.
Animation	DCMC0601	2016	Ability to create quality animation performance through a creative and professional portfolio using principles of animation.Will help in Employability and Skill development
Theatre Film and Television	DCMC0609	2016	Students will be able to develop skills in different aspects of Film and will be able to analyze film as an art. Skill Development and Employability
Communication in History and History of Communication	FCMC0901	2016	Utilise the skill in communication of the stuents- Skill development and students can able to work in new communication technologies at different points of time- Employability
Introduction to Print Media	CCMC0902	2016	Student will able to get employment on print media- Employability
Internship	DCMC0800	2016	Improve competency for the work in a real environment by understanding the industry constraints-Employability, developing professional skills.-Skill development
Classical Mechanics	MSCP1102	2017	Employability - Variational principle, Central force problem, Canonical transformations, Poisson Bracket, Hamiltonian-Jacobi Theory and transition to Quantum mechanics, Small Oscillations.
Quantum Physics I	MSCP1103	2017	Employability - Angular Momentum, The Hydrogen Atom, Perturbation Theory.



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Electrodynamics & Special Relativity	MSCP1104	2017	Employability - The special theory of relativity, Relativistic Mechanics, Relativistic Electrodynamics.
Solid State Physics	MSCP1201	2017	Employability - Crystal Vibrations (Phonon theory), Thermal Properties of Solid, Free electron Fermi gas, Semiconductor, Dielectrics and Ferroelectrics.
Computational Physics Lab	MSCP1204	2017	Skill and employability - Learning simulation and solving problems using programming.
Atomic and Molecular Physics	MSCP2301	2017	Employability - Molecular spectra , Laser.
Nuclear and Particle Physics	MSCP2302	2017	Employability - Nuclear models:Shell Model, Liquid Drop Model, Nuclear Reactions, Sub-nuclear particles and their properties.
Quantum Physics II	MSCP2303	2017	Employability - Variational Methods, WKB Approximation, Time Dependent Perturbation Theory, Scattering Theory.
Microprocessor and Interfacing devices	MSCP2304	2017	Employability - Microprocessor Architecture, Assembly language program & executing programs , Architecture and register organization of 8086.
Soft Matter Physics	MSCP2305	2017	Employability - Elastic soft matter, Liquid crystals, Brownian motion and thermal fluctuations, Variational Principles of for Soft Matter, Diffusion and Permeation in Soft Matter, Flow and deformation in Soft Matter.
Electronics Communication System	MSCP2401	2017	Employability - Analog Modulation Systems, Digital Modulation Systems, Optical Communication System, Satellite Communication.
Introduction to Bio- and Nano-materials	MSCP2403	2017	Employability - Natural biomaterials, Nano-Materials Introduction, Synthesis Routes, Nanostructured Materials, Characterization:.
Advanced Solid State Physics	MSCP2404	2017	Employability - Many Body Systems, Magnetic properties
Materials Lab II	MSCP2405	2017	Skill - Materials lab II, Employability - synthesis of materials, Analysis of dielectric properties of a material, Analysis of electrical properties of a



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			material. Analysis of AC and DC conductivity of a material
Statistical Physics	MSPH3602	2017	Employability -The Statistical Basis of Thermodynamics, Canonical Ensemble, The Grand Canonical Ensemble, Formulation of Quantum Statistics, The Theory of Simple Gases, Ideal Bose Systems, Ideal Fermi Systems.
Embedded System	MSPH5103	2017	Employability - Embedded systems
Advanced Physical Chemistry I	MSCC1101	2017	employability-Chemical Dynamics ,Adsorption,Electrochemistry, Enterperneurship-Micelles,
Advanced Inorganic Chemistry I	MSCC1102	2017	Employability-Metal-Ligand Bonding-I&II, Electronic Spectra and Magnetic Properties of Transition Metal Complexes-I,II and III, Metal - Ligand Equilibria in Solution-I&II.
Advanced Organic Chemistry I	MSCC1103	2017	Employability-Aliphatic Nucleophilic Substitution,Aromatic Nucleohilic Substitution,Aliphatic Electrophilic Substitution,Addition to Carbon-Carbon Multiple Bonds ,Elimination Reactions.
Polymer Chemistry	MSCC1104	2017	Employability-Kinetics of melting, crystal morphology, free volume, distribution of molecular size, stoichiometric imbalance. X-ray diffraction study, Microscopy,Price - Alfrey equation, Flory - Huggins theory, polymer fractionation, Mark - Houwink - Sakurada equation, diffusion coefficient and friction factor,Power Law for pseudo plastic liquids, effect of shearing forces, segmental friction factor, Bueche theory. Skill-Thermal analysis and physical testing,Polymer Processing-I&II,Elastic deformation, shear modulus and compliances, Maxwell model, Voigt model, dynamic viscoelasticity, molecular theory for viscoelasticity - Rouse model,Mechanical properties



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Advanced Physical Chemistry II	MSCC1201	2017	Employability-Non-ideal systems,Quantum Chemistry-I,II ,III and IV.
Advanced Inorganic Chemistry II	MSCC1202	2017	Employability-Metal n -Complex,Metal Clusters,Organometallic Chemistry I &II . Skill-Symmetry and Group Theory in Chemistry-III.
Advanced Organic Chemistry II	MSCC1203	2017	Employability-Organic Synthesis and retrosynthesis,Organometallics in synthesis,Photochemistry,Pericyclic Reactions,Cycloadditions.
Nuclear Chemistry	MSCC1204	2017	Employability-Systematic Study of alpha, beta and gamma decays,Module-II & III, Nuclear reaction,Nuclear fission,Reactor Theory and Module-VII
Advanced Inorganic Chemistry III	MSCC2301	2017	Skill-Instrumental Method of Analysis,Raman Spectroscopy,Homogeneous and Heterogeneous Catalysis,Displacement and Isomerization reaction. Hydrogenation, Hydroformylation, Wacker (Smidt) Process, Olefin Metathesis, Fischer-Tropsch synthesis, Zeigler-Natta polymerization, Water gas reaction Employability-Mechanism of Substitution Reactions,Electron Transfer Reactions
Advanced Organic Chemistry III	MSCC2302	2017	Employability-Bioenergetics,Amino Acids, Peptides and Proteins,Proteins,Enzymes,Module-V & VI
Advanced Physical Chemistry III	MSCC2303	2017	Employability-Electronic spectra of molecule,Electronic spectra of diatomic molecules,Electronic spectra of polyatomic molecules. Skill-Nuclear Magnetic Resonance Spectroscopy,Fluorescence,Data analysis
Advanced Solid State Chemistry	MSCC2304	2017	Employability-Bonding in Solids,of solids-band theory,Mechanical Properties of Solids,Organic Solids. Skill-Diffraction Methods,Neutron Diffraction
Advanced Bio-Inorganic Chemistry	MSCC2402	2017	Employability-Metalloporphyrins and Iron-sulphur Protein,Metalloporphyrins and Iron-sulphur Protein,Magnesium porphyrins



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			(Chlorophyll),Metalloenzymes,chiral recognition and catalysis, molecular recognition, biomimetic chemistry, crown ethers, cryptates. Cyclodextrine, cyclodextrinbased enzyme models, calixarenes, Ionophores,Supramolecular Chemistry-I&II
MATHEMATICAL MODELLING	MSMA 4701	2017	Skill- Mathematical modelling through ordinary differential equations of first order. Employability - Mathematical modelling through the systems of ordinary differential equations
ABSTRACT ALGEBRA - I	MSMA 4702	2017	Employability - Automorphisms, Cayley's Theorem, Permutations Groups
ADVANCED ANALYSIS	MSMA 4703	2017	Employability - Connected sets, Bounded sets, Totally Bounded sets, Complete Metric Spaces.
PARTIAL DIFFERENTIAL EQUATION-II	MSMA 4704	2017	Skill- Eigen value Problems Employability - The Cauchy Problem, The method of Separation of Variables
DIFFERENTIAL GEOMETRY	MSMA 4705	2017	Employability - Fundamental Triads, Curves, Serret-Frenet Formulae, Curvatures and torsion of a curve at a point.
MEASURE THEORY	MSMA 4801	2017	Employability - Outer measure, Measurable sets and Lebesgue measure
ADVANCED CALCULUS	MSMA 4802	2017	Skill- Derivatives of functions on R_n , Differentiation of composite functions Employability - Set functions, Transformations and Multiple integrals
TOPOLOGY	MSMA 4803	2017	Employability - T_0 - and T_1 - spaces and sequence, Axioms of countability
FLUID DYNAMICS – I	MSMA 4804	2017	Employability - Fundamental equations of the flow of viscous compressible fluids
TENSOR ANALYSIS	MSMA 4805	2017	Skill- Riemann Geometry Employability - Tensor Algebra, Applications of Tensor methods to surface Geometry.



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ABSTRACT ALGEBRA-II	MSMA 5101	2017	Employability -Algebra of Linear Transformations, Characteristic Roots
COMPLEX ANALYSIS-II	MSMA 5102	2017	Employability -General form of Cauchy's Theorem, Calculus of Residues, Evaluation of Definite Integrals, Harmonic Functions.
FLUID DYNAMICS – II	MSMA 5103	2017	Employability -The Laminar boundary layer, Properties of Navier-Stokes equations
OPERATION RESEARCH – II	MSMA 5104	2017	Skill- Graphical method for 2 X n and, m X 2 matrix games Employability - Second order optimality condition, Lagranges method
NUMBER THEORETIC CRYPTOGRAPHY	MSMA 5105	2017	Employability -Enciphering matrices, The idea of public key Cryptography, RSA
THEORY OF COMPUTATION	MSMA 5201	2017	Employability -Computability Theory: Churh-Turing thesis
ADVANCED NUMERICAL ANALYSIS	MSMA 5202	2017	Employability -Eigen values and Eigen Vectors: Basic power method, Rayleigh Quotient, Shifted power method
Microbiology	MSBO1101	2017	Higher studies/Employability- Students learn on preparation and sterilization of media, plating, slanting of media, isolation of bacteria in pure culture
Cell Biology	MSBO1103	2017	Employability-Perform comparative karyotypic analysis, techniques like extraction and separation of DNA by gel electrophoresis, squashing technique for the study of different stages of mitosis and meiosis
Plant Ecology	MSBO1104	2017	Employability-Practical on biodiversity measurement by different indices, calculation and problem solving.
Botany Laboratory-I	MSBO1105	2017	Employability/Skill-Acquire general idea on instruments used in microbiology laboratory
Plant Physiology, Metabolism, and Biochemistry	MSBO1202	2017	Employability- Practicals on study of principles of spectrophotometer & verification of Beer-Lambert's law, Preparation of standard curve for



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			quantification of protein, carbohydrate & reducing sugar
Environmental Pollution and Management	MSBO1204	2017	Employability-Testing water and soil quality,practicals on Phytoremediation and pollution management.
Systematics and Pathology	MSBO2301	2017	Employability-Identification of plants, plant diseases and control measures
Natural Resource Management and Utilization	MSBO2302	2017	Skill/ Employability- Bioresource management.
Plant Biotechnology and Bioinformatics	MSBO2401	2017	Entrepreneurship/Employability- Practicle on Production of synthetic seeds, Techniques of surface sterilization and plant regeneration via organ culture
Eco toxicology & Waste Management	MSBO2402	2017	Employability-Practicle on E-waste management, smart waste management; landfilling-biological processes, leachate control and treatment, site management
Microbial Technology &Physiology	MSBO2403	2017	Employability-Perform fermentation technology, Food processing technology
Project/Dissertation	MSBP2401	2017	Employability- Problem analysis by opting the project work, findings and presentation
Biosystematics and Taxonomy	MSZO1102	2017	Employability - . History of Classification Trends in biosystematics: Chemotaxonomy cytotaxonomy and molecular taxonomy, ,Taxonomic procedures: Taxonomic collections, preservation, curretting, process of identification. Taxonomic keys, different types of keys, their merits and demerits. Taxonomic categories. Evaluation of biodiversity indices Evaluation of Shannon. Weiner Index, International code of Zoological Nomenclature (ICZN): , Hardy-Weinberg law of genetic equilibrium, . Trends in Evolution Molecular Evolution Gene evolution, Evolution of gene families. Assessment of molecular variation



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Cell & Molecular Biology	MSZO1103	2017	Employability - Cell Signaling: Signalling molecules and signal receptors, second messengers, G protein coupled receptors, activation of gene transcription by G protein coupled receptors, Lampbrush chromosome, Polytene chromosome, telocentric chromosome, Inter-phase chromatin, Euchromatin and Heterochromatin, karyotype and its significance Cell cycle: Molecular models and events. Regulators and checkpoints in cell cycle, DNA synthesis by reverse transcription, DNA Repair: mismatch repair, base excision, nucleotide excision, direct repair, SOS repair, Prokaryotic and eukaryotic translation.
Biochemistry	MSZO1104	2017	Employability - Carbohydrate metabolism: Glycolysis, TCA cycle, pentose-phosphate pathway. Gluconeogenesis, glycogen metabolism, regulation of carbohydrate metabolism, Oxidative phosphorylation, electron transport and ATP synthesis, Enzymes: General properties, nomenclature and classification, extraction and assay Michaelis-Menten kinetics and its significance, Brigg's-Halden modification, determination of Vmax and Km, Mechanism of enzyme action: general acid-base catalysis, covalent catalysis, metal catalysis Mechanism of action of RNase, Lysozyme and Chymotrypsin, Coenzymes and vitamins, Enzyme inhibition: competitive, non-competitive inhibition, determination of Ki, allosteric regulation, covalent modification
Immunology and Cancer Biology	MSZO1204	2017	Employability - Antigen – Antibody interaction (Antibody affinity, Radial and Double immune diffusion, Radioimmunoassay, ELISA- Indirect, Direct, Sandwich, ELISPOT, Competitive, Western blotting), Major histocompatibility complex and MHC restriction, Antigen Processing and Presentation, Generation of humoral and cell mediated immune response,



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			BCR and TCR, generation of diversity, Complement system(Classical, Alternate and lectin pathway), Cytokines- Types and their role in immune regulation, Activation and regulation of B and T lymphocytes, Cell-mediated cytotoxicity and Antibody dependent cell mediated cytotoxicity, Hypersensitivity, Autoimmunity and Transplantation., Role of carcinogens and DNA repair in cancer
Ecotoxicology	MSZO2303	2017	Employability - Productivity, Production and analysis. Recycling and reuse technologies for solid and liquid wastes and their role in environmental conservation. Remote sensing – basic concepts and applications of remote sensing techniques in environmental conservation. Environmental indicators and their role in environmental balance., , Vehicular exhaust pollution causes and remedies, Noise pollution, Toxicity testing principles, hazards, risks and their control methods., Food toxicants and their control methods, Public Health Hazards due to environmental disasters, Pesticides, types, nature and their effects on environment, Important heavy metals and their role in environment, Agrochemical use and misuse, alternatives, Occupational Health Hazards and their Control
Environment and Pollution Management	MSZO2403	2017	Employability - biomass production, biotechnology for generation of biogas , Classification, formation, survey and land capability, soil structure and profile, soil reaction and buffering, Management and remediation of soil pollution, management and decontamination of saline, acidic, alkaline and mine waste soil, management of water logged, sandy and peat soil, degradation of organic pollutants in soil environment, ex situ and in situ bioremediation of contaminated soil: biopile, bioventing, biosparging and bio slurping.,



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			Pollutants in air: Major air pollutants; oxides of nitrogen, sulphur and carbon-sources, effects and environmental reactions, particulate air pollutants; methods of air pollution control, particle settling chamber, inertial separator, cyclone filters, electrostatic precipitators, gaseous pollutant control-scrubber, absorbers, thermal decomposers, biological filters
Environmental Science	FCBS0101	2016	Employability - Environmental Science
Thermal Physics	BSPH1201	2016	Employability - Laws of Thermodynamics, Carnot engine & efficiency. Carnot's Theorem. Refrigerator & coefficient of performance, 2nd Law of Thermodynamics: Kelvin-Planck and Clausius Statements and their Equivalence. Applications of Second Law of thermodynamics, Entropy, Thermodynamic Potentials, Kinetic Theory of Gases, Molecular Collisions, Real Gases. Skill- Thermal Physics Lab
Waves and optics	BSPH1202	2016	Employability - Interferometer, Diffraction grating. Resolving power of grating, Fresnel's half-Period Zones Skill - Waves and Optics Lab.
Electricity and Magnetism	BSPH2302	2017	Employability - Magnetic Properties of Matter, Magnetization, Electromagnetic Induction, Electrical Circuits, Network Theorem. Skill - Electricity and Magnetism Lab
Analog systems and Applications	BSPH2303	2017	Employability - Semiconductor Diodes, Two-terminal Devices and their Application, Amplifiers, Applications of Op-Amp. Skill - Analog Systems and ApplicationsLab
Elements of Modern Physics	BSPH2402	2017	Employability - Radioactivity, Fission and Fusion, Lasers. Skill - Elements of Modern Physics Lab
Digital systems and Applications	BSPH2403	2017	Employability - CRO uses, Integrated Circuits, Digital Circuits, Data processing circuit,



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			Microprocessor Architecture. Skill - Digital system Lab
Quantum Mechanics & Applications	BSPH3501	2017	Employability - Schrodinger equation and its solution, its application, hydrogen-like atoms, Atoms in Electric & Magnetic Fields, Many electron atoms. Skill - Learn to solve quantum problems through computational methods
Solid State Physics	BSPH3502	2017	Employability - Magnetic properties of materials, dielectric properties of materials, superconductivity. Skill - Solid state physics lab
Experimental Techniques	BSPH3503	2017	Employability - Experiments are done on, Thermostat, ultrasonic transducer, Calibrate Semiconductor type temperature sensor (AD590, LM35, or LM75), Create vacuum in a small chamber using a mechanical (rotary) pump and measure the chamber pressure using a pressure gauge, design and study the Sample and Hold Circuit, Design and analyze the Clippers and Clampers circuits using junction diode etc enables them to become Lab Technician. Enterprenuership - Transducers & industrial instrumentation, Digital Multimeter, Sensors Skill - Experimental Techniques Lab
Embedded systems- Introduction to Microcontroller	BSPH3504	2017	Employability - Embedded system, microprocessors, 8051 microcontroller, 8051 I/O port programming, Interfacing 8051 microcontroller to peripherals, Embedded system design and development. Enterprenuership - 8051 I/O port programming, Interfacing 8051 microcontroller to peripherals, Embedded system design and development. Skill - Embedded System: Introduction to Microcontrollers Lab.
Physics of Devices and Communication	BSPH3505	2017	Employability - Physics of Devices, Power supply and Filters, Phase detector , Processing of



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			Devices, Digital Data Communication, communication systems. Skill - Physics of Devices and Communications Lab
Advanced Mathematical Physics-II	BSPH3507	2017	Employability - Enterprenuership - Skill -
Classical Dynamics	BSPH3508	2017	Employability - Small amplitude oscillations, special theory of relativity, tensors, fluid dynamics.
Applied Dynamics	BSPH3603	2017	Employability - Dynamical systems, Chaos and Fractals, Fluid Dynamic Skill - Applied Dynamics lab
Communication System	BSPH3604	2017	Employability - Communication and Navigation systems, Satellite Communication, Mobile Telephony System, mobile communication network, Enterprenuership - Mobile Telephony System, mobile communication network, Skill - Communication Electronics Lab
Nuclear and Particle Physics	BSPH3605	2017	Employability - Nuclear Models, Radioactivity decay, Nuclear Reactions, Interaction of Nuclear Radiation with matter, Detector for Nuclear Radiations, Particle Accelerators.
Astronomy and Astrophysics	BSPH3606	2017	Employability - Astronomy and Astrophysics Skill - Astronomical Scales, Astronomical techniques, Stellar spectra and classification Structure
Dissertation	BSPH3607	2017	Employability - Project work Skill - Project work
Inorganic chemistry-I	BSCH1101	2017	Skill- Wave mechanics and Inorganic Chemistry-I Lab , enterperneurship-Atomic Structure-2,Periodicity of Elements-1&2, Employability-Chemical Bonding-1&2, Oxidation-Reduction
Physical Chemistry-I	BSCH1102	2017	Employability-Gaseous state 1 &2 ,enterperneurship-Liquid state:,gaseous state-3,Solid state,Ionic Equilibria-1&2, Skill-bravis



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			lattices,Qualitative treatment of acid - base, Physical Chemistry Practice
Organic Chemistry-I	BSCH1201	2017	Employability-Basics of Organic Chemistry,Stereochemistry,Chemistry of Aliphatic Hydrocarbons,Carbon-Carbon pi bonds,Electrophilic aromatic substitution , skill-Cycloalkanes and Conformational Analysis,Organic Chemistry Practice
Physical Chemistry-II	BSCH1202	2017	Employability-Chemical Thermodynamics,Second Law of Thermodynamics,Third Law of thermodynamics,Systems of Variable Composition,Dilute solutions . Enterperneurship-Chemical Equilibrium,Thermochemistry. Skill-Physical Chemistry-II Practice
Inorganic chemistry-II	BSCH2301	2017	Skill-General Principles of Metallurgy-1,- Inorganic Chemistry Practice. Employability-Acids and Bases,Chemistry of s and p Block Elements-1,Boric acid and borates, boron nitrides, borohydrides (diborane) carboranes and graphitic compounds, silanes,Chemistry of s and p Block Elements-3,preparation and properties of Clathrates, Inorganic Polymers .
Organic Chemistry-II	BSCH2302	2017	Employability-Chemistry of Halogenated Hydrocarbons-1&2, Organometallic compounds ,Alcohols, Phenols, Ethers and Epoxides,Carbonyl Compounds 1&2, Carboxylic Acids and their Derivatives. Skill-Organic Chemistry Practice
Physical Chemistry-III	BSCH2303	2017	Employability-Phase Equilibria-1 &2, Chemical Kinetics-2,Catalysis,Surface chemistry. Skill-Nernst distribution law, Physical Chemistry Practice.
Inorganic Chemistry-III	BSCH2401	2017	Employability-Coordination Chemistry-1&2,Transition Elements,Lanthanoids and Actinoids. Skill-separation of lanthanides,



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			Bioinorganic Chemistry-1,2 and Inorganic Chemistry Practice
Organic Chemistry-III	BSCH2402	2017	Employability-Nitrogen Containing Functional Groups,Heterocyclic Compounds-1&2 ,Alkaloids-1. Skill-Alkaloids-2 &3, Organic Chemistry Practice
Physical Chemistry-IV	BSCH2403	2017	Employability-Electrical & Magnetic Properties of Atoms and Molecules and Application . Skill-Electrochemistry :II, Physical Chemistry Practice. Entrepreneurship-Electrochemistry :I
Organic Chemistry-IV	BSCH3501	2017	Employability-Nucleic Acids,Amino Acids,Peptides,Enzymes,for transfer of electrons in biological redox systems .Skill-Lipids,Pharmaceutical Compounds, Organic Chemistry Lab
Physical Chemistry-V	BSCH3502	2017	Employability-Molecular Spectroscopy,Raman spectroscopy,Nuclear Magnetic Resonance (NMR) spectroscopy,Photochemistry. Skill-Physical Chemistry Practice
Inorganic Chemistry-IV	BSCH3601	2017	Employability-General methods of preparation of mono and binuclear carbonyls of 3d series,Zeise's salt,Study of the some industrial processes and their mechanism.Skill-Inorganic Chemistry Practice
Organic Chemistry-V	BSCH3602	2017	Employability-Organic Spectroscopy,Carbohydrates,Dyes,Metalocene-based Ziegler-Natta polymerisation of alkenes. Skill-Polymers Introduction and classification ,IR Spectroscopy,NMR Spectroscopy,Organic Chemistry Practice
Industrial Chemicals and Environment	BSCH3503	2017	Employability-Industrial Gases and Inorganic Chemicals,Inorganic Chemicals,Energy & Environment,Biocatalysis. Skill-Environment and its segments, Water Pollution,Industrial effluents from the following industries and their treatment, Industrial Chemicals & Environment practice.



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Inorganic Materials of Industrial Importance	BSCH3504	2017	Employability-Glass,Ceramics,Fertilizers,Surface Coatings,Alloys,Catalysis.Skill-Batteries,Inorganic Materials of Industrial Importance practice
Instrumental Methods of Chemical Analysis	BSCH3604	2017	Skill-Introduction to spectroscopic methods of analysis,Molecular spectroscopy,Separation techniques,Instrumental Methods of Chemical Analysis practice. Employability-Molecular spectroscopy instrumentation and application,Atomic spectroscopy,Spectrophotometers principle and application,
Calculus	BSMA1101	2016	Skill- Lab work to be performed on a Computer Employability- Asymptotes,Curvature,Tracing of Curves
Linear Algebra	BSMA1102	2016	Skill –To gain the knowledge on MATLAB and uses in algebra. Employability- Solve systems of linear equations using various methods
Ordinary Differential Equations	BSMA1202	2016	Skill –To understand solving Free Undamped Motion of a Spring System using Python and other skills Employability- Be competent in solving linear/non-linear 1st & higher order ODEs using analytical methods to obtain their exact solutions.
Numerical Analysis	BSMA2401	2017	Skill – Numerical Solution of different linear and non-linear equations using software. Employability - Perform error analysis to select an appropriate numerical model and to estimate errors in numerical solution of a given problem.
Complex Analysis	BSMA3501	2017	Skill –Learn the Plotting of complex functions using Matlab Employability - Illustrate the applications of the calculus of residues in the evaluation of real integrals.



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Discrete Mathematical Structure	BSMA3602	2017	Skill –To work with different types of Sets, Lattices and Boolean Algebra using Python Employability - To learn a particular set of mathematical facts and to apply their applications in many subjects of Computer Science and Engineering such as Cryptography, Theory of Computation & Data Networking.
Analysis-I	BSMA1201	2017	Skill- In much of analysis, the emphasis is not on finding explicit solutions to specific problems Employability- Produce rigorous proofs of results that arise in the context of real analysis
Analysis-II	BSMA2301	2017	Skill - To describe various theorems about Riemann sums and Riemann integrals and emphasize the proofs' development. Employability - Apply change of variables in double integrals and triple integrals
Modern Algebra	BSMA2302	2017	Skill - To introduce students to the language and precision of modern algebra Employability - Work effectively with others to discuss homework problems put on the board.
Partial Differential Equations and System of Ordinary Differential Equations	BSMA2303	2017	Skill - Introduce students to how to solve linear Partial Differential Equations with different methods. Employability - Identify and solve Laplace, Diffusion and Wave equations.
Advanced Analysis	BSMA2402	2017	Skill - Construct rigorous mathematical proofs of basic results in real analysis; Employability - Define the limit point, interior point, neighbourhood etc.
Programming in C	BSMA2403	2017	Skill - To understand advanced concepts of C such as Arrays, Strings, functions pointers and structures in detail. Employability - Write programs that perform operations using derived data types.
Probability and Statistics	BSMA3502	2017	Skill- To apply probability and statistics in engineering and science like disease modeling, climate Prediction and computer networks etc using MATLAB



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			Employability - Compute probabilities based on practical situations using the Binomial, Poisson and Normal distributions.
Phycology and Microbiology	BSBO1101	2017	Employability- Classification and identification of microbes and algae. Skill-Practice on staining procedure of different Algae and Bacteria.
Biomolecules & Cell biology	BSBO1102	2017	Employability- Carbohydrates,Lipids,Nucleic Acids,Bioenergetics Skill- Students Completed practice on analysis of carbohydrates, protein, reducing sugars etc.
Archegoniate	BSBO1202	2017	Employability-Learn the phylogeny of archegoniate . Skill-Practice on cutting thin sections and staining procedure of Archegoniates
Anatomy of Angiosperms	BSBO2301	2017	Employability-Learn identification of plants based on cytotaxonomy, helps in forensic science, pharmacology and drug development. Skill- To gain hand on skills about the anatomical details of conducting tissues and secretory tissues.
Plant Ecology and Phytogeography	BSBO2402	2017	Employability-Soil,Water,Light, temperature, wind ,fire and Plant Communities. Skill -Students do practicals on environmental laboratory and analyse on carbonates, chlorides, nitrates, sulphates, organic matter, morphological adaptations of hydrophytes and xerophytes
Plant Systematics	BSBO2403	2017	Employability- Students can easily identified plants, prepared and deposited herbarium, they also practiced digital documentation of herbarium. Skill- Hands on skill on herbarium preparation.
Reproductive Biology of Angiosperm	BSBO3501	2017	Employability -Keen Observations of some of the variation in different parts of sample fruits, and relate these modifications to changes in function,significance of angiosperm gametogenesis and fertilization, including



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			double fertilization. Help to pursue higher studies. Skill -Hands on skill on Pollen viability: Tetrazoliumtest. Germination: Calculation of percentage germination in different media using hanging drop method.
Plant Physiology	BSBO3502	2017	Employability- A keen observation and application of Plant water relationship and Growth regulators. Skill-Hand on practice on calculate the area of an open stoma and percentage of leaf area open through stomata;Study the phenomenon of seed germination
Plant Metabolism	BSBO3601	2017	Employability- Students isolate and quantify the biomolecules, metabolites present on plants and analyse them. Skill- Hand on skill of bioassay of <i>Avena coleoptile</i> .
Bioinformatics	BSBO3603	2017	Employability- Different biological Data bases. Skill -Practicals on Nucleic acid and protein databases., Sequence homology and Gene annotation etc., skill on rug discovery studio
Natural Resource Management	BSBO3604	2017	Employability- Management of nautral resources and IPR Skill-Students practiced on Measurement of dominance of woody speciesby DBH calculation, Ecological modeling.
Non-Chordates I	BSZO1101	2017	Employability - General characteristics and Classification up to classes, Study of Euglena, Amoeba and Paramecium,Life cycle and pathogenicity of Plasmodium vivax and Entamoeba histolytica, General characteristics and Classification up to classes, Canal system and spicules in sponges, General characteristics and Classification up to classes, Metagenesis in Obelia Polymorphism in Cnidaria, Corals and coral reefs, General characteristics and Evolutionary significance, General



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			characteristics and Evolutionary significance., General characteristics and Classification up to classes, Life cycle and pathogenicity o Fasciola hepatica and Taenia solium, General characteristics and Classification up to classes, Life cycle, and pathogenicity of Ascaris lumbricoides and Wuchereria bancrofti, Parasitic adaptations in helminthes
Principles of Ecology	BSZO1102	2017	Employability - Unitary and Modular populations Unique and group attributes of population: Density, nasality, mortality, life tables, fecundity tables, survivorship curves, age ratio, sex ratio, dispersal and dispersion. Exponential and logistic growth, equation and patterns, r and K strategies, Types of ecosystems with one example in detail, Food chain: Detritus and Grazing food chains, Linear and Y-shaped food chains, Food web., Nutrient and biogeochemical cycle with one example of Nitrogen cycle, Human modified ecosystem , Ecology in Wildlife Conservation and Management Principles of Ecology Lab
Non-Chordate II	BSZO1201	2017	Employability - Annelida: General characteristics and Classification up to classes, Arthropoda: General characteristics and Classification up to classes, Social life in bees and termites, General characteristics and Classification up to classes, Pearl formation in bivalves, General characteristics and Classification up to classes
Cell Biology	BSZO1202	2017	Employability -Cell Division: Mitosis, Meiosis, Cell cycle and its regulation, Cell Signaling: GPCR and Role of second messenger (cAMP) • Preparation of permanent slide to show the presence of Barr body in human female blood cells/cheek cells. <ul style="list-style-type: none"> • Preparation of permanent slide to demonstrate: <ol style="list-style-type: none"> i) DNA by Feulgen reaction



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			ii) DNA and RNA by MGP iii) Mucopolysaccharides by PAS reaction iv) Proteins by Mercurobromophenol blue/Fast Green
Diversity of Chordates	BSZO2301	2017	Employability - General characteristics and outline classification, General characteristics of Chondrichthyes and Osteichthyes, General characteristics and classification up to order; Parental care in Amphibians, General characteristics and classification up to order; Affinities of Sphenodon; Poison apparatus and Biting mechanism in snakes, General characteristics and classification up to order Archaeopteryx—a connecting link; Principles and aerodynamics of flight, Flight adaptations and Migration in birds
Animal Physiology: Controlling and Coordinating Systems	BSZO2302	2017	Employability - Physiology of hearing and vision, Histology of testis and ovary; Physiology of male and female reproduction; Puberty, Methods of contraception in male and female.
Fundamentals Of Biochemistry	BSZO2303	2017	Employability - Carbohydrates: Structure and Biological importance: Monosaccharides, Disaccharides, Polysaccharides and Glycoconjugates, Structure and Significance: Physiologically important saturated and unsaturated fatty acids, Tri-acylglycerols, Phospholipids, Glycolipids, Nucleic Acids: Structure: Purines and pyrimidines, Nucleosides, Nucleotides, Nucleic acids Cot Curves: Base pairing, Denaturation and Renaturation of DNA Types of DNA and RNA, Complementarity of DNA, Hpyo-Hyperchromaticity of DNA. Module-VI (12Hrs), Enzymes: Nomenclature and classification; Cofactors; Specificity of enzyme action; Isozymes; Mechanism of enzyme action; Enzyme kinetics; Factors affecting rate of



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			enzyme-catalyzed reactions; Derivation of Michaelis-Menten equation, Concept of K_m and V_{max} , Lineweaver-Burk plot; Multi-substrate reactions, <ul style="list-style-type: none"> • Separation of amino acid using Paper. Chromatography . • Action of salivary amylase under optimum conditions. • Effect of different pH on salivary amylase activity. • Effect of different Temperature on salivary amylase activity. • Effect of inhibitor on salivary amylase activity.
Comparative Anatomy of Vertebrates	BSZO2401	2017	Employability : Overview of axial and appendicular skeleton, Jaw suspensorium, Visceral arches, <ul style="list-style-type: none"> • Dissection / video demonstration of Chick to study arterial system (subject to permission) • Dissection / video demonstration of Chick to study system (subject)
Animal Physiology: Life Sustaining Systems	BSZO2402	2017	Employability <ul style="list-style-type: none"> • Determination of ABO Blood group • Enumeration of red blood cells using haemocytometer
Biochemistry of Metabolic Processes	BSZO2403	2017	Employability - Carbohydrate Metabolism , Lipid Metabolism, Protein Metabolism, Oxidative Phosphorylation <ul style="list-style-type: none"> • To estimate the protein content of supplied tissue by colorimeter method • To estimate the glycogen content of supplied tissue by colorimeter method • To extract & colorimetric estimation of nucleic acid. • To demonstrate the effect of temperature on enzyme activity. • Preparation of Standard Curve of Bovine serum Albumin. • Detection of SGOT in given sample using



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			available kit. (Chick/Goat Serum) <ul style="list-style-type: none"> • Determination of SGPT in given sample by using available kit.(Chick/Goat Serum) • Estimation of total protein content in the given sample by Lowry's Method. • To study the enzymatic activity of Trypsin and Lipase. • Dry Lab: To trace the labelled C atoms of Acetyl-CoA till in the TCA cycle
Molecular Biology	BSZO3501	2017	Employability - Salient features of DNA and RNA, Watson and Crick model of DNA DNA Replication DNA Replication in prokaryotes and eukaryotes, mechanism of DNA replication, Semi-conservative, bidirectional and semi-discontinuous replication, RNA priming, Replication of circular and linear ds-DNA, replication of telomeres, Process of protein synthesis in prokaryotes: Ribosome structure and assembly in prokaryotes, fidelity of protein synthesis, aminoacyl tRNA synthetases and charging of tRNA; Proteins involved in initiation, elongation and termination of polypeptide chain; Inhibitors of protein synthesis; Difference between prokaryotic and eukaryotic translation, Gene silencing, Genetic imprinting DNA Repair Mechanisms: Pyrimidine dimerization and mismatch repair Regulatory RNAs, Ribo-switches, RNA interference, miRNA, siRNA., • Preparation of liquid culture medium (LB) and raise culture of E. coli <ul style="list-style-type: none"> • Preparation of Standard Curve DNA by Diphenyl method. • Preparation of solid culture medium (LB) and growth of E. coli by spreading and streaking • Preparation of Standard Curve RNA using Orcinol reaction. • Histochemical demonstration of DNA (Liver/Testis of Chick). • Demonstration of DNA & RNA by MGP.



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Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			<ul style="list-style-type: none"> • Demonstration of Mucopolysaccharides by PAS reaction. • Demonstration by Mercurbromophenol blue/Fast Green.
Principles Of Genetics	BSZO3502	2017	<p>Employability - Types of chromosomal aberrations (Classification, figures and with one suitable example of each), Molecular basis of mutations in relation to UV light and chemical mutagens; Detection of mutations: CLB method, attached X method, Sex Determination, Chromosomal mechanisms of sex determination in Drosophila and Man Extra - chromosomal Inheritance, Transposons in bacteria, Ac-Ds elements in maize and P elements In Drosophila, Transposons in humans,</p> <ul style="list-style-type: none"> • Chi-square analyses using seeds/beads/Drosophila. • Linkage maps based on data from conjugation, transformation and transduction. • Linkage maps based on data from Drosophila crosses. • Study of karyotype (Human or Drosophilla).
Developmental Biology	BSZO3601	2017	<p>Employability- Early Embryonic Development Gametogenesis, Spermatogenesis, Oogenesis; Types of eggs, Egg membranes, Fate maps (including Techniques); early development of frog and chick up to gastrulation; embryonic induction and organizers, • Primitive streak (13 and 18 hours), 21, 24, 28, 33, 36, 48, 72, and 96hours of incubation (Hamilton and Hamburger stages)</p> <ul style="list-style-type: none"> • Study of the developmental stages and life cycle of Drosophila from stock culture • Study of different sections of placenta (photomicrograph/ slides) • Project report on Drosophila culture/chick embryo development



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Evolutionary Biology	BSZO3602	2017	Employability- Population genetics: Hardy-Weinberg Law (statement and derivation of equation, application of law to human Population); Evolutionary forces upsetting H-Wequilibrium; Natural selection (concept of fitness, selection coefficient, derivation of oneunit of selection for a dominant allele, genetic load, mechanism of working, types of selection, density-dependent selection, heterozygous superiority, kin selection, adaptive resemblances, sexual selection, Genetic Drift (mechanism, founder’s effect, bottleneck phenomenon; Role of Migration and Mutation in changing allele frequencies.Product of evolution: Micro evolutionary changes (inter-population variations, <ul style="list-style-type: none"> • Study of fossils from models/ pictures • Study of homology and analogy from suitable specimens • Study and verification of Hardy-Weinberg Law by chi square analysis • Demonstration of role of natural selection and genetic drift in changing allele • Frequencies using simulation studies • Graphical representation and interpretation of data of height/ weight of a sample of 100 humans in relation to their age and sex. • Construction of phylogenetic trees with the help of bioinformatics tools (Clustal,X, Phylip, NJ) and its interpretation
Animal Biotechnology	BSZO3503	2017	Employability-Genetically Modified Organisms , Applications of transgenic animals: Production of pharmaceuticals, production of donor organs, knockout mice. Production of transgenic plants: Agrobacterium mediated transformation. Applications of transgenic plants: insect and herbicide resistant plants, Culture Techniques and Applications,



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Fish and Fisheries	BSZO3504	2017	Employability- Sustainable Aquaculture; Extensive, semi-intensive and intensive culture of fish; Pen and cage culture; Polyculture; Composite fish culture; Brood stock management; Induced breeding of fish; Management of finfish hatcheries; Preparation and maintenance of fish aquarium; Preparation of compound diets for fish,
Immunology	BSZO3603	2017	Employability-Cell and molecules involved in innate immunity, Adaptive immunity (Cell mediated and humoral), Passive: Artificial and natural Immunity, Active: Artificial and natural Immunity, Immune dysfunctions (brief account of autoimmunity with reference to Rheumatoid Arthritis and tolerance, AIDS, Structure and functions of different classes of immunoglobulins, Antigen-antibody interactions, Immunoassays (ELISA and RIA), 5. ABO blood group determination,
Fundamentals of Genetics	ASPG1101	2017	Application of genetic principles in plant breeding:employability& skill dev.
Fundamentals of Soil Science	ASAC1101	2017	Understanding the theory of soil science and its characteristics :employability.
Fundamentals of Horticulture	ASHO1101	2017	Understanding the fundamentals of various aspects of horticulture crops :employability
Fundamentals of Plant Pathology	ASPP1101	2017	Understanding the fundamentals of plant disease causing organisms and their management: employability
Rural Sociology & Educational Psychology	ASEE1102	2017	Learning the basic concepts of rural sociology and psychology for its application in ag.extension : employability.
Soil and Water Conservation Engineering	ASAE1101	2017	Understanding about the principles of soil water conservation:employability
NSS/NCC/Physical Education & Yoga Practices	ASPE1101	2017	Understanding and application of different yoga asanas and pranayama techniques for physical and mental well-being :Skill & Employability



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Irrigation water management	ASAG1206	2017	Understanding the practices of water management and its application in irrigation management : skill dev.& employability
Fundamentals of Entomology –I (Insect Morphology and Taxonomy)	ASEN1201	2017	Understanding the basic principles of morphology of different plant disease causing insects: Employability
Fundamentals of Agricultural Extension Education	ASEE1201	2017	Learning about the latest extension methods i.e. audio-visual aids, field demonstration: Employability
Farm Machinery and Power	ASAE1202	2017	Learning about latest machines used in crop production: employability
Crop Production Technology – I (Cereals, millets and pulses) Kharif crops	ASAG2103	2017	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability
Fundamentals of Plant Breeding	ASPG2103	2017	Understand the basic methods of plant breeding i.e. emasculation and crossing : Skill & Employability
Fundamentals of Entomology- II (Insect ecology and concepts of IPM)	ASEN2102	2017	Understanding the basic principles of morphology of different plant disease causing insects: Employability
Weed management	ASAG2105	2017	Identification of Weeds and its management in different crops : employability
Agricultural Informatics	ASAI2101	2017	To disseminate,capture,access information to achieve sustainable use of agricultural resources : employment.
Communication skills and personality development	ASEE2104	2017	Develop knowledge of english communication through presentation, extempore and GD: Skill & Employability
Crop Production Technology –II (Oil seeds, fiber, sugar, tobacco, and fodder Crops) Rabi crops	ASAG2204	2017	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability



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Production Technology for Ornamental Crops, MAP and Landscaping	ASHO2204	2017	To gain expertise in production of ornamental crops and landscaping : ,employability & skill development
Renewable Energy and Green Technology	ASAE2203	2017	Understanding the principles of renewable energy for agriculture practice: employability
Manures, Fertilizers and Soil Fertility Management	ASAC2202	2017	Understanding the manures and fertilizer and its application:skill and employability.
Fundamentals of Plant Biotechnology	ASPB2201	2017	Understanding and learning about the methods of plant biotechnology i.e. DNA Microinjection and Short-gun method: Employability
Rain-fed Agriculture & Watershed Management	ASAG2211	2017	Understanding the methods of rainwater harvesting and groundwater rechargement :employability
Principles of seed technology	ASPG2202	2017	Gaining knowledge in seed storage, certification and marketing ways: employment
Diseases of Field and Horticultural Crops and their Management –I	ASPP2202	2017	Identification and management of diseases of field crops :employability
Problematic Soils and their Management	ASAC3103	2017	Understanding fertility and pH levels of soil to manage problematic soils :skill dev and employability
Pests of field Crops and Stored Grain and their Management	ASEN3103	2017	Identification and management of store pest and management of field crops :employability
Diseases of Field and Horticultural Crops and their Management-II	ASPP3103	2017	Identification and management of diseases of horticultural crops :employability
Crop Improvement-I (Cereals,millets,pulses and oil seeds etc)(Kharif crops)	ASPG3104	2017	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability
Principles of food science and nutrition	ASFS3101	2017	Identification of microbes in food processing and packaging: employability



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Geoinformatics and Nano-technology for Precision Farming	ASAG3110	2017	To gain knowledge in nano materials and geoinformatics applications i.e. moonsoon tracking system, drainage networks for precision farming:Employability, skill and enterprenureship
Practical Crop Production – I (Kharif crops)	ASAG3108	2017	To gain expertise in production of commercial kharif crops: employability
Farming System & Organic farming for Sustainable Agriculture	ASAG3207	2017	To gain expertise in organic farming practice: employability, skill development and Entrepreneurship
Practical crop production II (Rabi crops)	ASAG3209	2017	To gain expertise in commercial rabi crop production: employability
Post-harvest Management and Value Addition of Fruits and Vegetables	ASHO3205	2017	Understanding different practices with relation to Value addition of fruits and vegetables and their packaging and storage :Employability & skill development
Pests of horticultural crops and their management and Beneficial Insects	ASEN3204	2017	Identification and management of crop & storedgrain pests :employability & skill dev
Crop Improvement-II (fibre, sugar, starches, narcotics, Vegetables, fruits, and flowers)	ASPG3205	2017	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability
Principles of Integrated Pest and Disease Management (50% Entomology and 50% Pathology)	ASPP3204	2017	Identification of insects pests of different crops and its integrated pest management- Entrepreneurship& skill dev,employability
Protected cultivation and post harvest technologies	ASAE3204	2017	Understanding different practices with relation to Value addition of fruits and vegetables and their packaging and storage :Employability & skill development
Intellectual Property Rights	ASIP3201	2017	Understanding the process to file patent and register for copyrights:skill and employability.



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Farm Management	ASEC3204	2017	Expertise to manage agriculture farm : Employability
Commercial Plant Breeding	ASFE2204	2017	Understanding of commercial plant breeding techniques i.e. emasculation, crossing and storage practices :Employability & skill development
Micro propagation Technologies	ASFE2208	2017	Gaining knowledge in different micro irrigation techniques i.e. sprinkler and drip irrigation: Skill &Employability
Hi-tech. Horticulture	ASFE2202	2017	Gaining knowledge in different techniques i.e. vertical farming and hydroponics of hitech horticulture: skill & employability
Remote Sensing & GIS Applications	ASFE2209	2017	Understanding the applications of remote sensing i.e. analyzing the condition of rural roads and detecting land use: Employability, Entrepreneurship and Skill development
Climate Smart Agriculture	ASFE2210	2017	Gaining knowledge on the usage of drones in agriculture for crop improvement: Employability, Entrepreneurship and Skill development
Principles of Aquaculture	ASFE2213	2017	Understanding the various methods i.e. breeding, raising and harvesting in fish production :Employability, Entrepreneurship and Skill development
RAWEP	AGRW4101	2017	To impart diagnostic and remedial practical training and skills in crop production/horticulture/plant protection through work experience: employability,enterpreneurship and skill development.
AELP	AGEL4201	2017	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship,skill dev.and employability.
Principles and practices of water management	MAAG 1103*	2017	Skill development: The students can learn about judicious water management using different efficient technologies which would further lay



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			emphasis on job opportunities as well as they can make themselves self sufficient by serving as entrepreneurs to serve the farming community
Cropping systems and sustainable agriculture	MAAG 1206*	2017	Skill development: The students acquire knowledge about different cropping systems under various climatic situations and they can make themselves self employed as successful entrepreneurs
Intellectual property and its management in agriculture	MAIP 1201	2017	Employability and Skill development: students get an overall idea of IPR and their applications towards the protection of property rights
Agricultural research, research ethics and rural development programmes	MAAR2101	2017	Employability and Skill development: Acquire knowledge for research ethics and government policies.
Development perspectives of extension education	MAEX1101*	2017	Employability: Understanding the rural development programs i.e. Kisan call center, Farmer Field School.
Gender sensitization for development	MAEX1105*	2017	Research and employability: provide them an opportunity to work in sectors relating to women empowerment
Statistical methods for social sciences	MAST 1203	2017	Skill: Students can learn the usage of different statistical tools that in turn would provide them a scope for employment
Participatory methods for technology development and transfer	MAEX1104	2017	Skill and employability: students can learn the basic concepts of participatory techniques and thereby help in technology transfer from lab to land
Fish Food Organisms	FSAQ2109	2017	Learn and practice the nutritional requirements of fish/shellfish larvae and knowledge on mass culture and enrichment of live food organisms. Employability and Skill development
Freezing Technology	FSPT2103	2017	Understanding the different types of low temperature preservation, handling, storage of different type of fish and fishery products to



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			minimize the spoilage along with post harvest loss. Employability and Skill development
Genetics and Breeding	FSAQ2111	2017	Gain knowledge on genetic basis of inheritance and breeding plans for commercially important fishes. Employability, Entrepreneurship and Skill development
Fish Immunology	FSHM2106	2017	Study the types of immunity, antigen-antibody interactions and learn the Serological methods in disease diagnosis. Employability and Skill development
Fisheries Economics	FSEE2102	2017	Learning the interface between economics and effective management decisions for fisheries business firm. Employability and Skill development
Coastal Aquaculture and Mariculture	FSAQ2204	2017	To gain knowledge in establishing and managing different fish/shellfish farming systems in coastal waters. Employability and skill development
Fish Nutrition and Feed Technology	FSAQ2208	2017	Practical knowledge of feed formulation and different feed processing techniques and prepare feed based on the nutritional requirements of fish/shell fish. Employability and skill development
Fish and Shellfish Pathology	FSHM2201	2017	Study fish and shellfish pathogens, their control measures and treatments. Employability and Skill development.
Shellfish Hatchery Management	FSAQ2206	2017	Practical skills of seed production and hatchery management of commercially important crustaceans and molluscs and can setup his/her own hatchery. Employability, Entrepreneurship and Skill development.
Communication Skills and Personality Development	FSEE2208	2017	Students will improve interpersonal skills, active listening and responding skills, communication into everyday practice, teamwork and group discussions skills. Employability and Skill development.



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Pharmacology and Pharmaceutical Drug Analysis	MSFS2101	2017	Employability : Students learn about basic principles of pharmacology, pharmacokinetics & qualitative and quantitative analysis of Pharmaceutical drug by various chemical and instrumental techniques.
Concepts of Toxicology	MSFS2102	2017	Skill & Employability, : Students gain basic knowledge about disposition and translocation of toxicants, analytical toxicology, toxic agents such as pesticides, metals etc and their effects & applications of toxicology.
Modern and Applied Analytical Forensic Chemistry	MSFS2103	2017	Skill & Employability : Student learns about basic concepts of forensic nuclear chemistry, gains knowledge about drug chemistry, petroleum chemistry and fire chemistry. learns about analysis of lipids and fats of different oils and analysis of dairy products
Pharmacology and Pharmaceutical Drug Analysis Laboratory	MSFS2104	2017	Skill & Employability : Students do qualitative and quantitative analysis of Pharmaceutical drug by various chemical and instrumental techniques.
Concepts of Toxicology Laboratory	MSFS2105	2017	Skill & Employability, : Students do analysis of various poisons such as metallic poisons, pesticides, plant poisons etc. and gain knowledge about interpretation of toxicological findings and preparation of reports.
Modern and Applied Analytical Forensic Chemistry Laboratory	MSFS2106	2017	Skill & Employability : Student performs analysis of various cases in forensic chemistry, validation of new methods & accreditation in FSL's, analysis of NDPS, explosives, fire, petroleum products, beverages, bribe trap cases, adulterated food, fibres & examination of forensic chemicals.
Advances in Physical Techniques	MSFS2121	2017	Employability : Student gains knowledge about thermal analysis and different spectroscopy techniques, microscopy techniques and forensic nanotechnology and forensic engineering



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Concepts of Conventional and Modern Ballistics	MSFS2122	2017	Employability : student gains knowledge about operational features of firearms, ammunition, external ballistics, GSR analysis and procedures for test firing & other instrumental techniques used for ballistics evidence analysis.
Audio Recognition and Video Analysis	MSFS2123	2017	Employability : Student gains knowledge about basic concepts of voice recognition, handling of audio evidences, processing of speech signals, Gold wave analysis & video analysis
Advances in Physical Techniques Laboratory	MSFS2124	2017	Skill & Employability : Students perform examination of evidences by EDXRF, measures RI of physical evidences.
Concepts of Conventional and Modern Ballistics Laboratory	MSFS2125	2017	Skill & Employability : Students perform examination of barrel wash, analysis of GSR
Audio Recognition and Video Analysis Laboratory	MSFS2126	2017	Skill & employability : Students record, edit & process audi files using goldwave software, speech acquisition and analysis of speech samples using CSL-4500 software, Video analysis and detection of tampered video files using videofocus
General Microbiology	MSCM1101	2016	Functions of cell organelles in microorganisms; Growth of microorganisms: Skill dev and Employability
Human Anatomy & Physiology	MSCM1102	2016	Gross anatomy of human body and detailed physiology: Employability
Biomolecules	MSCM1103	2016	Metabolism of Carbohydrates, Lipids, Proteins, Nucleic acid: Employability
Analytical Techniques	MSCM1104	2016	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership
Basic Microbiology Lab	MSCM1105	2016	Techniques for staining microorganisms, isolating and culturing microorganisms: Skill and Employability and Enterpreunership
Systemic Bacteriology	MSCM1201	2016	Understanding the Morphological identification, pathogenesis, laboratory diagnosis and



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			epidemiology of clinically significant bacteria: Skill dev and Employability
Molecular Biology & Clinical Biochemistry	MSCM1202	2016	Understanding the central dogma of life, Metabolic disorders and diagnostic enzymology, Biochemical tests for organ function: Employability
Medical Parasitology & Mycology	MSCM1203	2016	Clinical features of important parasites, protozoans, fungi: Skill dev. & Employability
Bacteriology, Parasitology & Mycology Lab	MSCM1205	2016	Pathological investigations of urine, stool and other biological specimen; Culture for Pathogenic Fungi : Skill dev. & Employability & Enterpreunership
Immunology & Virology	MSCM2301	2017	Clinically relevant serological analysis; Clinically significant virus: Skill dev. & Employability
Diagnostic Bacteriology	MSCM2302	2017	Diagnosis of bacteria from infective regions of the body: Skill dev and Employability
Biochemistry	MSCM2303	2017	Concepts of Carbohydrates, proteins, lipids and their metabolism: Skill dev and Employability
Histology	MSCM2304	2017	Concept of about Histotechnology; fixation in histopathology lab: Skill dev and Employability
Communicative Practice Laboratory- II	FCHU0204	2017	Effectiveness in participation in group discussion and job interviews: Skill dev. And Employability
Immunology, Histopathology & Biochemistry Lab	MSCM2306	2017	Performing immunological/ serological tests and their interpretation: Skill dev and Employability. Performing histopathological analysis and their interpretation: Skill dev and Employability
Project	MSCM2401	2017	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
Internship	MSCM2402	2017	Dealing with patient, analysis and interpretation of diseases: Skill dev. & Employability & Enterpreunership
Anatomy & Physiology	MSMT1102	2016	Concept and Scopes of anatomy & physiology: Employability



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Medical Instrumentation and Technique	MSMT1104	2016	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership
Hematology Lab	MSMT1105	2016	Performing various hematological tests: Skill and Employability and Enterpreunership
Medical Microbiology	MSMT1201	2016	Growth of microorganisms; Properties of viruses and fungi: Employability
Molecular Biology & Clinical Biochemistry	MSMT1202	2016	Understanding the central dogma of life, Metabolic disorders and diagnostic enzymology, Biochemical tests for organ function: Employability
Clinical pathology & Microbiology Lab	MSMT1204	2016	Collection of blood, stool, body fluids and study their chemical and morphological examination: Skill dev. & Enterpreunership culturing and identification of pathogenic microorganims: Skill dev. & Employability & Enterpreunership
Immunology, Bacterial Serology & Parasitology	MSMT2301	2017	Clinically relevant serological analysis; Clinically significant virus: Skill dev. & Employability
Biochemistry	MSMT2303	2017	Concepts of Carbohydrates, proteins, lipids and their metabolism: Skill dev and Employability
Histology	MSMT2304	2017	Concept of about Histotechnology; fixation in histopathology lab: Skill dev and Employability
Immunology, Biochemistry & Histopathology Lab	MSMT2306	2017	Performing immunological/ serological tests and their interpretation: Skill dev and Employability. Assay on blood serum for biochemical test: Skill dev and Employability. Performing histopathological analysis and their interpretation: Skill dev and Enterpreunership.
Project	MSMT2401	2017	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
Internship	MSMT2402	2017	Dealing with patient, analysis and interpretation of diseases: Skill dev. & Employability & Enterpreunership



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Introductory Cell Biology	BSCM1101	2017	Understanding the functions of cell organelles: Employability
Human Anatomy & Physiology	BSCM1102	2017	Gross anatomy of human body and detailed physiology: Employability
Basic Haematology	BSCM1103	2017	Carry out hematological investigations: Skill dev. & Employability & Enterpreunership
Instrumentation & Techniques	BSCM1104	2017	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership
Human Anatomy, Physiology & Haematology Practical	BSCM1105	2017	Understanding the physiological aspects of growth and development of Human organs/ tissues: Employability & Enterpreunership
General Microbiology	BSCM1201	2017	Understanding the details of microbial cell organelles: Skill dev and Employability
Clinical Biochemistry	BSCM1202	2017	Understanding the concept of metabolism of carbohydrates, amino acids, lipids: Employability
Clinical Pathology, Biochemisrty & Microbiology Practical	BSCM1204	2017	Performing pathological investigations on human specimen: Skill dev. & Enterpreunership; Microscopic analysis of specimen collected: Skill dev. & Enterpreunership; principle of spectrophotometry, colometry, photometry and Clinical biochemistry tests: Skill dev and Employability and Enterpreunership
Communicative Practice Laboratory- II	FCHU0202	2017	Effectiveness in participation in group discussion and job interviews: Skill dev. And Employability
Introductory Biology	BSMT1101	2016	Understanding the functions of cell organelles: Employability
Basic Anatomy & Physiology	BSMT1102	2016	Gross anatomy of human body and detailed physiology: Employability
Basic Hematology	BSMT1103	2016	Carry out hematological investigations: Skill dev. & Employability & Enterpreunership
Basic Medical Instrumentation & Techniques	BSMT1104	2016	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Anatomy , Physiology & Hematology Lab	BSMT1105	2016	Understanding the physiological aspects of growth and development of Human organs/ tissues and hematological investigations: Employability & Enterpreunership
Microbiology	BSMT1201	2016	Understanding the details of microbial cell organelles: Skill dev and Employability
Basic Biochemistry	BSMT1202	2016	Understanding the concept of metabolism of carbohydrates, amino acids, lipids: Employability
Immunology	BSMT2301	2017	Understanding the concept of Innate & adaptive immune system; performing serological analysis: Skill dev. & Employability & Enterpreunership
Applied Hematology	BSMT2302	2017	Concept of Haemopoietic disorders, laboratory diagnosis of leukemia, hemolytic anemia, haemophilia, ITP: Skill dev. & Employability & Enterpreunership
Applied Biochemistry	BSMT2303	2017	Basic concept of Biochemistry; Employability
Basic Histology	BSMT2304	2017	Concept of Histotechnology, histopathology: Skill dev. & Employability & Enterpreunership
Immunology & Histology Lab	BSMT2305	2017	Performing Serological reactions: Skill and Employability
Parasitology	BSMT2401	2017	Understanding the life cycle and lab diagnosis of various clinically significant parasite: Skill dev. and Employability
Advance Biochemistry	BSMT2402	2017	Learning the principle of spectrophotometry, colometry, photometry and Clinical biochemistry tests: Skill dev and Employability and Enterpreunership
Advanced Hematology	BSMT2403	2017	Understanding the lab diagnosis for Leukamoid reactions, DIC: Skill dev and Employability and Enterpreunership
Basic Computers and Information Science	BSMT2405	2017	Concept for Input & output device, Processor & memory, Word, excel, power point: Skill dev and Employability
Introductory Biology	BSRT1101	2016	Understanding the functions of cell organelles: Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Basic anatomy	BSRT1102	2016	Gross anatomy of human body with emphasis to the skeletal organization: Employability
Basic physiology	BSRT1103	2016	Understanding the physiology and mechanisms of living things: Employability
Basic Radiation Physics	BSRT1104	2016	Understanding of the concept of Radiation in the study of human anatomy and disease identification: Employability
Basic Medical Instrumentation & Techniques	BSRT1105	2016	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership
Anatomy and Physiology lab	BSRT1106	2016	Understanding the physiological aspects of growth and development of Human organs/ tissues: Employability & Enterpreunership
Fundamental of Medical Imaging and Radiotherapy	BSRT1201	2016	Understanding the basic concepts of xrays and their emission; ultrasound and transducers, CT, MRI: Employability
Basic Biochemistry	BSRT1202	2016	Understanding the concept of metabolism of carbohydrates, amino acids, lipids: Employability
Equipments Of Radiotherapy	BSRT1203	2016	Conceptualization of linear accelarators, simulators, magnetrons and klestron: Employability & Enterpreunership
Applied Radiation Physics and Radiation Protection	BSRT2301	2017	Ability to understand the concept of Radioation in diagnosis and protection towards radiation: Employability
Advance Radiographic Technique	BSRT2302	2017	Familiariation with the equipments of ultrasound, basic principle of ct scanning and MRI: Employability
Special Radiographic Technique and Procedures	BSRT2303	2017	Understanding of special procedures and importance of contrast media: Skill dev. and Employability
Radiotherapy and Branchy Therapy Techniques In Malignant And Non Malignant Diseases	BSRT2401	2017	Concept on treatment of cancer, dose limits for individuals: Skill dev and Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Interventional Radiology & Drugs Used in Radiology	BSRT2403	2017	Concept on use of anaesthesia in diagnostic radiology: Skill dev and Employability
Hospital posting Medical Imaging Lab - III	BSRT2406	2017	Exposure to different hospitals, training of x-ray, CT and MRI: Skill dev. & Employability & Enterpreneurship
GENERAL PHYSIOLOGY	BSOP1103	2015	Understanding the physiological aspects of growth and development of Human organs/ tissues: Employability
BASIC BIOCHEMISTRY	BSOP1104	2015	Gaining adequency in the concept of metabolism of various macromolecules in humab body: Employability
BIOCHEMISTRY LAB	BSOL1102	2015	Gaining adequency in the concept of metabolism of various macromolecules in humab body and the diagnosis of diseses associated with their malfunction: Skill dev. & Employability
GENERAL ANATOMY & PHYSIOLOGY LAB	BSOL1103	2015	Learning about basic structure and connections between the various parts of the body and their integrative function: Skill dev & Employability
OPTICS II	BSOP1201	2015	Predicting the distribution of light under various conditions: Employability
OCULAR ANATOMY	BSOP1202	2015	Identifying the microscopic structures of various tissues in the eye and correlating the structure with the functions: Employability
OCULAR PHYSIOLOGY	BSOP1203	2015	Elucidating the physiological aspects of normal growth and development of the eye: Employability
OPTICS LABORATORY- II	BSOL1201	2015	Predicting the distribution of light under various conditions: Skill and Employability
ANATOMY& PHYSIOLOGY LAB (CLINIC-I)	BSOL1202	2015	Learning about basic structures in eye and their integrative function: Skill dev & Employability
OCCULAR MICROBIOLOGY AND PATHOLOGY	BSOP2301	2015	Understanding of how knowledge of pathological processes can be utilized in the investigation, management and prevention of disease: Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
CLINICAL EXAMINATION OF VISUAL SYSTEM	BSOL2301	2015	Performing various clinical tests, their interpretation and finding: Skill dev. and Entrepreneurship and Employability
CLINICAL OPTOMETRY-I	BSOL2302	2015	Measurement of lens power, lens centration using conventional techniques, transposition of various types of lenses: Skill dev. and Entrepreneurship and Employability
OCULAR DISEASES -I	BSOP2401	2015	Developing diagnostic approach towards management of the ocular diseases: Employability
OPTOMETRIC OPTICS II	BSOP2403	2015	Developing the art and science of dispensing spectacle lens and frames based on the glass prescription: Skill dev. and Entrepreneurship and Employability
OCULAR DISEASES II	BSOP2405	2015	Knowledge on course sequelae of ocular diseases, their diagnosis and management of the ocular diseases: Employability
CLINICAL OPTOMETRY II	BSOL2401	2015	To gain practical knowledge regarding Ocular Diseases, Visual Optics, Optometric Optics: Skill dev. and Entrepreneurship and Employability
BINOCULAR VISION & SQUINT	BSOP3501	2015	Binocular muscle coordination; Integration of motor and sensory system into binocular vision; Differentiate different types of strabismic anomalies; non strabismic anomalies related to accommodation & convergence: Skill & Employability
CONTACT LENSES	BSOP3502	2015	Understanding of the concepts of contact lenses: Employability
LOW VISION AID	BSOP3503	2015	Training for Low Vision subjects with Low vision devices: Skill and Employability
CONTACT LENS LABORATORY	BSOL3502	2015	Applying the concepts of contact lenses: Skill dev. & Employability
OCULAR DISEASES LABORATORY II	BSOL3503	2015	Performing the basic workup for a patient in a hospital and clinic set up: Skill dev. and Entrepreneurship and Employability
STATISTICS & OCCUPATIONAL OPTOMETRY	BSOP3601	2015	Interpretation and ability to prescribe suitable corrective lenses and eye protective wear: Skill dev. and Entrepreneurship and Employability



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PEDIATRIC & GERIATRIC OPTOMETRY	BSOP3602	2015	Ability to identify, investigate the age-related changes in the eyes: Skill dev. & Employability
SYSTEMIC DISEASES	BSOP3603	2015	Understanding of Ocular findings of the systemic conditions: Employability
OPTOMETRIC INSTRUMENTS LABORATORY-II	BSOL3602	2015	Gaining practical skill in handling the advanced instruments in an Optometry Lab: Skill dev. and Entrepreneurship and Employability
Human Anatomy and Physiology I – Theory	BPHT1101	2017	Skill-Employability- Hand on practice on various clinical aspects of human physiology and also able to perform different types of experiments
Pharmaceutical Analysis I – Theory	BPHT1102	2017	Skill-Employability-Use the techniques, skills, and modern pharmaceutical instruments and tools necessary for pharmacy profession
Pharmaceutics I – Theory	BPHT1103	2017	Skill- Employability- Entrepreneurship - Understand the impact of pharmaceutical solutions in a global, economic, environmental, and societal context
Pharmaceutical Inorganic Chemistry – Theory	BPHT1104	2017	Skill- Employability- Students can prepare various Pharmaceutical dosage form
Remedial Biology – Theory*	BPHT1106	2017	Employability- Apply knowledge of basic science and pharmacy
Remedial Mathematics – Theory*	BPHT1107	2017	Employability- Apply knowledge of basic science and pharmacy
Pharmaceutical Analysis I – Practical	BPHL1102	2017	Skill- Employability- Students can assay ,preparaed and standarized various Heavy metals and Chemicals
Pharmaceutics I – Practical	BPHL1103	2017	Skill- Employability- Students can prepare various Pharmaceutical dosage form
Human Anatomy and Physiology II – Theory	BPHT1201	2017	Skill-Employability- Hand on practice on various clinical aspects of human physiology and also able to perform different types of experiments
Pharmaceutical Organic Chemistry I – Theory	BPHT1202	2017	Skill-Employability- synthesis, characterization of synthetic formulation and solve complex



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			pharmaceutical problems in research and development sector.
Biochemistry – Theory	BPHT1203	2017	Employability- Apply knowledge and concept of basic science and pharmacy and also able to understand all concept regarding biochemical organization.
Pathophysiology – Theory	BPHT1204	2017	Skill-Employability-student get to know about various communicable diseases and pathophysiology along with all the techniques for screening test .
Computer Applications in Pharmacy – Theory *	BPHT1205	2017	Skill-Employability-Building competency in programme coding, various softwares, simulation techniques, statistical application etc.
Environmental sciences – Theory *	BPHT1206	2017	Employability- student get to know about basic knowledge about the environment and its allied problems
Apparel Production & Marketing	CUTM3029	2017	Employability/Skill - Practice and Project
Line Stitching Supervising	CUTM3030	2017	Employability/Skill - Practice and Project
Apparel Production	CUTM3031	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Light Motor Vehicle Driving	CUTM3032	2017	Employability/Skill - Practice and Project
Fork Lift Operation	CUTM3033	2017	Employability/Skill - Practice and Project
Heavy Vehicle Technology	CUTM3034	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Two Wheeler Service Technology	CUTM3035	2017	Employability/Skill - Practice and Project
Four Wheeler Service Technology	CUTM3036	2017	Employability/Skill - Practice and Project
E-Vehicle Assembly and Service Technology	CUTM3037	2017	Employability/ Entrepreneurship/Skill - Practice and Project



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Robotics	CUTM3038	2017	Employability/Skill - Practice and Project
Poultry Farming	CUTM3039	2017	Employability/ Entrepreneurship/Skill
CNC Programming (CAM)	CUTM3040	2017	Employability/Skill - Practice and Project
Design Supervising Wooden and Modular Furniture	CUTM3041	2017	Employability/ Entrepreneurship/Skill - Practice and Project
2018-19			
Calculus	FCBS0107	2017	Employability (Students will know about curvature, asymptotes)
Probability & Statistics	FCBS0108	2017	Employability (Students will know about probability distribution) Skill (Students will know about mean, media, mode)
Basic Mechanics and Properties of Matter	FCBS0405	2016	Employability (knowledge enhancement)
Optics and Optical Fibres	FCBS0406	2016	Employability (knowledge enhancement)
Applied Analytical Chemistry	FCBS0401	2016	Employability-Water Analysis,Soil Analysis,Chemistry of fuels. Skill- All practices
Industrial Chemistry	FCBS0402	2016	Employability-: Preparation of soap, dyes and oil analysis ,Analysis of cement Skill-All Practices
Applied Engineering Materials	FCBS0403	2016	Employability-Nano Materials,Polymers,Composites. Skill- All Practices
Economics	FCMG0101	2016	Skill Development(to provide students with a basic understanding of the economic principles, methodologies and analytical tools that can be used in business decision making problems) Employability & Entrepreneurship (Student shall understand and apply the impact of economic



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			policies on managerial decision-making by providing an understanding of fiscal policy, and national and global economic issues affecting business.)
Accounting & Finance	FCMG0102	2016	Skill Development-Students will be able to create, balance and deliver a budget and use budget information for planning and decision purposes; Employability & Entrepreneurship (Students to Undertake various costing techniques and information for planning and decision-making)
Management Processes and OB	FCMG0103	2016	Skill Development-Students shall be able to analyze and compare different models used to explain individual behaviour; Employability & Entrepreneurship (Students shall be able to resolve conflict, motivate the employees, handle stress and communicate effectively and manage diversified workforce in workplace)
Production and Operation Management	FCMG0104	2016	Skill Development (Acquire a working understanding of the roles/functions of production management in the context of business enterprise.) Employability & Entrepreneurship (Student can use specialized knowledge in Operations Management to solve business processes)
Marketing Management	FCMG0105	2016	Skill Development (Students will learn the application of various marketing tools for solving business problems). Employability and Entrepreneurship (students will acquire and develop the marketing skills to be a successful marketing person)
Introduction to Research	FCMG0108	2016	Skill Development (Students will be able to understand the process of doing a research). Employability and Entrepreneurship (Students will be able to write a research report.)
Indian Society and Culture	FCMG0113	2016	Skill Development (Students will be familiarized with the science and technology policies that would benefit modern India). Employability and



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			Entrepreneurship (Students would develop an idea about the socio-cultural environment in which they would be working as scientists, researchers and entrepreneurs.)
Disaster Management	FCMG1201	2016	Skill Development (students would begin to understand the relationship between vulnerability, disasters, disaster prevention, risk reduction and the basic understanding of the research methodology for risk reduction measures.). Employability and Entrepreneurship (Students would develop rudimentary ability to respond to their surroundings with potential disaster response in areas where they live, with due sensitivity)
Human Rights	FCMG0115	2018	Skill Development (Student would have an understanding of human rights, its history, characteristics, types, protection, violation and the legal framework for their protection, therefore, a fair knowledge of the Universal Declaration of Human Rights.). Employability and Entrepreneurship (students shall gain a holistic view of human rights and their implications)
Introduction to Ethics	FCMG0116	2018	Skill Development (Students shall be able to demonstrate their respect of different ethical perspectives). Employability and Entrepreneurship (students shall be able to clearly formulate their ethical position on an issue and develop arguments based on sound inferences and clear premises (through project))
Gender Issues in Development	FCMG0401	2018	Skill Development (Students shall be able to develop an understanding of perspectives on gender and development). Employability and Entrepreneurship (Familiarise with the different tools and techniques for gender planning, analysis and evaluation in the development sector)



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Material Sciences	ENFC0102	2017	Employability and Skill development (Students will able to identify materials for engineering use.Students will able to select best materials for a specific design and production.)
Introduction to Robotics	ENFC0203	2017	Employability (upgrading knowledge levels of robotic application in modern industries Project based training)
Engineering Metrology and Measurements	ENFC0401	2017	Employability and Skill development (To Make Students Familiar with the Measuring Systems, and the Standard of Measurements. Learns about Basic Measurement Devices.Selecting Suitable Measuring Instruments for Basic and Typical Applications in the Industries.)
Programming in C	ENFC0409	2018	Skill And Employability(Case study to be given to students on uses of C program for development of various real time applications like online examination system, online quiz competetion etc.)
Programming for Problem Solving – Java	ENFC0412	2017	Skill And Employability(Understands the concepts of Threads, exception handling, file handling and even handling and applets implemented in the Java, which helps students in getting jobs in different IT firms)
Data Base Management System	ENFC0414	2018	Skill And Employability(Hands on training on Client/Server Architecture- System Structure , Instance and schema, Data Models, Types of DBMS Query Processing and Optimization: Evaluation of Relational algebra expressions-Query Equivalence-Transaction Processing: Built in SQL functions, Sub Queries-Joins-DCL – TCL- Views – Sequences – Index – Locks PL/SQL Basics – Exceptions – Cursors - Stored Functions – Triggers Case study in industrial standards of Database Management)



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Electronics and Its Application	ENFC0415	2018	Employability (Students will develop an updated knowledge in the latest trends)
Electronic Devices	ENFC0416	2018	Employability (Students will get the fundamentals cleared for the basics required in the industry)
Sensors and IOT	ENFC0417	2017	Employability (The students will be aware of the application and operations of the sensors used in day to day life)
Problem Solving & Programming	ENFC0418	2018	Skill And Employability(To enhance the problem analysis capability and problem solving techniques and solves various real life problems using raptor and scratch tools)
Data Structures and C Programming	ENFC0419	2018	Skill And Employability(Understand asymptotic analysis and different methods. Understand linear data structures and its applications. Understand different non-linear data structures and its applications Understand divide and conquer strategy for various sorting and searching techniques. Understand and apply the greedy approach for various problems)
Operating System	ENFC0422	2018	Skill And Employability(This course enables students to understand the basic concepts of operating system with different types of OS, services and system calls, get knowledge of process management, Inter process communication and various CPU scheduling algorithms. It also helps to understand the concept of memory management -paging and segmentation and learn about various I/O systems and mass storage structures.)
Big Data Analytics	ENFC0423	2018	Skill And Employability(This course helps in gaining the ability to choose the right solution for a commercial task involving big data, including databases, architectures and cloud services. Also focuses on understanding of the



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			analysis of big data including methods to visualise and automatically learn from vast quantities of data. Develop the programming skills to build solutions using big data technologies such as Map Reduce, scripting for No-SQL, Apache Mahout, Hive and the ability to write parallel algorithms for multi-processor execution.)
Block Chain and Smart Contracts	ENFC0424	2018	Skill And Employability(Hands on in design and program smart contracts and decentralized applications)
AI Tools, Techniques and applications	ENFC0603	2018	Skill And Employability(Introduce state-of-art AI tools and techniques to solve various problems faced by Engineers in design and analysis)
Problem Solving using Python	ENFC0901	2018	Skill And Employability(Eenhance the problem analysis capability and problem solving techniques and solves various real life problems using raptor and scratch tools)
Object Oriented Programming through Java	ENFC0902	2018	Skill And Employability(Understands the concepts of Threads, exception handling, file handling and even handling and applets implemented in the Java, which helps students in getting jobs in different IT firms)
Web Technologies	ENFC0903	2018	Skill And Employability(Develop a static, interactive and well-formed webpage using JavaScript, CSS3 and HTML5)
Software Engineering using Agile	ENFC0904	2018	Skill (Students get to apply software engineering principles and techniques learnt to a real-life project topic of their choice in a contemporary domain and design-implement novel solution by working together as a team.
Soil Mechanics	CECC0401	2018	Skill development(• Students will gain knowledge on soil mechanics and the concepts involve in it • Students will develop skill on laboratory experiments, empirical methods and software aids involve in soil mechanics)



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Foundation Engineering	CECC0402	2017	Employability(To obtain knowledge about soil properties and methods of soil properties determination in the laboratory, using field tests and considering comparable experience. Basic stability and deformation problems. Principle of spread and deep foundation design. To understand fundamental knowledge of geotechnical works for soil improvement, interaction of structure and subsoil. Basic design methods for excavation and foundation pits with dewatering and sealing systems)
Water supply & Waste water Management	CECC0415	2018	Entrepreneurship(• Students will gain knowledge and the concepts involve in it • Students will develop skill on laboratory experiments, empirical methods and software aids involve in hydrology)
Hydrology & Water Resources Engineering	CECC0416	2018	Employability(• Students will gain knowledge and the concepts involve in it • Students will develop skill on laboratory experiments, empirical methods and software aids involve in hydrology)
Strength of Material	CECC0411	2018	Employability(Students will acquire knowledge and skill to analyze the effect of force and motion on rigid bodies to solve engineering problems through application of basic laws of mechanics.)
Functional planning and DPR	CECC0501	2018	Skill development(• Students will gain knowledge on and the concepts involve in it • Students will develop skill on laboratory experiments, empirical methods and software aids involve)
Site Supervision & Measurement Methods	DECP0401	2018	Employability(• Students will gain knowledge on and the concepts involve in it • Students will develop skill on laboratory experiments, empirical methods and software aids involve)
Tendering Process, Bidding Contract	DECP0601	2018	Skill development(• Upon successful completion of the course, students shall be fit in CPWD,



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Agreements & Arbitration			<p>state Government departments and infrastructural organizations, persons working in development projects in public or private sectors. Consultancy units, research organizations as well as self-employed practitioners engaged in the planning, design, Procurement, construction, operation and maintenance.</p> <ul style="list-style-type: none"> • Apply legal aspects of construction projects in construction contract, of issues related to contract administration, apply various disputes resolution techniques including arbitration)
Project	DEET0300	2015	Employability (Skill development course)
Internship	DEET0800	2015	Employability (Skill development course)
Earthquake Resistant Design	DEPD0102	2018	<p>Employability(• To study co-relation with architectural design and performance of building during earthquake</p> <ul style="list-style-type: none"> • To study advanced structural design parameters • To analyze the detailing of reinforcement design and its impact on performance)
Smart City Planning	DESP0202	2018	<p>Employability (designing the city features including park, garden etc. Course Outcomes: After completion of this course students will be able to design and plan a twin city model of an area.</p> <p>Students will get more knowledge on designing of building, road, drainage etc. through Autodesk Infrawork)</p>
Building of Cloud Infrastructure	DECT0901	2015	Skill And Employability(Analyze and Understand the functioning of different components involved in Amazon web services and also acquire cloud technology skill for cloud partitioner certification which helps students in getting jobs in different MNCs)



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Deployment Architecture -I	DECT0902	2015	Skill And Employability(Evaluate cloud application requirements and make architectural recommendations for implementation, deployment and provisioning applications on AWS)
Deployment Architecture - II	DECT0903	2015	Skill And Employability(Ability to evaluate cloud application requirements and make architectural recommendations for implementation, deployment and provisioning applications on AWS)
Advanced Networking	DECT0904	2015	Skill And Employability(Students had Implemented various VPC,VPN and optimization of network cost and also Understand and building the skills of sub-netting and routing mechanisms)
Oracle Database Administration and SQL	DEST0401	2015	Skill And Employability(Provides an exhaustive coverage of SQL Admin to understand the architecture and processes of the Oracle database)
Problem Solving through Coding	DEST0201	2015	Skill And Employability(Obtain skills to solve problems involving text, numbers and graphics, producing a top-level plan with refinements.)
Linux and Lamp Administration	DEST0402	2015	Skill And Employability(Obtain skills in Linux server administration. Content includes LINUX and Web server installation, system startup/shutdown, hardware configuration, disk and file system structure, package management, TCP/IP networking, system management and security, X-Windows usage and configuration, user management)
Testing and Test Automation	DEST0403	2015	Skill And Employability(students had applied various modern software testing processes in relation to software development and project management)



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Web Services using Java	DEST0404	2015	Skill And Employability(Developed knowledge-based force to serve the IT industry with the latest technologies.)
Python for Data Science and Machine Learning	DEML0201	2015	Skill And Employability(Implement ML algorithms that generates insight to high volume data and helps to make better classifications and prediction. The students are able to solve problems in areas computational finance, image processing and computer vision, energy and natural language processing.)
Supervised and Unsupervised Machine Learning	DEML0401	2015	Skill And Employability(Implement several ML algorithms that generates insight to high volume data and helps to make better classifications and prediction. The students are able to solve problems in areas computational finance, image processing and computer vision, energy and natural language processing.)
Advanced Neural Network (RNN & CNN)	DEML0402	2015	Skill And Employability (Design and train a CNN, RNN language models and also able to apply deep learning principles using tools such as TensorFlow, Keras)
ML Techniques in Image Processing	DEML0202	2015	Skill And Employability(Implemented different Real life Projects in the field of medical and Agricultural image processing)
Deep Learning Techniques and Neural Network	DEML0403	2015	Skill And Employability(Design and train a CNN, RNN language models.Be able to apply deep learning principles using tools such as TensorFlow, Keras)
Introduction to IT Networking & Security	DEIS0121	2015	Skill And Employability(To understand, design and implement appropriate security technologies and policies to protect computers and digital information)
Advanced Networking	DEIS0421	2015	Skill And Employability(Understand and explain Data Communications System and its components and Identify the different types of network topologies and protocols. Enumerate the layers of the OSI model and TCP/IP and explain the functions of each layer,identify the



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			different types of network devices and their functions within a network)
White Hat Hacking Techniques and Tools	DEIS0422	2015	Skill And Employability(Information technologies skill like vulnerabilities, defense-in-depth, penetration testing, the methodology for pen testing/ethical hacking, vulnerability management, incident management, and creating and implementing a security policy will be understood)
Information Technology Infrastructure Library	DEIS0122	2015	Skill And Employability(Obtain the skill about IT Service Management best practices, generic concepts, key principles, gain a comprehensive understanding of the purpose and scope of service strategy, service design, service transition, service operations, and Continual Service Improvement)
Network Security Audit of an Organisation	DEIS0221	2015	Skill And Employability(To perform an IT Network security audit of an organization and prepare a detailed report identifying different weakness of the architecture)
CCNA	DEIS0222	2015	Skill And Employability(hands on training to manage Network for an Organization)
Analog Electronic Circuits	ECCC0401	2018	Skill Development and Employability (Its an important subject in the curriculum. Its also equivalently important for facing interviews in industry.)
Digital Electronic Circuits	ECCC0402	2018	Skill Development and Employability (Its an important subject in the curriculum. Its also equivalently important for facing interviews in industry.)
Networks and Systems	ECCC0403	2018	Employability (Its also equivalently important for facing interviews in industry. Evaluate Complex Frequencie+E53:E54s, Pole-Zeros of an Admittance or Impedance function and sketch Pole-Zero Plots and to find Resonance, Q-Factor and Bandwidth)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Digital Signal Processing	ECCC0404	2018	Employability (Analyse Z-Transform , DFT,FFT and, and the Architecture of TMS320C54xx Processor and the Various Addressing modes. Design & compare Digital FIR filters using window method, Analyze the characteristics of various windows Formulate & apply Digital IIR filter design using Butterworth & Chebyshev approximations to Verify the characteristics of LPF, HPF, BPF)
Analog Communication Systems	ECCC0405	2017	Employability (Familiar with analog radio transmitters and receivers Verify the Noise performance of different Modulation Techniques)
Digital Communication Systems	ECCC0406	2017	Employability (Illustrate the classification of channels, Entropy coding methods and different types of Error control codes along with their encoding/decoding algorithms. Examine the Performance of different Digital Carrier Modulation schemes of Coherent and Non-coherent type based on Probability of error)
VLSI Design	ECCC0407	2017	Employability (Design combinational and sequential circuit using CMOS logic Enhancement of complex digital VLSI logic design skill of students which will help them to complete any project work undertaken in higher semesters. Perform back-end physical design)
ARM Processor Based System Design	ECCC0408	2017	Employability (Understand the architecture of ARM Processor Implement real time projects using 32 bits ARM Processor)
RTOS and its Application	ECCC0412	2018	Employability (Develop the skill to implement the Real



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			Time Operating System FreeRTOS in LPC2148 Microcontroller)
Microwave and Radar Communications	ECCC0410	2017	Employability (Integrate the concept of bunching and velocity modulation to summarize the operation of micro wave tubes and the high frequency limitations of conventional tubes. Analyse the principle, operation and characteristics of different Radars and its applications)
Antenna and Wave Propagation	ECCC0413	2018	Employability (Analyze antenna parameters Evaluate the features and analyze the radiation pattern of antennas by using simulation tools Compare wave propagation techniques and illustrate the radio wave behavior in different modes of communications)
Power System Market, Act and Regulations	DEOM0103	2018	Employability (Student will learn power market operation & energy audit process with hands on practice which will lead them to placement in power & energy trading company)
Fluid Power Control	MECC0102	2018	Employability and Skill development (To impart knowledge to students on fundamentals of hydraulic and pneumatic power and their circuits with industrial applications.)
Introduction to Hybrid and Electric Vehicles	MECC0103	2018	Employability and Skill development (Students will acquire knowledge regarding the testing and performance of electric vehicles)
Manufacturing Technology 1	MECC0401	2017	Skill And Employability (Students will have Knowledge and Skills to Understand Actual Manufacturing Processes used in Industry and will be Able to Correlate a Specific Process with the Part / Component being Produced. Students will be Able to Select the Most Optimum Manufacturing Process for a Specific Product Design and Application.)
Manufacturing Technology 2	MECC0402	2017	Skill And Employability (Students will be Able to Do Process Planning, Develop CNC Part



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			Programs. Students will have Knowledge and Skills to Operate CNC Machines.)
Design for Manufacturing	MECC0403	2017	Skill And Employability (Students will be able to select appropriate manufacturing technology and process to produce a product effectively with quality and optimized production cost.Students will have skills and knowledge to use softwares like CATIA, Novaflow and Solid CV, ProCAST, Flow-3D Cast, DEFORM-3D and PAM-STAMP 2G.)
Finite Element Analysis	MECC0404	2017	Skill And Employability (Students will be Able to Deploy Practical and Industrial Approach using FEA towards Solving Engineering Problems)
Digital Manufacturing	MECC0405	2017	Skill And Employability (Students will be able to use modern software like DELMIA-Quest (Dassault System) and Camtesia to conceptualise and create 3D factory layouts and optimise resource planning.Students will be able to do simulation of manufacturing processes using software tools.)
Fundamentals of Heat Engine	MECC0415	2018	Skill And Employability (Students will be able to test internal combustion engines for various performance parameters using engine test rigs.Students will be able to carry out emission tests using various types of fuels commonly used in internal combustion engines.)
Design of Thermal Energy Systems	MECC0407	2017	Skill And Employability (Students will be able to identify and select, design and implement appropriate thermal energy system corresponding to specific need.)
Mechanics of Machines	MECC0410	2017	Skill And Employability (Students will have knowledge and skills to analyse, design and develop mechanisms suiting specific applications. Students will have knowledge skills to study and understand working of complex mechanisms and machines enabling them to safely operate and maintain such installations)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Design of Transmission Systems	MECC0412	2018	Skill And Employability (To Enable the Students to Design Basic Transmission Elements using prior theoretical Knowledge)
Fluid Mechanics and Heat Transfer	MECC0414	2017	Skill And Employability (Students will be able to analyze and design various Equipment used in industry using principles of Fluid Mechanics and Heat Transfer)
Introduction to Automobile Engineering	DEAE0101	2018	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Entrepreneurship Opportunities in Automobile Trade	DEAE0102	2018	Employability and Skill development (This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Maintenance of Automobile	DEAE0204	2018	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Design of Basic Automobile Components	DEAE0205	2018	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Subsystems of Automobile	DEAE0401	2018	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large



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			number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Design and Maintenance of Electric Vehicles	DEAE0402	2018	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Jigs and Fixtures	DECM0101	2015	Employability and Skill development (Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Process Planning and Cost Estimation	DECM0102	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Conventional Machining for Cylindrical Shape Component	DECM0201	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to



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Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Conventional Machining for Prismatic Shape Component	DECM0202	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
CNC Machining	DECM0603	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Non-Traditional Machining and 3D Printing	DECM0604	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Wood Engineering	DECM0203	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Project	DECM0300	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Internship	DECM0800	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			machineries. Strengthens the Industrial-Institutional partnership.)
Joining Processes & Technology	DEWD0403	2018	Employability and Skill development(This gives opportunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Arc Welding, Gas Welding & Brazing	DEWD0201	2015	Employability and Skill development(This gives opportunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Metal Transfer & Weld Metallurgy	DEWD0102	2018	Employability and Skill development(This gives opportunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Design of Welded Joints (CATIA)	DEWD0101	2015	Employability and Skill development(This gives opportunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Welding of Stainless Steel, Aluminium, Copper, Cast Iron and Hard Surfacing	DEWD0603	2018	Employability and Skill development(This gives opportunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Testing of Welded Joints (DT, NDT & Microstructure)	DEWD0604	2018	Employability and Skill development(This gives opportunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Project	DEWD0300	2018	Employability and Skill development(This gives opportunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Basic Metallurgy	DEOC0134	2015	Employability and Skill development (Understand the correlation between processing, structure and properties of metals. Ensure production of metallic components for use in consumer or engineering products)
Information Theory & Coding	DEOC0136	2018	Employability Design the channel performance using Information theory. Comprehend various error control code properties. Apply linear block codes for error detection and correction. Apply convolution codes for performance analysis & cyclic codes for error detection and correction. Design BCH & RS codes for Channel performance improvement against burst errors
Mobile Communication	DEOC0135	2018	Employability Understand the new trends in mobile/wireless communications networks, understand multiple radio access techniques, analyze various routing algorithms used in mobile/wireless networks, identify the issues in transport and application layers.



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Electromagnetic Theory	DEOC0122	2015	Employability Knowledge of, physical interpretation, and ability to apply Maxwell's equations to determine field waves, potential waves, energy and charge conservation conditions. Experimental measurement of voltages induced by time varying magnetic flux. Flux determination.
MATLAB for Electronics	DEOC0233	2018	Employability Able to use Matlab for interactive computations. Familiar with memory and file management in Matlab. Able to generate plots and export this for use in reports and presentations. Able to program scripts and functions using the Matlab development environment.
PCB Design and Analysis	DEOC0425	2018	Employability To design and fabricate PCB for prototyping as well as in Industrial Production environment. This will help students to innovate faster with electronics technology.
Computer Graphics (2D & 3D Drafting)	ISSD1106	2016	Skill development(At the end of the course, the students have a skill and employability to: Event driven I/O and callback programming & typical structure of an interactive, real-time computer graphics program `` 2&3D transformations, homogeneous co-ordinates, post-multiplication `` Modelling and instantiat)
Civil Engg. MATLAB Lab	ISSD1107	2016	Employability (Differential equations and its application to engineering problems Soft computing applications to engineering problems)
Finite Element Method	ISSE1201	2016	Skill development(• Enable the students to identify, formulate and skill to engineering problems related to one, two and three Dimensional structures subjected to static loads. • To show the impact of engineering solutions



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			on the society and also will be aware of contemporary issues regarding failure of structures due to wrong analysis)
CAD LAB	ISSE1204	2016	Employability (Analysis and design of a simply supported beam, Plate, Simple framed structure 1, Design and analysis of Steel Truss structure 1, Multi story building design and analysis using STAAD.Pro 1)
Pavement Materials And Construction	ISTE1102	2018	Employability (• To learn about characteristic of subgrade soil. • To learn about characteristic of road aggregates. • To learn about characteristic of paving grade bitumen. • To learn about characteristic of cement used in road construction.)
Urban Transportation Planning	ISTE1103	2018	Employability (• To learn the planning methodology of Urban transportation systems. • To learn methods of data collection for planning. • To learn about travel demand models. • To learn Planning for sustainable urban mobility)
Transportation Infrastructure Design	ISTE1104	2018	Employability (• To learn Geometric Design of Cross Sectional Elements of various types of roads. • To learn Geometric Design of Horizontal Alignment of Roads • To learn Geometric Design of Vertical Alignment of Roads. • To learn transportation system management)
Highway Project formulation and Economics	ISTE1202	2018	Employability (• To learn Geometric Design of Cross Sectional Elements of various types of roads. • To learn Geometric Design of Horizontal Alignment of Roads • To learn Geometric Design of Vertical



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			Alignment of Roads. • To learn transportation system management)
Pavement Evaluation ,Rehabilitation and Maintenance	ISTE1208	2018	Employability(• To learn about characteristic of subgrade soil. • To learn about characteristic of road aggregates. • To learn about characteristic of paving grade bitumen. • To learn about characteristic of cement used in road construction.)
Project Management	ISTE1209	2018	Employability(Identify functions of project management including estimating, job controls, field data collection, scheduling, accounting and design. * method that uses technology to measure cost and productivity through the full life-cycle of enterprise level projects * Contract Management and Tendering
Environmental Impact Assessment for Transportation Projects	ISTE1210	2018	Employability(• environmental issues in decision-making) .• impacts of transportation projects on air quality, society, economy, ecology and travel .• Ecological disturbances . Environmental Issues in Industrial Development
Industry Internship and Project-1	ISTE2101	2018	Employability(Student will be doing live project For 4 months in an Industry and submit a Project Report to concerned guide certified by the Industry Engineer)
Industry Internship and Project-II	ISTE2200	2018	Employability(Student will be performing internship for 3-months in Industry and submitted a report and duly certified certificate from the competent Engineer in charge)
Industry Internship and Project - I	ISPS2101	2016	employability (Student will learn on power system operation & energy audit process with



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			on the job training which will lead them to placement in power & energy company)
Comprehensive Viva	ISPS2103	2016	Employability(Students will give a comprehensive Viva about all subjects taught in their M.Tech. syllabus.
Industry Internship and Project - II (Thesis)	ISPS2200	2016	employability (Student will learn on power system operation & energy audit process with on the job training which will lead them to placement in power & energy company)
Basic Communication Skills	MGGM1102	2011	Competence in oral, written, and visual communication: Employability, Use current technology Practicals - Skill development
Quantitative Techniques	MBDM1104	2017	application of quantitative techniques in business decision making- Employability,
Managerial Economics	MGGM1104	2014	Analysis of demand, supply, production,market; Application of different economic paradigms using Microeconomics concepts- Employability
Accounting for Managers	MGFM1101	2011	Preparation of financial statement, preparation of cost sheet and financial analysis of financial statements: Employability & Entrepreneurship
Marketing Management	MGMK1101	2011	Interpretation complex marketing issues facing by a variety of enterprises: Employability & Entrepreneurship
Organizational Behaviour	MGGM1105	2011	Analyze and compare different models of Human Behaviour - Employability, Entrepreneurship
Management Information Systems	MGIT1202	2011	Utilize Management Information Systems in achieving business competitive advantage - Employability, Entrepreneurship & Skill development
Communication Perspective of Management	MGGM1206	2011	Write business proposals and reports- Employability, Entrepreneurship & Skill development
Human Resource Management	MGHR1201	2011	Carry out human resource planning and Job analysis, develop, implement and evaluate recruitment and selection-Employability & Entrepreneurship



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Management & Market Research	MGGM1207	2011	Applying marketing research into the broader strategic planning process, with reference to existing theories, concepts and models from within the program: Employability & Entrepreneurship
Financial Management	MGFM1202	2011	Application of concepts of financial management, investment, financing, working capital and dividend policy decisions: Employability & Entrepreneurship
Production & Operations Management	MGOM1201	2011	Developing aggregate capacity plans and MPS in operation environments- Employability, Entrepreneurship
Economic Environment of Business	MGGM1208	2014	Analysis of economic policy and environment- Employability, Entrepreneurship
Indian Society and Culture	MGGM1212	2015	Analysing social issues, Societal Analysis- Employability
Aptitude and Career Enhancement-I(Practice)	MGGM1210	2014	Quatitative aptitude and logical analysis- Employability, Entrepreneurship & Skill development
Production Planning and Inventory Control	MGOM2309	2018	Develop Production planning and handel control issues in both service and manufacturing industries- Employability, Entrepreneurship
Sales and Distribution Management	MGMK2302	2011	Manage and enhance the sales force productivity and performance: Employability & Entrepreneurship
Summer Internship Programme	MGGM1211	2011	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship
Strategic Management and Ethics	MGGM2318	2015	Conduct analysis of competitive situations of the enterprise and inroduction of ethical practices - Employability, Entrepreneurship
Aptitude and Career Enhancement-II (Practice)	MGGM2317	2014	Compete and qualify in the selection process - Employability
Career Communication and	MGGM2314	2014	Communicate appropriately using the technology - Employability



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Professional Success Lab			
Operations Research	MBDM1202	2017	Manage and enhance the sales force productivity and performance: Employability & Entrepreneurship
Logistics and Supply Chain Management	MGOM2302	2011	Analyzing the manufacturing operations of a firm- Employability, Entrepreneurship
Legal Environment for Enterprise	MGGM2315	2011	Analyze business issues and to understand broader legal issues- Employability, Entrepreneurship
Project Management	MGGM2316	2011	Describe a project life cycle, identify the resources needed for each stage, develop a project scope - Employability, Entrepreneurship
Live Project (Dissertation in Domain Area)	MGEL2401	2015	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Contemporary Management courses	MGEL2402	2015	Advance topics, analysis and application of IT- Employability
Rural Marketing	MGMK2312	2015	Able to successfully enter the rural market for promotion of his products and services: Employability & Entrepreneurship;
Services Marketing	MGMK2313	2015	Able to deliver services successfully Employability & Entrepreneurship
Customer Relationship Management	MGMK2314	2015	Formulate and assess strategic, operational and tactical CRM decisions: Employability & Entrepreneurship
Consumer Behaviour	MGMK2305	2011	Detect the relevance of consumer behaviour to the entire marketing process, the nature and stages of consumers' decision making and the factors influencing consumers' choices: Employability & Entrepreneurship;
Brand Management and Marcomm	MGMK2306	2011	Appraise key issues in managing brand portfolio and making strategic branding decisions: Employability & Entrepreneurship
B2B Marketing	MGMK2307	2011	Effective B2B marketing strategy design and execution: Employability & Entrepreneurship;



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Retail Management	MGMK2315	2011	Make merchandise plan and to procure right merchandise: Employability & Entrepreneurship
International Marketing	MGMK2316	2015	Assess an organization's ability to enter and compete in international markets: Employability & Entrepreneurship;
Social Marketing	MGMK2310	2011	Develop a strategic plan for identifying opportunities for implementing social marketing in a company:Employability & Entrepreneurship
Digital Marketing	MGMK2311	2015	Apply various concepts and importance of digital marketing - Visualize various application in diverse areas of sales & marketing - Employability & Entrepreneurship;
GIS for Marketing	MGMK2317	2015	Develop customer marketing applications such as acquisition, marketing, messaging, purchasing, and retention: Employability & Entrepreneurship;
Advanced Managerial Accounting	MGFM2310	2015	Preparation of cost sheet and analysis of financial statements: Employability & Entrepreneurship;
Financial Derivatives	MGFM2311	2015	Competent in derivative products such as forward, future, option & swap and to make on line trading on futures and options: Employability & Entrepreneurship;
Financial Institutions, Markets & Services	MGFM2305	2011	Use techniques for raising funds from capital market and from different sources- Employability & Entrepreneurship;
Commercial Banking and ALM	MGFM2306	2011	Use techniques for Asset/Liability Management for smooth operation of the Bank. This will help in employability in Banking Sector - Employability & Entrepreneurship
Insurance & Risk Management	MGFM2307	2011	Use techniques for identifying, measuring and managing the risk - Employability & Entrepreneurship
Security Analysis And Portfolio Management	MGFM2308	2011	Use methods of valuations of financial instruments and evaluation of risk as well as return of an individual security and portfolio - Employability & Entrepreneurship



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Project Appraisal & Financing	MGFM2309	2014	Preparation of detailed project report, identification of a project, feasibility analysis including market, technical and financial appraisal of a project; Uses project appraisal techniques for evaluating live projects: Employability & Entrepreneurship
Corporate Restructuring	MGFM2312	2015	Use techniques of Financial Corporate valuation and Engineering - Employability & Entrepreneurship
Financial Planning and Wealth Management	MGFM2313	2015	Use methods to determine the ways of personal tax planning, retirement and estate planning for an individual and design a financial plan - Employability & Entrepreneurship
Current Asset Management	MGFM2314	2015	Evaluate comparative current asset management policies and their impact on the firm's profitability, liquidity, risk and operating flexibility: Employability & Entrepreneurship;
Service Operations Management	MGOM2303	2011	Carry out optimal inventory management- Employability, Entrepreneurship
Total Quality Management	MGOM2311	2011	Use statistical approach for quality control, ISO and QS certification process- Employability, Entrepreneurship & Skill development
Technology Management	MGOM2312	2015	Technology adaptation and technology transfer- Employability, Entrepreneurship
Purchase and Materials Management	MGOM2305	2011	Develop materials requirement planning technique, handel issues related to overstocking and under stocking- Employability, Entrepreneurship
Environment & Industrial Safety	MGOM2306	2011	Formulate or design a system, process, procedure, or program to meet desired safety needs- Employability, Entrepreneurship
Enterprise Resource Planning	MGOM2308	2011	Develop Generic Model of ERP and Implementation of General ERP Methodology- Employability, Entrepreneurship & Skill development
Supply Chain Modelling	MGOM2310	2011	Value creation and revamping supply chains for becoming competitive in the market- Employability, Entrepreneurship



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Industrial Relations and Labour Laws	MGHR2302	2015	Handle industrial disputes - Employability
Compensation and Reward Management	MGHR2315	2011	Designing a pay structure - Employability
Performance Management	MGHR2314	2011	Fixing performance standards and performance indicators that reflect the employees range of responsibilities- Employability
Organization Change and Development	MGHR2305	2011	Bring out appropriate changes in the organization and becoming a change agent- Employability, Entrepreneurship
International Human Resource Management	MGHR2307	2011	Design Human Resource activities in an International Context- Employability,
Knowledge Management	MGHR2308	2011	Critically apply theories and models to organisations for success- Employability, Entrepreneurship
Human Resource Planning and Sourcing	MGHR2312	2015	Development, implementation, and evaluation of employee recruitment, selection, and retention plans and processes- Employability, Entrepreneurship
Training and Development	MGHR2311	2011	Assess, design and implement various methods, techniques and sources of training- Employability & Skill development
Leadership Development	MGHR2313	2015	Develop critical thinking skills and lead the organization- Employability, Entrepreneurship
Organization Structure and Design	MGHR2310	2014	Designing effective organizational structure keeping in view business strategies - Employability, Entrepreneurship
Rural Immersion Programme (Practice)	MGRM2305	2015	Carry out participatory planning with the community, develop strategies for intervention - Employability & Skill development
Sustainable Livelihood System (SLS)	MGRM2306	2015	Employ appropriate software to record, maintain, retrieve and analyse human resources information - Employability, Entrepreneurship & Skill development



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Public System Management	MGRM2307	2015	Comprehend and apply the basic principles of public administration model - Employability, Skill development
Micro Finance Management	MGRM2308	2015	Accelerating the expansion of local microbusinesses- Employability
Natural Resource Management	MGRM2309	2015	Work effectively with, and within, interdisciplinary and diverse groups to resolve-management problems and achieve management objectives- Employability and Entrepreneurship
Gender and Development	MGRM2311	2015	Utilize the different tools and techniques for gender planning, analysis and evaluation in the development sector-Employability
Hospital Administration	MGHM2301	2017	Create policy and processes and execute decisions in compliance with the legal, regulatory and ethical considerations inherent in managing healthcare systems and organizations- Employability
Management Information Systems for Hospital	MGHM2302	2017	Analyze existing systems and design technology solutions appropriate to the hospital-Employability & Skill development
Management of Out-Patient Department	MGHM2303	2017	Deal the issues effectively in emergency services, can plan, organize and supervise the activities of Minor Operation Theatre, Manage treatments of referral & cross referral cases-Employability & Skill development
Risk and Disaster Management	MGHM2304	2017	Handle Security Management Effectively in Hospitals, Control and Prevent hospitals from getting infected, Plan and design fire protection in hospitals, Handel radioactive waste collection and disposal in hospitals- Employability
Management of Quality	MGHM2305	2017	Prepare quality policy and objectives for hospitals, Plan and organize quality accreditation-Employability
Legal and Ethical Issues for Hospitals	MGHM2306	2017	Handle medico-legal issues effectively, Ensure appropriate patient relationship, Handle trade unions - Employability



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Health Insurance	MGHM2307	2017	Ensure hassle free insurance facility in hospitals, Build appropriate relation with insurance providers- Employability
Project Management in Health Care	MGHM2308	2017	Plan and implement health sector projects, Carry out feasibility analysis of health sector projects, Carry out demand analysis in health care sector- Employability
Marketing of Hospital Services	MGHM2309	2017	Handle challenges in hospital services marketing, Design new hospital services, Engage appropriate channels for hospital service marketing, Use marketing communication with technical knowledge- Employability, Entrepreneurship
Clinical, Diagnostic & Therapeutic Services	MGHM2310	2017	Design and manage secondary and tertiary systems of medicine, Maintain hospital records appropriately, Handle specialist services effectively- Employability
Patient Care and Behaviour	MGHM2311	2017	Motivate patients and instrumental in shaping positive attitude towards hospital, Carry out audit on patient behaviors, Handle the role of hospital administrator effectively- Employability & Skill development
Web Traffic Generation	MBDM2201	2017	Increase traffic in any website, Popularizing websites- Employability, Entrepreneurship & Skill development
Link Building & e-WoM	MBDM2202	2017	Increase links through web, Building relationships through the web- Employability, Entrepreneurship & Skill development
Social Media Marketing	MBDM2203	2017	Develop effective social media marketing strategies for various types of industries and businesses- Employability, Entrepreneurship & Skill development
Branded Content and the Future of Media	MBDM2204	2017	Develop and market branded contents, Employability,
Ideas, Brands and Business	MBDM2205	2017	Make strategic branding decisions- Employability, Entrepreneurship
Brand Planning and Consumer Insights	MBDM2206	2017	Design and execute intelligent and innovative research studies to scan the environment,



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			identify consumer insights, and use those insights to manage the brand- Employability, Entrepreneurship
Digital Strategies and Planning	MBDM2207	2017	Create a digital marketing plan and budget; identify suitable measures to set objectives and evaluate digital marketing -Employability & Entrepreneurship;
Power Distribution Management	MGPM2301	2018	Create e-business plan, Make e-business risk analysis and justify it- Employability,
Power Plant System	MGPM2302	2018	Plan and administer policies for power plants, Handle usages of equipment in power plants effective, Carry out job designing appropriately- Employability,
Project Planning, Analysis and Management	MGPM2303	2018	Carryout feasibility analysis of projects (Market, Technical, Financial and Economic), design project plan, Apply the risk management plan and analyse the role of stakeholders- Employability, Entrepreneurship
Electricity Industry Structure and Act	MGPM2304	2018	Handle power generation, transmission, and distribution process effectively, Manage legal aspects, Introduce technological changes required in the organization- Employability,
Integrated Energy Management & Power Planning	MGPM2305	2018	Develop plan for sustainable use of alternative sources of energy, Plan for generation and sharing of load, Central power system and grid plan - Employability
Financing Energy Sector Projects	MGPM2306	2018	Carry out feasibility study of projects for micro, small and medium enterprises, Handle legal issues effectively, Handle project financing- Employability, Entrepreneurship
Power Pricing & Power Purchase Agreement	MGPM2307	2018	Develop agreements for power purchase, Calculate capital cost operational cost, development cost- Employability, Entrepreneurship
Power Trading	MGPM2308	2018	Design and develop the power market engaging modern technology- Employability,
Power Station Management	MGPM2309	2018	Utilise safe technology, Handle the challenges in power generation, transmission and



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Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			distribution, Develop strategies for production-Employability
Renewable Energy for a Sustainable Future	MGPM2310	2018	Plan for utilization of renewable energy, Design facilities for solar, wind and tidal energy-Employability, Entrepreneurship
Risk Hazard and Environment	MGPM2311	2018	Establish first aid facilities, Plan for risk reduction,Develop hazardous waste management - Employability
Energy Conservation & Update	MGPM2312	2018	Establish first aid facilities, Plan for risk reduction,Develop hazardous waste management - Employability
Maintenance Management and Inventory Control	MGPM2313	2018	Handle inventory properly, Job designing, Manage production maintenance-Employability,
Advance Business Communication	MGDA1209	2016	Able to make better business communication-Employability & Entrepreneurship
Information System in Business	MGDA1210	2016	Analyze actions affecting the business as well as prepare cost estimates and forecasts-Employability & Entrepreneurship
ETL , Data modeling and Cube Design	MGDA1215	2016	Able to analyze data objects and figuring out the relationships between them- Employability and Skill development
Project (Project Mode in Organization)	MGDA1200	2016	It will enable learner to easily cope up with harsh industry or startup environments-Employability & Entrepreneurship
Introduction to Indian Society	MGDM0101	2018	Critically examine the challenges in society from a multi stakeholder perspective -Employability
Sustainable Entrepreneurship Development	MGDM0103	2018	To promote sustainable enterprises-Employability, Entrepreneurship
Skill Ecosystem Development	MGDM0104	2018	Appraise the skill ecosystem and its dimensions - Employability
Innovation and Regional Development	MGDM0106	2018	Develop innovative approaches-Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Project Management	MGAM0102	2018	Describe a project life cycle, identify the resources needed for each stage, develop a project scope - Employability, Entrepreneurship
Summer Internship	MGDM0801	2018	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship
Development and Globalisation	MGDM0107	2018	Analyzing the manufacturing operations of a firm, dealing with fundamental issues of development and globalization - Employability
Global Production Network	MGDM0108	2018	To deal with the terrain of globalization and production networks in the new world order - Employability
Research Methods	MGAM0103	2018	Application of modern analytical tools and techniques for management decision making, research designing, sampling, analysis of data, hypothesis formulation and testing- Employability, Entrepreneurship
Gender Issues in Development	MGDM0109	2018	Adopt different tools and techniques for gender planning, analysis and evaluation in the development sector-Employability
Accounting for Managers	MGFA1101	2018	Preparation of financial statement, preparation of cost sheet and financial analysis of financial statements: Employability & Entrepreneurship
Micro and Macro Economics	MGDM1104	2014	Application of different economic paradigms using Microeconomics concepts- Employability
Individual and Group Behaviour	MGDA1103	2017	Competence to deal with behavioural challenges in an organization and insights for personal and professional growth- Employability
Socio-Economic and Political History of India	MGDM1201	2014	Analyse social, economical and political background of India for decision making - Employability
Financial Inclusion and Micro-finance	MGDM2303	2014	To appraise the scenario of financial inclusion in the country , acquire skills to operate in Micro Finance sector - Employability, Entrepreneurship
Economic Environment for Agriculture	MGAM1204	2017	Developing aggregate capacity plans and agricultural policies for sustainable agricultural development, risk management strategies and MPS in operation environments- Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
ICT in Agriculture	MGAM1102	2017	Applications of information & Community technology in various fields of agriculture and promoting the applications of ICT in agriculture - Employability, Entrepreneurship
Agricultural Marketing	MGAM1203	2017	Effectively evaluate the challenges and prospects of agri marketing system, : Employability & Entrepreneurship
Natural Resource Management	MGDM2406	2014	Work effectively with, and within, interdisciplinary and diverse groups to resolve-management problems and achieve management objectives- Employability and Entrepreneurship
Post-harvest and Processing Management (Theme Based)	MGAM2108	2017	Carry out Interdisciplinary approach to post-harvest management including biology, agricultural sciences, and management, Employability,
Live-stock management (Theme Based)	MGAM2203	2017	Manage animals for food and fiber production: Employability & Entrepreneurship
Sales and Distribution Management (Theme Based)	MGAM2103	2017	Develop a sales and distribution plan for products/services- Employability
Commodity market and trading (Theme Based)	MGAM2209	2017	Develop plans to minimize risk through trade strategies: Employability, Entrepreneurship
Proficiency in English	BBAR1101	2015	Communicate effectively: Employability
Basic Financial Accounting	BBAR1102	2015	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Management Principles and Applications	BBAR1103	2016	Application of Basic management principles in organizations- Employability
Micro Economics	BBAR1104	2015	Utilize micro economic concepts and techniques to take business decisions Employability & Entrepreneurship
Reading to Writing	BBAR1201	2015	Increased reading speed and using academic vocabulary in writing - Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Business Statistics	BBAR1203	2016	Use statistical tools for managerial decision-making-Employability, Entrepreneurship
Macro Economics	BBAR1204	2015	Apply macroeconomic perspective to solve business issues and take appropriate policy decision-Employability & Entrepreneurship
Human Resource Management	BBAR2101	2015	Carry out human resource planning and Job analysis, develop, implement and evaluate recruitment and selection-Employability & Entrepreneurship
Principles of Marketing	BBAR2102	2016	Solving marketing issues faced by a variety of enterprises : Employability & Entrepreneurship;
Cost & Management Accounting	BBAR2103	2016	Preparation of cost sheet and analysis of financial statements: Employability & Entrepreneurship
Oral Communication Skills	BBAR2104	2015	Use of strategies, such as contextualization of new vocabulary, use of previewing, skimming and scanning techniques, and knowledge of text organization and discourse markers, to demonstrate comprehension of written and spoken language-Employability,
Production & Operation Management	BBAR2105	2015	Developing aggregate capacity plans and MPS in operation environments- Employability, Entrepreneurship
Research Methodology	BBAR2201	2015	Application of modern analytical tools and techniques for management decision making, research designing, sampling, analysis of data, hypothesis formulation and testing-Employability, Entrepreneurship
Operation Research	BBAR2202	2015	Develop a report that describes the model and the solving technique, analyse the results and propose recommendations in language understandable to the decision-making processes in Management - Employability, Entrepreneurship
Financial Management	BBAR2203	2016	Application of concepts of financial management, investment, financing, working capital and dividend policy decisions: Employability & Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Business Communication	BBAR2204	2015	Use of strategies to demonstrate comprehension of written and spoken language in business context-Employability,
Financial Institution and Markets	BBAR3101	2016	Use techniques for raising funds from capital market and from different sources-Employability & Entrepreneurship;
Business Law for managers	BBAR3102	2016	Utilize legal framework for starting a business venture and running it successfully in conformity with legal parameters-Employability & Entrepreneurship
Summer Internship	BBAR3103	2016	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Business Policy	BBAR3201	2016	Carry out SWOT analysis of a firm and develop an environment appraisal that will lead to formulation of strategic plans: Employability & Entrepreneurship
International Finance	BBAF3101	2016	Use techniques for managing the financial issues in international environment - Employability
Investment Banking & Financial Services	BBAF3102	2016	Use techniques for raising funds from capital market and from different sources-Employability
Investment Analysis & Portfolio Management	BBAF3103	2016	Use methods of valuations of financial instruments and evaluation of risk as well as return of an individual security and portfolio - Employability & Entrepreneurship
Project Appraisal	BBAF3104	2016	Preparation of detailed project report, identification of a project, feasibility analysis including market, technical and financial appraisal of a project; Uses project appraisal techniques for evaluating live projects: Employability & Entrepreneurship
Business Analysis & Valuation	BBAF3105	2016	Analyse and interpret the financial statements for various decision making purposes: Employability & Entrepreneurship
Financial Modelling & Derivatives	BBAF3106	2016	Uses techniques of Financial modeling and various Financial Derivatives including Greeks & Exotic Options - Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Strategic Corporate Finance	BBAF3107	2016	Use valuation principles, tools & techniques, the link between valuation and corporate finance, management buy-outs valuing real assets in the presence of risk: tracking portfolios and real asset valuation- Employability
Research Project	BBAF3108	2016	Identification of research problems, collection of data and analysis of data : Employability & Entrepreneurship
Personal Selling & Sales Force Management	BBAM3102	2016	Evaluate the role of sales manager and his/ her responsibilities in recruiting, motivating, managing and leading sales team: Employability
Advertising & Brand Management	BBAM3103	2016	Appraise key issues in managing brand portfolio and making strategic branding and advertising decisions: Employability & Entrepreneurship
Retail Management	BBAM3104	2016	Make merchandise plan and to procure right merchandise: Employability & Entrepreneurship
Distribution & Supply Chain Management	BBAM3105	2016	Design and implement distribution channel strategy: Employability, Entrepreneurship
Marketing of Services	BBAM3106	2016	Design service quality measurements to build customer loyalty and evaluate the effectiveness and efficiency of customer service offerings: Employability
International Marketing	BBAM3107	2016	Assess an organization's ability to enter and compete in international markets: Employability & Entrepreneurship;
Research Project	BBAM3108	2016	Competent with identification of research problems, collection of data and analysis of data : Employability & Entrepreneurship; Uses techniques of analyzing live data for solving research problem- Skill development
Hospitality management	BBAM3109	2016	Create policy and processes and execute decisions in compliance with the legal, regulatory and ethical considerations inherent in managing organizations in hospitality sector- Employability
HRD : Systems & Strategies	BBAH3101	2016	Prepare strategies for development of human resources in organizations- Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Training & Development	BBAH3102	2016	Prepare training calendar and training contents by analysing the need-Employability
Management of Industrial Relations	BBAH3103	2016	Plan policies towards Labour Welfare and maintain sound Industrial Relations-Employability, Entrepreneurship
Performance & Compensation Management	BBAH3104	2016	Fixing performance standards and performance indicators that reflect the employees range of responsibilities, Designing a pay structure-Employability, Entrepreneurship
Counselling & Negotiation Skills for Managers	BBAH3105	2016	Negotiation with business enterprises-Employability, Entrepreneurship
Cross Cultural HRM	BBAH3106	2016	Diversity management respecting the culture of employees- Employability, Entrepreneurship
Talent & Knowledge Management	BBAH3107	2016	Develop knowledge management process in the organization- Employability
Research Project	BBAH3108	2016	Knowledge and skills in preparing a project report- Employability, Entrepreneurship & Skill development
International Trade Policy & Strategy	BBAB3101	2016	Analyze new opportunities in international trade, global supply and value chains, investment agreements, trade in services, competition policy and regional economic integration- Employability
Global Business Environment	BBAB3102	2016	Analyse the key decisions that multinational firms make in relation to the choice of markets and entry strategies- Employability
Transnational & Cross Cultural Marketing	BBAB3103	2016	Formulate marketing strategy taking into consideration cultural beliefs, values and customs of a specific country- Employability
International Distribution & Supply Chain Management	BBAB3104	2016	Use commonly accepted frameworks and tools to analyze supply chain situations- Employability
International Accounting & Reporting System	BBAB3105	2016	Prepare the mandatory financial statements, according to the IFRS- Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Multinational Business Finance	BBAB3106	2016	Can handle – Problems and issues in foreign investment, Manage payment settlements- Employability
International Joint Ventures, Mergers & Acquisitions	BBAB3107	2016	Handle issues in mergers and acquisitions- Employability
Research Project	BBAB3108	2016	Project writing skills and utilization of research methodologies in a project- Employability, Entrepreneurship
Financial Accounting I	BCFA1102	2017	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Business Mathematics	BBAR1106	2017	Data analysis using mathematical function- Employability & Entrepreneurship
Business Economics	BCFA1104	2017	Apply macroeconomic perspective to solve business problems- Employability & Entrepreneurship
Business Law	BCOR1202	2017	Utilize legal framework for starting a business venture and running it successfully in conformity with legal parameters- Employability & Entrepreneurship
Introduction to Banking	BBAR1208	2017	Carry out operational activities in commercial banks Employability
Business Environment	BBAR1206	2017	Analyse business environment and take appropriate decision Employability and Entrepreneurship
Financial Accounting II	BCFA1207	2017	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Direct Tax	BBAR2106	2017	Can handle computation of heads of income and taxable income, TDS, advance tax etc.: Employability
Indirect Taxes / GST	BBAR2107	2017	Calculate and file GST, levy and collection of tax, input tax credit, IGST act GSTN etc.: Employability & Entrepreneurship
Cost & Management Accounting	BBAR2110	2017	Preparation of cost sheet and analysis of financial statements: Employability & Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Corporate Law	BBAR2108	2017	Utilize legal framework for starting a business venture and running it successfully in conformity with legal parameters- Employability & Entrepreneurship
E-Commerce	BBAR2209	2017	carry out entrepreneurial activities electronically (E-commerce) Employability
Quantitative Techniques for Business	BBAR2207	2017	formulate complex problems into mathematical models to solve using software- Employability
Auditing	BBAR2210	2017	Identify the areas of fraud and errors in the accounts and take corrective actions while presenting the audit report: Employability
Business Ethics & Governance	BBAR2206	2017	Introduction of ethical practices in business - Employability, Entrepreneurship
Corporate Accounting	BBAR3109	2017	Develop Accounting procedures used in corporates and the strategies involved in the corporate decisions.: Employability & Entrepreneurship
Financial Market Operation	BBAR3110	2017	Analyse Money market, Capital market, its instruments and apply the same in organizations- Employability
On Job Internship-I	BBAR3111	2017	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Global Finance	BBAR3209	2017	Apply suitable techniques and strategies to reduce risk in the foreign exchange market - Employability
Banking Law & Practice	BBAR3210	2017	Adhere to Banking laws and practices while working in banking sector- Employability
On Job Internship-II	BBAR3211	2017	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Digital Media Platforms	MAMC1104	2018	Employability: Get jobs in Television program production or Radio Program production.
Film studies	MAMC1105	2018	Students will be able to develop skills in different aspects of Film and will be able to analyze film-Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Advertising and Public Relations	MAMC1106	2018	After studying this paper student will be able to employ Public Relations and Advertising industry and its functioning.-Employability
Thesis	MAMC0301	2018	Employability: Analysing Media issues and analysis of media content.
Animation	MCDE0601	2016	Ability to create quality animation performance through a creative and professional portfolio using principles of animation.will help in Employability and Skill development
Adobe tools and Illustrations	MCDE0609	2018	Work on Adobe Illustrator in the beginner level, and on graphics designing. Skill Development and Employability
Communication in History and History of Communication	MCFC0501	2016	Utilise the skill in communication of the students- Skill development and students can able to work in new communication technologies at different points of time-Employability
Introduction to Social Media	MCCC1101	2018	Student will able to get employment on Social media- Employability
Electronic Media	MCCC1102	2018	Students can develop their skills in in TV/Radio/ Digital media platforms-Skill development, Get job in TV/Radio/ Digital media-Employability
Film Studies	MCCC1103	2018	Students will be able to develop skills in different aspects of Film and will be able to analyze film-Employability
PR and Advertising	MCCC1104	2018	After studying this paper student will be able to employ Public Relations and Advertising industry and its functioning.-Employability
Classical Mechanics	MSCP1102	2017	Employability - Variational principle, Central force problem, Canonical transformations, Poisson Bracket, Hamiltonian-Jacobi Theory and transition to Quantum mechanics, Small Oscillations.
Quantum Physics I	MSCP1103	2017	Employability - Angular Momentum, The Hydrogen Atom, Perturbation Theory.
Electrodynamics & Special Relativity	MSCP1104	2017	Employability - The special theory of relativity, Relativistic Mechanics, Relativistic Electrodynamics.



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Solid State Physics	MSCP1201	2017	Employability - Crystal Vibrations (Phonon theory), Thermal Properties of Solid, Free electron Fermi gas, Semiconductor, Dielectrics and Ferroelectrics.
Computational Physics Lab	MSCP1204	2017	Skill and employability - Learning simulation and solving problems using programming.
Atomic and Molecular Physics	MSCP2301	2017	Employability - Molecular spectra , Laser.
Nuclear and Particle Physics	MSCP2302	2017	Employability - Nuclear models:Shell Model, Liquid Drop Model, Nuclear Reactions, Sub-nuclear particles and their properties.
Quantum Physics II	MSCP2303	2017	Employability - Variational Methods, WKB Approximation, Time Dependent Perturbation Theory, Scattering Theory.
Microprocessor and Interfacing devices	MSCP2304	2017	Employability - Microprocessor Architecture, Assembly language program & executing programs , Architecture and register organization of 8086.
Soft Matter Physics	MSCP2305	2017	Employability - Elastic soft matter, Liquid crystals, Brownian motion and thermal fluctuations, Variational Principles of for Soft Matter, Diffusion and Permeation in Soft Matter, Flow and deformation in Soft Matter.
Electronics Communication System	MSCP2401	2017	Employability - Analog Modulation Systems, Digital Modulation Systems, Optical Communication System, Satellite Communication.
Introduction to Bio- and Nano-materials	MSCP2403	2017	Employability - Natural biomaterials, Nano-Materials Introduction, Synthesis Routes, Nanostructured Materials, Characterization:.
Advanced Solid State Physics	MSCP2404	2017	Employability - Many Body Systems, Magnetic properties
Materials Lab II	MSCP2405	2017	Skill - Materials lab II, Employability - synthesis of materials, Analysis of dielectric properties of a material, Analysis of electrical properties of a material. Analysis of AC and DC conductivity of a material



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Statistical Physics	MSPH3602	2017	Employability -The Statistical Basis of Thermodynamics, Canonical Ensemble, The Grand Canonical Ensemble, Formulation of Quantum Statistics, The Theory of Simple Gases, Ideal Bose Systems, Ideal Fermi Systems.
Embedded System	MSPH5103	2017	Employability - Embedded systems
Advanced Physical Chemistry I	MSCC1101	2018	employability-Chemical Dynamics ,Adsorption,Electrochemistry, Enterperneurship-Micelles,
Advanced Inorganic Chemistry I	MSCC1102	2018	Employability-Metal-Ligand Bonding-I&II, Electronic Spectra and Magnetic Properties of Transition Metal Complexes-I,II and III, Metal - Ligand Equilibria in Solution-I&II.
Advanced Organic Chemistry I	MSCC1103	2018	Employability-Aliphatic Nucleophilic Substitution,Aromatic Nucleohilic Substitution,Aliphatic Electrophilic Substitution,Addition to Carbon-Carbon Multiple Bonds ,Elimination Reactions.
Polymer Chemistry	MSCC1104	2018	Employability-Kinetics of melting, crystal morphology, free volume, distribution of molecular size, stoichiometric imbalance. X-ray diffraction study, Microscopy,Price - Alfrey equation, Flory - Huggins theory, polymer fractionation, Mark - Houwink - Sakurada equation, diffusion coefficient and friction factor,Power Law for pseudo plastic liquids, effect of shearing forces, segmental friction factor, Bueche theory. Skill-Thermal analysis and physical testing,Polymer Processing-I&II,Elastic deformation, shear modulus and compliances, Maxwell model, Voigt model, dynamic viscoelasticity, molecular theory for viscoelasticity - Rouse model,Mechanical properties
Advanced Physical Chemistry II	MSCC1201	2018	Employability-Non-ideal systems,Quantum Chemistry-I,II ,III and IV.



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Advanced Inorganic Chemistry II	MSCC1202	2018	Employability-Metal n -Complex, Metal Clusters, Organometallic Chemistry I & II . Skill-Symmetry and Group Theory in Chemistry-III.
Advanced Organic Chemistry II	MSCC1203	2018	Employability-Organic Synthesis and retrosynthesis, Organometallics in synthesis, Photochemistry, Pericyclic Reactions, Cycloadditions.
Nuclear Chemistry	MSCC1204	2018	Employability-Systematic Study of alpha, beta and gamma decays, Module-II & III, Nuclear reaction, Nuclear fission, Reactor Theory and Module-VII
Advanced Inorganic Chemistry III	MSCC2301	2018	Skill-Instrumental Method of Analysis, Raman Spectroscopy, Homogeneous and Heterogeneous Catalysis, Displacement and Isomerization reaction. Hydrogenation, Hydroformylation, Wacker (Smidt) Process, Olefin Metathesis, Fischer-Tropsch synthesis, Zeigler-Natta polymerization, Water gas reaction Employability-Mechanism of Substitution Reactions, Electron Transfer Reactions
Advanced Organic Chemistry III	MSCC2302	2018	Employability-Bioenergetics, Amino Acids, Peptides and Proteins, Enzymes, Module-V & VI
Advanced Physical Chemistry III	MSCC2303	2018	Employability-Electronic spectra of molecule, Electronic spectra of diatomic molecules, Electronic spectra of polyatomic molecules. Skill-Nuclear Magnetic Resonance Spectroscopy, Fluorescence, Data analysis
Advanced Solid State Chemistry	MSCC2304	2018	Employability-Bonding in Solids, of solids-band theory, Mechanical Properties of Solids, Organic Solids. Skill-Diffraction Methods, Neutron Diffraction
Advanced Bio-Inorganic Chemistry	MSCC2402	2018	Employability-Metalloporphyrins and Iron-sulphur Protein, Metalloporphyrins and Iron-sulphur Protein, Magnesium porphyrins (Chlorophyll), Metalloenzymes, chiral recognition and catalysis, molecular recognition, biomimetic



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			chemistry, crown ethers, cryptates. Cyclodextrine, cyclodextrinbased enzyme models, calixarenes, Ionophores, Supramolecular Chemistry-I&II
MATHEMATICAL MODELLING	MSMA 4701	2017	Skill- Mathematical modelling through ordinary differential equations of first order. Employability - Mathematical modelling through the systems of ordinary differential equations
ABSTRACT ALGEBRA - I	MSMA 4702	2017	Employability - Automorphisms, Cayley's Theorem, Permutations Groups
ADVANCED ANALYSIS	MSMA 4703	2017	Employability - Connected sets, Bounded sets, Totally Bounded sets, Complete Metric Spaces.
PARTIAL DIFFERENTIAL EQUATION-II	MSMA 4704	2017	Skill- Eigen value Problems Employability - The Cauchy Problem, The method of Separation of Variables
DIFFERENTIAL GEOMETRY	MSMA 4705	2017	Employability - Fundamental Triads, Curves, Serret-Frenet Formulae, Curvatures and torsion of a curve at a point.
MEASURE THEORY	MSMA 4801	2017	Employability - Outer measure, Measurable sets and Lebesgue measure
ADVANCED CALCULUS	MSMA 4802	2017	Skill- Derivatives of functions on R^n , Differentiation of composite functions Employability - Set functions, Transformations and Multiple integrals
TOPOLOGY	MSMA 4803	2017	Employability - T_0 - and T_1 - spaces and sequence, Axioms of countability
FLUID DYNAMICS – I	MSMA 4804	2017	Employability - Fundamental equations of the flow of viscous compressible fluids
TENSOR ANALYSIS	MSMA 4805	2017	Skill- Riemann Geometry Employability - Tensor Algebra, Applications of Tensor methods to surface Geometry.
ABSTRACT ALGEBRA-II	MSMA 5101	2017	Employability -Algebra of Linear Transformations, Characteristic Roots



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
COMPLEX ANALYSIS-II	MSMA 5102	2017	Employability -General form of Cauchy's Theorem, Calculus of Residues, Evaluation of Definite Integrals, Harmonic Functions.
FLUID DYNAMICS – II	MSMA 5103	2017	Employability -The Laminar boundary layer, Properties of Navier-Stokes equations
OPERATION RESEARCH – II	MSMA 5104	2017	Skill- Graphical method for 2 X n and, m X 2 matrix games Employability - Second order optimality condition, Lagranges method
NUMBER THEORETIC CRYPTOGRAPHY	MSMA 5105	2017	Employability -Enciphering matrices, The idea of public key Cryptography, RSA
THEORY OF COMPUTATION	MSMA 5201	2017	Employability -Computability Theory: Churh-Turing thesis
ADVANCED NUMERICAL ANALYSIS	MSMA 5202	2017	Employability -Eigen values and Eigen Vectors: Basic power method, Rayleigh Quotient, Shifted power method
Microbiology	MSBO1101	2017	Higher studies/Employability- Students learn on preparation and sterilization of media, plating, slanting of media, isolation of bacteria in pure culture
Cell Biology	MSBO1103	2017	Employability-Perform comparative karyotypic analysis, techniques like extraction and separation of DNA by gel electrophoresis, squashing technique for the study of different stages of mitosis and meiosis
Plant Ecology	MSBO1104	2017	Employability-Practical on biodiversity measurement by different indices, calculation and problem solving.
Botany Laboratory-I	MSBO1105	2017	Employability/Skill-Acquire general idea on instruments used in microbiology laboratory
Plant Physiology, Metabolism, and Biochemistry	MSBO1202	2017	Employability- Practicals on study of principles of spectrophotometer & verification of Beer-Lambert's law, Preparation of standard curve for quantification of protein, carbohydrate & reducing sugar



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Environmental Pollution and Management	MSBO1204	2017	Employability-Testing water and soil quality,practicals on Phytoremediation and pollution management.
Systematics and Pathology	MSBO2301	2017	Employability-Identification of plants, plant diseases and control measures
Natural Resource Management and Utilization	MSBO2302	2017	Skill/ Employability- Bioresource management.
Plant Biotechnology and Bioinformatics	MSBO2401	2017	Entrepreneurship/Employability- Practicle on Production of synthetic seeds, Techniques of surface sterilization and plant regeneration via organ culture
Eco toxicology & Waste Management	MSBO2402	2017	Employability-Practicle on E-waste management, smart waste management; landfilling-biological processes, leachate control and treatment, site management
Microbial Technology &Physiology	MSBO2403	2017	Employability-Perform fermentation technology, Food processing technology
Project/Dissertation	MSBP2401	2017	Employability- Problem analysis by opting the project work, findings and presentation
Biosystematics and Taxonomy	MSZO1102	2017	Employability - . History of Classification Trends in biosystematics: Chemotaxonomy cytotaxonomy and molecular taxonomy, ,Taxonomic procedures: Taxonomic collections, preservation, curation, process of identification. Taxonomic keys, different types of keys, their merits and demerits. Taxonomic categories. Evaluation of biodiversity indices Evaluation of Shannon. Weiner Index, International code of Zoological Nomenclature (ICZN): , Hardy-Weinberg law of genetic equilibrium, . Trends in Evolution Molecular Evolution Gene evolution, Evolution of gene families. Assessment of molecular variation
Cell & Molecular Biology	MSZO1103	2017	Employability - CellSignaling: Signalling molecules and signal receptors, second messengers, G protein coupled receptors,



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			<p>activation of gene transcription by G protein coupled receptors, Lampbrush chromosome, Polytene chromosome, telocentric chromosome, Inter-phase chromatin, Euchromatin and Heterochromatin, karyotype and its significance Cell cycle: Molecular models and events. Regulators and checkpoints in cell cycle, DNA synthesis by reverse transcription, DNA Repair: mismatch repair, base excision, nucleotide excision, direct repair, SOS repair, Prokaryotic and eukaryotic translation.</p>
Biochemistry	MSZO1104	2017	<p>Employability - Carbohydrate metabolism: Glycolysis, TCA cycle, pentose-phosphate pathway. Gluconeogenesis, glycogen metabolism, regulation of carbohydrate metabolism, Oxidative phosphorylation, electron transport and ATP synthesis, Enzymes: General properties, nomenclature and classification, extraction and assay Michaelis-Menten kinetics and its significance, Brigg's-Halden modification, determination of Vmax and Km, Mechanism of enzyme action: general acid-base catalysis, covalent catalysis, metal catalysis Mechanism of action of RNase, Lysozyme and Chymotrypsin, Coenzymes and vitamins, Enzyme inhibition: competitive, non-competitive inhibition, determination of Ki, allosteric regulation, covalent modification</p>
Immunology and Cancer Biology	MSZO1204	2017	<p>Employability - Antigen – Antibody interaction (Antibody affinity, Radial and Double immune diffusion, Radioimmunoassay, ELISA- Indirect, Direct, Sandwich, ELISPOT, Competitive, Western blotting), Major histocompatibility complex and MHC restriction, Antigen Processing and Presentation, Generation of humoral and cell mediated immune response, BCR and TCR, generation of diversity, Complement system(Classical, Alternate and lectin pathway), Cytokines- Types and their role</p>



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			in immune regulation, Activation and regulation of B and T lymphocytes, Cell-mediated cytotoxicity and Antibody dependent cell mediated cytotoxicity, Hypersensitivity, Autoimmunity and Transplantation., Role of carcinogens and DNA repair in cancer
Ecotoxicology	MSZO2303	2017	Employability - Productivity, Production and analysis. Recycling and reuse technologies for solid and liquid wastes and their role in environmental conservation. Remote sensing – basic concepts and applications of remote sensing techniques in environmental conservation. Environmental indicators and their role in environmental balance., , Vehicular exhaust pollution causes and remedies, Noise pollution, Toxicity testing principles, hazards, risks and their control methods., Food toxicants and their control methods, Public Health Hazards due to environmental disasters, Pesticides, types, nature and their effects on environment, Important heavy metals and their role in environment, Agrochemical use and misuse, alternatives, Occupational Health Hazards and their Control
Environment and Pollution Management	MSZO2403	2017	Employability - biomass production, biotechnology for generation of biogas , Classification, formation, survey and land capability, soil structure and profile, soil reaction and buffering, Management and remediation of soil pollution, management and decontamination of saline, acidic, alkaline and mine waste soil, management of water logged, sandy and peat soil, degradation of organic pollutants in soil environment, ex situ and in situ bioremediation of contaminated soil: biopile, bioventing, biosparging and bio slurping., Pollutants in air: Major air pollutants; oxides of nitrogen, sulphur and carbon-sources, effects and environmental reactions, particulate air



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			pollutants; methods of air pollution control, particle settling chamber, inertial separator, cyclone filters, electrostatic precipitators, gaseous pollutant control-scrubber, absorbers, thermal decomposers, biological filters
Environmental Science	FCBS0101	2016	Employability - Environmental Science
Thermal Physics	BSPH1201	2016	Employability - Laws of Thermodynamics, Carnot engine & efficiency. Carnot's Theorem. Refrigerator & coefficient of performance, 2nd Law of Thermodynamics: Kelvin-Planck and Clausius Statements and their Equivalence. Applications of Second Law of thermodynamics, Entropy, Thermodynamic Potentials, Kinetic Theory of Gases, Molecular Collisions, Real Gases. Skill- Thermal Physics Lab
Waves and optics	BSPH1202	2016	Employability - Interferometer, Diffraction grating. Resolving power of grating, Fresnel's half-Period Zones Skill - Waves and Optics Lab.
Electricity and Magnetism	BSPH2302	2017	Employability - Magnetic Properties of Matter, Magnetization, Electromagnetic Induction, Electrical Circuits, Network Theorem. Skill - Electricity and Magnetism Lab
Analog systems and Applications	BSPH2303	2017	Employability - Semiconductor Diodes, Two-terminal Devices and their Application, Amplifiers, Applications of Op-Amp. Skill - Analog Systems and ApplicationsLab
Elements of Modern Physics	BSPH2402	2017	Employability - Radioactivity, Fission and Fusion, Lasers. Skill - Elements of Modern Physics Lab
Digital systems and Applications	BSPH2403	2017	Employability - CRO uses, Integrated Circuits, Digital Circuits, Data processing circuit, Microprocessor Architecture. Skill - Digital system Lab
Quantum Mechanics & Applications	BSPH3501	2017	Employability - Schrodinger equation and its solution, its application, hydrogen-like atoms,



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			Atoms in Electric & Magnetic Fields, Many electron atoms. Skill - Learn to solve quantum problems through computational methods
Solid State Physics	BSPH3502	2017	Employability - Magnetic properties of materials, dielectric properties of materials, superconductivity. Skill - Solid state physics lab
Experimental Techniques	BSPH3503	2017	Employability - Experiments are done on, Thermostat, ultrasonic transducer, Calibrate Semiconductor type temperature sensor (AD590, LM35, or LM75), Create vacuum in a small chamber using a mechanical (rotary) pump and measure the chamber pressure using a pressure gauge, design and study the Sample and Hold Circuit, Design and analyze the Clippers and Clampers circuits using junction diode etc enables them to become Lab Technician. Enterprenuership - Transducers & industrial instrumentation, Digital Multimeter, Sensors Skill - Experimental Techniques Lab
Embedded systems- Introduction to Microcontroller	BSPH3504	2017	Employability - Embedded system, microprocessors, 8051 microcontroller, 8051 I/O port programming, Interfacing 8051 microcontroller to peripherals, Embedded system design and development. Enterprenuership - 8051 I/O port programming, Interfacing 8051 microcontroller to peripherals, Embedded system design and development. Skill - Embedded System: Introduction to Microcontrollers Lab.
Physics of Devices and Communication	BSPH3505	2017	Employability - Physics of Devices, Power supply and Filters, Phase detector , Processing of Devices, Digital Data Communication, communication systems. Skill - Physics of Devices and Communications Lab



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Advanced Mathematical Physics-II	BSPH3507	2017	Employability - Enterprenuership - Skill -
Classical Dynamics	BSPH3508	2017	Employability - Small amplitude oscillations, special theory of relativity, tensors, fluid dynamics.
Applied Dynamics	BSPH3603	2017	Employability - Dynamical systems, Chaos and Fractals, Fluid Dynamic Skill - Applied Dynamics lab
Communication System	BSPH3604	2017	Employability - Communication and Navigation systems, Satellite Communication, Mobile Telephony System, mobile communication network, Enterprenuership - Mobile Telephony System, mobile communication network, Skill - Communication Electronics Lab
Nuclear and Particle Physics	BSPH3605	2017	Employability - Nuclear Models, Radioactivity decay, Nuclear Reactions, Interaction of Nuclear Radiation with matter, Detector for Nuclear Radiations, Particle Accelerators.
Astronomy and Astrophysics	BSPH3606	2017	Employability - Astronomy and Astrophysics Skill - Astronomical Scales, Astronomical techniques, Stellar spectra and classification Structure
Dissertation	BSPH3607	2017	Employability - Project work Skill - Project work
Inorganic chemistry-I	BSCH1101	2018	Skill- Wave mechanics and Inorganic Chemistry-I Lab , enterperneurship-Atomic Structure-2,Periodicity of Elements-1&2, Employability-Chemical Bonding-1&2, Oxidation-Reduction
Physical Chemistry-I	BSCH1102	2018	Employability-Gaseous state 1 &2 ,enterperneurship-Liquid state:,gaseous state-3,Solid state,Ionic Equilibria-1&2, Skill-bravis lattices,Qualitative treatment of acid - base, Physical Chemistry Practice
Organic Chemistry-I	BSCH1201	2018	Employability-Basics of Organic Chemistry,Stereochemistry,Chemistry of Aliphatic Hydrocarbons,Carbon-Carbon pi



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			bonds, Electrophilic aromatic substitution , skill- Cycloalkanes and Conformational Analysis, Organic Chemistry Practice
Physical Chemistry-II	BSCH1202	2018	Employability-Chemical Thermodynamics, Second Law of Thermodynamics, Third Law of thermodynamics, Systems of Variable Composition, Dilute solutions . Enterpreneurship-Chemical Equilibrium, Thermochemistry. Skill-Physical Chemistry-II Practice
Inorganic chemistry-II	BSCH2301	2018	Skill-General Principles of Metallurgy-1,- Inorganic Chemistry Practice. Employability-Acids and Bases, Chemistry of s and p Block Elements-1, Boric acid and borates, boron nitrides, borohydrides (diborane) carboranes and graphitic compounds, silanes, Chemistry of s and p Block Elements-3, preparation and properties of Clathrates, Inorganic Polymers .
Organic Chemistry-II	BSCH2302	2018	Employability-Chemistry of Halogenated Hydrocarbons-1&2, Organometallic compounds , Alcohols, Phenols, Ethers and Epoxides, Carbonyl Compounds 1&2, Carboxylic Acids and their Derivatives. Skill-Organic Chemistry Practice
Physical Chemistry-III	BSCH2303	2018	Employability-Phase Equilibria-1 &2, Chemical Kinetics-2, Catalysis, Surface chemistry. Skill-Nernst distribution law, Physical Chemistry Practice.
Inorganic Chemistry-III	BSCH2401	2018	Employability-Coordination Chemistry-1&2, Transition Elements, Lanthanoids and Actinoids. Skill-separation of lanthanides, Bioinorganic Chemistry-1,2 and Inorganic Chemistry Practice
Organic Chemistry-III	BSCH2402	2018	Employability-Nitrogen Containing Functional Groups, Heterocyclic Compounds-1&2 , Alkaloids-1. Skill-Alkaloids-2 &3, Organic Chemistry Practice



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Physical Chemistry-IV	BSCH2403	2018	Employability-Electrical & Magnetic Properties of Atoms and Molecules and Application . Skill- Electrochemistry :II, Physical Chemistry Practice. Enterperneurship-Electrochemistry :I
Organic Chemistry-IV	BSCH3501	2018	Employability-Nucleic Acids,Amino Acids,Peptides,Enzymes,for transfer of electrons in biological redox systems .Skill- Lipids,Pharmaceutical Compounds, Organic Chemistry Lab
Physical Chemistry-V	BSCH3502	2018	Employability-Molecular Spectroscopy,Raman spectroscopy,Nuclear Magnetic Resonance (NMR) spectroscopy,Photochemistry. Skill- Physical Chemistry Practice
Inorganic Chemistry-IV	BSCH3601	2018	Employability-General methods of preparation of mono and binuclear carbonyls of 3d series,Zeise's salt,Study of the some industrial processes and their mechanism.Skill-Inorganic Chemistry Practice
Organic Chemistry-V	BSCH3602	2018	Employability-Organic Spectroscopy,Carbohydrates,Dyes,Metalocene-based Ziegler-Natta polymerisation of alkenes. Skill-Polymers Introduction and classification ,IR Spectroscopy,NMR Spectroscopy,Organic Chemistry Practice
Industrial Chemicals and Environment	BSCH3503	2018	Employability-Industrial Gases and Inorganic Chemicals,Inorganic Chemicals,Energy & Environment,Biocatalysis. Skill-Environment and its segments, Water Pollution,Industrial effluents from the following industries and their treatment, Industrial Chemicals & Environment practice.
Inorganic Materials of Industrial Importance	BSCH3504	2018	Employability-Glass,Ceramics,Fertilizers,Surface Coatings,Alloys,Catalysis.Skill-Batteries,Inorganic Materials of Industrial Importance practice
Instrumental Methods of Chemical Analysis	BSCH3604	2018	Skill-Introduction to spectroscopic methods of analysis,Molecular spectroscopy,Separation techniques,Instrumental Methods of Chemical Analysis practice. Employability-Molecular



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			spectroscopy instrumentation and application, Atomic spectroscopy, Spectrophotometers principle and application,
Calculus	BSMA1101	2017	Skill- Lab work to be performed on a Computer Employability- Asymptotes, Curvature, Tracing of Curves
Linear Algebra	BSMA1102	2017	Skill –To gain the knowledge on MATLAB and uses in algebra. Employability- Solve systems of linear equations using various methods
Ordinary Differential Equations	BSMA1202	2017	Skill –To understand solving Free Undamped Motion of a Spring System using Python and other skills Employability- Be competent in solving linear/non-linear 1st & higher order ODEs using analytical methods to obtain their exact solutions.
Numerical Analysis	BSMA2401	2017	Skill – Numerical Solution of different linear and non-linear equations using software. Employability - Perform error analysis to select an appropriate numerical model and to estimate errors in numerical solution of a given problem.
Complex Analysis	BSMA3501	2017	Skill –Learn the Plotting of complex functions using Matlab Employability - Illustrate the applications of the calculus of residues in the evaluation of real integrals.
Discrete Mathematical Structure	BSMA3602	2017	Skill –To work with different types of Sets, Lattices and Boolean Algebra using Python Employability - To learn a particular set of mathematical facts and to apply their applications in many subjects of Computer Science and Engineering such as Cryptography, Theory of Computation & Data Networking.
Analysis-I	BSMA1201	2017	Skill- In much of analysis, the emphasis is not on finding explicit solutions to specific problems



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			Employability- Produce rigorous proofs of results that arise in the context of real analysis
Analysis-II	BSMA2301	2017	Skill - To describe various theorems about Riemann sums and Riemann integrals and emphasize the proofs' development. Employability - Apply change of variables in double integrals and triple integrals
Modern Algebra	BSMA2302	2017	Skill - To introduce students to the language and precision of modern algebra Employability - Work effectively with others to discuss homework problems put on the board.
Partial Differential Equations and System of Ordinary Differential Equations	BSMA2303	2017	Skill - Introduce students to how to solve linear Partial Differential Equations with different methods. Employability - Identify and solve Laplace, Diffusion and Wave equations.
Advanced Analysis	BSMA2402	2017	Skill - Construct rigorous mathematical proofs of basic results in real analysis; Employability - Define the limit point, interior point, neighbourhood etc.
Programming in C	BSMA2403	2017	Skill - To understand advanced concepts of C such as Arrays, Strings, functions pointers and structures in detail. Employability - Write programs that perform operations using derived data types.
Probability and Statistics	BSMA3502	2017	Skill- To apply probability and statistics in engineering and science like disease modeling, climate Prediction and computer networks etc using MATLAB Employability - Compute probabilities based on practical situations using the Binomial, Poisson and Normal distributions.
Non-Chordates-I	BSZO1101	2017	Employability- Porifera: General characteristics and Classification up to classes, Cnidaria: General characteristics and Classification up to classes, Metagenesis in Obelia Polymorphism in Cnidaria, Corals and coral reefs., Platyhelminthes: General



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			characteristics and Classification up to classes, Life cycle and pathogenicity of <i>Fasciola hepatica</i> and <i>Taenia solium</i> , Nematelminthes: General characteristics and Classification up to classes, Life cycle, and pathogenicity of <i>Ascaris lumbricoides</i> and <i>Wuchereria bancrofti</i> , Parasitic adaptations in helminthes,
Principles of Ecology	BSZO1102	2017	Employability- Population: Unitary and Modular populations Unique and group attributes of population: Density, natality, mortality, life tables, fecundity tables, survivorship curves, age ratio, sex ratio, dispersal and dispersion. Exponential and logistic growth, equation and patterns, r and K strategies Ecosystem: Types of ecosystems with one example in detail, Food chain: Detritus and Grazing food chains, Linear and Y-shaped food chains, Food web, Energy flow through the ecosystem, Ecological pyramids and Ecological efficiencies, • Study of life tables and plotting of survivorship curves of different types from the hypothetical/real data provided. • Determination of population density in a natural/hypothetical community by quadrat method and calculation of Shannon-Weiner diversity index for the same community • Study of an aquatic ecosystem: Phytoplankton and zooplankton, Measurement of area, temperature, turbidity/penetration of light, determination of pH, and Dissolved Oxygen content • (Winkler's method), Chemical Oxygen Demand and free CO ₂
Non-Chordate II	BSZO1201	2017	Employability - General characteristics and Classification up to classes, General characteristics and Classification up to classes, Social life in bees and termites, General characteristics and Classification up to classes,



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			Pearl formation in bivalves, General characteristics and Classification up to classes
Cell Biology	BSZO1202	2017	<p>Employability - Structure of Nucleus: Nuclear envelope, Nuclear pore complex, Nucleolus, Chromatin: Euchromatin and Hetrochromatin and packaging (nucleosome), Mitosis, Meiosis, Cell cycle and its regulatio, GPCR and Role of second messenger (cAMP),</p> <ul style="list-style-type: none"> • Preparation of permanent slide to show the presence of Barr body in human female blood cells/cheek cells. • Preparation of permanent slide to demonstrate <ol style="list-style-type: none"> i) DNA by Feulgen reaction ii) DNA and RNA by MGP iii) Mucopolysaccharides by PAS reaction iv) Proteins by Mercurobromophenol blue/Fast Green
Diversity of Chordates	BSZO2301	2017	<p>Employability - General characteristics and classification of cyclostomes up to class, General characteristics of Chondrichthyes and Osteichthyes, classification up to order Migration, Osmoregulation and Parental care in fishes, General characteristics and classification up to order; Parental care in Amphibians, General characteristics and classification up to order; Affinities of Sphenodon; Poison apparatus and Biting mechanism in snakes, General characteristics and classification up to order Archaeopteryx—a connecting link; Principles and aerodynamics of flight, Flight adaptations and Migration in birds, General characters and classification up to order</p>
Animal Physiology: Controlling and Coordinating Systems	BSZO2302	2017	<p>Employability - Histology of endocrine glands - pineal, pituitary, thyroid, parathyroid, pancreas, adrenal; hormones secreted by them and their mechanism of action; Classification of hormones, Regulation of their secretion; Mode</p>



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			of hormone action, Signal transduction pathways for steroidal and non-steroidal hormones
Fundamentals Of Biochemistry	BSZO2303	2017	Employability - Enzymes: Nomenclature and classification; Cofactors; Specificity of enzyme action; Isozymes; Mechanism of enzyme action; Enzyme kinetics; Factors affecting rate of enzyme-catalyzed reactions; Derivation of Michaelis-Menten equation, Concept of Km and Vmax, Lineweaver-Burk plot; Multi-substrate reactions, Enzyme inhibition; Allosteric enzymes and their kinetics; Regulation of enzyme action, <ul style="list-style-type: none"> • Qualitative tests of functional groups in carbohydrates, • Qualitative tests of functional groups in protein • Qualitative tests of functional groups in lipids. • Separation of amino acid using Paper. Chromatography . • Action of salivary amylase under optimum conditions. • Effect of different pH on salivary amylase activity. • Effect of different Temperature on salivary amylase activity. • Effect of inhibitor on salivary amylase activity
Comparative Anatomy of Vertebrates	BSZO2401	2017	Employability - <ul style="list-style-type: none"> • Study of placoid, cycloid and ctenoid scales through permanent slides/photographs • Study of disarticulated skeleton of Amphibia/Reptilia/Aves/Mammal • Study of Mammalian skulls (Rabbit) • Study of Mammalian skulls (Rat)
Animal Physiology: Life Sustaining Systems	BSZO2402	2017	Employability - Cardiac cycle; Cardiac output and its regulation, Frank-Starling Law of the heart, nervous and chemical regulation of heart rate. Electrocardiogram, Blood pressure and its regulation, Structure of kidney and its functional unit; Mechanism of urine formation; Regulation



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			<p>of water balance; Regulation of acid-base balance, • Study of blood cells from prepared blood smear</p> <ul style="list-style-type: none"> • Determination of ABO Blood group • Enumeration of red blood cells using haemocytometer • Enumeration of red blood cells using haemocytometer <ul style="list-style-type: none"> • Estimation of haemoglobin using Sahli's haemoglobinometer • Preparation of haemin and haemochromogen crystals • Recording of blood pressure using a sphygmomanometer. • Examination of sections of various mammalian organs
Biochemistry of Metabolic Processes	BSZO2403	2017	<p>Employability - Sequence of reactions and regulation of glycolysis, Citric acid cycle, Phosphate pentose pathway, Gluconeogenesis, Glycogenolysis and Glycogenesis, • To estimate the protein content of supplied tissue by colorimeter method</p> <ul style="list-style-type: none"> • To estimate the glycogen content of supplied tissue by colorimeter method • To extract & colorimetric estimation of nucleic acid. • To demonstrate the effect of temperature on enzyme activity.
Molecular Biology	BSZO3501	2017	<p>Employability - Ribosome structure and assembly in prokaryotes, fidelity of protein synthesis, aminoacyl tRNA synthetases and charging of tRNA; Proteins involved in initiation, elongation and termination of polypeptide chain; Inhibitors of protein synthesis; Difference between prokaryotic and eukaryotic translation. Gene silencing, Genetic imprinting DNA Repair Mechanisms: Pyrimidine dimerization and</p>



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			mismatch repairRegulatory RNAs,Ribo-switches, RNA interference, miRNA, siRNA <ul style="list-style-type: none"> • Demonstration of DNA & RNA by MGP. • Demonstration of Mucopolysaccharides by PAS reaction. • Demonstration by Mercurobromophenol blue/Fast Green.
Principles of Genetics	BSZO3502	2017	Employability - Types of chromosomal aberrations (Classification, figures and with one suitable example of each), Molecular basis of mutations in relation to UV light and chemical mutagens; Detection of mutations: CLB method, attached X method, Sex Determination, Chromosomal mechanisms of sex determination in Drosophila and Man Extra - chromosomal Inheritance. Criteria for extra-chromosomal inheritance, Antibiotic resistance in Chlamydomonas, Mitochondrial mutations in Saccharomyces, Infective heredity in Paramecium and Maternal effects., Transposons in bacteria, Ac-Ds elements in maize and P elements In Drosophila, Transposons in humans,
Developmental Biology	BSZO3601	2017	Employability - Regeneration: Modes of regeneration, epimorphosis, morphallaxis and compensatory regeneration (with one example each)., Ageing: Concepts and Theories, Implications of Developmental Biology Teratogenesis: Teratogenic agents and their effects on embryonic, development; in vitro fertilization, Stem cell (ESC), Amniocentesis, <ul style="list-style-type: none"> • Study of whole mounts and sections of developmental stages of frog through permanent slides: Cleavage stages, blastula, gastrula, neurula, tail-bud stage,tadpole (external and internal gill stages) • Study of whole mounts of developmental stages of chick through permanent slides: • Primitive streak (13 and 18 hours), 21, 24, 28,



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			33, 36, 48, 72, and 96hours of incubation (Hamilton and Hamburger stages)
Evolutionary Biology	BSZO3602	2017	Employability - Hardy-Weinberg Law (statement and derivation of equation, application of law to human Population); Evolutionary forces upsetting H-Wequilibrium; Natural selection (concept of fitness, selection coefficient, derivation of oneunit of selection for a dominant allele, genetic load, mechanism of working, types of selection, density-dependent selection, heterozygous superiority, kin selection, adaptive resemblances, sexual selection, Phylogenetic trees, Multiple sequence alignment, construction of phylogenetic trees, interpretation of trees
Immunology	BSZO3603	2017	Employability - Immunoglobulins : Structure and functions of different classes of immunoglobulins, Antigen-antibody interactions, Immunoassays (ELISA and RIA), Structure and functions of MHC molecules. Endogenous and exogenous pathways of antigen processing and presentation Cytokines: Properties and functions of cytokines, Therapeutics Cytokines Complement System: Components and pathways of complement activation., 5. ABO blood group determination., 6. Cell counting and viability test from splenocytes of farm bred animals/celllines., 7. Demonstration of a. ELISA , b. Immunoelectrophoresis
Parasitology	BSZO3604	2017	Employability- Study of Morphology, Life Cycle, Prevalence, Epidemiology, Pathogenicity,Diagnosis, Prophylaxis and Treatment of Entamoeba histolytica, Giardia intestinalis, Trypanosoma gambiense, Leishmania donovani, Plasmodium vivax Study of structure, life cycle and importance of Meloidogyne (root knot



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			nematode), Pratylenus (lesionnematode, All Experiments present in Syllabus
Techniques in Bio fertilizers	BSLS2001	2017	Employability- - Methods of Biocompost, 9. Methods of vermicomposting, 10. Field application of Vermicompost
Techniques in Medical Diagnostics	BSLS2004	2017	Employability- Study of D.L.C (Differential Leucocyte Count) using Leishman's stain., 3. Platelet count using haemocytometer, Determination of ABO Blood group, 7. Recording of blood pressure using a sphygmomanometer.
Fundamentals of Genetics	ASPG1101	2018	Application of genetic principles in plant breeding:employability& skill dev.
Fundamentals of Soil Science	ASAC1101	2018	Understanding the theory of soil science and its characteristics :employability.
Fundamentals of Horticulture	ASHO1101	2018	Understanding the fundamentals of various aspects of horticulture crops :employability
Fundamentals of Plant Pathology	ASPP1101	2018	Understanding the fundamentals of plant disease causing organisms and their management: employability
Rural Sociology & Educational Psychology	ASEE1102	2018	Learning the basic concepts of rural sociology and psychology for its application in ag.extension : employability.
Soil and Water Conservation Engineering	ASAE1101	2018	Understanding about the principles of soil water conservation:employability
NSS/NCC/Physical Education & Yoga Practices	ASPE1101	2018	Understanding and application of different yoga asanas and pranayama techniques for physical and mental well-being :Skill & Employability
Irrigation water management	ASAG1206	2018	Understandsanding the practices of water management and its application in irrigation management : skill dev.& employability
Fundamentals of Entomology –I (Insect Morphology and Taxonomy)	ASEN1201	2018	Understanding the basic principles of morphology of different plant disease causing insects: Employability



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Fundamentals of Agricultural Extension Education	ASEE1201	2018	Learning about the latest extension methods i.e. audio-visual aids, field demonstration: Employability
Farm Machinery and Power	ASAE1202	2018	Learning about latest machines used in crop production: employability
Crop Production Technology – I (Cereals, millets and pulses) Kharif crops	ASAG2103	2018	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability
Fundamentals of Plant Breeding	ASPG2103	2018	Understand the basic methods of plant breeding i.e. emasculation and crossing : Skill & Employability
Fundamentals of Entomology- II (Insect ecology and concepts of IPM)	ASEN2102	2018	Understanding the basic principles of morphology of different plant disease causing insects: Employability
Weed management	ASAG2105	2018	Identification of Weeds and its management in different crops : employability
Agricultural Informatics	ASAI2101	2018	To disseminate,capture,access information to achieve sustainable use of agricultural resources : employment.
Communication skills and personality development	ASEE2104	2018	Develop knowledge of english communication through presentation, extempore and GD: Skill & Employability
Crop Production Technology –II (Oil seeds, fiber, sugar, tobacco, and fodder Crops) Rabi crops	ASAG2204	2018	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability
Production Technology for Ornamental Crops, MAP and Landscaping	ASHO2204	2018	To gain expertise in production of ornamental crops and landscaping : ,employability & skill development
Manures, Fertilizers and Soil Fertility Management	ASAC2202	2018	Understanding the manures and fertilizer and its application:skill and employability.



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Fundamentals of Plant Biotechnology	ASPB2201	2018	Understanding and learning about the methods of plant biotechnology i.e. DNA Microinjection and Short-gun method: Employability
Rain-fed Agriculture & Watershed Management	ASAG2211	2018	Understanding the methods of rainwater harvesting and groundwater recharging :employability
Principles of seed technology	ASPG2202	2018	Gaining knowledge in seed storage, certification and marketing ways: employment
Diseases of Field and Horticultural Crops and their Management –I	ASPP2202	2018	Identification and management of diseases of field crops :employability
Principles and practices of water management	MAAG 1103*	2017	Skill development: The students can learn about judicious water management using different efficient technologies which would further lay emphasis on job opportunities as well as they can make themselves self sufficient by serving as entrepreneurs to serve the farming community
Cropping systems and sustainable agriculture	MAAG 1206*	2017	Skill development: The students acquire knowledge about different cropping systems under various climatic situations and they can make themselves self employed as successful entrepreneurs
Intellectual property and its management in agriculture	MAIP 1201	2017	Employability and Skill development: students get an overall idea of IPR and their applications towards the protection of property rights
Agricultural research, research ethics and rural development programmes	MAAR2101	2017	Employability and Skill development: Acquire knowledge for research ethics and government policies.
Development perspectives of extension education	MAEX1101*	2017	Employability: Some concepts in this course and the rural development programs can help in getting employment
Gender sensitization for development	MAEX1105*	2017	Research and employability: provide them an opportunity to work in sectors relating to women empowerment



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Statistical methods for social sciences	MAST 1203	2017	Skill: Students can learn the usage of different statistical tools that in turn would provide them a scope for employment
Participatory methods for technology development and transfer	MAEX1104	2017	Skill and employability: students can learn the basic concepts of participatory techniques and thereby help in technology transfer from lab to land
Fish Food Organisms	FSAQ2109	2017	Learn and practice the nutritional requirements of fish/shellfish larvae and knowledge on mass culture and enrichment of live food organisms. Employability and Skill development
Freezing Technology	FSPT2103	2017	Understanding the different types of low temperature preservation, handling, storage of different type of fish and fishery products to minimize the spoilage along with post harvest loss. Employability and Skill development
Genetics and Breeding	FSAQ2111	2017	Gain knowledge on genetic basis of inheritance and breeding plans for commercially important fishes. Employability, Entrepreneurship and Skill development
Fish Immunology	FSHM2106	2017	Study the types of immunity, antigen-antibody interactions and learn the Serological methods in disease diagnosis. Employability and Skill development
Fisheries Economics	FSEE2102	2017	Learning the interface between economics and effective management decisions for fisheries business firm. Employability and Skill development
Coastal Aquaculture and Mariculture	FSAQ2204	2017	To gain knowledge in establishing and managing different fish/shellfish farming systems in coastal waters. Employability and skill development
Fish Nutrition and Feed Technology	FSAQ2208	2017	Practical knowledge of feed formulation and different feed processing techniques and prepare feed based on the nutritional requirements of fish/shell fish. Employability and skill development



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Fish and Shellfish Pathology	FSHM2201	2017	Study fish and shellfish pathogens, their control measures and treatments. Employability and Skill development.
Shellfish Hatchery Management	FSAQ2206	2017	Practical skills of seed production and hatchery management of commercially important crustaceans and molluscs and can setup his/her own hatchery. Employability, Entrepreneurship and Skill development.
Communication Skills and Personality Development	FSEE2208	2017	Students will improve interpersonal skills, active listening and responding skills, communication into everyday practice, teamwork and group discussions skills. Employability and Skill development.
Crime Scene Management and Forensic Physics	MSFS1103	2017	Skill & Employability : Skill to reconstruct crime scene. Student process the simulated crime scene. Student gains knowledge about examination of various evidences such as soil, glass, paint, foot print and lip prints.
Finger prints and Questioned Documents	MSFS1104	2017	Skill, Employability & Entrepreneurship, : Student learn about latent fingerprints and lift them for comparison & identification purpose. Gains knowledge about various Aspects of AFIS. Student also detects Signature, hand writing & document forgery, examines counterfeit currency, passport and seal impressions. Gains knowledge about instrumental techniques like ESDA, VSC, Stereo Microscope.
Instrumental Techniques Laboratory	MSFS1105	2017	Skill & Employability: Student perform experiments on UV absorption of drugs/dyes, TLC, IR spectroscopy of paints/drugs/dyes/organic compounds
Crime Scene Management and Forensic Physics Laboratory	MSFS1106	2017	Skill & Employability : Student perform density gradient analysis of soil samples, physical matching of broken glass bangles and different objects, reconstruction of mock crime scene
Finger prints and Questioned	MSFS1107	2017	Skill & Employability: Student examines and identify signature and handwriting forgeries,



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Documents Laboratory			alterations in documents, examination of intersceting strokes, comparison of fingerprints and development of latent fingerprints
Forensic Serology and DNA Profiling	MSFS1203	2017	Skill & Employability : Students learn about different ways to detect the presence of blood, semen, saliva and other body fluids , Performs DNA extraction, gains knowledge about basic methodologies used in forensic DNA analysis
Forensic Toxicology and Pharmacology	MSFS1204	2017	Skill & Employability, : Student learn about techniques used to isolate and Extract poisons\ Drugs from samples and determination of various poisons. Also gains knowledge about interpretation of toxicological findings and preparation of reports.
Forensic Ballistics and Computer Forensics	MSFS1205	2017	Skill & Employability : Student gains knowledge about various aspects of ballistics, characteristics of ammunitions and Computer Foreniscs.
Forensic Serology and DNA Profiling Laboratory	MSFS1208	2017	Skill & Employability : Students perform experiments to detect the presence of blood, semen, saliva and other body fluids , Performs DNA extraction,
Forensic Toxicology and Pharmacology Laboratory	MSFS1209	2017	Skill & Employability, : Student isolate and Extract poisons\ Drugs from samples and detrmnes the presence of various poisons. Also gains knowledge about interpretation of toxicological finding and preparation of reports.
Forensic Ballistics and Computer Forensics Laboratory	MSFS1210	2017	Skill & Employability : Student also perform instrumental analysis of GSR & examines bullets and cartridge cases to determine the source of origin.
Pharmacology and Pharmaceutical Drug Analysis	MSFS2101	2017	Employability : Students learn about basic principles of pharmacology, pharmacokinetics & qualitative and quantative analysis of Phramaceutical drug by various chemical and instrumental techniques.



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Concepts of Toxicology	MSFS2102	2017	Skill & Employability, : Students gains basic knowledge about disposition and translocation of toxicants, analytical toxicology, toxic agents such as pesticides, metals etc and their effects & applications of toxicology.
Modern and Applied Analytical Forensic Chemistry	MSFS2103	2017	Skill & Employability : Student learns about basic concepts of forensic nuclear chemistry, gains knowledge about drug chemistry, petroleum chemistry and fire chemistry. learns about analysis of lipids and fats of different oils and analysis of dairy products
Pharmacology and Pharmaceutical Drug Analysis Laboratory	MSFS2104	2017	Skill & Employability : Students do qualitative and quantative analysis of Phramaceutical drug by various chemical and instrumental techniques.
Concepts of Toxicology Laboratory	MSFS2105	2017	Skill & Employability, : Students do analysis of various poison such as metallic poison, pesticides, plant poisons etc. and gains knowledge about interpretation of toxicological finding and preparation of reports.
Modern and Applied Analytical Forensic Chemistry Laboratory	MSFS2106	2017	Skill & Employability : Student performs analysis of Various Cases in Forensic Chemistry, Validation of new methods & Accreditation in FSL's, Analysis of NDPS, Explosives, Fire, Petroluem Products, Beverages, Bribe Trap Cases, Adultrated food, Fibres & Exmination of Forensic Chemicals.
Advances in Physical Techniques	MSFS2121	2017	Employability : Student gains knowledge about thermal analysis and different spectroscopy techniques, microscopy techniques and forensic nanotechnology and forensic engineering
Concepts of Conventional and Modern Ballistics	MSFS2122	2017	Employability : student gains knowldege about operational features of firearms, ammunition, external ballistics, GSR analysis and procedures for test firing & other instruemental techniques used for ballistics evidence analysis.
Audio Recognition and Video Analysis	MSFS2123	2017	Employability : Student gains knowledge about basic concepts of voice recognition, handling of



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			audio evidences, processing of speech signals, Gold wave analysis & video analysis
Advances in Physical Techniques Laboratory	MSFS2124	2017	Skill & Employability : Students perform examination of evidences by EDXRF, measures RI of physical evidences.
Concepts of Conventional and Modern Ballistics Laboratory	MSFS2125	2017	Skill & Employability : Students perform examination of barrel wash, analysis of GSR
Audio Recognition and Video Analysis Laboratory	MSFS2126	2017	Skill & employability : Students record, edit & process audi files using goldwave software, speech acquisition and analysis of speech samples using CSL-4500 software, Video analysis and detection of tampered video files using videofocus
General Microbiology	MSCM1101	2016	Functions of cell organelles in microorganisms; Growth of microorganisms: Skill dev and Employability
Human Anatomy & Physiology	MSCM1102	2016	Gross anatomy of human body and detailed physiology: Employability
Biomolecules	MSCM1103	2016	Metabolism of Carbohydrates, Lipids, Proteins, Nucleic acid: Employability
Analytical Techniques	MSCM1104	2016	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership
Basic Microbiology Lab	MSCM1105	2016	Techniques for staining microorganisms, isolating and culturing microorganisms: Skill and Employability and Enterpreunership
Systemic Bacteriology	MSCM1201	2016	Understanding the Morphological identification, pathogenesis, laboratory diagnosis and epidemiology of clinically significant bacteria: Skill dev and Employability
Molecular Biology & Clinical Biochemistry	MSCM1202	2016	Understanding the central dogma of life, Metabolic disorders and diagnostic enzymology, Biochemical tests for organ function: Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Medical Parasitology & Mycology	MSCM1203	2016	Clinical features of important parasites, protozoans, fungi: Skill dev. & Employability
Bacteriology, Parasitology & Mycology Lab	MSCM1205	2016	Pathological investigations of urine, stool and other biological specimen; Culture for Pathogenic Fungi : Skill dev. & Employability & Enterpreunership
Immunology & Virology	MSCM2301	2017	Clinically relevant serological analysis; Clinically significant virus: Skill dev. & Employability
Diagnostic Bacteriology	MSCM2302	2017	Diagnosis of bacteria from infective regions of the body: Skill dev and Employability
Biochemistry	MSCM2303	2017	Concepts of Carbohydrates, proteins, lipids and their metabolism: Skill dev and Employability
Histology	MSCM2304	2017	Concept of about Histotechnology; fixation in histopathology lab: Skill dev and Employability
Communicative Practice Laboratory- II	FCHU0204	2017	Effectiveness in participation in group discussion and job interviews: Skill dev. And Employability
Immunology, Histopathology & Biochemistry Lab	MSCM2306	2017	Performing immunological/ serological tests and their interpretation: Skill dev and Employability. Performing histopathological analysis and their interpretation: Skill dev and Employability
Project	MSCM2401	2017	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
Internship	MSCM2402	2017	Dealing with patient, analysis and interpretation of diseases: Skill dev. & Employability & Enterpreunership
Anatomy & Physiology	MSMT1102	2016	Concept and Scopes of anatomy & physiology: Employability
Medical Instrumentation and Technique	MSMT1104	2016	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership
Hematology Lab	MSMT1105	2016	Performing various hematological tests: Skill and Employability and Enterpreunership
Medical Microbiology	MSMT1201	2016	Growth of microorganisms; Properties of viruses and fungi: Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Molecular Biology & Clinical Biochemistry	MSMT1202	2016	Understanding the central dogma of life, Metabolic disorders and diagnostic enzymology, Biochemical tests for organ function: Employability
Clinical pathology & Microbiology Lab	MSMT1204	2016	Collection of blood, stool, body fluids and study their chemical and morphological examination: Skill dev. & Enterpreunership culturing and identification of pathogenic microorganisms: Skill dev. & Employability & Enterpreunership
Immunology, Bacterial Serology & Parasitology	MSMT2301	2017	Clinically relevant serological analysis; Clinically significant virus: Skill dev. & Employability
Biochemistry	MSMT2303	2017	Concepts of Carbohydrates, proteins, lipids and their metabolism: Skill dev and Employability
Histology	MSMT2304	2017	Concept of about Histotechnology; fixation in histopathology lab: Skill dev and Employability
Immunology, Biochemistry & Histopathology Lab	MSMT2306	2017	Performing immunological/ serological tests and their interpretation: Skill dev and Employability. Assay on blood serum for biochemical test: Skill dev and Employability. Performing histopathological analysis and their interpretation: Skill dev and Enterpreunership.
Project	MSMT2401	2017	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
Internship	MSMT2402	2017	Dealing with patient, analysis and interpretation of diseases: Skill dev. & Employability & Enterpreunership
Introductory Cell Biology	BSCM1101	2017	Understanding the functions of cell organelles: Employability
Human Anatomy & Physiology	BSCM1102	2017	Gross anatomy of human body and detailed physiology: Employability
Basic Haematology	BSCM1103	2017	Carry out hematological investigations: Skill dev. & Employability & Enterpreunership



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Instrumentation & Techniques	BSCM1104	2017	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership
Human Anatomy, Physiology & Haematology Practical	BSCM1105	2017	Understanding the physiological aspects of growth and development of Human organs/ tissues: Employability & Enterpreunership
General Microbiology	BSCM1201	2017	Understanding the details of microbial cell organelles: Skill dev and Employability
Clinical Biochemistry	BSCM1202	2017	Understanding the concept of metabolism of carbohydrates, amino acids, lipids: Employability
Clinical Pathology, Biochemisrty & Microbiology Practical	BSCM1204	2017	Performing pathological investigations on human specimen: Skill dev. & Enterpreunership; Microscopic analysis of specimen collected: Skill dev. & Enterpreunership; principle of spectrophotometry, colometry, photometry and Clinical biochemistry tests: Skill dev and Employability and Enterpreunership
Immunology	BSCM2301	2017	Understanding the concept of Innate & adaptive immune system; performing serological analysis: Skill dev. & Employability & Enterpreunership
Systemic Bacteriology	BSCM2302	2017	Understanding of morphology, pathogenesis, lab diagnosis on gram positive & negative bacteria: Skill dev. & Employability
Molecular Biology	BSCM2303	2017	Basic techniques applicable in Molecular Biology: Skill dev and Employability
Systemic Virology & Mycology	BSCM2304	2017	Understanding the epidemiology, pathogenesis of viruses and fungi: Skill dev and Employability
Communicative Practice Laboratory- II	FCHU0202	2017	Effectiveness in participation in group discussion and job interviews: Skill dev. And Employability
Public Health Microbiology	BSCM2401	2017	Understanding of role of microbiologist in public health: Employability
Pharmaceutical Microbiology	BSCM2402	2017	Understanding of types & synthesis of antimicrobial agents: Employability and Enterpreunership



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Industrial Microbiology	BSCM2403	2017	Understanding the significance of microbes in fermentation process & industrial effluents: Skill dev and Employability and Entrepreneurship
Biochemistry	BSCM2404	2017	Learning the principle of spectrophotometry, colometry, photometry and Clinical biochemistry tests: Skill dev and Employability and Entrepreneurship
Basic Computer & Information technique	BSCM2405	2017	Concept for Input & output device, Processor & memory, Word, excel, power point: Skill dev and Employability
Industrial, Public Health Microbiology & Biochemistry Lab.	BSCM2406	2017	Industrial visit to a fermentation factory; Isolation & identification of microorganisms from samples: Analysis of urine and serum sample for biochemical parameters: Skill dev and Entrepreneurship, Employability
Introductory Biology	BSMT1101	2016	Understanding the functions of cell organelles: Employability
Basic Anatomy & Physiology	BSMT1102	2016	Gross anatomy of human body and detailed physiology: Employability
Basic Hematology	BSMT1103	2016	Carry out hematological investigations: Skill dev. & Employability & Entrepreneurship
Basic Medical Instrumentation & Techniques	BSMT1104	2016	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Entrepreneurship
Anatomy , Physiology & Hematology Lab	BSMT1105	2016	Understanding the physiological aspects of growth and development of Human organs/ tissues and hematological investigations: Employability & Entrepreneurship
Microbiology	BSMT1201	2016	Understanding the details of microbial cell organelles: Skill dev and Employability
Basic Biochemistry	BSMT1202	2016	Understanding the concept of metabolism of carbohydrates, amino acids, lipids: Employability
Immunology	BSMT2301	2017	Understanding the concept of Innate & adaptive immune system; performing serological analysis: Skill dev. & Employability & Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Applied Hematology	BSMT2302	2017	Concept of Haemopoietic disorders, laboratory diagnosis of leukemia, hemolytic anemia, haemophilia, ITP: Skill dev. & Employability & Enterpreneurship
Applied Biochemistry	BSMT2303	2017	Basic concept of Biochemistry; Employability
Basic Histology	BSMT2304	2017	Concept of Histotechnology, histopathology: Skill dev. & Employability & Enterpreneurship
Immunology & Histology Lab	BSMT2305	2017	Performing Serological reactions: Skill and Employability
Parasitology	BSMT2401	2017	Understanding the life cycle and lab diagnosis of various clinically significant parasite: Skill dev. and Employability
Advance Biochemistry	BSMT2402	2017	Learning the principle of spectrophotometry, colometry, photometry and Clinical biochemistry tests: Skill dev and Employability and Enterpreneurship
Advanced Hematology	BSMT2403	2017	Understanding the lab diagnosis for Leukamoid reactions, DIC: Skill dev and Employability and Enterpreneurship
Transfusion Medicine	BSMT3501	2017	Blood product analysis and transfusion procedure: Skill dev and Employability
Medical Laboratory Management	BSMT3502	2017	Patient management and quality management: Employability & Enterpreneurship
Mycology and Virology	BSMT3506	2017	Study of culture of medically important fungi and virus: Employability
Project	BSMT3601	2017	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
Internship	BSMT3602	2017	Dealing with patient, analysis and interpretation of diseases: Skill dev. & Employability & Enterpreneurship
Introductory Biology	BSRT1101	2016	Understanding the functions of cell organelles: Employability
Basic Anatomy	BSRT1102	2016	Gross anatomy of human body with emphasis to the skeletal organization: Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Basic Physiology	BSRT1103	2016	Understanding the physiology and mechanisms of living things: Employability
Basic Radiation Physics	BSRT1104	2016	Understanding of the concept of Radiation in the study of human anatomy and disease identification: Employability
Basic Medical Instrumentation and Technique	BSRT1105	2016	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership
Anatomy and Physiology lab	BSRT1106	2016	Understanding the physiological aspects of growth and development of Human organs/ tissues: Employability & Enterpreunership
Fundamental of Medical Imaging and Radiotherapy	BSRT1201	2016	Understanding the basic concepts of xrays and their emission; ultrasound and transducers, CT, MRI: Employability
Basic Biochemistry	BSRT1202	2016	Understanding the concept of metabolism of carbohydrates, amino acids, lipids: Employability
Equipments Of Radiotherapy	BSRT1203	2016	Conceptualization of linear accelarators, simulators, magnetrons and klestron: Employability & Enterpreunership
Applied Radiation Physics and Radiation Protection	BSRT2301	2017	Ability to understand the concept of Radioation in diagnosis and protection towards radiation: Employability
Advance Radiographic Technique	BSRT2302	2017	Familiriation with the equipments of ultrasound, basic principle of ct scanning and MRI: Employability
Special Radiographic Technique and Procedures	BSRT2303	2017	Understanding of special procedures and importance of contrast media: Skill dev. and Employability
Radiotherapy and Brachy Therapy Techniques In Malignant And Non Malignant Diseases	BSRT2401	2017	Concept on treatment of cancer, dose limits for individuals: Skill dev and Employability
Interventional Radiology & Drugs Used in Radiology	BSRT2403	2017	Concept on use of anaesthesia in diagnostic radiology: Skill dev and Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Hospital posting Medical Imaging Lab - III	BSRT2406	2017	Exposure to different hospitals, training of x-ray, CT and MRI: Skill dev. & Employability & Enterpreunership
Basics of X-Ray and Digital X-Ray Imaging	BSRT3501	2017	Properties of x-ray, x-ray machines and application of portable xray: Skill dev and Employability
Computerized Tomography (CT scanning) Method and Procedure	BSRT3502	2017	Diagnosis of muscle and bone disorders, detecting conditions such as cancer, heart disease, lung nodules: Skill dev and Employability
Basics of Magnetic Resonance Imaging	BSRT3503	2017	Understanding of MRI scans of different organs: Skill dev and Employability
Orientation In Clinical Sciences	BSRT3505	2017	Understanding about different diseases and medicines: Employability
Medical Imaging Lab - IV	BSRT3506	2017	Access to CT, MRI and their indications: Skill dev. & Employability & Enterpreunership
Project	BSRT3601	2017	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
Internship	BSRT3602	2017	Dealing with patient, analysis and interpretation of diseases: Skill dev. & Employability & Enterpreunership
BASIC COMPUTER	BSOP1105	2015	Identifying the applications and use of computers: Skil and employability
GENERAL PHYSIOLOGY	BSOP1103	2015	Understanding the physiological aspects of growth and development of Human organs/ tissues: Employability
BASIC BIOCHEMISTRY	BSOP1104	2015	Gaining adequency in the concept of metabolism of various macromolecules in humab body: Employability
BIOCHEMISTRY LAB	BSOL1102	2015	Gaining adequency in the concept of metabolism of various macromolecules in humab body and the diagnosis of diseses associated with their malfunction: Skill dev. & Employability
GENERAL ANATOMY & PHYSIOLOGY LAB	BSOL1103	2015	Learning about basic structure and connections between the various parts of the body and their integrative function: Skill dev & Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
PHYSICAL OPTICS	BSOP1204	2015	Predicting the distribution of light under various conditions: Employability
OCULAR ANATOMY	BSOP1202	2015	Identifying the microscopic structures of various tissues in the eye and correlating the structure with the functions: Employability
OCULAR PHYSIOLOGY	BSOP1203	2015	Elucidating the physiological aspects of normal growth and development of the eye: Employability
OPTICS LABORATORY-II	BSOL1201	2015	Predicting the distribution of light under various conditions: Skill and Employability
ANATOMY& PHYSIOLOGY LAB (CLINIC-I)	BSOL1202	2015	Learning about basic structures in eye and their integrative function: Skill dev & Employability
OCCULAR MICROBIOLOGY AND PATHOLOGY	BSOP2301	2015	Understanding of how knowledge of pathological processes can be utilized in the investigation, management and prevention of disease: Employability
CLINICAL EXAMINATION OF VISUAL SYSTEM	BSOL2301	2015	Performing various clinical tests, their interpretation and finding: Skill dev. and Entrepreneurship and Employability
CLINICAL OPTOMETRY-I	BSOL2302	2015	Measurement of lens power, lens centration using conventional techniques, transposition of various types of lenses: Skill dev. and Entrepreneurship and Employability
OCULAR DISEASES -I	BSOP2401	2015	Developing diagnostic approach towards management of the ocular diseases: Employability
OPTOMETRIC OPTICS II	BSOP2403	2015	Developing the art and science of dispensing spectacle lens and frames based on the glass prescription: Skill dev. and Entrepreneurship and Employability
BASIC AND OCULAR PHARMACOLOGY	BSOP2404	2015	Developing conceptual knowledge on the mechanism, indications, contraindications, drug dosage and adverse effects of Ocular Drugs: Skill dev. And Employability
OCULAR DISEASES II	BSOP2405	2015	Knowledge on course sequelae of ocular diseases, their diagnosis and management of the ocular diseases: Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
CLINICAL OPTOMETRY II	BSOL2401	2015	To gain practical knowledge regarding Ocular Diseases, Visual Optics, Optometric Optics: Skill dev. and Entrepreneurship and Employability
BINOCULAR VISION & SQUINT	BSOP3501	2015	Binocular muscle coordination; Integration of motor and sensory system into binocular vision; Differentiate different types of strabismic anomalies; non strabismic anomalies related to accommodation & convergence: Skill & Employability
CONTACT LENSES	BSOP3502	2015	Understanding of the concepts of contact lenses: Employability
LOW VISION AID	BSOP3503	2015	Training for Low Vision subjects with Low vision devices: Skill and Employability
CONTACT LENS LABORATORY	BSOL3502	2015	Applying the concepts of contact lenses: Skill dev. & Employability
OCULAR DISEASES LABORATORY II	BSOL3503	2015	Performing the basic workup for a patient in a hospital and clinic set up: Skill dev. and Entrepreneurship and Employability
STATISTICS & OCCUPATIONAL OPTOMETRY	BSOP3601	2015	Interpretation and ability to prescribe suitable corrective lenses and eye protective wear: Skill dev. and Entrepreneurship and Employability
PEDIATRIC & GERIATRIC OPTOMETRY	BSOP3602	2015	Ability to identify, investigate the age-related changes in the eyes: Skill dev. & Employability
SYSTEMIC DISEASES	BSOP3603	2015	Understanding of Ocular findings of the systemic conditions: Employability
OPTOMETRIC INSTRUMENTS LABORATORY-II	BSOL3602	2015	Gaining practical skill in handling the advanced instruments in an Optometry Lab: Skill dev. and Entrepreneurship and Employability
PROJECT	BSOP4701	2015	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
Human Anatomy and Physiology I– Theory	BPHT1101	2017	Skill-Employability- Hand on practice on various clinical aspects of human physiology and also able to perform different types of experiments



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Pharmaceutical Analysis I – Theory	BPHT1102	2017	Skill-Employability-Use the techniques, skills, and modern pharmaceutical instruments and tools necessary for pharmacy profession
Pharmaceutics I – Theory	BPHT1103	2017	Skill- Employability- Entrepreneurship - Understand the impact of pharmaceutical solutions in a global, economic, environmental, and societal context
Pharmaceutical Inorganic Chemistry – Theory	BPHT1104	2017	Skill- Employability- Students can prepare various Pharmaceutical dosage form
Remedial Biology – Theory*	BPHT1106	2017	Employability- Apply knowledge of basic science and pharmacy
Remedial Mathematics – Theory*	BPHT1107	2017	Employability- Apply knowledge of basic science and pharmacy
Pharmaceutical Analysis I – Practical	BPHL1102	2017	Skill- Employability- Students can assay ,preparaed and standarized various Heavy metals and Chemicals
Pharmaceutics I – Practical	BPHL1103	2017	Skill- Employability- Students can prepare various Pharmaceutical dosage form
Human Anatomy and Physiology II – Theory	BPHT1201	2017	Skill-Employability- Hand on practice on various clinical aspects of human physiology and also able to perform different types of experiments
Pharmaceutical Organic Chemistry I – Theory	BPHT1202	2017	Skill-Employability- synthesis, characterization of synthetic formulation and solve complex pharmaceutical problems in research and development sector.
Biochemistry – Theory	BPHT1203	2017	Employability- Apply knowledgeand concept of basic science and pharmacy and also able to understand all concept regarding biochemical organization.
Pathophysiology – Theory	BPHT1204	2017	Skill-Employability-student get to know about various communicable diseases and pathophysiology along with all thetechniques for screening test .
Computer Applications in Pharmacy – Theory *	BPHT1205	2017	Skill-Employability-Buiding compitancy in programme coding, various softwares, simulation techniques, statistical application etc.



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Environmental sciences – Theory *	BPHT1206	2017	Employability- student get to know about basic knowledge about the environment and its allied problems
Pharmaceutical Organic Chemistry II – Theory	BPHT2101	2017	Skill-Employability- synthesis, characterization of synthetic formulation and solve complex pharmaceutical problems in research and development sector.
Physical Pharmaceutics I – Theory	BPHT2102	2017	Skill- Employability- formulate and solve complex pharmaceutical problems in formulation development
Pharmaceutical Microbiology – Theory	BPHT2103	2017	Skill- Employability- Carried out sterility testing, microbiological standardization of Pharmaceuticals and perform cell culture technology and its applications in pharmaceutical industries
Pharmaceutical Engineering – Theory	BPHT2104	2017	Skill -Employability- Enterprenurship- students can able to understand and perform unit operations, material handling techniques, screening test and plant lay out design for optimum use of resources used in Pharmaceutical industries
Pharmaceutical Organic Chemistry III– Theory	BPHT2201	2017	Skill-Employability- synthesis, characterization of synthetic formulation and solve complex pharmaceutical problems in research and development sector.
Medicinal Chemistry I – Theory	BPHT2202	2017	Employability students get to know about the chemistry, pharmacological activity, metabolic pathways, adverse effect, therapeutic value, classification, synthesis, mechanism of action along with structures, structure activity relationship of various drug molecules.
Physical Pharmaceutics II – Theory	BPHT2203	2017	Skill- Employability- formulate and solve complex pharmaceutical problems in formulation development
Pharmacology I – Theory	BPHT2204	2017	skill-Employability- student get to know about correlation of pharmacology with other bio



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			medical sciences, mechanism of action, drug interaction, design and conduct pharmacological screening experiments.
Apparel Production & Marketing	CUTM3029	2017	Employability/Skill - Practice and Project
Line Stitching Supervising	CUTM3030	2017	Employability/Skill - Practice and Project
Apparel Production	CUTM3031	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Light Motor Vehicle Driving	CUTM3032	2017	Employability/Skill - Practice and Project
Fork Lift Operation	CUTM3033	2017	Employability/Skill - Practice and Project
Heavy Vehicle Technology	CUTM3034	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Two Wheeler Service Technology	CUTM3035	2017	Employability/Skill - Practice and Project
Four Wheeler Service Technology	CUTM3036	2017	Employability/Skill - Practice and Project
E-Vehicle Assembly and Service Technology	CUTM3037	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Robotics	CUTM3038	2017	Employability/Skill - Practice and Project
Poultry Farming	CUTM3039	2017	Employability/ Entrepreneurship/Skill
CNC Programming (CAM)	CUTM3040	2017	Employability/Skill - Practice and Project
Design Supervising Wooden and Modular Furniture	CUTM3041	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Introduction to Composite Manufacturing	CUTM3042	2018	Employability/Skill - Practice and Project



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
3D Modelling and Printing	CUTM3043	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Precast Concrete Manufacturing	CUTM3045	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Fabrication	CUTM3046	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Hi-Tech Surveying	CUTM3047	2018	Employability/Skill - Practice and Project
Internet of Things	CUTM3048	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Mechatronics System Design	CUTM3049	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Introduction to Nanotechnology	CUTM3051	2018	Employability/Skill - Practice and Project
Drone Piloting	CUTM3052	2018	Employability/Skill - Practice and Project
Camera Operation	CUTM3053	2018	Employability/Skill - Practice and Project
Editor	CUTM3054	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Desktop Publishing	CUTM3055	2018	Employability/Skill - Practice and Project
Introduction to Blender and Unity tools	CUTM3056	2018	Employability/Skill - Practice and Project
2019-20			



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Calculus	FCBS0107	2017	Employability (Students will know about curvature, asymptotes)
Probability & Statistics	FCBS0108	2017	Employability (Students will know about probability distribution) Skill (Students will know about mean, media, mode)
Basic Mechanics and Properties of Matter	FCBS0405	2016	Employability (knowledge enhancement)
Optics and Optical Fibres	FCBS0406	2016	Employability (knowledge enhancement)
Applied Analytical Chemistry	FCBS0401	2016	Employability-Water Analysis, Soil Analysis, Chemistry of fuels. Skill- All practices
Industrial Chemistry	FCBS0402	2016	Employability-: Preparation of soap, dyes and oil analysis ,Analysis of cement Skill-All Practices
Applied Engineering Materials	FCBS0403	2016	Employability-Nano Materials, Polymers, Composites. Skill- All Practices
Environmental Science	FCBS 0101	2016	Employability-Environment and its multidisciplinary nature, Biodiversity and its conservation, Causes, effects and control measures of pollution.
Economics	FCMG0101	2016	Skill Development (to provide students with a basic understanding of the economic principles, methodologies and analytical tools that can be used in business decision making problems) Employability & Entrepreneurship (Student shall understand and apply the impact of economic policies on managerial decision-making by providing an understanding of fiscal policy, and national and global economic issues affecting business.)
Accounting & Finance	FCMG0102	2016	Skill Development-Students will be able to create, balance and deliver a budget and use budget information for planning and decision purposes; Employability & Entrepreneurship (Students to Undertake various costing



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			techniques and information for planning and decision-making)
Management Processes and OB	FCMG0103	2016	Skill Development-Students shall be able to analyze and compare different models used to explain individual behaviour; Employability & Entrepreneurship (Students shall be able to resolve conflict, motivate the employees, handle stress and communicate effectively and manage diversified workforce in workplace)
Production and Operation Management	FCMG0104	2016	Skill Development (Acquire a working understanding of the roles/functions of production management in the context of business enterprise.) Employability & Entrepreneurship (Student can use specialized knowledge in Operations Management to solve business processes)
Marketing Management	FCMG0105	2016	Skill Development (Students will learn the application of various marketing tools for solving business problems). Employability and Entrepreneurship (students will acquire and develop the marketing skills to be a successful marketing person)
Introduction to Research	FCMG0108	2016	Skill Development (Students will be able to understand the process of doing a research). Employability and Entrepreneurship (Students will be able to write a research report.)
Indian Society and Culture	FCMG0113	2016	Skill Development (Students will be familiarized with the science and technology policies that would benefit modern India). Employability and Entrepreneurship (Students would develop an idea about the socio-cultural environment in which they would be working as scientists, researchers and entrepreneurs.)
Disaster Management	FCMG1201	2016	Skill Development (students would begin to understand the relationship between vulnerability, disasters, disaster prevention, risk reduction and the basic understanding of the research methodology for risk reduction



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			measures.). Employability and Entrepreneurship (Students would develop rudimentary ability to respond to their surroundings with potential disaster response in areas where they live, with due sensitivity)
Material Sciences	ENFC0102	2017	Employability and Skill development (Students will able to identify materials for engineering use.Students will able to select best materials for a specific design and production.)
Introduction to Robotics	ENFC0203	2017	Employability (upgrading knowledge levels of robotic application in modern industries Project based training)
Engineering Metrology and Measurements	ENFC0401	2017	Employability and Skill development (To Make Students Familiar with the Measuring Systems, and the Standard of Measurements. Learns about Basic Measurement Devices.Selecting Suitable Measuring Instruments for Basic and Typical Applications in the Industries.)
Programming in C	ENFC0409	2018	Skill And Employability(Case study to be given to students on uses of C program for development of various real time applications like online examination system, online quiz competetion etc.)
Programming for Problem Solving – Java	ENFC0412	2017	Skill And Employability(Understands the concepts of Threads, exception handling, file handling and even handling and applets implemented in the Java, which helps students in getting jobs in different IT firms)
Data Base Management System	ENFC0414	2018	Skill And Employability(Hands on training on Client/Server Architecture- System Structure , Instance and schema, Data Models, Types of DBMS Query Processing and Optimization: Evaluation of Relational algebra expressions- Query Equivalence-Transaction Processing: Built in SQL functions, Sub Queries-Joins-DCL – TCL- Views – Sequences – Index – Locks PL/SQL Basics – Exceptions – Cursors - Stored Functions



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			– Triggers Case study in industrial standards of Database Management)
Electronics and Its Application	ENFC0415	2018	Employability (Students will develop an updated knowledge in the latest trends)
Electronic Devices	ENFC0416	2018	Employability (Students will get the fundamentals cleared for the basics required in the industry)
Sensors and IOT	ENFC0417	2017	Employability (The students will be aware of the application and operations of the sensors used in day to day life)
Problem Solving & Programming	ENFC0418	2018	Skill And Employability(To enhance the problem analysis capability and problem solving techniques and solves various real life problems using raptor and scratch tools)
Data Structures and C Programming	ENFC0419	2018	Skill And Employability(Understand asymptotic analysis and different methods. Understand linear data structures and its applications. Understand different non-linear data structures and its applications Understand divide and conquer strategy for various sorting and searching techniques. Understand and apply the greedy approach for various problems)
Operating System	ENFC0422	2018	Skill And Employability(This course enables students to understand the basic concepts of operating system with different types of OS, services and system calls, get knowledge of process management, Inter process communication and various CPU scheduling algorithms. It also helps to understand the concept of memory management -paging and segmentation and learn about various I/O systems and mass storage structures.)
Big Data Analytics	ENFC0423	2018	Skill And Employability(This course helps in gaining the ability to choose the right solution for a commercial task involving big data,



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			including databases, architectures and cloud services. Also focuses on understanding of the analysis of big data including methods to visualise and automatically learn from vast quantities of data. Develop the programming skills to build solutions using big data technologies such as Map Reduce, scripting for No-SQL, Apache Mahout, Hive and the ability to write parallel algorithms for multi-processor execution.)
Block Chain and Smart Contracts	ENFC0424	2018	Skill And Employability(Hands on in design and program smart contracts and decentralized applications)
AI Tools, Techniques and applications	ENFC0603	2018	Skill And Employability(Introduce state-of-art AI tools and techniques to solve various problems faced by Engineers in design and analysis)
Problem Solving using Python	ENFC0901	2018	Skill And Employability(Eenhance the problem analysis capability and problem solving techniques and solves various real life problems using raptor and scratch tools)
Object Oriented Programming through Java	ENFC0902	2018	Skill And Employability(Understands the concepts of Threads, exception handling, file handling and even handling and applets implemented in the Java, which helps students in getting jobs in different IT firms)
Web Technologies	ENFC0903	2018	Skill And Employability(Develop a static, interactive and well-formed webpage using JavaScript, CSS3 and HTML5)
Software Engineering using Agile	ENFC0904	2018	Skill (Students get to apply software engineering principles and techniques learnt to a real-life project topic of their choice in a contemporary domain and design-implement novel solution by working together as a team.
Soil Mechanics	CECC0401	2018	Employability(• Students will gain knowledge on soil mechanics and the concepts involve in it • Students will develop skill on laboratory experiments, empirical methods and software aids involve in soil mechanics)



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Foundation Engineering	CECC0402	2017	Employability(To obtain knowledge about soil properties and methods of soil properties determination in the laboratory, using field tests and considering comparable experience. Basic stability and deformation problems. Principle of spread and deep foundation design. To understand fundamental knowledge of geotechnical works for soil improvement, interaction of structure and subsoil. Basic design methods for excavation and foundation pits with dewatering and sealing systems)
Transportation Engineering	CECC0403	2018	Employability(• Students will gain knowledge on planning, material selection for construction, Economics and finance and designing of elements on highway. • Acquire the skill of designing the geometric elements of highway using AUTOCAD CIVIL 3D software.)
Water supply & Waste water Management	CECC0415	2018	Employability(• Students will gain knowledge and the concepts involve in it • Students will develop skill on laboratory experiments, empirical methods and software aids involve in hydrology)
Hydrology &Water Resources Engineering	CECC0416	2018	Employability(• Students will gain knowledge on and the concepts involve in it • Students will develop skill on laboratory experiments, empirical methods and software aids involve)
Quality Control and Risk Management in Construction	CECC0414	2018	Entrepreneurship(• Students will gain knowledge on and the concepts involve in it • Students will develop skill on laboratory experiments, empirical methods and software aids involve)
Strength of Material	CECC0411	2018	Employability(Students will acquire knowledge and skill to analyze the effect of force and motion on rigid bodies to solve engineering problems through application of basic laws of mechanics.)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Site Supervision & Measurement Methods	DECP0401	2018	Employability(• Students will gain knowledge on and the concepts involve in it • Students will develop skill on laboratory experiments, empirical methods and software aids involve)
Geotechnical Investigations	DECP0402	2018	Employability(• Plan geotechnical investigations before constructing a structure. • Conduct the laboratory and field tests as a part of geotechnical investigations. • Analyze the geotechnical investigation test data and prepare a report for selected categories of structures)
Repairs, Renovation and Rehabilitation of Structures	DECP0403	2018	Employability(• After successful completion of the course the students will have capability/knowledge of various important, monumental but distressed and damaged modern materials that longevities old concrete and masonry structures)
Tendering Process, Bidding Contract Agreements & Arbitration	DECP0601	2018	Employability(• Upon successful completion of the course, students shall be fit in CPWD, state Government departments and infrastructural organizations, persons working in development projects in public or private sectors. Consultancy units, research organizations as well as self-employed practitioners engaged in the planning, design, Procurement, construction, operation and maintenance. • Apply legal aspects of construction projects in construction contract, of issues related to contract administration, apply various disputes resolution techniques including arbitration)
Project	DEET0300	2015	Employability development(Students will be able to work with the latest trend of the construction industry needs. Understand different methods of project delivery and the roles and responsibilities of all constituents involved in the design and construction process.



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			<p>Give the students experience, supervision and direction in recognizing and applying the concepts of project management and construction planning.</p> <p>Students will plan various projects relating to advanced building technology with trust.</p> <p>Students will be churned as Construction Manager, Project Engineer, Site Supervisor and Project Consultant.</p> <p>Maintain and develop the pupils' ability to put their knowledge of theory into practice using forms of construction.)</p>
Internship	DEET0800	2015	Employability (Skill development course)
Green Building Design	DEPD0101	2018	<p>Employability(• To study the theory of sustainability.</p> <ul style="list-style-type: none"> • To study the changing climatology and contribution of built mass • To learn reduction of carbon foot prints)
Earthquake Resistant Design	DEPD0102	2018	<p>Employability(• To study co-relation with architectural design and performance of building during earthquake</p> <ul style="list-style-type: none"> • To study advanced structural design parameters • To analyze the detailing of reinforcement design and its impact on performance)
Barrier Free Design	DEPD0103	2018	<p>Employability(• To study the various provisions in the code</p> <ul style="list-style-type: none"> • To design or modification based on provision in the code • To analyze the improved performance of the same building with different set of users)
Intelligent Building Design	DEPD0104	2018	<p>Employability(• To study integrates technology and process to create a facility that is safer, more comfortable and productive for its occupants</p> <ul style="list-style-type: none"> • To design Smart buildings)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Architectural Design	DEPD0201	2018	Employability(• To study the basic concepts of building Design. • To study the climatology, soil condition, site analysis and other factors on design. • To learn building bye laws application while designing any building)
Remote Sensing & Digital Image Processing	DESP0401	2018	Employability(• Students will gain knowledge of basic concepts of remote sensing, aerial photogrammetry. • Students will gain knowledge of applications different satellites imagery, image classification techniques and image analysis and interpretation.)
Geospatial Technology and its Application	DESP0901	2018	Employability(• Students will gain knowledge about the structure of spatial data including file associations, attribute tables, Metadata, coordinate systems, and projections. • To develop software skills in programs used for map production in the modern cartographic workflow.)
Photogrammetry and its Application	DESP0402	2018	Employability(• Students will gain knowledge about the survey by Photogrammetry method. • Prepare DEM, TIN model and generate contour map.)
Lidar Remote Sensing and its Applications	DESP0201	2018	Employability(• Students will gain knowledge about LIDAR and its application. • Students will be more skilled in CATIA Civil module)
Introduction to Gaming & Simulation	CSCC0901	2018	Skill And Employability(End to End Game Development Pipeline)
Introduction to Cyber Security	CSCC0902	2018	Skill And Employability(Students have done activities like network analysis, intrusion detection in the network and file integrity using different open source tool.)
AI & ML using Python	CSCC0903	2018	Skill And Employability(Implemented different Real life Projects in the field of medical and Agricultural image processing)



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Object Oriented Analysis and Design	CSCC0601	2018	Skill And Employability(Students are able to analyze and model software specifications.)
Computer Organization and Architecture	CSCC0410	2018	Skill And Employability(Students had Implemented various VPC,VPN and optimization of network cost and also Understand and building the skills of sub-netting and routing mechanisms)
Building of Cloud Infrastructure	DECT0901	2015	Skill And Employability(Analyze and Understand the functioning of different components involved in Amazon web services and also acquire cloud technology skill for cloud partitioner certification which helps students in getting jobs in different MNCs)
Deployment Architecture -I	DECT0902	2015	Skill And Employability(Evaluate cloud application requirements and make architectural recommendations for implementation, deployment and provisioning applications on AWS)
Deployment Architecture - II	DECT0903	2015	Skill And Employability(Ability to evaluate cloud application requirements and make architectural recommendations for implementation, deployment and provisioning applications on AWS)
Advanced Networking	DECT0904	2015	Skill And Employability(Students had Implemented various VPC,VPN and optimization of network cost and also Understand and building the skills of sub-netting and routing mechanisms)
Oracle Database Administration and SQL	DEST0401	2015	Skill And Employability(Provides an exhaustive coverage of SQL Admin to understand the architecture and processes of the Oracle database)
Problem Solving through Coding	DEST0201	2015	Skill And Employability(Obtain skills to solve problems involving text, numbers and graphics, producing a top-level plan with refinements.)
Linux and Lamp Administration	DEST0402	2015	Skill And Employability(Obtain skills in Linux server administration. Content includes LINUX and Web server installation, system



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			startup/shutdown, hardware configuration, disk and file system structure, package management, TCP/IP networking, system management and security, X-Windows usage and configuration, user management)
Testing and Test Automation	DEST0403	2015	Skill And Employability(students had applied various modern software testing processes in relation to software development and project management)
Web Services using Java	DEST0404	2015	Skill And Employability(Developed knowledge-based force to serve the IT industry with the latest technologies.)
Python for Data Science and Machine Learning	DEML0201	2015	Skill And Employability(Implement ML algorithms that generates insight to high volume data and helps to make better classifications and prediction. The students are able to solve problems in areas computational finance, image processing and computer vision, energy and natural language processing.)
Supervised and Unsupervised Machine Learning	DEML0401	2015	Skill And Employability(Implement several ML algorithms that generates insight to high volume data and helps to make better classifications and prediction. The students are able to solve problems in areas computational finance, image processing and computer vision, energy and natural language processing.)
Advanced Neural Network (RNN & CNN)	DEML0402	2015	Skill And Employability (Design and train a CNN, RNN language models and also able to apply deep learning principles using tools such as TensorFlow, Keras)
ML Techniques in Image Processing	DEML0202	2015	Skill And Employability(Implemented different Real life Projects in the field of medical and Agricultural image processing)
Deep Learning Techniques and Neural Network	DEML0403	2015	Skill And Employability(Design and train a CNN, RNN language models.Be able to apply deep



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			learning principles using tools such as TensorFlow, Keras)
Introduction to IT Networking & Security	DEIS0121	2015	Skill And Employability(To understand, design and implement appropriate security technologies and policies to protect computers and digital information)
Advanced Networking	DEIS0421	2015	Skill And Employability(Understand and explain Data Communications System and its components and Identify the different types of network topologies and protocols. Enumerate the layers of the OSI model and TCP/IP and explain the functions of each layer, identify the different types of network devices and their functions within a network)
White Hat Hacking Techniques and Tools	DEIS0422	2015	Skill And Employability(Information technologies skill like vulnerabilities, defense-in-depth, penetration testing, the methodology for pen testing/ethical hacking, vulnerability management, incident management, and creating and implementing a security policy will be understood)
Information Technology Infrastructure Library	DEIS0122	2015	Skill And Employability(Obtain the skill about IT Service Management best practices, generic concepts, key principles, gain a comprehensive understanding of the purpose and scope of service strategy, service design, service transition, service operations, and Continual Service Improvement)
Network Security Audit of an Organisation	DEIS0221	2015	Skill And Employability(To perform an IT Network security audit of an organization and prepare a detailed report identifying different weakness of the architecture)
CCNA	DEIS0222	2015	Skill And Employability(hands on training to manage Network for an Organization)
Analog Electronic Circuits	ECCC0401	2018	Skill Development and Employability (Its an important subject in the curriculum. Its



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			also equivalently important for facing interviews in industry.)
Digital Electronic Circuits	ECCC0402	2018	Skill Development and Employability (Its an important subject in the curriculum. Its also equivalently important for facing interviews in industry.)
Networks and Systems	ECCC0403	2018	Employability (Its also equivalently important for facing interviews in industry. Evaluate Complex Frequencies, Pole-Zeros of an Admittance or Impedance function and sketch Pole-Zero Plots and to find Resonance, Q-Factor and Bandwidth)
Digital Signal Processing	ECCC0404	2018	Employability (Analyse Z-Transform , DFT,FFT and, and the Architecture of TMS320C54xx Processor and the Various Addressing modes. Design & compare Digital FIR filters using window method, Analyze the characteristics of various windows Formulate & apply Digital IIR filter design using Butterworth & Chebyshev approximations to Verify the characteristics of LPF, HPF, BPF)
Analog Communication Systems	ECCC0405	2017	Employability (Familiar with analog radio transmitters and receivers Verify the Noise performance of different Modulation Techniques)
Digital Communication Systems	ECCC0406	2017	Employability (Illustrate the classification of channels, Entropy coding methods and different types of Error control codes along with their encoding/decoding algorithms. Examine the Performance of different Digital Carrier Modulation schemes of Coherent and Non-coherent type based on Probability of error)
VLSI Design	ECCC0407	2017	Employability (Design combinational and sequential circuit



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			using CMOS logic Enhancement of complex digital VLSI logic design skill of students which will help them to complete any project work undertaken in higher semesters. Perform back-end physical design)
Microwave and Radar Communications	ECCC0410	2017	Employability (Integrate the concept of bunching and velocity modulation to summarize the operation of micro wave tubes and the high frequency limitations of conventional tubes. Analyse the principle, operation and characteristics of different Radars and its applications)
Antenna and Wave Propagation	ECCC0411	2018	Employability (Analyze antenna parameters Evaluate the features and analyze the radiation pattern of antennas by using simulation tools Compare wave propagation techniques and illustrate the radio wave behavior in different modes of communications)
Linear Integrated Circuits & Application	ELCC0403	2018	Employability(Students will be able to design, filter, amplifier circuit and also skilled to solve problem related to linear IC)
Power System Market, Act and Regulations	DEOM0103	2018	Employability (Student will learn power market operation & energy audit process with hands on practice which will lead them to placement in power & energy trading company)
Fluid Power Control	MECC0102	2018	Employability and Skill development (To impart knowledge to students on fundamentals of hydraulic and pneumatic power and their circuits with industrial applications.)
Introduction to Hybrid and Electric Vehicles	MECC0103	2018	Employability and Skill development (Students will acquire knowledge regarding the testing and performance of electric vehicles)
Manufacturing Technology 1	MECC0401	2017	Skill And Employability (Students will have Knowledge and Skills to Understand Actual Manufacturing Processes used in Industry and



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			will be Able to Correlate a Specific Process with the Part / Component being Produced. Students will be Able to Select the Most Optimum Manufacturing Process for a Specific Product Design and Application.)
Manufacturing Technology 2	MECC0402	2017	Skill And Employability (Students will be Able to Do Process Planning, Develop CNC Part Programs. Students will have Knowledge and Skills to Operate CNC Machines.)
Design for Manufacturing	MECC0403	2017	Skill And Employability (Students will be able to select appropriate manufacturing technology and process to produce a product effectively with quality and optimized production cost. Students will have skills and knowledge to use softwares like CATIA, Novaflow and Solid CV, ProCAST, Flow-3D Cast, DEFORM-3D and PAM-STAMP 2G.)
Finite Element Analysis	MECC0404	2017	Skill And Employability (Students will be Able to Deploy Practical and Industrial Approach using FEA towards Solving Engineering Problems)
Digital Manufacturing	MECC0405	2017	Skill And Employability (Students will be able to use modern software like DELMIA-Quest (Dassault System) and Camtesia to conceptualise and create 3D factory layouts and optimise resource planning. Students will be able to do simulation of manufacturing processes using software tools.)
Fundamentals of Heat Engine	MECC0415	2018	Skill And Employability (Students will be able to test internal combustion engines for various performance parameters using engine test rigs. Students will be able to carry out emission tests using various types of fuels commonly used in internal combustion engines.)
Design of Thermal Energy Systems	MECC0407	2017	Skill And Employability (Students will be able to identify and select, design and implement appropriate thermal energy system corresponding to specific need.)



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Mechanics of Machines	MECC0410	2017	Skill And Employability (Students will have knowledge and skills to analyse, design and develop mechanisms suiting specific applications. Students will have knowledge skills to study and understand working of complex mechanisms and machines enabling them to safely operate and maintain such installations)
Design of Transmission Systems	MECC0412	2018	Skill And Employability (To Enable the Students to Design Basic Transmission Elements using prior theoretical Knowledge)
Fluid Mechanics and Heat Transfer	MECC0414	2017	Skill And Employability (Students will be able to analyze and design various Equipment used in industry using principles of Fluid Mechanics and Heat Transfer)
Introduction to Automobile Engineering	DEAE0101	2018	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Entrepreneurship Opportunities in Automobile Trade	DEAE0102	2018	Employability and Skill development (This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Maintenance of Automobile	DEAE0204	2018	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Design of Basic Automobile Components	DEAE0205	2018	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large



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			number of job opportunities in automobile designing, research & development, sales & service. The students can also successfully run their own business in this field.)
Subsystems of Automobile	DEAE0401	2018	Employability and Skill development (This gives jobs opportunity in automobile manufacturing companies in India and abroad. There are large number of job opportunities in automobile designing, research & development, sales & service. The students can also successfully run their own business in this field.)
Design and Maintenance of Electric Vehicles	DEAE0402	2018	Employability and Skill development (This gives jobs opportunity in automobile manufacturing companies in India and abroad. There are large number of job opportunities in automobile designing, research & development, sales & service. The students can also successfully run their own business in this field.)
Jigs and Fixtures	DECM0101	2015	Employability and Skill development (Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Process Planning and Cost Estimation	DECM0102	2015	Employability and Skill development (Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of



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			latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Conventional Machining for Cylindrical Shape Component	DECM0201	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Conventional Machining for Prismatic Shape Component	DECM0202	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
CNC Machining	DECM0603	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)



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Non-Traditional Machining and 3D Printing	DECM0604	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Wood Engineering	DECM0203	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Project	DECM0300	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Internship	DECM0800	2015	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial



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			experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Joining Processes & Technology	DEWD0403	2018	Employability and Skill development(This gives oppertunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Arc Welding, Gas Welding & Brazing	DEWD0201	2015	Employability and Skill development(This gives oppertunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Metal Transfer & Weld Metallurgy	DEWD0102	2018	Employability and Skill development(This gives oppertunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Design of Welded Joints (CATIA)	DEWD0101	2015	Employability and Skill development(This gives oppertunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)



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Welding of Stainless Steel, Aluminium, Copper, Cast Iron and Hard Surfacing	DEWD0603	2018	Employability and Skill development(This gives opportunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Testing of Welded Joints (DT, NDT & Microstructure)	DEWD0604	2018	Employability and Skill development(This gives opportunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Project	DEWD0300	2018	Employability and Skill development(This gives opportunities for self employed by opening a small-scale welding shop to a medium scale industry.skill certification will make the candidate recognised in national and international levels in the industry as qualified welding inspector.)
Basic Metallurgy	DEOC0134	2015	Employability and Skill development (Understand the correlation between processing, structure and properties of metals. Ensure production of metallic components for use in consumer or engineering products)
Information Theory & Coding	DEOC0136	2018	Employability Design the channel performance using Information theory. Comprehend various error control code properties. Apply linear block codes for error detection and correction. Apply convolution codes for performance analysis & cyclic codes for error detection and correction. Design BCH & RS codes for Channel performance improvement against burst errors



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Mobile Communication	DEOC0135	2018	Employability Understand the new trends in mobile/wireless communications networks, understand multiple radio access techniques, analyze various routing algorithms used in mobile/wireless networks, identify the issues in transport and application layers.
Electromagnetic Theory	DEOC0122	2015	Employability Knowledge of, physical interpretation, and ability to apply Maxwell's equations to determine field waves, potential waves, energy and charge conservation conditions. Experimental measurement of voltages induced by time varying magnetic flux. Flux determination.
MATLAB for Electronics	DEOC0233	2018	Employability Able to use Matlab for interactive computations. Familiar with memory and file management in Matlab. Able to generate plots and export this for use in reports and presentations. Able to program scripts and functions using the Matlab development environment.
PCB Design and Analysis	DEOC0425	2018	Employability To design and fabricate PCB for prototyping as well as in Industrial Production environment. This will help students to innovate faster with electronics technology.
Computer Graphics	MTSE1106	2019	Skill development(At the end of the course, the students have a skill and employability to: Event driven I/O and callback programming & typical structure of an interactive, real-time computer graphics program `` 2&3D transformations, homogeneous co-ordinates, post-multiplication `` Modelling and instantiat(i)
MATLAB for Civil Engineers	MTSE1107	2019	Employability (Differential equations and its application to engineering problems



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			Soft computing applications to engineering problems)
Finite Element Method	MTSE1201	2019	"Skill development(• Enable the students to identify, formulate and skill to engineering problems related to one, two and three Dimensional structures subjected to static loads. • To show the impact of engineering solutions on the society and also will be aware of contemporary issues regarding failure of structures due to wrong analysis)"
Industry Internship and Project - I	MTIP2101	2019	Employability(On successful completion of this course student will able to: • Get Experience of working conditions on live projects of company. • learn soft skill viz. Self-Confidence, widen Strong Work Ethic toward work, Positive Attitude towards work, develop effective Communication Skills, Time Management Abilities, Problem-Solving Skills etc. • Find successful employment after graduation.)
Industry Internship and Project - II	MTIP2201	2019	Employability(On successful completion of this course student will able to: • Get Experience of working conditions on live projects of company. • learn soft skill viz. Self-Confidence, widen Strong Work Ethic toward work, Positive Attitude towards work, develop effective Communication Skills, Time Management Abilities, Problem-Solving Skills etc. • Find successful employment after graduation.)
Pavement Materials And Construction	ISTE1102	2019	Employability(• To learn about characteristic of subgrade soil. • To learn about characteristic of road aggregates. • To learn about characteristic of paving grade bitumen. • To learn about characteristic of cement used in road construction.)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Urban Transportation Planning	ISTE1103	2019	Employability(• To learn the planning methodology of Urban transportation systems. • To learn methods of data collection for planning. • To learn about travel demand models. • To learn Planning for sustainable urban mobility)
Transportation Infrastructure Design	ISTE1104	2019	Employability(• To learn Geometric Design of Cross Sectional Elements of various types of roads. • To learn Geometric Design of Horizontal Alignment of Roads • To learn Geometric Design of Vertical Alignment of Roads. • To learn transportation system management)
Highway Project formulation and Economics	ISTE1202	2019	Employability(• To learn Geometric Design of Cross Sectional Elements of various types of roads. • To learn Geometric Design of Horizontal Alignment of Roads • To learn Geometric Design of Vertical Alignment of Roads. • To learn transportation system management)
Research Methodology For Engineers	ISRM1201	2019	Employability(Meaning of Research , Objectives of Research ,Motivation in Research ,Types of Research Research Approaches ,Significance of Research ,Research Methods versus Methodology Research and Scientific Method ,Importance of Knowing How Research is Done ,)
Pavement Evaluation ,Rehabilitation and Maintenance	ISTE1208	2019	Employability(• To learn about characteristic of subgrade soil. • To learn about characteristic of road aggregates. • To learn about characteristic of paving grade bitumen. • To learn about characteristic of cement used in road construction.)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Project Management	ISTE1209	2019	Employability(Identify functions of project management including estimating, job controls, field data collection, scheduling, accounting and design. * method that uses technology to measure cost and productivity through the full life-cycle of enterprise level projects * Contract Management and Tendering
Environmental Impact Assessment for Transportation Projects	ISTE1210	2019	Employability(• environmental issues in decision-making) .• impacts of transportation projects on air quality, society, economy, ecology and travel .• Ecological disturbances . Environmental Issues in Industrial Development
Industry Internship and Project-1	ISTE2101	2019	Employability(Student will be doing live project For 4 months in an Industry and submit a Project Report to concerned guide certified by the Industry Engineer)
Industry Internship and Project-II	ISTE2200	2019	Employability(Student will be performing internship for 3-months in Industry and submitted a report and duly certified certificate from the competent Engineer in charge)
Industry Internship and Project – II/Dissertation	MTIP2102	2019	employability (Student will learn on power system operation & energy audit process with on the job training which will lead them to placement in power & energy company)
Workshop Practice	BTME0401	2019	Employability and skill development (Analyze the different applications of different shops.)
Pharmacognosy-Concepts of Authenticity & Analytical Chemistry	CCAY0402	2019	Employability (Learn about different herbal drug and their application which improves their employability)
Basic Electronics Engineering	FCEC0101	2019	Skill Development and Employability (Application of OPAMP in various purposes)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Basic Electronics Laboratory	FCEC0201	2019	Skill Development and Employability (Application of OPAMP in various purposes)
Engineering Drawing	FCME0202	2019	Employability and skill development(Draw orthographic projection of solids like cylinders, cones, prisms and pyramids including sections.)
Automation and Mechatronics	DEME0401	2019	Skill Development and Employability (the importance of maintenance of structures, types and properties of repair materials etc)
Basic Electrical Engineering	BTEE0401	2018	Employability and skill development (Formulate and solve complex AC, DC circuits, know the requirement of transformers,explain electric power economics and energy management)
Refrigeration & Air-conditioning	BTME0406	2018	Employability and skill development (effect of different components on the refrigerating machines, different refrigerants and refrigeration equipments, able to designing of air-conditioning system and estimation of air-conditioning load)
Dairy Engineering	BTAE0401	2018	Employability (Completing this course students can get job in dairy industry as dairy engineers or they can start their own milk processing startup).
Fat Rich Dairy Products	BTDT0407	2018	Employability and entrepreneurship (After completing this course students can get job in dairy industry in production department).
Microbiology of Dairy Products	BTDT0408	2018	Skill development and Employability (Students can go for higher studies (m.Tach and PhD) or can get job in quality control lab in dairy industry as a dairy microbiologist)
Dairy Process Engineering	BTAE0402	2018	Employability (This industrial based course is dedicated to inspiring job possibilities (dairy process engineer) to manage dairy process operation handling in dairy and health food industries.)
Condensed & Dried Milks	BTAE0403	2018	Entrepreneurship and employability (The course leads to the gateway of industrial openings related to manufacturing of condensed and dried milk power).



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Quality and Safety Monitoring in Dairy Industry	BTDT0410	2018	Employability and skill development (Being a research cum industrial based course, a student can opt for different types of jobs such as Quality Control Executive, Quality Analyst, Quality Assurance Supervisor as well as enhance their career in Quality Management in dairy plants).
Ice-cream & Frozen Deserts	BTDT0411	2018	Entrepreneurship and employability (The course leads to the gateway of industrial openings related to manufacturing of ice-cream and frozen foods).
Chemistry of Dairy Products	BTDT0412	2018	Skill development and employability (The course is mainly based upon laboratory chemical analysis and creating specifications for milk and milk products which will help the students to do higher studies in chemistry).
Fundamentals of Dairy Extension	BTAS0402	2018	Employability (student can be placed in different sectors of employment (cooperatives, banks, NGOs, dairy extension officers etc.)
Basic Communication Skills	MGGM1102	2011	Competence in oral, written, and visual communication: Employability, Use current technology Practicals - Skill development
Quantitative Techniques	MBDM1104	2017	application of quantitative techniques in business decision making- Employability,
Managerial Economics	MGGM1104	2014	Analysis of demand, supply, production,market; Application of different economic paradigms using Microeconomics concepts- Employability
Accounting for Managers	MGFM1101	2011	Preparation of financial statement, preparation of cost sheet and financial analysis of financial statements: Employability & Entrepreneurship
Marketing Management	MGMK1101	2011	Interpretation complex marketing issues facing by a variety of enterprises: Employability & Entrepreneurship
Organizational Behaviour	MGGM1105	2011	Analyze and compare different models of Human Behaviour - Employability, Entrepreneurship
Management Information Systems	MGIT1202	2011	Utilize Management Information Systems in achieving business competitive advantage -



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			Employability, Entrepreneurship & Skill development
Communication Perspective of Management	MGGM1206	2011	Write business proposals and reports- Employability, Entrepreneurship & Skill development
Human Resource Management	MGHR1201	2011	Carry out human resource planning and Job analysis, develop, implement and evaluate recruitment and selection-Employability & Entrepreneurship
Management & Market Research	MGGM1207	2011	Understand how marketing research fits into the broader strategic planning process, with reference to existing theories, concepts and models from within the program: Employability & Entrepreneurship Plan and undertake qualitative or quantitative Market Research and demonstrate the ability to appropriately analyze data to resolve marketing issues: Skill Development
Financial Management	MGFM1202	2011	Application of concepts of financial management, investment, financing, working capital and dividend policy decisions: Employability & Entrepreneurship
Production & Operations Management	MGOM1201	2011	Developing aggregate capacity plans and MPS in operation environments- Employability, Entrepreneurship
Economic Environment of Business	MGGM1208	2014	Analysis of economic policy and environment- Employability, Entrepreneurship
Indian Society and Culture	MGGM1212	2015	Analysing social issues, Societal Analysis- Employability
Aptitude and Career Enhancement-I (Practice)	MGGM1210	2014	Quatitative aptitude and logical analysis- Employability, Entrepreneurship & Skill development
Operation Research	MBDM1202	2017	Manage and enhance the sales force productivity and performance:Employability & Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Summer Internship Programme	MGGM1211	2011	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Strategic Management and Ethics	MGGM2318	2015	Conduct analysis of competitive situations of the enterprise and introduction of ethical practices - Employability, Entrepreneurship
Aptitude and Career Enhancement-II (Practice)	MGGM2317	2014	Compete and qualify in the selection process - Employability
Career Communication and Professional Success Lab	MGGM2314	2014	Communicate appropriately using the technology - Employability
Sales and Distribution Management (Elective)	MGMK2302	2011	Manage and enhance the sales force productivity and performance: Employability & Entrepreneurship
Logistics and Supply Chain Management	MGOM2302	2011	Analyzing the manufacturing operations of a firm- Employability, Entrepreneurship
Legal Environment for Enterprise	MGGM2315	2011	Analyze business issues and to understand broader legal issues- Employability, Entrepreneurship
Project Management	MGGM2316	2011	Describe a project life cycle, identify the resources needed for each stage, develop a project scope - Employability, Entrepreneurship
Live Project	MGEL2401	2015	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Contemporary Management courses	MGEL2402	2015	Advance topics, analysis and application of IT- Employability
Rural Marketing	MGMK2312	2015	Able to successfully enter the rural market for promotion of his products and services: Employability & Entrepreneurship;
Services Marketing	MGMK2313	2015	Able to deliver services successfully Employability & Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Customer Relationship Management	MGMK2314	2015	Formulate and assess strategic, operational and tactical CRM decisions: Employability & Entrepreneurship
Consumer Behaviour	MGMK2305	2011	Detect the relevance of consumer behaviour to the entire marketing process, the nature and stages of consumers' decision making and the factors influencing consumers' choices: Employability & Entrepreneurship;
Brand Management and Marcomm	MGMK2306	2011	Appraise key issues in managing brand portfolio and making strategic branding decisions: Employability & Entrepreneurship
B2B Marketing	MGMK2307	2011	Effective B2B marketing strategy design and execution: Employability & Entrepreneurship;
Retail Management	MGMK2315	2011	Make merchandise plan and to procure right merchandise: Employability & Entrepreneurship
International Marketing	MGMK2316	2015	Assess an organization's ability to enter and compete in international markets: Employability & Entrepreneurship;
Social Marketing	MGMK2310	2011	Develop a strategic plan for identifying opportunities for implementing social marketing in a company: Employability & Entrepreneurship
Digital Marketing	MGMK2311	2015	Apply various concepts and importance of digital marketing - Visualize various application in diverse areas of sales & marketing - Employability & Entrepreneurship;
GIS for Marketing	MGMK2317	2015	Develop customer marketing applications such as acquisition, marketing, messaging, purchasing, and retention: Employability & Entrepreneurship;
Service Marketing Management	MGMK2318	2019	Design service quality measurements to build customer loyalty and evaluate the effectiveness and efficiency of customer service offerings: Employability & Entrepreneurship
Advanced Managerial Accounting	MGMK2310	2015	Preparation of cost sheet and analysis of financial statements: Employability & Entrepreneurship;
Financial Derivatives	MGMK2311	2015	Competent in derivative products such as forward, future, option & swap and to make on



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			line trading on futures and options: Employability & Entrepreneurship;
Financial Institutions, Markets & Services	MGFM2305	2011	Use techniques for raising funds from capital market and from different sources- Employability & Entrepreneurship;
Commercial Banking and ALM	MGFM2306	2011	Use techniques for Asset/Liability Management for smooth operation of the Bank. This will help in employability in Banking Sector - Employability & Entrepreneurship
Insurance & Risk Management	MGFM2307	2011	Use techniques for identifying, measuring and managing the risk - Employability & Entrepreneurship
Security Analysis And Portfolio Management	MGFM2308	2011	Use methods of valuations of financial instruments and evaluation of risk as well as return of an individual security and portfolio - Employability & Entrepreneurship
Project Appraisal & Financing(PAF)	MGFM2309	2014	Preparation of detailed project report, identification of a project, feasibility analysis including market, technical and financial appraisal of a project; Uses project appraisal techniques for evaluating live projects: Employability & Entrepreneurship
Corporate Restructuring	MGFM2312	2015	Use techniques of Financial Corporate valuation and Engineering - Employability & Entrepreneurship
Financial Planning and Wealth Management	MGFM2313	2015	Use methods to determine the ways of personal tax planning, retirement and estate planning for an individual and design a financial plan - Employability & Entrepreneurship
Current Asset Management	MGFM2314	2015	Evaluate comparative current asset management policies and their impact on the firm's profitability, liquidity, risk and operating flexibility: Employability & Entrepreneurship;
Financial Analytics	MGFM2315	2019	Able to work with large amounts of financial data without difficulty for analysing and interpreting the financial statements for various decision making purposes: Employability & Entrepreneurship;



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Industrial Relations and Labour Laws	MGHR2302	2015	Handle industrial disputes - Employability
Compensation and Reward Management	MGHR2315	2011	Designing a pay structure - Employability
Performance Management	MGHR2314	2011	Fixing performance standards and performance indicators that reflect the employees range of responsibilities- Employability
Organization Change and Development	MGHR2305	2011	Bring out appropriate changes in the organization and becoming a change agent- Employability, Entrepreneurship
International Human Resource Management	MGHR2307	2011	Design Human Resource activities in an International Context- Employability,
Knowledge Management	MGHR2308	2011	Critically apply theories and models to organisations for success- Employability, Entrepreneurship
Human Resource Planning and Sourcing	MGHR2312	2015	Development, implementation, and evaluation of employee recruitment, selection, and retention plans and processes- Employability, Entrepreneurship
Training and Development	MGHR2311	2011	Assess, design and implement various methods, techniques and sources of training- Employability & Skill development
Leadership Development	MGHR2313	2015	Develop critical thinking skills and lead the organization- Employability, Entrepreneurship
Organization Structure and Design	MGHR2310	2014	Designing effective organizational structure keeping in view business strategies - Employability, Entrepreneurship
HR Analytics	MGHR2316	2019	Employ appropriate software to record, maintain, retrieve and analyse human resources information - Employability
Rural Immersion Programme	MGRM2305	2015	Carry out participatory planning with the community, develop strategies for intervention - Employability & Skill development
Sustainable Livelihood System	MGRM2306	2015	Introduce and train people on alternative livelihood options- Employability, Entrepreneurship & Skill development



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Public System Management	MGRM2307	2015	Comprehend and apply the basic principles of public administration model - Employability, Skill development
Micro Finance Management	MGRM2308	2015	Accelerating the expansion of local microbusinesses- Employability
Natural Resource Management	MGRM2309	2015	Work effectively with, and within, interdisciplinary and diverse groups to resolve-management problems and achieve management objectives- Employability and Entrepreneurship
Gender and Development	MGRM2311	2015	Utilize the different tools and techniques for gender planning, analysis and evaluation in the development sector-Employability
Hospital Administration	MGHM2301	2017	Create policy and processes and execute decisions in compliance with the legal, regulatory and ethical considerations inherent in managing healthcare systems and organizations- Employability
Management Information Systems for Hospital	MGHM2302	2017	Analyze existing systems and design technology solutions appropriate to the hospital-Employability & Skill development
Management of Out-Patient Department	MGHM2303	2017	Deal the issues effectively in emergency services, can plan, organize and supervise the activities of Minor Operation Theatre, Manage treatments of referral & cross referral cases-Employability & Skill development
Risk and Disaster Management	MGHM2304	2017	Handle Security Management Effectively in Hospitals, Control and Prevent hospitals from getting infected, Plan and design fire protection in hospitals, Handel radioactive waste collection and disposal in hospitals- Employability
Management of Quality	MGHM2305	2017	Prepare quality policy and objectives for hospitals, Plan and organize quality accreditation-Employability
Legal and Ethical Issues for Hospitals	MGHM2306	2017	Handle medico-legal issues effectively, Ensure appropriate patient relationship, Handle trade unions - Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Health Insurance	MGHM2307	2017	Ensure hassle free insurance facility in hospitals, Build appropriate relation with insurance providers- Employability
Project Management in Health Care	MGHM2308	2017	Plan and implement health sector projects, Carry out feasibility analysis of health sector projects, Carry out demand analysis in health care sector- Employability
Marketing of Hospital Services	MGHM2309	2017	Handle challenges in hospital services marketing, Design new hospital services, Engage appropriate channels for hospital service marketing, Use marketing communication with technical knowledge- Employability, Entrepreneurship
Clinical, Diagnostic & Therapeutic Services	MGHM2310	2017	Design and manage secondary and tertiary systems of medicine, Maintain hospital records appropriately, Handle specialist services effectively- Employability
Patient Care and Behaviour	MGHM2311	2017	Motivate patients and instrumental in shaping positive attitude towards hospital, Carry out audit on patient behaviors, Handle the role of hospital administrator effectively- Employability & Skill development
Web Traffic Generation	MBDM2201	2017	Increase traffic in any website, Popularizing websites- Employability, Entrepreneurship & Skill development
Link Building & e-WoM	MBDM2202	2017	Increase links through web, Building relationships through the web- Employability, Entrepreneurship & Skill development
Social Media Marketing	MBDM2203	2017	Develop effective social media marketing strategies for various types of industries and businesses- Employability, Entrepreneurship
Branded Content and the Future of Media	MBDM2204	2017	Develop and market branded contents, Employability,
Ideas, Brands and Business	MBDM2205	2017	Make strategic branding decisions- Employability, Entrepreneurship
Brand Planning and Consumer Insights	MBDM2206	2017	Design and execute intelligent and innovative research studies to scan the environment, identify consumer insights, and use those



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			insights to manage the brand- Employability, Entrepreneurship
Digital Strategies and Planning	MBDM2207	2017	Create a digital marketing plan and budget; identify suitable measures to set objectives and evaluate digital marketing -Employability & Entrepreneurship;
Power Distribution Management	MGPM2301	2018	Create e-business plan, Make e-business risk analysis and justify it- Employability,
Power Plant System	MGPM2302	2018	Plan and administer policies for power plants, Handle usages of equipment in power plants effective, Carry out job designing appropriately- Employability,
Project Planning, Analysis and Management	MGPM2303	2018	Carryout feasibility analysis of projects (Market, Technical, Financial and Economic), design project plan, Apply the risk management plan and analyse the role of stakeholders- Employability, Entrepreneurship
Electricity Industry Structure and Act	MGPM2304	2018	Handle power generation, transmission, and distribution process effectively, Manage legal aspects, Introduce technological changes required in the organization- Employability,
Integrated Energy Management & Power Planning	MGPM2305	2018	Develop plan for sustainable use of alternative sources of energy, Plan for generation and sharing of load, Central power system and grid plan - Employability
Financing Energy Sector Projects	MGPM2306	2018	Carry out feasibility study of projects for micro, small and medium enterprises, Handle legal issues effectively, Handle project financing- Employability, Entrepreneurship
Power Pricing & Power Purchase Agreement	MGPM2307	2018	Develop agreements for power purchase, Calculate capital cost operational cost, development cost- Employability, Entrepreneurship
Power Trading	MGPM2308	2018	Design and develop the power market engaging modern technology- Employability,
Power Station Management	MGPM2309	2018	Utilise safe technology, Handle the challenges in power generation, transmission and



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			distribution, Develop strategies for production-Employability
Renewable Energy for a Sustainable Future	MGPM2310	2018	Plan for utilization of renewable energy, Design facilities for solar, wind and tidal energy-Employability, Entrepreneurship
Risk Hazard and Environment	MGPM2311	2018	Establish first aid facilities, Plan for risk reduction,Develop hazardous waste management - Employability
Energy Conservation & Update	MGPM2312	2018	Establish first aid facilities, Plan for risk reduction,Develop hazardous waste management - Employability
Maintenance Management and Inventory Control	MGPM2313	2018	Handle inventory properly, Job designing, Manage production maintenance-Employability,
Service Operations Management	MGOM2303	2011	Carry out optimal inventory management-Employability, Entrepreneurship
Total Quality Management	MGOM2311	2011	Use statistical approach for quality control, ISO and QS certification process- Employability, Entrepreneurship & Skill development
Technology Management	MGOM2312	2015	Technology adoption and technology transfer-Employability, Entrepreneurship
Purchase and Materials Management	MGOM2305	2011	Develop materials requirement planning technique, handel issues related to overstocking and under stocking- Employability, Entrepreneurship
Environment & Industrial Safety	MGOM2306	2011	Formulate or design a system, process, procedure, or program to meet desired safety needs- Employability, Entrepreneurship
Enterprise Resource Planning	MGOM2308	2011	Develop Generic Model of ERP and Implementation of General ERP Methodology-Employability, Entrepreneurship & Skill development
Production Planning and Inventory Control	MGOM2309	2018	Develop Production planning and handel control issues in both service and manufacturing industries- Employability, Entrepreneurship
Supply Chain Modelling	MGOM2310	2011	Value creation and revamping supply chains for becoming competitive in the market-Employability, Entrepreneurship



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Information System in Business	MGDA1210	2019	Analyze actions affecting the business as well as prepare cost estimates and forecasts- Employability & Entrepreneurship
Anatomy Physiology & Health Education (APHE)	MGGM1106	2019	Apply knowledge on structure and function of body parts for therapies-Employability
Pharmacology	MGPH1201	2019	Able to advise use of drugs for therapeutic purposes-Employability
Basic Epidemiology	MGPH1202	2019	Analysis of distribution and determinant of health and diseases condition in defined population-Employability
Selling and Reporting Skills of Pharmaceutical Product	MGPH1203	2019	Handle pharmaceutical marketing efficiently- Employability, Entrepreneurship
Pharmaceutical Brand Management	MGPH2101	2019	Development of brand of a product- Employability, Entrepreneurship
Pharmaceutical Sales and Distribution Management	MGPH2102	2019	Increase pharmaceutical sales, develop promotional strategy,-Employability, Entrepreneurship
Drug Regulatory Affairs & Intellectual Property Rights	MGPH2104	2019	Able to manufacture and sale of pharmaceuticals-Employability, Entrepreneurship
Manufacturing Management	MGPH2105	2019	Able to plan and design pharmaceutical production system-Employability
Financial Reporting & Analysis	MGPH2106	2019	Analyze financial statements-Employability
Pharmaceutical Advertising & Services Management	MGPH2107	2019	Able to design managerial process to oversee and control the various advertising activities- Employability
Introduction to Indian Society	MGDM0101	2018	Critically examine the challenges in society from a multi stakeholder perspective -Employability
Marketing Management	MGMK1101	2018	Interpretation complex marketing issues facing by a variety of enterprises: Employability & Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Sustainable Entrepreneurship Development	MGDM0103	2018	To promote sustainable enterprises- Employability, Entrepreneurship
Skill Ecosystem Development	MGDM0104	2018	Appraise the skill ecosystem and its dimensions - Employability
Innovation and Regional Development	MGDM0106	2018	Develop innovative approaches- Employability
Project Management	MGAM0102	2018	Describe a project life cycle, identify the resources needed for each stage, develop a project scope - Employability, Entrepreneurship
Summer Internship	MGDM0801	2018	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship
Development and Globalisation	MGDM0107	2018	Analyzing the manufacturing operations of a firm, dealing with fundamental issues of development and globalization - Employability
Global Production Network	MGDM0108	2018	To deal with the terrain of globalization and production networks in the new world order - Employability
Research Methods	MGAM0103	2018	Application of modern analytical tools and techniques for management decision making, research designing, sampling, analysis of data, hypothesis formulation and testing- Employability, Entrepreneurship
Gender Issues in Development	MGDM0109	2018	Adopt different tools and techniques for gender planning, analysis and evaluation in the development sector- Employability
Introduction to Ethics	FCMG0116	2018	To appraise ethical issues and challenges in organizations - Employability
Accounting for Managers	MGFA1101	2018	Preparation of financial statement, preparation of cost sheet and financial analysis of financial statements: Employability & Entrepreneurship
Micro and Macro Economics	MGDM1104	2014	Application of different economic paradigms using Microeconomics concepts- Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Individual and Group Behaviour	MGDA1103	2017	Competence to deal with behavioural challenges in an organization and insights for personal and professional growth- Employability
Socio-Economic and Political History of India	MGDM 1201	2014	Analyse social, economical and political background of India for decision making - Employability
Financial Inclusion and Micro-finance	MGDM 2303	2014	To appraise the scenario of financial inclusion in the country , acquire skills to operate in Micro Finance sector - Employability, Entrepreneurship
Economic Environment for Agriculture	MGAM1204	2017	Developing aggregate capacity plans and agricultural policies for sustainable agricultural development, risk management strategies and MPS in operation environments- Employability
ICT in Agriculture	MGAM1102	2017	Applications of information & Community technology in various fields of agriculture and promoting the applications of ICT in agriculture - Employability, Entrepreneurship
Agricultural Marketing	MGAM1203	2017	Effectively evaluate the challenges and prospects of agri marketing system, : Employability & Entrepreneurship
Natural Resource Management	MGDM 2406	2014	Work effectively with, and within, interdisciplinary and diverse groups to resolve-management problems and achieve management objectives- Employability and Entrepreneurship
Post-harvest and Processing Management (Theme Based)	MGAM2108	2017	Carry out Interdisciplinary approach to post-harvest management including biology, agricultural sciences, and management, Employability,
Live-stock management (Theme Based)	MGAM2203	2017	Manage animals for food and fiber production: Employability & Entrepreneurship
Sales and Distribution Management (Theme Based)	MGAM2103	2017	Develop a sales and distribution plan for products/services- Employability
Commodity market and trading (Theme Based)	MGAM2209	2017	Develop plans to minimize risk through trade strategies: Employability, Entrepreneurship



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Proficiency in English	BBAR1101	2015	Communicate effectively: Employability
Basic Financial Accounting	BBAR1102	2015	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Management Principles and Applications	BBAR1103	2016	Application of Basic management principles in organizations- Employability
Micro Economics	BBAR1104	2015	Utilize micro economic concepts and techniques to take business decisions Employability & Entrepreneurship
Reading to Writing	BBAR1201	2015	Increased reading speed and using academic vocabulary in writing - Employability
Organisational Behaviour	BBAR1202	2015	Analyze and compare different models of Human Behaviour - Employability, Entrepreneurship
Business Statistics	BBAR1203	2016	Use statistical tools for managerial decision-making-Employability, Entrepreneurship
Macro Economics	BBAR1204	2015	Apply macroeconomic perspective to solve business issues and take appropriate policy decision-Employability & Entrepreneurship
Human Resource Management	BBAR2101	2015	Carry out human resource planning and Job analysis, develop, implement and evaluate recruitment and selection-Employability & Entrepreneurship
Principles of Marketing	BBAR2102	2016	Solving marketing issues faced by a variety of enterprises : Employability & Entrepreneurship;
Cost & Management Accounting	BBAR2103	2016	Preparation of cost sheet and analysis of financial statements: Employability & Entrepreneurship
Oral Communication Skills	BBAR2104	2015	Use of strategies, such as contextualization of new vocabulary, use of previewing, skimming and scanning techniques, and knowledge of text organization and discourse markers, to demonstrate comprehension of written and spoken language-Employability,



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Production & Operation Management	BBAR2105	2015	Developing aggregate capacity plans and MPS in operation environments- Employability, Entrepreneurship
Research Methodology	BBAR2201	2015	Application of modern analytical tools and techniques for management decision making, research designing, sampling, analysis of data, hypothesis formulation and testing- Employability, Entrepreneurship
Operation Research	BBAR2202	2015	Develop a report that describes the model and the solving technique, analyse the results and propose recommendations in language understandable to the decision-making processes in Management - Employability, Entrepreneurship
Financial Management	BBAR2203	2016	Application of concepts of financial management, investment, financing, working capital and dividend policy decisions: Employability & Entrepreneurship
Business Communication	BBAR2204	2015	Use of strategies to demonstrate comprehension of written and spoken language in business context-Employability,
Financial Institutions and Markets	BBAR3101	2016	Use techniques for raising funds from capital market and from different sources- Employability & Entrepreneurship;
Business Law for Managers	BBAR3102	2016	Utilize legal framework for starting a business venture and running it successfully in conformity with legal parameters- Employability & Entrepreneurship
Summer Internship	BBAR3103	2015	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Strategic Management	BBAR3204	2019	Conduct analysis of competitive situations of the enterprise they would be employed with, or the enterprise they would set up: Employability & Entrepreneurship
International Finance	BBAF3101	2016	Use techniques for managing the financial issues in international environment - Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Investment Banking & Financial Services	BBAF3102	2016	Use techniques for raising funds from capital market and from different sources- Employability
Investment Analysis & Portfolio Management	BBAF3103	2016	Use methods of valuations of financial instruments and evaluation of risk as well as return of an individual security and portfolio - Employability & Entrepreneurship
Project Appraisal	BBAF3104	2016	Preparation of detailed project report, identification of a project, feasibility analysis including market, technical and financial appraisal of a project; Uses project appraisal techniques for evaluating live projects: Employability & Entrepreneurship
Business Analysis & Valuation	BBAF3105	2016	Analyse and interpret the financial statements for various decision making purposes: Employability & Entrepreneurship
Financial Modelling & Derivatives	BBAF 3106	2016	Uses techniques of Financial modeling and various Financial Derivatives including Greeks & Exotic Options - Employability
Strategic Corporate Finance	BBAF3107	2016	Use valuation principles, tools & techniques, the link between valuation and corporate finance, management buy-outs valuing real assets in the presence of risk: tracking portfolios and real asset valuation- Employability
Research Project	BBAF3108	2016	Identification of research problems, collection of data and analysis of data : Employability & Entrepreneurship
Personal Selling & Sales Force Management	BBAM3102	2016	Evaluate the role of sales manager and his/ her responsibilities in recruiting, motivating, managing and leading sales team: Employability
Advertising & Brand Management	BBAM3103	2016	Appraise key issues in managing brand portfolio and making strategic branding and advertising decisions: Employability & Entrepreneurship
Retail Management	BBAM3104	2016	Make merchandise plan and to procure right merchandise: Employability & Entrepreneurship
Distribution & Supply Chain Management	BBAM3105	2016	Design and implement distribution channel strategy: Employability, Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Marketing of Services	BBAM3106	2016	Design service quality measurements to build customer loyalty and evaluate the effectiveness and efficiency of customer service offerings: Employability
International Marketing	BBAM3107	2016	Assess an organization's ability to enter and compete in international markets: Employability & Entrepreneurship;
Research Project	BBAM3108	2016	Competent with identification of research problems, collection of data and analysis of data : Employability & Entrepreneurship
Hospitality management	BBAM3109	2016	Create policy and processes and execute decisions in compliance with the legal, regulatory and ethical considerations inherent in managing organizations in hospitality sector- Employability
HRD : Systems & Strategies	BBAH3101	2016	Prepare strategies for development of human resources in organizations- Employability
Training & Development	BBAH3102	2016	Prepare training calendar and training contents by analysing the need- Employability
Management of Industrial Relations	BBAH3103	2016	Plan policies towards Labour Welfare and maintain sound Industrial Relations- Employability, Entrepreneurship
Performance & Compensation Management	BBAH3104	2016	Fixing performance standards and performance indicators that reflect the employees range of responsibilities, Designing a pay structure- Employability, Entrepreneurship
Counselling & Negotiation Skills for Managers	BBAH3105	2016	Negotiation with business enterprises- Employability, Entrepreneurship
Cross Cultural HRM	BBAH3106	2016	Diversity management respecting the culture of employees- Employability, Entrepreneurship
Talent & Knowledge Management	BBAH3107	2016	Develop knowledge management process in the organization- Employability
Research Project	BBAH3108	2016	Knowledge and skills in preparing a project report- Employability, Entrepreneurship
International Trade Policy & Strategy	BBAB3101	2016	Analyze new opportunities in international trade, global supply and value chains,



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			investment agreements, trade in services, competition policy and regional economic integration- Employability
Global Business Environment	BBAB3102	2016	Analyse the key decisions that multinational firms make in relation to the choice of markets and entry strategies- Employability
Transnational & Cross Cultural Marketing	BBAB3103	2016	Formulate marketing strategy taking into consideration cultural beliefs, values and customs of a specific country- Employability
International Distribution & Supply Chain Management	BBAB3104	2016	Use commonly accepted frameworks and tools to analyze supply chain situations- Employability
International Accounting & Reporting System	BBAB3105	2016	Prepare the mandatory financial statements, according to the IFRS- Employability
Multinational Business Finance	BBAB3106	2016	Can handle – Problems and issues in foreign investment, Manage payment settlements- Employability
International Joint Ventures, Mergers & Acquisitions	BBAB3107	2016	Handle issues in mergers and acquisitions- Employability
Research Project	BBAB3108	2016	Project writing skills and utilization of research methodologies in a project-Employability, Entrepreneurship
Financial Accounting I	BCFA1102	2017	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Business Mathematics	BBAR1106	2017	Data analysis using mathematical function- Employability & Entrepreneurship
Business Economics	BCFA1104	2017	Apply macroeconomic perspective to solve business problems-Employability & Entrepreneurship
Business Law	BCOR1202	2017	Utilize legal framework for starting a business venture and running it successfully in conformity with legal parameters- Employability & Entrepreneurship
Introduction to Banking	BBAR1208	2017	Carry out operational activities in commercial banks Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Business Environment	BBAR1206	2017	Analyse business environment and take appropriate decision Employability and Entrepreneurship
Financial Accounting II	BCFA1207	2017	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Direct Tax	BBAR2106	2017	Can handle computation of heads of income and taxable income, TDS, advance tax etc.: Employability
Indirect Taxes / GST	BBAR2107	2017	Calculate and file GST, levy and collection of tax, input tax credit, IGST act GSTN etc.: Employability & Entrepreneurship
Cost & Management Accounting	BBAR2110	2017	Preparation of cost sheet and analysis of financial statements: Employability & Entrepreneurship
Corporate Law	BBAR2108	2017	Utilize legal framework for starting a business venture and running it successfully in conformity with legal parameters- Employability & Entrepreneurship
E-Commerce	BBAR2209	2017	carry out entrepreneurial activities electronically (E-commerce) Employability
Quantitative Techniques for Business	BBAR2207	2017	formulate complex problems into mathematical models to solve using software- Employability
Auditing	BBAR2210	2017	Identify the areas of fraud and errors in the accounts and take corrective actions while presenting the audit report: Employability
Business Ethics & Governance	BBAR2206	2017	Inroduction of ethical practices in business - Employability, Entrepreneurship
Corporate Accounting	BBAR3109	2017	Develop Accounting procedures used in corporates and the strategies involved in the corporate decisions.: Employability & Entrepreneurship
Financial Market Operation	BBAR3110	2017	Analyse Money market, Capital market, its instruments and apply the same in organizations- Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
On Job Internship-I	BBAR3111	2017	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Global Finance	BBAR3209	2017	Apply suitable techniques and strategies to reduce risk in the foreign exchange market - Employability
Banking Law & Practice	BBAR3210	2017	Adhere to Banking laws and practices while working in banking sector- Employability
On Job Internship-II	BBAR3211	2017	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Introduction to Print & Electronic Media	MAMC1102	2018	Competence in Print and Electronic Media and can work in Print and Electronic Media industry- Skill development and Employability
Advanced Digital Media	MAMC1103	2018	Students will be able to Competence skills in modern media and will be able to analyse advertising, Marketing, social networking and using social media for different purposes. - Skill development and Employability
Digital Media Platforms	MAMC1104	2018	Employability: Get jobs in Television program production or Radio Program production.
Film studies	MAMC1105	2018	Students will be able to develop skills in different aspects of Film and will be able to analyze film-Employability
Advertising and Public Relations	MAMC1106	2018	After studying this paper student will be able to employ Public Relations and Advertising industry and its functioning.-Employability
Thesis	MAMC0301	2018	Employability: Analysing Media issues and analysis of media content.
Animation	MCDE0601	2016	Ability to create quality animation performance through a creative and professional portfolio using principles of animation. Will help in Employability and Skill development
Camera Operator	MCDE0605	2018	Skills development and Employability in camera handling and planning and producing programs for television and Photography.



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Adobe tools and Illustrations	MCDE0609	2018	Work on Adobe Illustrator in the beginner level, and on graphics designing. Skill Development and Employability
Communication in History and History of Communication	MCFC0501	2016	Utilise the skill in communication of the students- Skill development and students can able to work in new communication technologies at different points of time- Employability/
Introduction to Social Media	MCCC1101	2018	Student will able to get employment on Social media- Employability
Film Studies	MCCC1103	2018	Students will be able to develop skills in different aspects of Film and will be able to analyze film as an art. -Skill development, Employability
PR and Advertising	MCCC1104	2018	After studying this paper student will be able to employ Public Relations and Advertising industry and its functioning- Employability and Skill Development
Digital Media	MCCC1105	2018	Students will be able to develop skills in new media and will be able to analyse advertising, Marketing, social networking and using social media for different purposes. Employability and Entrepreneurship
Classical Mechanics	MSCP1102	2017	Employability - Variational principle, Central force problem, Canonical transformations, Poisson Bracket, Hamiltonian-Jacobi Theory and transition to Quantum mechanics, Small Oscillations.
Quantum Physics I	MSCP1103	2017	Employability - Angular Momentum, The Hydrogen Atom, Perturbation Theory.
Electrodynamics & Special Relativity	MSCP1104	2017	Employability - The special theory of relativity, Relativistic Mechanics, Relativistic Electrodynamics.
Solid State Physics	MSCP1201	2017	Employability - Crystal Vibrations (Phonon theory), Thermal Properties of Solid, Free electron Fermi gas, Semiconductor, Dielectrics and Ferroelectrics.



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Computational Physics Lab	MSCP1204	2017	Skill and employability - Learning simulation and solving problems using programming.
Atomic and Molecular Physics	MSCP2301	2017	Employability - Molecular spectra , Laser.
Nuclear and Particle Physics	MSCP2302	2017	Employability - Nuclear models:Shell Model, Liquid Drop Model, Nuclear Reactions, Sub-nuclear particles and their properties.
Quantum Physics II	MSCP2303	2017	Employability - Variational Methods, WKB Approximation, Time Dependent Perturbation Theory, Scattering Theory.
Microprocessor and Interfacing devices	MSCP2304	2017	Employability - Microprocessor Architecture, Assembly language program & executing programs , Architecture and register organization of 8086.
Soft Matter Physics	MSCP2305	2017	Employability - Elastic soft matter, Liquid crystals, Brownian motion and thermal fluctuations, Variational Principles of for Soft Matter, Diffusion and Permeation in Soft Matter, Flow and deformation in Soft Matter.
Electronics Communication System	MSCP2401	2017	Employability - Analog Modulation Systems, Digital Modulation Systems, Optical Communication System, Satellite Communication.
Introduction to Bio- and Nano-materials	MSCP2403	2017	Employability - Natural biomaterials, Nano-Materials Introduction, Synthesis Routes, Nanostructured Materials, Characterization:.
Advanced Solid State Physics	MSCP2404	2017	Employability - Many Body Systems, Magnetic properties
Materials Lab II	MSCP2405	2017	Skill - Materials lab II, Employability - synthesis of materials, Analysis of dielectric properties of a material, Analysis of electrical properties of a material. Analysis of AC and DC conductivity of a material
Statistical Physics	MSPH3602	2017	Employability -The Statistical Basis of Thermodynamics, Canonical Ensemble, The Grand Canonical Ensemble, Formulation of Quantum Statistics, The Theory of Simple Gases, Ideal Bose Systems, Ideal Fermi Systems.



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Embedded System	MSPH5103	2017	Employability - Embedded systems
Advanced Physical Chemistry I	MSCC1101	2019	employability-Chemical Dynamics ,Adsorption,Electrochemistry, Enterperneurship-Micelles,
Advanced Inorganic Chemistry I	MSCC1102	2019	Employability-Metal-Ligand Bonding-I&II, Electronic Spectra and Magnetic Properties of Transition Metal Complexes-I,II and III, Metal - Ligand Equilibria in Solution-I&II.
Advanced Organic Chemistry I	MSCC1103	2019	Employability-Aliphatic Nucleophilic Substitution,Aromatic Nucleohilic Substitution,Aliphatic Electrophilic Substitution,Addition to Carbon-Carbon Multiple Bonds ,Elimination Reactions.
Polymer Chemistry	MSCC1104	2019	Employability-Kinetics of melting, crystal morphology, free volume, distribution of molecular size, stoichiometric imbalance. X-ray diffraction study, Microscopy,Price - Alfrey equation, Flory - Huggins theory, polymer fractionation, Mark - Houwink - Sakurada equation, diffusion coefficient and friction factor,Power Law for pseudo plastic liquids, effect of shearing forces, segmental friction factor, Bueche theory. Skill-Thermal analysis and physical testing,Polymer Processing-I&II,Elastic deformation, shear modulus and compliances, Maxwell model, Voigt model, dynamic viscoelasticity, molecular theory for viscoelasticity - Rouse model,Mechanical properties
Advanced Physical Chemistry II	MSCC1201	2019	Employability-Non-ideal systems,Quantum Chemistry-I,II ,III and IV.
Advanced Inorganic Chemistry II	MSCC1202	2019	Employability-Metal n -Complex,Metal Clusters,Organometallic Chemistry I &II . Skill-Symmetry and Group Theory in Chemistry-III.
Advanced Organic Chemistry II	MSCC1203	2019	Employability-Organic Synthesis and retrosynthesis,Organometallics in



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			synthesis,Photochemistry,Pericyclic Reactions,Cycloadditions.
Nuclear Chemistry	MSCC1204	2019	Employability-Systematic Study of alpha, beta and gamma decays,Module-II & III, Nuclear reaction,Nuclear fission,Reactor Theory and Module-VII
Advanced Inorganic Chemistry III	MSCC2301	2019	Skill-Instrumental Method of Analysis,Raman Spectroscopy,Homogeneous and Heterogeneous Catalysis,Displacement and Isomerization reaction. Hydrogenation, Hydroformylation, Wacker (Smidt) Process, Olefin Metathesis, Fischer-Tropsch synthesis, Zeigler-Natta polymerization, Water gas reaction Employability-Mechanism of Substitution Reactions,Electron Transfer Reactions
Advanced Organic Chemistry III	MSCC2302	2019	Employability-Bioenergetics,Amino Acids, Peptides and Proteins,Proteins,Enzymes,Module-V & VI
Advanced Physical Chemistry III	MSCC2303	2019	Employability-Electronic spectra of molecule,Electronic spectra of diatomic molecules,Electronic spectra of polyatomic molecules. Skill-Nuclear Magnetic Resonance Spectroscopy,Fluorescence,Data analysis
Advanced Solid State Chemistry	MSCC2304	2019	Employability-Bonding in Solids,of solids-band theory,Mechanical Properties of Solids,Organic Solids. Skill-Diffraction Methods,Neutron Diffraction
Advanced Bio-Inorganic Chemistry	MSCC2402	2019	Employability-Metalloporphyrins and Iron-sulphur Protein,Metalloporphyrins and Iron-sulphur Protein,Magnesium porphyrins (Chlorophyll),Metalloenzymes,chiral recognition and catalysis, molecular recognition, biomimetic chemistry, crown ethers, cryptates. Cyclodextrine, cyclodextrinbased enzyme models, calixarenes, Ionophores,Supramolecular Chemistry-I&II



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MATHEMATICAL MODELLING	MSMA 4701	2017	Skill- Mathematical modelling through ordinary differential equations of first order. Employability - Mathematical modelling through the systems of ordinary differential equations
ABSTRACT ALGEBRA - I	MSMA 4702	2017	Employability - Automorphisms, Cayley's Theorem, Permutations Groups
ADVANCED ANALYSIS	MSMA 4703	2017	Employability - Connected sets, Bounded sets, Totally Bounded sets, Complete Metric Spaces.
PARTIAL DIFFERENTIAL EQUATION-II	MSMA 4704	2017	Skill- Eigen value Problems Employability - The Cauchy Problem, The method of Separation of Variables
DIFFERENTIAL GEOMETRY	MSMA 4705	2017	Employability - Fundamental Triads, Curves, Serret-Frenet Formulae, Curvatures and torsion of a curve at a point.
MEASURE THEORY	MSMA 4801	2017	Employability - Outer measure, Measurable sets and Lebesgue measure
ADVANCED CALCULUS	MSMA 4802	2017	Skill- Derivatives of functions on R_n , Differentiation of composite functions Employability - Set functions, Transformations and Multiple integrals
TOPOLOGY	MSMA 4803	2017	Employability - T_0 - and T_1 - spaces and sequence, Axioms of countability
FLUID DYNAMICS – I	MSMA 4804	2017	Employability - Fundamental equations of the flow of viscous compressible fluids
TENSOR ANALYSIS	MSMA 4805	2017	Skill- Riemann Geometry Employability - Tensor Algebra, Applications of Tensor methods to surface Geometry.
ABSTRACT ALGEBRA-II	MSMA 5101	2017	Employability -Algebra of Linear Transformations, Characteristic Roots
COMPLEX ANALYSIS-II	MSMA 5102	2017	Employability -General form of Cauchy's Theorem, Calculus of Residues, Evaluation of Definite Integrals, Harmonic Functions.
FLUID DYNAMICS – II	MSMA 5103	2017	Employability -The Laminar boundary layer, Properties of Navier-Stokes equations



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
OPERATION RESEARCH – II	MSMA 5104	2017	Skill- Graphical method for 2 X n and, m X 2 matrix games Employability - Second order optimality condition, Lagranges method
NUMBER THEORETIC CRYPTOGRAPHY	MSMA 5105	2017	Employability -Enciphering matrices, The idea of public key Cryptography, RSA
THEORY OF COMPUTATION	MSMA 5201	2017	Employability -Computability Theory: Churh-Turing thesis
ADVANCED NUMERICAL ANALYSIS	MSMA 5202	2017	Employability -Eigen values and Eigen Vectors: Basic power method, Rayleigh Quotient, Shifted power method
Microbiology	MSBO1101	2017	Higher studies/Employability- Students learn on preparation and sterilization of media, plating, slanting of media, isolation of bacteria in pure culture
Cell Biology	MSBO1103	2017	Employability-Perform comparative karyotypic analysis, techniques like extraction and separation of DNA by gel electrophoresis, squashing technique for the study of different stages of mitosis and meiosis
Plant Ecology	MSBO1104	2017	Employability-Practical on biodiversity measurement by different indices, calculation and problem solving.
Botany Laboratory-I	MSBO1105	2017	Employability/Skill-Acquire general idea on instruments used in microbiology laboratory
Plant Physiology, Metabolism, and Biochemistry	MSBO1202	2017	Employability- Practicals on study of principles of spectrophotometer & verification of Beer-Lambert's law, Preparation of standard curve for quantification of protein, carbohydrate & reducing sugar
Environmental Pollution and Management	MSBO1204	2017	Employability-Testing water and soil quality, practicals on Phytoremediation and pollution management.
Systematics and Pathology	MSBO2301	2017	Employability-Identification of plants, plant diseases and control measures



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Natural Resource Management and Utilization	MSBO2302	2017	Skill/ Employability- Bioresource management.
Plant Biotechnology and Bioinformatics	MSBO2401	2017	Entrepreneurship/Employability- Practicle on Production of synthetic seeds, Techniques of surface sterilization and plant regeneration via organ culture
Eco toxicology & Waste Management	MSBO2402	2017	Employability-Practicle on E-waste management, smart waste management; landfilling-biological processes, leachate control and treatment, site management
Microbial Technology & Physiology	MSBO2403	2017	Employability-Perform fermentation technology, Food processing technology
Project/Dissertation	MSBP2401	2017	Employability- Problem analysis by opting the project work, findings and presentation
Biosystematics and Taxonomy	MSZO1102	2019	Employability - . History of Classification Trends in biosystematics: Chemotaxonomy cytotaxonomy and molecular taxonomy, ,Taxonomic procedures: Taxonomic collections, preservation, curretting, process of identification. Taxonomic keys, different types of keys, their merits and demerits. Taxonomic categories. Evaluation of biodiversity indices Evaluation of Shannon. Weiner Index, International code of Zoological Nomenclature (ICZN): , Hardy-Weinberg law of genetic equilibrium, . Trends in Evolution Molecular Evolution Gene evolution, Evolution of gene families. Assessment of molecular variation
Cell & Molecular Biology	MSZO1103	2019	Employability - CellSignaling: Signalling molecules and signal receptors, second messengers, G protein coupled receptors, activation of gene transcription by G protein coupled receptors, Lampbrush chromosome, Polytene chromosome, telocentric chromosome, Inter-phase chromatin, Euchromatin and Heterochromatin, karyotype



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			and its significance Cell cycle: Molecular models and events. Regulators and checkpoints in cell cycle, DNA synthesis by reverse transcription, DNA Repair: mismatch repair, base excision, nucleotide excision, direct repair, SOS repair, Prokaryotic and eukaryotic translation.
Biochemistry	MSZO1104	2019	Employability - Carbohydrate metabolism: Glycolysis, TCA cycle, pentose-phosphate pathway. Gluconeogenesis, glycogen metabolism, regulation of carbohydrate metabolism, Oxidative phosphorylation, electron transport and ATP synthesis, Enzymes: General properties, nomenclature and classification, extraction and assay Michaelis-Menten kinetics and its significance, Brigg's-Halden modification, determination of Vmax and Km, Mechanism of enzyme action: general acid-base catalysis, covalent catalysis, metal catalysis Mechanism of action of RNase, Lysozyme and Chymotrypsin, Coenzymes and vitamins, Enzyme inhibition: competitive, non-competitive inhibition, determination of Ki, allosteric regulation, covalent modification
Immunology and Cancer Biology	MSZO1204	2019	Employability - Antigen – Antibody interaction (Antibody affinity, Radial and Double immune diffusion, Radioimmunoassay, ELISA- Indirect, Direct, Sandwich, ELISPOT, Competitive, Western blotting), Major histocompatibility complex and MHC restriction, Antigen Processing and Presentation, Generation of humoral and cell mediated immune response, BCR and TCR, generation of diversity, Complement system(Classical, Alternate and lectin pathway), Cytokines- Types and their role in immune regulation, Activation and regulation of B and T lymphocytes, Cell-mediated cytotoxicity and Antibody dependent cell mediated cytotoxicity, Hypersensitivity,



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			Autoimmunity and Transplantation., Role of carcinogens and DNA repair in cancer
Ecotoxicology	MSZO2303	2019	Employability - Productivity, Production and analysis. Recycling and reuse technologies for solid and liquid wastes and their role in environmental conservation. Remote sensing – basic concepts and applications of remote sensing techniques in environmental conservation. Environmental indicators and their role in environmental balance., , Vehicular exhaust pollution causes and remedies, Noise pollution, Toxicity testing principles, hazards, risks and their control methods., Food toxicants and their control methods, Public Health Hazards due to environmental disasters, Pesticides, types, nature and their effects on environment, Important heavy metals and their role in environment, Agrochemical use and misuse, alternatives, Occupational Health Hazards and their Control
Environment and Pollution Management	MSZO2403	2019	Employability - biomass production, biotechnology for generation of biogas , Classification, formation, survey and land capability, soil structure and profile, soil reaction and buffering, Management and remediation of soil pollution, management and decontamination of saline, acidic, alkaline and mine waste soil, management of water logged, sandy and peat soil, degradation of organic pollutants in soil environment, ex situ and in situ bioremediation of contaminated soil: biopile, bioventing, biosparging and bio slurping., Pollutants in air: Major air pollutants; oxides of nitrogen, sulphur and carbon-sources, effects and environmental reactions, particulate air pollutants; methods of air pollution control, particle settling chamber, inertial separator, cyclone filters, electrostatic precipitators,



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			gaseous pollutant control-scrubber, absorbers, thermal decomposers, biological filters
Environmental Science	FCBS0101	2016	Employability - Environmental Science
Thermal Physics	BSPH1201	2016	Employability - Laws of Thermodynamics, Carnot engine & efficiency. Carnot's Theorem. Refrigerator & coefficient of performance, 2nd Law of Thermodynamics: Kelvin-Planck and Clausius Statements and their Equivalence. Applications of Second Law of thermodynamics, Entropy, Thermodynamic Potentials, Kinetic Theory of Gases, Molecular Collisions, Real Gases. Skill- Thermal Physics Lab
Waves and optics	BSPH1202	2016	Employability - Interferometer, Diffraction grating. Resolving power of grating, Fresnel's half-Period Zones Skill - Waves and Optics Lab.
Electricity and Magnetism	BSPH2302	2017	Employability - Magnetic Properties of Matter, Magnetization, Electromagnetic Induction, Electrical Circuits, Network Theorem. Skill - Electricity and Magnetism Lab
Analog systems and Applications	BSPH2303	2017	Employability - Semiconductor Diodes, Two-terminal Devices and their Application, Amplifiers, Applications of Op-Amp. Skill - Analog Systems and ApplicationsLab
Elements of Modern Physics	BSPH2402	2017	Employability - Radioactivity, Fission and Fusion, Lasers. Skill - Elements of Modern Physics Lab
Digital systems and Applications	BSPH2403	2017	Employability - CRO uses, Integrated Circuits, Digital Circuits, Data processing circuit, Microprocessor Architecture. Skill - Digital system Lab
Quantum Mechanics & Applications	BSPH3501	2017	Employability - Schrodinger equation and its solution, its application, hydrogen-like atoms, Atoms in Electric & Magnetic Fields, Many electron atoms.



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			Skill - Learn to solve quantum problems through computational methods
Solid State Physics	BSPH3502	2017	Employability - Magnetic properties of materials, dielectric properties of materials, superconductivity. Skill - Solid state physics lab
Experimental Techniques	BSPH3503	2017	Employability - Experiments are done on, Thermostat, ultrasonic transducer, Calibrate Semiconductor type temperature sensor (AD590, LM35, or LM75), Create vacuum in a small chamber using a mechanical (rotary) pump and measure the chamber pressure using a pressure gauge, design and study the Sample and Hold Circuit, Design and analyze the Clippers and Clampers circuits using junction diode etc enables them to become Lab Technician. Enterprenuership - Transducers & industrial instrumentation, Digital Multimeter, Sensors Skill - Experimental Techniques Lab
Embedded systems- Introduction to Microcontroller	BSPH3504	2017	Employability - Embedded system, microprocessors, 8051 microcontroller, 8051 I/O port programming, Interfacing 8051 microcontroller to peripherals, Embedded system design and development. Enterprenuership - 8051 I/O port programming, Interfacing 8051 microcontroller to peripherals, Embedded system design and development. Skill - Embedded System: Introduction to Microcontrollers Lab.
Physics of Devices and Communication	BSPH3505	2017	Employability - Physics of Devices, Power supply and Filters, Phase detector , Processing of Devices, Digital Data Communication, communication systems. Skill - Physics of Devices and Communications Lab



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Advanced Mathematical Physics-II	BSPH3507	2017	Employability - Enterprenuership - Skill -
Classical Dynamics	BSPH3508	2017	Employability - Small amplitude oscillations, special theory of relativity, tensors, fluid dynamics.
Applied Dynamics	BSPH3603	2017	Employability - Dynamical systems, Chaos and Fractals, Fluid Dynamic Skill - Applied Dynamics lab
Communication System	BSPH3604	2017	Employability - Communication and Navigation systems, Satellite Communication, Mobile Telephony System, mobile communication network, Enterprenuership - Mobile Telephony System, mobile communication network, Skill - Communication Electronics Lab
Nuclear and Particle Physics	BSPH3605	2017	Employability - Nuclear Models, Radioactivity decay, Nuclear Reactions, Interaction of Nuclear Radiation with matter, Detector for Nuclear Radiations, Particle Accelerators.
Astronomy and Astrophysics	BSPH3606	2017	Employability - Astronomy and Astrophysics Skill - Astronomical Scales, Astronomical techniques, Stellar spectra and classification Structure
Dissertation	BSPH3607	2017	Employability - Project work Skill - Project work
Inorganic chemistry-I	BSCH1101	2019	Skill- Wave mechanics and Inorganic Chemistry-I Lab , enterperneurship-Atomic Structure-2,Periodicity of Elements-1&2, Employability-Chemical Bonding-1&2, Oxidation-Reduction
Physical Chemistry-I	BSCH1102	2019	Employability-Gaseous state 1 &2 ,enterperneurship-Liquid state:,gaseous state-3,Solid state,Ionic Equilibria-1&2, Skill-bravis lattices,Qualitative treatment of acid - base, Physical Chemistry Practice
Organic Chemistry-I	BSCH1201	2019	Employability-Basics of Organic Chemistry,Stereochemistry,Chemistry of Aliphatic Hydrocarbons,Carbon-Carbon pi



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			bonds, Electrophilic aromatic substitution , skill- Cycloalkanes and Conformational Analysis, Organic Chemistry Practice
Physical Chemistry-II	BSCH1202	2019	Employability-Chemical Thermodynamics, Second Law of Thermodynamics, Third Law of thermodynamics, Systems of Variable Composition, Dilute solutions . Enterpreneurship-Chemical Equilibrium, Thermochemistry. Skill-Physical Chemistry-II Practice
Inorganic chemistry-II	BSCH2301	2019	Skill-General Principles of Metallurgy-1,- Inorganic Chemistry Practice. Employability-Acids and Bases, Chemistry of s and p Block Elements-1, Boric acid and borates, boron nitrides, borohydrides (diborane) carboranes and graphitic compounds, silanes, Chemistry of s and p Block Elements-3, preparation and properties of Clathrates, Inorganic Polymers .
Organic Chemistry-II	BSCH2302	2019	Employability-Chemistry of Halogenated Hydrocarbons-1&2, Organometallic compounds , Alcohols, Phenols, Ethers and Epoxides, Carbonyl Compounds 1&2, Carboxylic Acids and their Derivatives. Skill-Organic Chemistry Practice
Physical Chemistry-III	BSCH2303	2019	Employability-Phase Equilibria-1 &2, Chemical Kinetics-2, Catalysis, Surface chemistry. Skill-Nernst distribution law, Physical Chemistry Practice.
Inorganic Chemistry-III	BSCH2401	2019	Employability-Coordination Chemistry-1&2, Transition Elements, Lanthanoids and Actinoids. Skill-separation of lanthanides, Bioinorganic Chemistry-1,2 and Inorganic Chemistry Practice
Organic Chemistry-III	BSCH2402	2019	Employability-Nitrogen Containing Functional Groups, Heterocyclic Compounds-1&2 , Alkaloids-1. Skill-Alkaloids-2 &3, Organic Chemistry Practice



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Physical Chemistry-IV	BSCH2403	2019	Employability-Electrical & Magnetic Properties of Atoms and Molecules and Application . Skill- Electrochemistry :II, Physical Chemistry Practice. Enterperneurship-Electrochemistry :I
Organic Chemistry-IV	BSCH3501	2019	Employability-Nucleic Acids,Amino Acids,Peptides,Enzymes,for transfer of electrons in biological redox systems .Skill- Lipids,Pharmaceutical Compounds, Organic Chemistry Lab
Physical Chemistry-V	BSCH3502	2019	Employability-Molecular Spectroscopy,Raman spectroscopy,Nuclear Magnetic Resonance (NMR) spectroscopy,Photochemistry. Skill- Physical Chemistry Practice
Inorganic Chemistry-IV	BSCH3601	2019	Employability-General methods of preparation of mono and binuclear carbonyls of 3d series,Zeise's salt,Study of the some industrial processes and their mechanism.Skill-Inorganic Chemistry Practice
Organic Chemistry-V	BSCH3602	2019	Employability-Organic Spectroscopy,Carbohydrates,Dyes,Metalocene-based Ziegler-Natta polymerisation of alkenes. Skill-Polymers Introduction and classification ,IR Spectroscopy,NMR Spectroscopy,Organic Chemistry Practice
Industrial Chemicals and Environment	BSCH3503	2019	Employability-Industrial Gases and Inorganic Chemicals,Inorganic Chemicals,Energy & Environment,Biocatalysis. Skill-Environment and its segments, Water Pollution,Industrial effluents from the following industries and their treatment, Industrial Chemicals & Environment practice.
Inorganic Materials of Industrial Importance	BSCH3504	2019	Employability-Glass,Ceramics,Fertilizers,Surface Coatings,Alloys,Catalysis.Skill-Batteries,Inorganic Materials of Industrial Importance practice
Instrumental Methods of Chemical Analysis	BSCH3604	2019	Skill-Introduction to spectroscopic methods of analysis,Molecular spectroscopy,Separation techniques,Instrumental Methods of Chemical Analysis practice. Employability-Molecular



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			spectroscopy instrumentation and application, Atomic spectroscopy, Spectrophotometers principle and application,
Calculus	BSMA1101	2016	Skill- Lab work to be performed on a Computer Employability- Asymptotes, Curvature, Tracing of Curves
Linear Algebra	BSMA1102	2016	Skill –To gain the knowledge on MATLAB and uses in algebra. Employability- Solve systems of linear equations using various methods
Ordinary Differential Equations	BSMA1202	2016	Skill –To understand solving Free Undamped Motion of a Spring System using Python and other skills Employability- Be competent in solving linear/non-linear 1st & higher order ODEs using analytical methods to obtain their exact solutions.
Numerical Analysis	BSMA2401	2017	Skill – Numerical Solution of different linear and non-linear equations using software. Employability - Perform error analysis to select an appropriate numerical model and to estimate errors in numerical solution of a given problem.
Complex Analysis	BSMA3501	2017	Skill –Learn the Plotting of complex functions using Matlab Employability - Illustrate the applications of the calculus of residues in the evaluation of real integrals.
Discrete Mathematical Structure	BSMA3602	2017	Skill –To work with different types of Sets, Lattices and Boolean Algebra using Python Employability - To learn a particular set of mathematical facts and to apply their applications in many subjects of Computer Science and Engineering such as Cryptography, Theory of Computation & Data Networking.
Analysis-I	BSMA1201	2017	Skill- In much of analysis, the emphasis is not on finding explicit solutions to specific problems



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			Employability- Produce rigorous proofs of results that arise in the context of real analysis
Analysis-II	BSMA2301	2017	Skill - To describe various theorems about Riemann sums and Riemann integrals and emphasize the proofs' development. Employability - Apply change of variables in double integrals and triple integrals
Modern Algebra	BSMA2302	2017	Skill - To introduce students to the language and precision of modern algebra Employability - Work effectively with others to discuss homework problems put on the board.
Partial Differential Equations and System of Ordinary Differential Equations	BSMA2303	2017	Skill - Introduce students to how to solve linear Partial Differential Equations with different methods. Employability - Identify and solve Laplace, Diffusion and Wave equations.
Advanced Analysis	BSMA2402	2017	Skill - Construct rigorous mathematical proofs of basic results in real analysis; Employability - Define the limit point, interior point, neighbourhood etc.
Programming in C	BSMA2403	2017	Skill - To understand advanced concepts of C such as Arrays, Strings, functions pointers and structures in detail. Employability - Write programs that perform operations using derived data types.
Probability and Statistics	BSMA3502	2017	Skill- To apply probability and statistics in engineering and science like disease modeling, climate Prediction and computer networks etc using MATLAB Employability - Compute probabilities based on practical situations using the Binomial, Poisson and Normal distributions.
Fundamentals of Genetics	ASPG1101	2018	Application of genetic principles in plant breeding:employability& skill dev.
Fundamentals of Soil Science	ASAC1101	2018	Understanding the theory of soil science and its characteristics :employability.



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Fundamentals of Horticulture	ASHO1101	2018	Understanding the fundamentals of various aspects of horticulture crops :employability
Fundamentals of Plant Pathology	ASPP1101	2018	Understanding the fundamentals of plant disease causing organisms and their management: employability
Rural Sociology & Educational Psychology	ASEE1102	2018	Learning the basic concepts of rural sociology and psychology for its application in ag.extension : employability.
Soil and Water Conservation Engineering	ASAE1101	2018	Understanding about the principles of soil water conservation:employability
Irrigation water management	ASAG1206	2018	Understands the practices of water management and its application in irrigation management : skill dev.& employability
Fundamentals of Entomology –I (Insect Morphology and Taxonomy)	ASEN1201	2018	Understanding the basic principles of morphology of different plant disease causing insects: Employability
Fundamentals of Agricultural Extension Education	ASEE1201	2018	Learning about the latest extension methods i.e. audio-visual aids, field demonstration: Employability
Fundamentals of Plant Breeding	ASPG2103	2018	Understand the basic methods of plant breeding i.e. emasculation and crossing : Skill & Employability
Fundamentals of Entomology- II (Insect ecology and concepts of IPM)	ASEN2102	2018	Understanding the basic principles of morphology of different plant disease causing insects: Employability
Weed management	ASAG2105	2018	Identification of Weeds and its management in different crops : employability
Agricultural Informatics	ASAI2101	2018	To disseminate,capture,access information to achieve sustainable use of agricultural resources : employment.
Communication skills and personality development	ASEE2104	2018	Develop knowledge of english communication through presentation, extempore and GD: Skill & Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Crop Production Technology –II (Oil seeds, fiber, sugar, tobacco, and fodder Crops) Rabi crops	ASAG2204	2018	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability
Production Technology for Ornamental Crops, MAP and Landscaping	ASHO2204	2018	To gain expertise in production of ornamental crops and landscaping : ,employability & skill development
Renewable Energy and Green Technology	ASAE2203	2018	Understanding the principles of renewable energy for agriculture practice: employability
Manures, Fertilizers and Soil Fertility Management	ASAC2202	2018	Understanding the manures and fertilizer and its application:skill and employability.
Rain-fed Agriculture & Watershed Management	ASAG2211	2018	Understanding the methods of rainwater harvesting and groundwater rechargement :employability
Principles of seed technology	ASPG2202	2018	Gaining knowledge in seed storage, certification and marketing ways: employment
Diseases of Field and Horticultural Crops and their Management –I	ASPP2202	2018	Identification and management of diseases of field crops :employability
Problematic Soils and their Management	ASAC3103	2018	Understanding fertility and pH levels of soil to manage problematic soils :skill dev and employability
Pests of field Crops and Stored Grain and their Management	ASEN3103	2018	Identification and management of store pest and management of field crops :employability
Diseases of Field and Horticultural Crops and their Management-II	ASPP3103	2018	Identification and management of diseases of horticultural crops :employability
Crop Improvement-I (Cereals,millet,s pulse s and oil seeds etc)(Kharif crops)	ASPG3104	2018	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Principles of food science and nutrition	ASFS3101	2018	Identification of microbes in food processing and packaging: employability
Geoinformatics and Nano-technology for Precision Farming	ASAG3110	2018	To gain knowledge in nano materials and geoinformatics applications i.e. moonsoon tracking system, drainage networks for precision farming: Employability, skill and entrepreneurship
Practical Crop Production – I (Kharif crops)	ASAG3108	2018	To gain expertise in production of commercial kharif crops: employability
Farming System & Organic farming for Sustainable Agriculture	ASAG3207	2018	To gain expertise in organic farming practice: employability, skill development and Entrepreneurship
Practical crop production II (Rabi crops)	ASAG3209	2018	To gain expertise in commercial rabi crop production: employability
Post-harvest Management and Value Addition of Fruits and Vegetables	ASHO3205	2018	Understanding different practices with relation to Value addition of fruits and vegetables and their packaging and storage :Employability & skill development
Pests of horticultural crops and their management and Beneficial Insects	ASEN3204	2018	Identification and management of crop & storedgrain pests :employability & skill dev
Crop Improvement-II (fibre, sugar, starches, narcotics, Vegetables, fruits, and flowers)	ASPG3205	2018	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability
Principles of Integrated Pest and Disease Management (50% Entomology and 50% Pathology)	ASPP3204	2018	Identification of insects pests of different crops and its integrated pest management- Entrepreneurship& skill dev,employability
Protected cultivation and post harvest technologies	ASAE3204	2018	Understanding different practices with relation to Value addition of fruits and vegetables and their packaging and storage :Employability & skill development



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Intellectual Property Rights	ASIP3201	2018	Understanding the process to file patent and register for copyrights:skill and employability.
Principles and practices of water management	MAAG 1103*	2017	Skill development: The students can learn about judicious water management using different efficient technologies which would further lay emphasis on job opportunities as well as they can make themselves self sufficient by serving as entrepreneurs to serve the farming community
Cropping systems and sustainable agriculture	MAAG 1206*	2017	Skill development: The students acquire knowledge about different cropping systems under various climatic situations and they can make themselves self employed as successful entrepreneurs
Intellectual property and its management in agriculture	MAIP 1201	2017	Employability and Skill development: students get an overall idea of IPR and their applications towards the protection of property rights
Agricultural research, research ethics and rural development programmes	MAAR2101	2017	Employability and Skill development: Acquire knowledge for research ethics and government policies.
Development perspectives of extension education	MAEX1101*	2017	Employability: Some concepts in this course and the rural development programs can help in getting employment
Gender sensitization for development	MAEX1105*	2017	Research and employability: provide them an opportunity to work in sectors relating to women empowerment
Statistical methods for social sciences	MAST 1203	2017	Skill: Students can learn the usage of different statistical tools that in turn would provide them a scope for employment
Participatory methods for technology development and transfer	MAEX1104	2017	Skill and employability: students can learn the basic concepts of participatory techniques and thereby help in technology transfer from lab to land
Fish Food Organisms	FSAQ2109	2019	Learn and practice the nutritional requirements of fish/shellfish larvae and knowledge on mass



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			culture and enrichment of live food organisms. Employability and Skill development
Freezing Technology	FSPT2103	2019	Understanding the different types of low temperature preservation, handling, storage of different type of fish and fishery products to minimize the spoilage along with post harvest loss. Employability and Skill development
Genetics and Breeding	FSAQ2111	2019	Gain knowledge on genetic basis of inheritance and breeding plans for commercially important fishes. Employability, Entrepreneurship and Skill development
Fish Immunology	FSHM2106	2019	Study the types of immunity, antigen-antibody interactions and learn the Serological methods in disease diagnosis. Employability and Skill development
Fisheries Economics	FSEE2102	2019	Learning the interface between economics and effective management decisions for fisheries business firm. Employability and Skill development
Coastal Aquaculture and Mariculture	FSAQ2204	2019	To gain knowledge in establishing and managing different fish/shellfish farming systems in coastal waters. Employability and skill development
Fish Nutrition and Feed Technology	FSAQ2208	2019	Practical knowledge of feed formulation and different feed processing techniques and prepare feed based on the nutritional requirements of fish/shell fish. Employability and skill development
Fish and Shellfish Pathology	FSHM2201	2019	Study fish and shellfish pathogens, their control measures and treatments. Employability and Skill development.
Shellfish Hatchery Management	FSAQ2206	2019	Practical skills of seed production and hatchery management of commercially important crustaceans and molluscs and can setup his/her own hatchery. Employability, Entrepreneurship and Skill development.



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Communication Skills and Personality Development	FSEE2208	2019	Students will improve interpersonal skills, active listening and responding skills, communication into everyday practice, teamwork and group discussions skills. Employability and Skill development.
Crime Scene Management and Forensic Physics	MSFS1103	2017	Skill & Employability : Skill to reconstruct crime scene. Student process the simulated crime scene. Student gains knowledge about examination of various evidences such as soil, glass, paint, foot print and lip prints.
Finger prints and Questioned Documents	MSFS1104	2017	Skill, Employability & Entrepreneurship, : Student learn about latent fingerprints and lift them for comparison & identification purpose. Gains knowledge about various Aspects of AFIS. Student also detects Signature, hand writing & document forgery, examines counterfeit currency, passport and seal impressions. Gains knowledge about instrumental techniques like ESDA, VSC, Stereo Microscope.
Instrumental Techniques Laboratory	MSFS1105	2017	Skill & Employability: Student perform experiments on UV absorption of drugs/dyes, TLC, IR spectroscopy of paints/drugs/dyes/organic compounds
Crime Scene Management and Forensic Physics Laboratory	MSFS1106	2017	Skill & Employability : Student perform density gradient analysis of soil samples, physical matching of broken glass bangles and different objects, reconstruction of mock crime scene
Finger prints and Questioned Documents Laboratory	MSFS1107	2017	Skill & Employability: Student examines and identify sinature and handwriting forgeries, alterations in documents, examination of intersceting strokes, comparison of fingerprints and development of latent fingerprints
Forensic Serology and DNA Profiling	MSFS1203	2017	Skill & Employability : Students learn about different ways to detect the presence of blood, semen, saliva and other body fluids , Performs



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			DNA extraction, gains knowledge about basic methodologies used in forensic DNA analysis
Forensic Toxicology and Pharmacology	MSFS1204	2017	Skill & Employability, : Student learn about techniques used to isolate and Extract poisons\ Drugs from samples and determination of various poisons. Also gains knowledge about interpretation of toxicological findings and preparation of reports.
Forensic Ballistics and Computer Forensics	MSFS1205	2017	Skill & Employability : Student gains knowledge about various aspects of ballistics, characteristics of ammunitions and Computer Forensics.
Forensic Serology and DNA Profiling Laboratory	MSFS1208	2017	Skill & Employability : Students perform experiments to detect the presence of blood, semen, saliva and other body fluids , Performs DNA extraction,
Forensic Toxicology and Pharmacology Laboratory	MSFS1209	2017	Skill & Employability, : Student isolate and Extract poisons\ Drugs from samples and determines the presence of various poisons. Also gains knowledge about interpretation of toxicological finding and preparation of reports.
Forensic Ballistics and Computer Forensics Laboratory	MSFS1210	2017	Skill & Employability : Student also perform instrumental analysis of GSR & examines bullets and cartridge cases to determine the source of origin.
Pharmacology and Pharmaceutical Drug Analysis	MSFS2101	2017	Employability : Students learn about basic principles of pharmacology, pharmacokinetics & qualitative and quantitative analysis of Pharmaceutical drug by various chemical and instrumental techniques.
Concepts of Toxicology	MSFS2102	2017	Skill & Employability, : Students gains basic knowledge about disposition and translocation of toxicants, analytical toxicology, toxic agents such as pesticides, metals etc and their effects & applications of toxicology.
Modern and Applied Analytical Forensic Chemistry	MSFS2103	2017	Skill & Employability : Student learns about basic concepts of forensic nuclear chemistry, gains knowledge about drug chemistry, petroleum



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			chemistry and fire chemistry. learns about analysis of lipids and fats of different oils and analysis of dairy products
Pharmacology and Pharmaceutical Drug Analysis Laboratory	MSFS2104	2017	Skill & Employability : Students do qualitative and quantitative analysis of Pharmaceutical drug by various chemical and instrumental techniques.
Concepts of Toxicology Laboratory	MSFS2105	2017	Skill & Employability, : Students do analysis of various poisons such as metallic poisons, pesticides, plant poisons etc. and gain knowledge about interpretation of toxicological findings and preparation of reports.
Modern and Applied Analytical Forensic Chemistry Laboratory	MSFS2106	2017	Skill & Employability : Student performs analysis of various cases in Forensic Chemistry, Validation of new methods & Accreditation in FSL's, Analysis of NDPS, Explosives, Fire, Petroleum Products, Beverages, Bribe Trap Cases, Adulterated food, Fibres & Examination of Forensic Chemicals.
Molecular Biology and Genetics	MSFS2111	2017	Skill & Employability : Student gains knowledge about immunology, metabolism of DNA, RNA and protein, phylogenetic tools, population genetics and bioinformatics, methodologies of DNA analysis, molecular autopsy
Biotechnology in Pharmaceutical Sciences	MSFS2112	2017	Skill & Employability, : Student studies about recombinant DNA Technology, Quality Assurance and Quality control, Studying Bioinformatics, intellectual property rights.
Environmental Biotechnology	MSFS2113	2017	Skill & Employability, : Student learns about pollutants in samples & estimation of BOD. Student gains knowledge about measurement of pollutants with the help of biosensor and biomarker, Measurement of Biomagnification, Waste water management and Treatment.
Molecular Biology and Genetics Laboratory	MSFS2114	2017	Skill & Employability : Student performs extraction of protein from various biological samples, SDS-PAGE for protein analysis, quantification of DNA, Extraction of DNA from



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			different sources. Analysis of protein structure using RASMOL.
Biotechnology in Pharmaceutical Sciences Laboratory	MSFS2115	2017	Skill & Employability, : Student performs isolation of bacteria by different methods, restricted digestion of DNA, Agarose gel electrophoresis, western blotting
Environmental Biotechnology Laboratory	MSFS2116	2017	Skill & Employability, : Student performs practicals to detect pollutants in samples & estimation of BOD., Physical characterisation of waste
Advances in Physical Techniques	MSFS2121	2017	Employability : Student gains knowledge about thermal analysis and different spectroscopy techniques, microscopy techniques and forensic nanotechnology and forensic engineering
Concepts of Conventional and Modern Ballistics	MSFS2122	2017	Employability : student gains knowledge about operational features of firearms, ammunition, external ballistics, GSR analysis and procedures for test firing & other instrumental techniques used for ballistics evidence analysis.
Audio Recognition and Video Analysis	MSFS2123	2017	Employability : Student gains knowledge about basic concepts of voice recognition, handling of audio evidences, processing of speech signals, Gold wave analysis & video analysis
Advances in Physical Techniques Laboratory	MSFS2124	2017	Skill & Employability : Students perform examination of evidences by EDXRF, measures RI of physical evidences.
Concepts of Conventional and Modern Ballistics Laboratory	MSFS2125	2017	Skill & Employability : Students perform examination of barrel wash, analysis of GSR
Audio Recognition and Video Analysis Laboratory	MSFS2126	2017	Skill & employability : Students record, edit & process audi files using goldwave software, speech acquisition and analysis of speech samples using CSL-4500 software, Video analysis and detection of tampered video files using videofocus
Modern Trends in Fingerprint Sciences	MSFS2131	2017	Employability : Studentgains knowledge about composition of latent print residue, differnet



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			chemical methods used for development of latent fingerprints, enhancement by lasre techniques & AFIS
Questioned Document and Forensic Accounting	MSFS2132	2017	Skill, Employability, Entrepreneurship, : Student gains knowledge about instrumental techniques like ESDA, VSC, Stereo Microscope. Examination of aging of paper, Basics of Forensic Accounting.
Forensic Photography and Biometric Traits	MSFS2133	2017	Skill & Employability : Student will gain knowledge about Basics of crime scene photography and laboratory photography. Student also gains knowledge about techniques of Biometric recognition (hand fingerprint, facial iris and retina.
Modern Trends in Fingerprint Sciences Laboratory	MSFS2134	2017	Skill, Employability & Entrepreneurship : Student performs Development of latent fingerprints. analysis of palatoprints, comparison of males and females fingerprints, cheiloscopy.
Questioned Document and Forensic Accounting Laboratory	MSFS2135	2017	Skill, Employability, Entrepreneurship, :Student performs examination of ink, determining age of document, examination of currency notes, passport, stamp rubberstamp impressions
Forensic Photography and Biometric Traits Laboratory	MSFS2136	2017	Skill & Employability : Students take photographs of simiulated crime scene and enhances the images using photo shop.
Principles of Information Security	MSCS1101	2019	Employability-Focus on the CIA models, tools, and techniques for enforcement of security
Digital Forensics	MSCS1102	2019	Employability -Focus on analysis and assessment of risk assesment process & control
Computer Networks	MSCS1103	2019	Skill Development , Employability-Learning about computer network & network security
Cyber Crime & Investigations	MSCS1104	2019	Skill Development,Employability-Learning about Analytical Skills,Comprehension of Cybersecurity Fundamentals and good practices for digital evidence and digital forensics: Skill Development
Intellectual Property Rights	MSCS1105	2019	Employability-Making the students aware of their rights for the protection of their invention done in their project work



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Number theory & Cryptography	MSCS1201	2019	Skill Development, Employability-Implement and analyse algorithms for integer factorization and primality testing: Skill Development
Advanced Information Security	MSCS1202	2019	Skill Development, Employability-Focus on the CIA models, tools, and techniques for enforcement of security
Cyber Forensics	MSCS1203	2019	Skill Development, Employability-Focus on analysis and assessment of risk assessment process & control : Skill Development, Employability
System and Network Security	MSCS1204	2019	Skill Development, Employability-Gaining practical experience in installation, monitoring, and troubleshooting of current LAN systems
General Microbiology	MSCM1101	2016	Functions of cell organelles in microorganisms; Growth of microorganisms: Skill dev and Employability
Human Anatomy & Physiology	MSCM1102	2016	Gross anatomy of human body and detailed physiology: Employability
Biomolecules	MSCM1103	2016	Metabolism of Carbohydrates, Lipids, Proteins, Nucleic acid: Employability
Analytical Techniques	MSCM1104	2016	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership
Basic Microbiology Lab	MSCM1105	2016	Techniques for staining microorganisms, isolating and culturing microorganisms: Skill and Employability and Enterpreunership
Systemic Bacteriology	MSCM1201	2016	Understanding the Morphological identification, pathogenesis, laboratory diagnosis and epidemiology of clinically significant bacteria: Skill dev and Employability
Molecular Biology & Clinical Biochemistry	MSCM1202	2016	Understanding the central dogma of life, Metabolic disorders and diagnostic enzymology, Biochemical tests for organ function: Employability
Medical Parasitology & Mycology	MSCM1203	2016	Clinical features of important parasites, protozoans, fungi: Skill dev. & Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Parasitology & Mycology Lab	MSCM1207	2017	Pathological investigations of urine, stool and other biological specimen; Culture for Pathogenic Fungi : Skill dev. & Employability & Enterpreunership
Immunology & Virology	MSCM2301	2017	Clinically relevant serological analysis; Clinically significant virus: Skill dev. & Employability
Diagnostic Bacteriology	MSCM2302	2017	Diagnosis of bacteria from infective regions of the body: Skill dev and Employability
Biochemistry	MSCM2303	2017	Concepts of Carbohydrates, proteins, lipids and their metabolism: Skill dev and Employability
Histology	MSCM2304	2017	Concept of about Histotechnology; fixation in histopathology lab: Skill dev and Employability
Immunology Lab	MSCM2308	2017	Performing immunological/ serological tests and their interpretation: Skill dev and Employability
Histopathology Lab	MSCM2309	2017	Performing histopathological analysis and their interpretation: Skill dev and Employability
Biochemistry Lab	MSCM2310	2017	Assay on blood serum for biochemical test: Skill dev and Employability
Mini Project	MSCM2311	2017	Conducting experimental/ research work by engaging in a project: Skill dev and Employability
Project	MSCM2403	2017	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
Internship	MSCM2404	2017	Dealing with patient, analysis and interpretation of diseases: Skill dev. & Employability & Enterpreunership
Anatomy & Physiology	MSMT1102	2016	Concept and Scopes of anatomy & physiology: Employability
Medical Instrumentation and Technique	MSMT1104	2016	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership
Hematology Lab	MSMT1105	2016	Performing various hematological tests: Skill and Employability and Enterpreunership
Medical Microbiology	MSMT1201	2016	Growth of microorganisms; Properties of viruses and fungi: Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Molecular Biology & Clinical Biochemistry	MSMT1202	2016	Understanding the central dogma of life, Metabolic disorders and diagnostic enzymology, Biochemical tests for organ function: Employability
Microbiology Lab	MSMT1207	2017	culturing and identification of pathogenic microorganisms: Skill dev. & Employability & Enterpreunership
Immunology & Parasitology	MSMT2306	2017	Clinically relevant serological analysis; Clinically significant virus: Skill dev. & Employability
Biochemistry	MSMT2303	2017	Concepts of Carbohydrates, proteins, lipids and their metabolism: Skill dev and Employability
Histology	MSMT2304	2017	Concept of about Histotechnology; fixation in histopathology lab: Skill dev and Employability
Immunology Lab	MSMT2308	2017	Performing immunological/ serological tests and their interpretation: Skill dev and Employability
Mini Project	MSMT2311	2017	Conducting experimental/ research work by engaging in a project: Skill dev and Employability
Introductory Biology	BSCM1101	2017	Understanding the functions of cell organelles: Employability
Human Anatomy & Physiology	BSCM1102	2017	Gross anatomy of human body and detailed physiology: Employability
Basic Hematology	BSCM1103	2017	Carry out hematological investigations: Skill dev. & Employability & Enterpreunership
Basic Medical Instrumentation & Techniques	BSCM1104	2017	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership
Anatomy, Physiology & Haematology Lab	BSCM1105	2017	Understanding the physiological aspects of growth and development of Human organs/ tissues: Employability & Enterpreunership
General Microbiology	BSCM1201	2017	Understanding the details of microbial cell organelles: Skill dev and Employability
Clinical Biochemistry	BSCM1202	2017	Understanding the concept of metabolism of carbohydrates, amino acids, lipids: Employability
Immunology	BSCM2301	2017	Understanding the concept of Innate & adaptive immune system; performing serological



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			analysis: Skill dev. & Employability & Enterpreunership
Systemic Bacteriology	BSCM2302	2017	Understanding of morphology, pathogenesis, lab diagnosis on gram positive & negative bacteria: Skill dev. & Employability
Molecular Biology	BSCM2303	2017	Basic techniques applicable in Molecular Biology: Skill dev and Employability
Systemic Virology & Mycology	BSCM2304	2017	Understanding the epidemiology, pathogenesis of viruses and fungi: Skill dev and Employability
Public Health Microbiology	BSCM2407	2017	Understanding of role of microbiologist in public health: Employability
Pharmaceutical Microbiology	BSCM2402	2017	Understanding of types & synthesis of antimicrobial agents: Employability and Enterpreunership
Industrial Microbiology	BSCM2408	2017	Understanding the significance of microbes in fermentation process & industrial effluents: Skill dev and Employability and Enterpreunership
Analytical Biochemistry	BSCM2404	2017	Learning the principle of spectrophotometry, colometry, photometry and Clinical biochemistry tests: Skill dev and Employability and Enterpreunership
Basic Computer & Information Science	BSCM2409	2017	Concept for Input & output device, Processor & memory, Word, excel, power point: Skill dev and Employability
Industrial Microbiology Lab	BSCM2410	2017	Industrial visit to a fermentation factory: Skill and Employability
Public Health Microbiology Lab	BSCM2411	2017	Isolation & identification of microorganisms from samples: Skill dev and Employability
Epidemiology	BSCM3508	2017	Understanding the scopes of epidemiology: Employability
Diagnostic Bacteriology	BSCM3509	2017	Study of Lab diagnosis for Enteric infection, RTI, Oral & stomach infection: Skill & Employability
Diagnostic Virology	BSCM3503	2017	Study of lab diagnosis of viral infection: Skill dev and Employability
Diagnostic Mycology	BSCM3504	2017	Study of lab diagnosis of medically important fungi: Skill dev and Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Diagnostic Parasitology	BSCM3505	2017	Study of lab diagnosis of Intestinal, vaginal, Tissue and blood parasite: Skill dev and Employability
Diagnosis Bacteriology Lab	BSCM3511	2017	Performing the laboratory diagnosis for specimens collected from human tissues: Skill dev & Employability
Mini Project	BSCM3512	2017	Conducting experimental/ research work by engaging in a project: Skill dev and Employability
Project	BSCM3603	2017	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
Internship	BSCM3604	2017	Dealing with patient, analysis and interpretation of diseases: Skill dev. & Employability & Enterpreunership
Introductory Biology	BSMT1101	2016	Understanding the functions of cell organelles: Employability
Basic Anatomy & Physiology	BSMT1102	2016	Gross anatomy of human body and detailed physiology: Employability
Basic Hematology	BSMT1103	2016	Carry out hematological investigations: Skill dev. & Employability & Enterpreunership
Basic Medical Instrumentation & Techniques	BSMT1104	2016	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership
Anatomy and Physiology lab	BSMT1105	2016	Understanding the physiological aspects of growth and development of Human organs/ tissues: Employability & Enterpreunership
Microbiology	BSMT1201	2016	Understanding the details of microbial cell organelles: Skill dev and Employability
Basic Biochemistry	BSMT1202	2016	Understanding the concept of metabolism of carbohydrates, amino acids, lipids: Employability
Immunology	BSMT2301	2017	Understanding the concept of Innate & adaptive immune system; performing serological analysis: Skill dev. & Employability & Enterpreunership
Applied Hematology	BSMT2302	2017	Concept of Haemopoietic disorders, laboratory diagnosis of leukemia, hemolytic anemia,



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			haemophilia, ITP: Skill dev. & Employability & Enterpreunership
Basic Histology	BSMT2304	2017	Concept of Histotechnology, histopathology: Skill dev. & Employability & Enterpreunership
Molecular Biology	BSMT2306	2017	Basic techniques applicable in Molecular Biology: Skill dev and Employability
Immunology Lab	BSMT2307	2017	Performing Serological reactions: Skill and Employability
Histology Lab	BSMT2308	2017	Performing experiment on Histotechnology: Skill dev and Employability
Parasitology	BSMT2401	2017	Understanding the life cycle and lab diagnosis of various clinically significant parasite: Skill dev. and Employability
Advanced Hematology	BSMT2403	2017	Understanding the lab diagnosis for Leukamoid reactions, DIC: Skill dev and Employability and Enterpreunership
Analytical Biochemistry	BSMT2407	2017	Learning the principle of spectrophotometry, colometry, photometry and Clinical biochemistry tests: Skill dev and Employability and Enterpreunership
Immunopathology	BSMT2408	2017	Understanding the Immunological aspects of clinically significant diseases: Skill dev and Employability
Basic Computer & Information Science	BSMT2409	2017	Concept for Input & output device, Processor & memory, Word, excel, power point: Skill dev and Employability
Parasitology Lab	BSMT2411	2017	Identification of parasites collected from human specimens: Skill dev and Employability
Transfusion Medicine	BSMT3501	2017	Blood product analysis and transfusion procedure: Skill dev and Employability
Medical Laboratory Management	BSMT3502	2017	Patient management and quality management: Employability & Enterpreunership
Introduction to Quality and patient safety	BSMT3508	2017	Studying of culture of safety, Quality improvement innovations: Skill dev and Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Mycology and Virology	BSMT3506	2017	Study of culture of medically important fungi and virus: Employability
Mini Project	BSMT3511	2016	Conducting experimental/ research work by engaging in a project: Skill dev and Employability
Project	BSMT3603	2016	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
Internship	BSMT3604	2016	Dealing with patient, analysis and interpretation of diseases: Skill dev. & Employability & Enterpreunership
Introductory Biology	BSRT1101	2016	Understanding the functions of cell organelles: Employability
Basic anatomy	BSRT1102	2016	Gross anatomy of human body with emphasis to the skeletal organization: Employability
Basic physiology	BSRT1103	2016	Understanding the physiology and mechanisms of living things: Employability
Basic Radiation Physics	BSRT1104	2016	Understanding of the concept of Radiation in the study of human anatomy and disease identification: Employability
Basic Medical Instrumentation & Techniques	BSRT1105	2016	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership
Anatomy and Physiology lab	BSRT1106	2016	Understanding the physiological aspects of growth and development of Human organs/ tissues: Employability & Enterpreunership
Fundamental of Medical Imaging and Radiotherapy	BSRT1201	2017	Understanding the basic concepts of xrays and their emission; ultrasound and transducers, CT, MRI: Employability
Basic Biochemistry	BSRT1202	2017	Understanding the concept of metabolism of carbohydrates, amino acids, lipids: Employability
Equipments Of Radiotherapy	BSRT1203	2017	Conceptualization of linear accelarators, simulators, magnetrons and klestron: Employability & Enterpreunership
Applied Radiation Physics and Radiation Protection	BSRT2301	2017	Ability to understand the concept of Radioation in diagnosis and protection towards radiation: Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Advance Radiographic Technique	BSRT2302	2017	Familiariation with the equipments of ultrasound, basic principle of ct scanning and MRI: Employability
Special Radiographic Technique and Procedures	BSRT2303	2017	Understanding of special procedures and importance of contrast media: Skill dev. and Employability
Radiotherapy and Brachy Therapy Techniques In Malignant And Non Malignant Diseases	BSRT2401	2017	Concept on treatment of cancer, dose limits for individuals: Skill dev and Employability
Interventional Radiology & Drugs Used in Radiology	BSRT2403	2017	Concept on use of anaesthesia in diagnostic radiology: Skill dev and Employability
Hospital posting Medical Imaging Lab - III	BSRT2406	2017	Exposure to different hospitals, training of x-ray, CT and MRI: Skill dev. & Employability & Enterpreunership
Basics of X-Ray and Digital X-Ray Imaging	BSRT3501	2017	Properties of x-ray, x-ray machines and application of portable xray: Skill dev and Employability
Computerized Tomography (CT scanning) Method and Procedure	BSRT3502	2017	Diagnosis of muscle and bone disorders, detecting conditions such as cancer, heart disease, lung nodules: Skill dev and Employability
Basics of Magnetic Resonance Imaging	BSRT3503	2017	Understanding of MRI scans of different organs: Skill dev and Employability
Orientation In Clinical Sciences And Course Contents	BSRT3505	2017	Understanding about different diseases and medicines: Employability
Medical Imaging Lab - IV	BSRT3506	2017	Access to CT, MRI and their indications: Skill dev. & Employability & Enterpreunership
GENERAL PHYSIOLOGY	BSOP1103	2015	Understanding the physiological aspects of growth and development of Human organs/ tissues: Employability
BASIC BIOCHEMISTRY	BSOP1104	2015	Gaining adequecy in the concept of metabolism of various macromolecules in humab body: Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
BIOCHEMISTRY LAB	BSOL1102	2015	Gaining adequacy in the concept of metabolism of various macromolecules in human body and the diagnosis of diseases associated with their malfunction: Skill dev. & Employability
GENERAL ANATOMY & PHYSIOLOGY LAB	BSOL1103	2015	Learning about basic structure and connections between the various parts of the body and their integrative function: Skill dev & Employability
PHYSICAL OPTICS	BSOP1204	2015	Predicting the distribution of light under various conditions: Employability
OCULAR ANATOMY	BSOP1202	2015	Identifying the microscopic structures of various tissues in the eye and correlating the structure with the functions: Employability
OCULAR PHYSIOLOGY	BSOP1203	2015	Elucidating the physiological aspects of normal growth and development of the eye: Employability
OPTICS LABORATORY-II	BSOL1201	2015	Predicting the distribution of light under various conditions: Skill and Employability
ANATOMY& PHYSIOLOGY LAB (CLINIC-I)	BSOL1202	2015	Learning about basic structures in eye and their integrative function: Skill dev & Employability
BUSINESS COMMUNICATION	FCHU0203	2015	Effectiveness in participation in group discussion and job interviews: Skill dev. And Employability
OCCULAR MICROBIOLOGY AND PATHOLOGY	BSOP2301	2015	Understanding of how knowledge of pathological processes can be utilized in the investigation, management and prevention of disease: Employability
CLINICAL EXAMINATION OF VISUAL SYSTEM	BSOL2301	2015	Performing various clinical tests, their interpretation and finding: Skill dev. and Entrepreneurship and Employability
CLINICAL OPTOMETRY-I	BSOL2302	2015	Measurement of lens power, lens centration using conventional techniques, transposition of various types of lenses: Skill dev. and Entrepreneurship and Employability
OCULAR DISEASES -I	BSOP2401	2015	Developing diagnostic approach towards management of the ocular diseases: Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
OPTOMETRIC OPTICS II	BSOP2403	2015	Developing the art and science of dispensing spectacle lens and frames based on the glass prescription: Skill dev. and Entrepreneurship and Employability
BASIC AND OCULAR PHARMACOLOGY	BSOP2404	2015	Developing conceptual knowledge on the mechanism, indications, contraindications, drug dosage and adverse effects of Ocular Drugs: Skill dev. And Employability
OCULAR DISEASES II	BSOP2405	2015	Knowledge on course sequelae of ocular diseases, their diagnosis and management of the ocular diseases: Employability
CLINICAL OPTOMETRY II	BSOL2401	2015	To gain practical knowledge regarding Ocular Diseases, Visual Optics, Optometric Optics: Skill dev. and Entrepreneurship and Employability
BINOCULAR VISION & SQUINT	BSOP3501	2015	Binocular muscle coordination; Integration of motor and sensory system into binocular vision; Differentiate different types of strabismic anomalies; non strabismic anomalies related to accommodation & convergence: Skill & Employability
CONTACT LENSES	BSOP3502	2015	Understanding of the concepts of contact lenses: Employability
LOW VISION AID	BSOP3503	2015	Training for Low Vision subjects with Low vision devices: Skill and Employability
CONTACT LENS LABORATORY	BSOL3502	2015	Applying the concepts of contact lenses: Skill dev. & Employability
OCULAR DISEASES LABORATORY II	BSOL3503	2015	Performing the basic workup for a patient in a hospital and clinic set up: Skill dev. and Entrepreneurship and Employability
STATISTICS & OCCUPATIONAL OPTOMETRY	BSOP3601	2015	Interpretation and ability to prescribe suitable corrective lenses and eye protective wear: Skill dev. and Entrepreneurship and Employability
PEDIATRIC & GERIATRIC OPTOMETRY	BSOP3602	2015	Ability to identify, investigate the age-related changes in the eyes: Skill dev. & Employability
SYSTEMIC DISEASES	BSOP3603	2015	Understanding of Ocular findings of the systemic conditions: Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
OPTOMETRIC INSTRUMENTS LABORATORY-II	BSOL3602	2015	Gaining practical skill in handling the advanced instruments in an Optometry Lab: Skill dev. and Entrepreneurship and Employability
PROJECT	BSOP4701	2015	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
Human Anatomy and Physiology I – Theory	BPHT1101	2017	Skill-Employability- Hand on practice on various clinical aspects of human physiology and also able to perform different types of experiments
Pharmaceutical Analysis I – Theory	BPHT1102	2017	Skill-Employability-Use the techniques, skills, and modern pharmaceutical instruments and tools necessary for pharmacy profession
Pharmaceutics I – Theory	BPHT1103	2017	Skill- Employability- Entrepreneurship - Understand the impact of pharmaceutical solutions in a global, economic, environmental, and societal context
Pharmaceutical Inorganic Chemistry – Theory	BPHT1104	2017	Skill- Employability- Students can prepare various Pharmaceutical dosage form
Remedial Biology – Theory*	BPHT1106	2017	Employability- Apply knowledge of basic science and pharmacy
Remedial Mathematics – Theory*	BPHT1107	2017	Employability- Apply knowledge of basic science and pharmacy
Pharmaceutical Analysis I – Practical	BPHL1102	2017	Skill- Employability- Students can assay ,preparaed and standarized various Heavy metals and Chemicals
Pharmaceutics I – Practical	BPHL1103	2017	Skill- Employability- Students can prepare various Pharmaceutical dosage form
Human Anatomy and Physiology II – Theory	BPHT1201	2017	Skill-Employability- Hand on practice on various clinical aspects of human physiology and also able to perform different types of experiments
Pharmaceutical Organic Chemistry I – Theory	BPHT1202	2017	Skill-Employability- synthesis, characterization of synthetic formulation and solve complex pharmaceutical problems in research and development sector.



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Biochemistry – Theory	BPHT1203	2017	Employability- Apply knowledge and concept of basic science and pharmacy and also able to understand all concept regarding biochemical organization.
Pathophysiology – Theory	BPHT1204	2017	Skill-Employability-student get to know about various communicable diseases and pathophysiology along with all the techniques for screening test .
Computer Applications in Pharmacy – Theory *	BPHT1205	2017	Skill-Employability-Building competency in programme coding, various softwares, simulation techniques, statistical application etc.
Environmental sciences – Theory *	BPHT1206	2017	Employability- student get to know about basic knowledge about the environment and its allied problems
Pharmaceutical Organic Chemistry II – Theory	BPHT2101	2017	Skill-Employability- synthesis, characterization of synthetic formulation and solve complex pharmaceutical problems in research and development sector.
Physical Pharmaceutics I – Theory	BPHT2102	2017	Skill- Employability- formulate and solve complex pharmaceutical problems in formulation development
Pharmaceutical Microbiology – Theory	BPHT2103	2017	Skill- Employability- Carried out sterility testing, microbiological standardization of Pharmaceuticals and perform cell culture technology and its applications in pharmaceutical industries
Pharmaceutical Engineering – Theory	BPHT2104	2017	Skill -Employability- Enterprenurship- students can able to understand and perform unit operations, material handling techniques, screening test and plant lay out design for optimum use of resources used in Pharmaceutical industries
Pharmaceutical Organic Chemistry III– Theory	BPHT2201	2017	Skill-Employability- synthesis, characterization of synthetic formulation and solve complex pharmaceutical problems in research and development sector.



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Medicinal Chemistry I – Theory	BPHT2202	2017	Employability students get to know about the chemistry, pharmacological activity, metabolic pathways, adverse effect, therapeutic value, classification, synthesis, mechanism of action along with structures, structure activity relationship of various drug molecules.
Physical Pharmaceutics II – Theory	BPHT2203	2017	Skill- Employability- formulate and solve complex pharmaceutical problems in formulation development
Pharmacology I – Theory	BPHT2204	2017	skill-Employability- student get to know about correlation of pharmacology with other bio medical sciences, mechanism of action, drug interaction, design and conduct pharmacological screening experiments.
Medicinal Chemistry II – Theory	BPHT3101	2017	Employability students get to know about the chemistry, pharmacological activity, metabolic pathways, adverse effect, therapeutic value, classification, synthesis, mechanism of action along with structures, structure activity relationship of various drug molecules.
Industrial Pharmacy– I Theory	BPHT3102	2017	Skill-Employability-Entrepreneurship- students get to design and develop process to meet desired needs within realistic constraints to formulate and solve complex pharmaceutical problems.
Pharmacology II – Theory	BPHT3103	2017	skill-Employability- student get to know about correlation of pharmacology with other bio medical sciences, mechanism of action, drug interaction, design and conduct pharmacological screening experiments.
Pharmaceutical Jurisprudence – Theory	BPHT3105	2017	Employability- students can able to apply knowledge in the area of pharmaceutical legislation, rules, laws, ethics, acts and amendments related to drugs, engage in life-long learning.
Medicinal Chemistry III – Theory	BPHT3201	2017	Employability students get to know about the chemistry, pharmacological activity, metabolic pathways, adverse effect, therapeutic value,



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			classification, synthesis, mechanism of action along with structures, structure activity relationship of various drug molecules.
Pharmacology III – Theory	BPHT3202	2017	skill-Employability- student get to know about correlation of pharmacology with other bio medical sciences, mechanism of action, drug interaction, design and conduct pharmacological screening experiments.
Herbal Drug Technology – Theory	BPHT3203	2017	Skill-Employability- students get to know basic principles of traditional medicinal systems with method of preparation and standardization of ayurvedic formulations
Biopharmaceutics and Pharmacokinetics – Theory	BPHT3204	2017	Skill- Employability- student get to know about pharmacokinetic and pharmacodynamic parameters of different dosage form and use the techniques, skills, and modern pharmaceutical instruments and tools necessary for pharmacy profession
Pharmaceutical Biotechnology – Theory	BPHT3205	2017	Employability- Students van design and develop process to meet desired needs within realistic constraints of pharmacy sector.
Quality Assurance – Theory	BPHT3206	2017	Skill-Employability- students get to know about the validation, confirmation of test product substance and able to analyze, screen and ensure quality of drugs/pharmaceuticals.
Apparel Production & Marketing	CUTM3029	2017	Employability/Skill - Practice and Project
Line Stitching Supervising	CUTM3030	2017	Employability/Skill - Practice and Project
Apparel Production	CUTM3031	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Light Motor Vehicle Driving	CUTM3032	2017	Employability/Skill - Practice and Project
Fork Lift Operation	CUTM3033	2017	Employability/Skill - Practice and Project
Heavy Vehicle Technology	CUTM3034	2017	Employability/ Entrepreneurship/Skill - Practice and Project



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Two Wheeler Service Technology	CUTM3035	2017	Employability/Skill - Practice and Project
Four Wheeler Service Technology	CUTM3036	2017	Employability/Skill - Practice and Project
E-Vehicle Assembly and Service Technology	CUTM3037	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Robotics	CUTM3038	2017	Employability/Skill - Practice and Project
Poultry Farming	CUTM3039	2017	Employability/ Entrepreneurship/Skill
CNC Programming (CAM)	CUTM3040	2017	Employability/Skill - Practice and Project
Design Supervising Wooden and Modular Furniture	CUTM3041	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Introduction to Composite Manufacturing	CUTM3042	2018	Employability/Skill - Practice and Project
3D Modelling and Printing	CUTM3043	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Precast Concrete Manufacturing	CUTM3045	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Fabrication	CUTM3046	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Hi-Tech Surveying	CUTM3047	2018	Employability/Skill - Practice and Project
Internet of Things	CUTM3048	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Mechatronics System Design	CUTM3049	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Introduction to Nanotechnology	CUTM3051	2018	Employability/Skill - Practice and Project
Drone Piloting	CUTM3052	2018	Employability/Skill - Practice and Project



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Camera Operation	CUTM3053	2018	Employability/Skill - Practice and Project
Editor	CUTM3054	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Desktop Publishing	CUTM3055	2018	Employability/Skill - Practice and Project
Introduction to Blender and Unity tools	CUTM3056	2018	Employability/Skill - Practice and Project
Refraction Technology	CUTM3057	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Emergency Medical Technology	CUTM3058	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Medical Lab Technology	CUTM3059	2019	Employability/Skill - Practice and Project
Operating Theatre Technology	CUTM3060	2019	Employability/Skill - Practice and Project
Radiology Technology	CUTM3061	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Phlebotomy Technology	CUTM3062	2019	Employability/Skill - Practice and Project
First Aid Service	CUTM3063	2019	Employability/Skill - Practice and Project
General Duty Assistance Service	CUTM3064	2019	Employability/Skill - Practice and Project
X- ray Technology	CUTM3065	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Retail Sales	CUTM3067	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Basketball	CUTM3068	2019	Employability/Skill - Practice and Project
Gym Fitness	CUTM3069	2019	Employability/Skill - Practice and Project



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Swimming	CUTM3070	2019	Employability/Skill - Practice and Project
Yoga & Meditation	CUTM3072	2019	Employability/Skill - Practice and Project
Solar PV Installation	CUTM3073	2019	Employability/Skill - Practice and Project
Solar Lighting Technology	CUTM3074	2019	Employability/Skill - Practice and Project
Solar PV Microgrid System	CUTM3076	2019	Employability/Skill - Practice and Project
Solar PV Driven Equipment O/M & Assembly	CUTM3077	2019	Employability/Skill - Practice and Project
Solar Thermal Engineering	CUTM3078	2019	Employability/Skill - Practice and Project
2020-21			
Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Probability & Statistics	CUTM1005	2020	Employability (Students will know about probability distribution) Skill (Students will know about mean, media, mode)
Calculus	CUTM1925	2020	Employability (Students will know about curvature, asymptotes)
Mechanics for Engineers	CUTM1006	2020	Employability (knowledge enhancement)
Optics and Optical Fibres	CUTM1007	2020	Employability (knowledge enhancement) / Skill development (LASER and Optical fiber portion)
Applied Analytical Chemistry	CUTM1008	2020	Employability-Water softening processes, Soil Analysis, fuels, petroluem, Corrosion, Electrochemical Phenomenon, error analysis Skill-All Practices.
Applied Engineering Materials	CUTM1009	2020	Employability- Nanostructures and nanomaterials, Carbon



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			nanomaterials,Polymers,Composites:,Adhesives Lubricants ,: Energy Storages material-I&II Skill-All Projects.
Environmental Studies	CUTM1010	2020	Employability-Environment and its multidisciplinary nature,Biodiversity and its conservation,Causes, effects and control measures of pollution.
Optimisation Techniques	CUTM1011	2020	Skill Development (Students shall be able to apply the theory of optimization methods and algorithms to develop and for solving various types of optimization problems). Employability and Entrepreneurship (Students shall be able to solve the mathematical results and numerical techniques of optimization theory to concrete Engineering problems by using computer software)
Engineering Economics and Costing	CUTM1012	2020	Skill Development (Students shall be able to apply the microeconomics concepts related to business and its impact on enterprise). Employability and Entrepreneurship (Students shall be able to apply cost concepts to analyse common business management decisions such as pricing a product and services)
Project Management	CUTM1013	2020	Skill Development (Students shall be able to develop a Project Charter document for any project). Employability and Entrepreneurship (Students shall be able to implement the Project and Prepare a project document that they have undertaken as a learning tool)
Gender, Human Rights and Ethics	CUTM1014	2020	Skill Development (Students shall be sensitive to gender, human rights and ethics within an organizational context). Employability and Entrepreneurship (Students shall be able to integrate concerns related to gender, human rights and ethics into the policies, processes and systems in an organization)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Climate Change, Sustainability and Organisation	CUTM1015	2020	Skill Development (Students will be exposed to current climate change issues, challenges and debates). Employability and Entrepreneurship (Students shall be equipped to develop strategies for perspective planning of organisations)
Job Readiness	CUTM1016	2020	Skill Development (Develop additional skills (verbal, logical, quantitative and reasoning) required to enhance employability as well as the entrepreneurial ability of the students). Employability (Students will develop skill in the area of proficiency in english, reasoning and aptitude, which are required to obtain a job)
Industrial IOT and Automation	CUTM1017	2020	Skill Development and Employability (the new evolution in hardware, software, and data. While the promise of the Industrial Internet of Things (IIoT) brings many new business prospects, it also presents significant challenges ranging from technology architectural choices to security concerns)
Data Analysis and Visualisation using Python	CUTM1018	2020	Skill And Employability(Students had Created data visualizations of various data sets using matplotlib and the seaborn modules with python and also developed portfolios of various data analysis projects .)
Machine Learning using Python	CUTM1019	2020	Skill And Employability(Implement ML algorithms that generates insight to high volume data and helps to make better classifications and prediction. The students are able to solve problems in areas computational finance, image processing and computer vision, energy and natural language processing.)
Robotic automation with ROS and C++	CUTM1020	2020	Employability (upgrading knowledge levels of robotic application in modern industries Project based training)
Design Thinking	CUTM1021	2020	Skill And Employability (student will be able to apply the design thinking process to innovative problem solving)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
System Integration with DYMOLA	CUTM1022	2020	Employability (designing of high-fidelity modeling of complex integrated systems, intuitive modeling i.e. advanced, formally defined object-oriented modeling language, To increase the ability to integrate with complex 3D geometry for integrated simulation, to increase powerful model management, calibration & optimization capabilities.)
Smart Engineering Project (G2M)	CUTM1023	2020	Employability (learn different tools and collaborate together to build a smart live project, express the imagination to reality, industry readiness.)
Geotechnical Engineering	CUTM1073	2020	Employability(To obtain knowledge about soil properties and methods of soil properties determination in the laboratory, using field tests and considering comparable experience. Basic stability and deformation problems. Principle of spread and deep foundation design. To understand fundamental knowledge of geotechnical works for soil improvement, interaction of structure and subsoil. Basic design methods for excavation and foundation pits with dewatering and sealing systems)
Structural Detailing and Drawing	CUTM1061	2020	Employability(Perform free hand sketching of basic geometrical constructions and multiple views of objects. Concept of projection, Types of section, PEB structure & Steel structure work. able to know the process of making sketches, types of projections, designing of beam, columns and shear walls.)
IT Infrastructure Management	CUTM1024	2020	Skill And Employability(Students developed skills to build and manage IT infrastrucatur in Enterprise level using CISCO packet tracer)
Cloud Practitioners	CUTM1025	2020	Skill And Employability(Analyze and Understand the functioning of different components involved in Amazon web services and also acquire cloud technology skill for cloud



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			partitioner certification which helps students in getting jobs in different MNCs)
Information Security	CUTM1027	2020	Skill And Employability(Students have done activities like network analysis, intrusion detection in the network and file integrity using different open source tool.)
OOps with C ++ Programming	CUTM1028	2020	Skill And Employability(Case study to be given to students on uses of C++ program for development of various real time applications like online examination system, online quiz competetion etc.)
Data Structures using C++	CUTM1029	2020	Skill And Employability(Understand asymptotic analysis and different methods. Understand linear data structures and its applications. Understand different non-linear data structures and its applications Understand divide and conquer strategy for various sorting and searching techniques. Understand and apply the greedy approach for various problems)
Advanced Web Programming	CUTM1030	2020	Skill And Employability(Develop a static, interactive and well-formed webpage using JavaScript, CSS3 and HTML5)
Java Technologies	CUTM1031	2020	Skill And Employability(Understands the concepts of Threads, exception handling, file handling and even handling and applets implemented in the Java, which helps students in getting jobs in different IT firms)
Database Creation and Maintenance	CUTM1033	2020	Skill And Employability(Hands on training on Client/Server Architecture- System Structure , Instance and schema, Data Models, Types of DBMS Query Processing and Optimization: Evaluation of Relational algebra expressions- Query Equivalence-Transaction Processing: Built in SQL functions, Sub Queries-Joins-DCL – TCL- Views – Sequences – Index – Locks PL/SQL Basics – Exceptions – Cursors - Stored Functions – Triggers Case study in industrial standards of Database Management)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Android App Development	CUTM1036	2020	Skill And Employability(Understand Android UI design, activity and fragments, intents, notifications, SQL Lite are implemented. As a course project students should implement a mobile app with the app idea and design user interface/wireframes of mobile app and also set up the mobile app development environment)
AWS Solution Architect (SAA-CO2)	CUCT2030	2020	Skill And Employability(Developed scalable and secure Cloud applications and acquired cloud solution architect certification)
AWS Developer (DVA-CO1)	CUCT2031	2020	Skill And Employability(Able to develop scalable and secure Cloud applications and acquired cloud developer certification)
Project	CUCT2032	2020	Skill And Employability(Able to develop scalable and secure Cloud applications)
Web Services Using Java	CUST2010	2020	Skill And Employability(Developed knowledge-based force to serve the IT industry with the latest technologies.)
Advanced Java Programming	CUST2011	2020	Skill And Employability(Understands the advance concepts of Threads, exception handling, file handling and even handling and applets implemented in the Java, which helps students in getting jobs in different IT firms)
Web Programming Using React	CUST2012	2020	Skill And Employability(Develop knowledge-based force to serve the IT industry with the latest technologies.)
Product Development	CUST2013	2020	Skill And Employability(Develop knowledge-based force to serve the IT industry with the latest technologies.)
ML for Predictive Analysis	CUML2002	2020	Skill And Employability(Implement ML algorithms that generates insight to high volume datasets and helps to make better prediction, classifications and clustering. The students are able to solve problems in areas computational finance and computer vision, energy and natural language processing.)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
ML for Image Analytics	CUML2003	2020	Skill And Employability(Implemented different Real life Projects in the field of medical and Agricultural image processing)
ML for Hyperspectral imaging	CUML2004	2020	Skill And Employability(Implemented different Real life Projects in the field of medical and Agricultural hyperspectral images)
Internship	CUML2005	2020	Skill And Employability(Implemented different Real life Projects in the field of medical and Agricultural image processing)
Project	CUML2006	2020	Skill And Employability(Implemented different Real life Projects in the field of medical and Agricultural image processing)
Linux Administration	CUCS2040	2020	Skill And Employability(Developed skills to manage a Linux server and provide basic security to the server)
Advanced Hacking Techniques	CUCS2041	2020	Skill And Employability(Learned different white hat hacking tools to defend different cyber attacks)
System and Network Security	CUCS2042	2020	Skill And Employability(Learned different network security tools to defend different cyber attacks)
IT Data Security	CUCS2043	2020	Skill And Employability(Students able to detect different data leakage and able to prevent some of it)
Project	CUCS2044	2020	Skill And Employability(Analyzed a self developed website for various types of vulnerability and defense)
Introduction to Gaming & Simulation	CUAR2060	2020	Skill And Employability(End to End Game Development Pipeline)
Game Assets & Game Objects	CUAR2061	2020	Skill And Employability(Able to built different models, assets and objects like temple, park, agriculture field etc..)
Building Game Environment	CUAR2062	2020	Skill And Employability(Able to built game environment)
Game Animation, Scripting & UI	CUAR2063	2020	Skill And Employability(Able to design different cartoon animations and UI)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Binary Deployment and Cross-Platform Controls	CUAR2064	2020	Skill And Employability(Design several 3D games which supports cross platforms)
Project	CUAR2065	2020	Skill And Employability(End to End Game Development Pipeline such as 3D games, model of konark temple)
Embedded System Programming with ARM-Cortex	CUTM1039	2020	Skill Development, Employability (Embedded System sectors to learn programming / Interfacing peripherals to ARM Cortex based Microcontroller)
VLSI Design (NSQF level 5)	CUTM1040	2020	Skill Development, Employability (Design combinational and sequential circuit using CMOS logic Enhancement of complex digital VLSI logic design skill of students which will help them to complete any project work undertaken in higher semesters. Perform back-end physical design)
Electronic Devices and Systems	CUTM1046	2020	Employability (A broad introduction to electronic systems for students from diverse engineering disciplines, necessary foundation to understand the role, capabilities and constraints of electronics in contemporary engineering systems, provides basic understanding of the fundamentals and principles of analog and digital circuits and electronic devices.)
Network Analysis	CUTM1043	2020	Employability (techniques of solving circuits involving different active and passive elements, analyze the behavior of the circuit's response in time domain, analyze the behavior of the circuit's response in frequency domain, synthesize an electrical network from a given impedance/admittance function.)
Analog Communication Systems	CUTM1045	2020	Employability (Familiar with analog radio transmitters and



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			receivers Verify the Noise performance of different Modulation Techniques)
Digital Communication Systems	CUTM1044	2020	Employability (Illustrate the classification of channels, Entropy coding methods and different types of Error control codes along with their encoding/decoding algorithms. Examine the Performance of different Digital Carrier Modulation schemes of Coherent and Non-coherent type based on Probability of error)
Principles of wireless communication	CUTM1047	2020	Skill Development and Employability Knowledge about the characteristic of wireless channel, designing of a cellular system, study the various digital signaling techniques and multipath mitigation techniques, understanding the concepts of multiple antenna techniques
Digital Signal & Image Processing	CUTM1048	2020	Employability (knowledge of time domain, frequency domain, discrete time signals, properties and digital filter design techniques, knowledge on basic concepts of image and its processing techniques, basic knowledge on Enhancement, Restoration, Segmentation techniques)
Antenna Design and Analysis	CUTM104	2020	Employability (understanding the theory and fundamentals of antenna design, learning key aspects of practical antenna design, knowledge of a broad range of antennas such as dipole, loop, microstrip patch, horn, smart etc.)
Wireless communication for IIOT	CUTM1050	2020	Employability (understanding of the physical aspects of Wireless Communication for IIoT Applications)
RF Planning and Drive Test	CUCS2082	2020	Employability (Students will develop skill on GSM RF Planning tool, Use of mapping software's like Map info/Google KLM, drive test tool TEMS and NEMO Tool for 4G LTE optimization with field



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			exposure This will lead employment as RF engineer)
Cell site and BTS Installation	CUCS2083	2020	Employability (Adhere and conduct site PM (preventive maintenance) and Task Reporting planes, as per organization's Norms . This will lead employment in BTS operation & maintenance engineering.)
Microwave & RADAR Communications	CUCS2084	2020	Employability Appreciate the importance of microwave signal and learn important microwave devices. Describe the working principle of different RADAR systems and their applications
Project	CUCS2085	2020	Employability (Skill development course)
Micro-Controller Based Embedded System Design	CUES2050	2020	Employability To understand the concepts of microcontroller based system, to enable design and programming of microcontroller based system
Real-Time Operating System and Porting	CUES2051	2020	Employability To make the student learn fundamentals of Operating Systems, Providing the knowledge on the implementation aspects of real time concepts. Providing the knowledge to build few applications on RTOS.
Embedded Linux on ARM	CUES2052	2020	Employability Provide an understanding of essentials of embedded Linux Explain the essential components- tool chain, kernel, bootloader and root file system. Describe the concept of ARM9. Introduce the concept of embedded Linux. Explain porting of Linux kernel and root file system to ARM9 board. Describe the implementation of application program on ARM9 board
Project	CUES2053	2020	Employability (Skill development course)



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ASIC Design	CUVL2070	2020	Employability (Design and Analysis of Analog Circuits and Systems, Write Efficient Hardware Designs and Perform High Level HDL Simulations, Built an FPGA Embedded Solution using Xilinx / Altera FPGAs.)
Digital VLSI	CUVL2071	2020	Employability (Design and Analysis of Digital Circuits and Systems, Write Efficient Hardware Designs and Perform High Level HDL Simulations, Built an FPGA Embedded Solution using Xilinx / Altera FPGAs.)
Analog VLSI	CUVL2072	2020	Employability (Design and Analysis of Analog Circuits and Systems, Write Efficient Hardware Designs and Perform High Level HDL Simulations, Built an FPGA Embedded Solution using Xilinx / Altera FPGAs.)
Verification Using SystemVerilog	CUVL2073	2020	Employability (VLSI verification project using Verilog. Pursue a bright career as a RTL Verification Engineer which results Employability.)
Power Markets	CUEG2094	2020	Employability (Student will learn power market operation & energy audit process with hands on practice which will lead them to placement in power & energy trading company)
Product Design and Development	CUTM1076	2020	Employability and Skill development (Student will understand and explain the concept of Industrial design and robust design concepts.Student will understand the concept of Design for manufacture and assembly.)
Reverse Engineering and Rapid Prototype	CUTM1077	2020	Employability and Skill development (Student will understand principles of imaging, cross-sectional scanning, digital data, computational graphics.)



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Product Life Cycle Management	CUTM1078	2020	Employability and Skill development(Students will use ENOVIA Engineering BOM Management)
Manufacturing Process-process planning and Heat Treatment	CUTM1079	2020	Employability and Skill development (Student will understand the Importance of Materials, Manufacturing Processes, Process Planning & Design in Product Manufacturing)
Material in product design and development	CUTM1080	2020	Employability and Skill development (Student will understand the various material selection for manufacturing processes. Students will be able to identify and select suitable material for product design. Students will be able to understand Application of smart materials, shape memory metal, Nano material.
Quality Assurance	CUTM1082	2020	Employability and Skill development (Students will carry out statistical analysis of experiment, ANOVA ratio test and apply advanced DOE method for product testing.Students will understand SIX SIGMA process and lean production concept.)
Applied Ergonomics	CUTM1083	2020	Employability and Skill development (Students will be able to use the Human Ergonomics software to create an accurate simulation of a human entity and its work environment to ensure a natural operation)
CNC Programming & CNC Machining	CUTM1085	2020	Employability and Skill development (Demonstrate and explain various CNC control Calculate technological data for CNC machining. Prepare programs, demonstrate, simulate and operate CNC milling machines for various machining operations)
Introduction to Automobile Engineering	CUAE2170	2020	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)



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Subsystems of Automobile	CUAE2171	2020	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Electric Vehicles	CUAE2172	2020	Employability and Skill development (This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Maintenance of Automobile	CUAE2173	2020	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Project	CUAE2174	2020	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Internship	CUAE2175	2020	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Introduction to composites	CUCD2130	2020	Employability and Skill development (students will be able to learn how to design a composite material using Catia software. Material



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			properties can be studied by Biovia software. Students will get familiar with 3d experience software. Well-equipped laboratory with different types of matrix and fiber where students will do hands-on practice and fabricate different types of composite which can be used in our day to day work)
Composite materials and characterization	CUCD2131	2020	Employability and Skill development (students will be able to learn how to design a composite material using Catia software. Material properties can be studied by Biovia software. Students will get familiar with 3d experience software. Well-equipped laboratory with different types of matrix and fiber where students will do hands-on practice and fabricate different types of composite which can be used in our day to day work)
CATIA-Composites Design	CUCD2132	2020	Employability and Skill development (students will be able to learn how to design a composite material using Catia software. Material properties can be studied by Biovia software. Students will get familiar with 3d experience software. Well-equipped laboratory with different types of matrix and fiber where students will do hands-on practice and fabricate different types of composite which can be used in our day to day work)
Composite Product Validation; Simulia	CUCD2133	2020	Employability and Skill development (students will be able to learn how to design a composite material using Catia software. Material properties can be studied by Biovia software. Students will get familiar with 3d experience software. Well-equipped laboratory with different types of matrix and fiber where students will do hands-on practice and fabricate different types of composite which can be used in our day to day work)



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Machineries and Technologies used for Manufacturing of Composites	CUCD2134	2020	Employability and Skill development (students will be able to learn how to design a composite material using Catia software. Material properties can be studied by Biovia software. Students will get familiar with 3d experience software. Well-equipped laboratory with different types of matrix and fiber where students will do hands-on practice and fabricate different types of composite which can be used in our day to day work)
Quality control and Fabrication of Composite Structure	CUCD2135	2020	Employability and Skill development (students will be able to learn how to design a composite material using Catia software. Material properties can be studied by Biovia software. Students will get familiar with 3d experience software. Well-equipped laboratory with different types of matrix and fiber where students will do hands-on practice and fabricate different types of composite which can be used in our day to day work)
Project	CUCD2136	2020	Employability and Skill development (students will be able to learn how to design a composite material using Catia software. Material properties can be studied by Biovia software. Students will get familiar with 3d experience software. Well-equipped laboratory with different types of matrix and fiber where students will do hands-on practice and fabricate different types of composite which can be used in our day to day work)
Manufacturing Requirements and Planning (Jigs & Fixtures; Process Planning & Cost Estimation)	CUCM2150	2020	Employability and Skill development (Developing the visibility of skills and potentials of students in ways that are relevant to manufacturing need & employability and also promoting a production oriented learning method.)
Conventional Machining for	CUCM2151	2020	Employability and Skill development(Makes student Industry ready through hands-on



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Cylindrical and Prismatic Shape Components			education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
CNC Machining	CUCM2152	2020	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Non-Traditional Machining and 3D Printing	CUCM2153	2020	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Wood Engineering	CUCM2154	2020	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to



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			improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Internship	CUCM2155	2020	Employability and Skill development(Students go to different corporate industry to carry out their internship for 3month duration.This help students to give specific skills followed by internships
Joining Processes and Technology	CUWI2160	2020	Employability and Skill development (ASNT Level II (LPI and UT) or NSQF skill certification will make the candidate recognised in national and international levels in the industry. He/she can be self employed by opening a small scale welding shop to a medium scale industry.)
Metal Transfer and Weld Metallurgy	CUWI2161	2020	Employability and Skill development ASNT Level II (LPI and UT) or NSQF skill certification will make the candidate recognised in national and international levels in the industry. He/she can be self employed by opening a small scale welding shop to a medium scale industry.)
Design of Welded Joints	CUWI2162	2020	Employability and Skill development (ASNT Level II (LPI and UT) or NSQF skill certification will make the candidate recognised in national and international levels in the industry. He/she can be self employed by opening a small scale welding shop to a medium scale industry.)
Testing of Welded Joints	CUWI2163	2020	Employability and Skill development (ASNT Level II (LPI and UT) or NSQF skill certification will make the candidate recognised in national and international levels in the industry. He/she can be self employed by opening a small scale welding shop to a medium scale industry.)
Computer Graphics	MTSE1106	2019	Skill development(At the end of the course, the students have a skill and emplyobility to:



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			Event driven I/O and callback programming & typical structure of an interactive, real-time computer graphics program • 2&3D transformations, homogeneous coordinates, post-multiplication • Modelling and instantiation)
MATLAB for Civil Engineers	MTSE1107	2019	Employability (Differential equations and its application to engineering problems Soft computing applications to engineering problems)
Finite Element Method	MTSE1201	2019	Skill development(• Enable the students to identify, formulate and skill to engineering problems related to one, two and three Dimensional structures subjected to static loads. • To show the impact of engineering solutions on the society and also will be aware of contemporary issues regarding failure of structures due to wrong analysis)
Industry Internship and Project - I	MTIP2101	2019	Employability(On successful completion of this course student will able to: • Get Experience of working conditions on live projects of company. • learn soft skill viz. Self-Confidence, widen Strong Work Ethic toward work, Positive Attitude towards work, develop effective Communication Skills, Time Management Abilities, Problem-Solving Skills etc. • Find successful employment after graduation.)
Industry Internship and Project - II	MTIP2201	2019	Employability(On successful completion of this course student will able to: • Get Experience of working conditions on live projects of company. • learn soft skill viz. Self-Confidence, widen Strong Work Ethic toward work, Positive Attitude towards work, develop effective Communication Skills, Time Management Abilities, Problem-Solving Skills etc. • Find successful employment after graduation.)



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Pavement Materials And Construction	ISTE1102	2019	Employability(• To learn about characteristic of subgrade soil. • To learn about characteristic of road aggregates. • To learn about characteristic of paving grade bitumen. • To learn about characteristic of cement used in road construction.)
Urban Transportation Planning	ISTE1103	2019	Employability(• To learn the planning methodology of Urban transportation systems. • To learn methods of data collection for planning. • To learn about travel demand models. • To learn Planning for sustainable urban mobility)
Transportation Infrastructure Design	ISTE1104	2019	Employability(• To learn Geometric Design of Cross Sectional Elements of various types of roads. • To learn Geometric Design of Horizontal Alignment of Roads • To learn Geometric Design of Vertical Alignment of Roads. • To learn transportation system management)
Highway Project formulation and Economics	ISTE1202	2019	Employability(• To learn Geometric Design of Cross Sectional Elements of various types of roads. • To learn Geometric Design of Horizontal Alignment of Roads • To learn Geometric Design of Vertical Alignment of Roads. • To learn transportation system management)
Research Methodology For Engineers	ISRM1201	2019	Employability(Meaning of Research , Objectives of Research ,Motivation in Research ,Types of Research Research Approaches ,Significance of Research ,Research Methods versus Methodology Research and Scientific Method ,Importance of Knowing How Research is Done ,)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Pavement Evaluation ,Rehabilitation and Maintenance	ISTE1208	2019	Employability(• To learn about characteristic of subgrade soil. • To learn about characteristic of road aggregates. • To learn about characteristic of paving grade bitumen. • To learn about characteristic of cement used in road construction.)
Project Management	ISTE1209	2019	Employability(Identify functions of project management including estimating, job controls, field data collection, scheduling, accounting and design. * method that uses technology to measure cost and productivity through the full life-cycle of enterprise level projects * Contract Management and Tendering
Environmental Impact Assessment for Transportation Projects	ISTE1210	2019	Employability(• environmental issues in decision-making) .• impacts of transportation projects on air quality, society, economy, ecology and travel .• Ecological disturbances . Environmental Issues in Industrial Development
Industry Internship and Project-1	ISTE2101	2019	Employability(Student will be doing live project For 4 months in an Industry and submit a Project Report to concerned guide certified by the Industry Engineer)
Industry Internship and Project-II	ISTE2200	2019	Employability(Student will be performing internship for 3-months in Industry and submitted a report and duly certified certificate from the competent Engineer in charge)
Industry Internship and Project – II/Dissertation	MTIP2102	2019	employability (Student will learn on power system operation & energy audit process with on the job training which will lead them to placement in power & energy company)



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Tractor Systems and Controls	CUTM1132	2017	Employability(Learning fundamentals of tractor chassis design and traction theory.)
Agricultural Structures and Environmental Control	CUTM1134	2017	Employability(To prepare estimate for different farm buildings, structures, roads, fencing and construction, repair and maintenance of farm structures.)
Tractor and Farm Machinery Operation and Maintenance	CUTM1142	2017	Employability(To acquire knowledge regarding makes and models of tractors, different systems and periodic maintenance tractors.)
Product Development and Packaging Technologies	CUFP2313	2020	(Employability) Gain insights into the scientific, regulatory, and consumer interests that interact in determining the safety of food
Sensory Evaluation and Nutritional Labelling of Foods	CUFP2315	2020	(Employability)Adopt hygienic and sanitation practices during product preparation
AELP Linked Project	CUFP2316	2020	(Employability)Pursue research and develop capabilities to handle multi-disciplinary field projects
Pharmacognosy and Phytochemistry of Important Medicinal Herbs	CUTM1167	2020	(Skill development/Employability) Identification of medicinal herbs and gaining knowledge of their pharmaceutical use
Ayurveda and fermentation technology	CUTM1168	2020	(Skill development/Employability) Formulation of herbal dosage forms, leading to improved employability
Regulations & Certifications of Herbal Drugs	CUTM1169	2020	(Employability/Entrepreneurship) Learn about international regulations of herbal drugs, which will improve employability, also can help to set up own regulatory consultation farm
Material Science of Excipients and Additives	CUTM1170	2020	(Skill development/Employability) Practical aspects of pharmaceutical dosage form formulation
Good Manufacturing Practices-Herbal Industry	CUTM1178	2020	(Employability) Learn about GMP international standards which will assist in bagging jobs
Plant Design and Operation for Herbal Drugs	CUTM1179	2020	(Employability) Scaling up operations and basics of Plant design and operations



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Thermodynamics	CUTM 1088	2020	(Employability and skill development) Designing of air-conditioning system and Estimation of air-conditioning load.
Heat and Mass Transfer	CUTM1525	2020	(Employability and skill development) learn about heat and mass transfer under industrial set up
Cheese Technology	CUTM1158	2020	Employability and entrepreneurship (Industry oriented course. A student with a basic understanding on cheese preparation can find a job in different types of cheese industries).
Chemical Quality Assurance	CUTM1161	2020	Employability and skill development (The students can become internal and external auditor based on the knowledge about different food regulations in this course and also can get job in dairy industry as quality control executive).
Fat Rich Dairy Products	CUTM1150	2020	Employability and entrepreneurship (After completing this course students can get job in dairy industry in production department).
Microbiology of Dairy Products	CUTM1151	2020	Skill development and Employability (Students can go for higher studies (m.Tach and PhD) or can get job in quality control lab in dairy industry as a dairy microbiologist)
By Products Technology	CUTM1159	2020	Entrepreneurship and employability (Completion of this course can lead a student to drive their career into dairy, food and non-food industries to utilize the wastes in food and non-food (production of plastics, adhesives, gels) uses).
Job Readiness	CUTM1182	2020	Analytical Ability, ability to plan & strategic, creative & logical thinking, attention to details, ability to recall (Working Memory), problem solving ability, communication skills (written), spatial ability articulation, data interpretation skills, active Listening, ability to visualize, adaptation skills, decision making, ability to analyze pattern & trends- Employability



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Quantitative Techniques	CUTM1183	2020	Application of quantitative techniques in business decision making- Employability
Micro Economics	CUTM1184	2020	Utilize micro economic concepts and techniques to take business decisions Employability & Entrepreneurship
Economic Environment of Business	CUTM1186	2020	Analyse of policy environment to take appropriate decision -Employability
Indian Society and Culture	CUTM1187	2015	Analysing social issues, Societal Analysis- Employability
Operation Research	CUTM1188	2017	Manage and enhance the sales force productivity and performance:Employability & Entrepreneurship
Principles of Management	CUTM1189	2020	Application of Basic mangement principles- Employability
Basics of Design Thinking	CUTM1190	2020	Utilize design thinking for innovation - employability & Entrepreneurship
Introduction to AI/ML	CUTM1192	2020	Utilize AI/ML to drive business in industry 4.0. - Employability
Introduction Data Analytics	CUTM1193	2020	Use analytics in decision making - Employability
Introduction Additive Manufacturing/3D Printing	CUTM1194	2020	Application of Additive Manufacturing- Employability
Introduction to AR/VR	CUTM1195	2020	Application of AR/VR in business - Employability
Introduction to Emerging Mobility Solutions	CUTM1196	2020	Analyse emerging mobility solutions and its impact on business & society - Employability
Introduction to Blockchain	CUTM1197	2020	Use Database, cryptography & Bitcoin - Employability
Introduction to Robotics	CUTM1198	2020	Impact of Robotics in business & Management - Employability
Accounting for Managers	CUTM1199	2011	Preparation of financial statement, preparation of cost sheet and financial analysis of financial statements: Employability & Entrepreneurship



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Marketing Management	CUTM1200	2011	Interpret complex marketing issues facing a variety of enterprises they would be employed in or setting up as entrepreneurs: Employability & Entrepreneurship;
Organizational Behaviour and Structure	CUTM1201	2011	Analyze and compare different models of Human Behaviour - Employability, Entrepreneurship
Talent Acquisition and Development	CUTM1202	2011	Assess, design and implement various methods, techniques and sources of training- Employability, Entrepreneurship
Marketing Research	CUTM1203	2011	Plan and undertake qualitative or quantitative Market Research and demonstrate the ability to appropriately analyze data to resolve marketing issues: Employability, Entrepreneurship
Corporate Finance	CUTM1204	2011	Utilize the concepts of financial management, investment, financing, working capital and dividend policy decisions: Use techniques of minimising risk in investment, techniques of leverage as well as optimum cost of capital structure of company.- Employability & Entrepreneurship
Production & Operations Management	CUTM1205	2011	Developing aggregate capacity plans and MPS in operation environments- Employability, Entrepreneurship
Introduction to PLM (Platforms such as 3DS) ⁵	CUTM1206	2020	Develop Product specification Document and digital prototype- Employability, Entrepreneurship
Supply Chain Management	CUTM1208	2020	Analyzing the manufacturing operations of a firm- Employability, Entrepreneurship
Advanced Managerial Accounting	CUFM2350	2015	Preparation of cost sheet and analysis of financial statements: Employability & Entrepreneurship;
Financial Institutions, Markets & Services	CUFM2351	2011	Use techniques for raising funds from capital market and from different sources- Employability & Entrepreneurship;
Commercial Banking and ALM	CUFM2352	2011	Use techniques for Asset/Liability Management for smooth operation of the Bank. Employability



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Security Analysis And Portfolio Management	CUFM2353	2011	Use methods of valuations of financial instruments and evaluation of risk as well as return of an individual security and portfolio - Employability & Entrepreneurship
Project Appraisal & Financing	CUFM2354	2014	Preparation of detailed project report, identification of a project, feasibility analysis including market, technical and financial appraisal of a project; Uses project appraisal techniques for evaluating live projects: Employability & Entrepreneurship
Current Asset Management	CUFM2355	2015	Use methods of determine optimum current assets level and appropriate working capital management policies to achieve corporate objectives - Employability and entrepreneurship
Rural Marketing	CUMM2360	2015	Able to promote products and services in rural market: Employability & Entrepreneurship
Sales and Distribution Management	CUMM2361	2011	Manage and enhance the sales force productivity and performance:Employability
Services & Financial Services Marketing	CUMM2362	2020	Design financial service quality measurements to build customer loyalty and evaluate the effectiveness and efficiency of customer service offerings: Employability
Brand Management & Consumer Behaviour	CUMM2363	2011	Analyse the relevance of consumer behaviour to the entire marketing process, the nature and stages of consumers' decision making and the factors influencing consumers' choices: Employability
Digital Marketing & Marketing Communications	CUMM2364	2011	Develop various application in diverse areas of sales & marketing - Employability
Retail & Etail Management	CUMM2365	2020	Make merchandise plan and to procure right merchandise: Employability & Entrepreneurship
B2B Marketing	CUMM2366	2011	Formulate decision, evaluate alternative courses of action and finally choose among alternatives-Employability
Performance Management	MGHR2317	2011	Analyze and adopt different models of Human Behaviour to achieve desired performance-Employability



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Organization Change and Development	MGHR2318	2011	Assess, design and implement various methods, techniques and sources of training- Employability
Human Resource Planning and Sourcing	MGHR2319	2015	Development, implementation, and evaluation of employee recruitment, selection, and retention plans and processes- Employability, Entrepreneurship
Training and Development	MGHR2320	2011	Assess, design and implement various methods, techniques and sources of training- Employability & Skill development
Anatomy Physiology & Health Education	CUTM1607	2019	Apply knowledge on structure and function of body parts for therapies-Employability
Pharmacology	CUTM1608	2019	Able to advise use of drugs for therapeutic purposes-Employability
Basic Epidemiology	CUTM 1609	2019	Analysis of distribution and determinant of health and diseases condition in defined population-Employability
Selling And Reporting Skills Of Pharmaceutical Product	CUTM 1610	2019	Handle pharmaceutical marketing efficiently- Employability, Entrepreneurship
Pharmaceutical Brand Management	CUTM 1611	2019	Development of brand of a product- Employability, Entrepreneurship
Pharmaceutical Sales and Distribution Management	CUTM 1612	2019	Increase pharmaceutical sales, develop promotional strategy,-Employability, Entrepreneurship
Drug Regulatory Affairs & Intellectual Property Rights	CUTM 1614	2019	Able to manufacture and sale of pharmaceuticals-Employability, Entrepreneurship
Manufacturing Management	CUTM 1615	2019	Able to plan and design pharmaceutical production system-Employability
Financial Reporting & Analysis	CUTM 1616	2019	Analyze financial statements-Employability
Pharmaceutical Advertising & Services Management	CUTM 1617	2019	Able to design managerial process to oversee and control the various advertising activities- Employability



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Contemporary Development Communication	CUTM1218	2020	Communicate appropriately using tools for development - Employability
Natural Resource Management	CUTM1243	2014	Work effectively with, and within, interdisciplinary and diverse groups to resolve-management problems and achieve management objectives- Employability and Entrepreneurship
Development Theory and Practice	CUTM1222	2020	Utilization of development theories in practical field- Employability and Skill
Social Research Methods	CUTM1246	2018	Application of modern analytical tools and techniques for management decision making, research designing, sampling, analysis of data, hypothesis formulation and testing- Employability, Entrepreneurship
Agricultural Marketing	CUTM1247	2017	Effectively evaluate the challenges and prospects of agri marketing system, : Employability
Strategic Management	CUTM1929	2020	Conduct analysis of competitive situations of the enterprise - Employability
Community Organization and Development	CUTM1930	2020	Managing and developing community organizations- Employability
Food Security and Right to Food	CUTM1931	2020	Promoting food security- Employability
Financial Inclusion and Micro Finance	CUTM1932	2017	To appraise the scenario of financial inclusion in the country , acquire skills to operate in Micro Finance sector - Employability, Entrepreneurship
Organization Behaviour	CUTM1933	2020	Analyze and compare different models of Human Behaviour for organizational effectiveness- Employability
Human Resource Management and Organisation Development	CUTM1934	2020	Carry out human resource planning and Job analysis, develop, implement and evaluate recruitment and selection-Employability, Entrepreneurship
Public Policy: Design, Analysis and Implementation	CUTM1935	2020	Designing campaigns and implementation of policies- Employability and Skill



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Digital and Social Media Marketing	CUTM1937	2020	Development and usages of social media marketing-Employability, Entrepreneurship
Skill Ecosystem development	CUDM2356	2018	Create skill ecosytm and analyse its dimensions - Employability
Local Governance systems	CUDM2357	2020	Developing collaboration with local government institutions- Employability
Rural Haat & Market Analysis	CUDM2358	2014	Assessing rural markets and develop appropriate marketing strategies - Employability, Entrepreneurship
Community Owned and Managed Businesses	CUDM2359	2020	Promoting community owned business organizations- Employability
Corporate Social Responsibility	CUDM2360	2017	Demonstrate a multi-stakeholder perspective in viewing CSR issues, Compare and contrast the multiple viewpoints and tradeoffs that exist in the area of CSR, design CSR statergies focusing agri sector- Employabiltiy, Skill Development
Disaster Management	CUDM2361	2017	To build skills and abilities in analyzing potential effects of disasters and the strategies to avert the disasters: Employability, Entrepreneurship & Skill development
Management of Rural Health	CUDM2362	2020	Developing strategies for Rural Health and managemet- Employability
Management of Rural Education	CUDM2363	2020	Promoting rural education- Employability
Sustainable Rural Livelihoods	CUDM2364	2020	Developing Livelihood opportunities and linking livelihood programs- Employability
Organizing Conference	CUDM2381	2014	Learning skills for organizing events - Employability, Entrepreneurship & Skill development
Managing Watersheds	CUDM2365	2020	Watershed management- Employability and skill
M&E of Development Projects	CUDM2366	2020	Project Mangement- Employability and Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Poverty reduction strategies	CUDM2353	2020	Can address the issues related to poverty and develop appropriate strategies to mitigate the issue- Employability
Issues in Tribal Development	CUDM2367	2020	Develop strategies to handle tribal issues- Employability
Extension strategies for development	CUDM2355	2020	Implement development strategies- Employability
Fund Raising for Social Cause	CUDM2368	2020	Develop strategies for fund raising- Employability and Entrepreneurship
Fundamentals of Management	CUTM1209	2020	Apply appropriate managerial principles and theories on the work front- Employability and Entrepreneurship
Organisational Behaviour	CUTM1210	2015	Analyze and compare different models of Human Behaviour - Employability
Statistics for Business Decisions	CUTM1211	2016	Use appropriate sampling techniques, formulate the appropriate hypothesis, use the appropriate measures of central tendency, measures of dispersion, hypothesis testing technique, and interpret the results thereof- Employability, Entrepreneurship
Managerial Economics	CUTM1212	2015	make optimal decisions by integrating the concept of economics and business- make optimal decisions by integrating the concept of developmenteconomics and business- Employability
Business Accounting	CUTM1213	2015	interpret the nature and role of the principal financial statements (i.e., the Income Statement, the Statement of Financial Position, and the Statement of Cash Flows). Read, interpret and analyze financial statements; combine financial analysis with other information to assess the financial performance and position of a company;- Employability and Entrepreneurship
Macro Economics	CUTM1214	2015	Develop knowledge to apply macroeconomic perspective to solve business problems- Employability & Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Principles of Marketing	CUTM1215	2015	Solving simple marketing issues facing by a variety of enterprises they would be employed in or setting up as entrepreneurs: Employability & Entrepreneurship;
Management Accounting	CUTM1216	2015	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Business Research	CUTM1217	2015	Formulate the hypothesis and conduct independent research- Employability
Financial Management	CUTM1219	2015	Utilize concepts of financial management, investment, financing, working capital and dividend policy in decisions: Employability & Entrepreneurship
Quantitative Techniques for Management	CUTM1220	2020	formulate complex problems into mathematical models to solve using software- Employability
Legal Aspects of Business	CUTM1221	2016	Adhere to legal framework for starting a business venture and running it successfully in conformity with legal parameters- Entrepreneurship and Employability
Advanced Managerial Accounting	CUTM1225	2020	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Financial Institutions, Markets & Services	CUTM1226	2020	Use techniques for raising funds from capital market and from different source- Employability
Commercial Banking and ALM	CUTM1227	2020	Use techniques for Asset/Liability Management for smooth operation of the Bank. Employability
Security Analysis And Portfolio Management	CUTM1228	2016	Use methods of valuations of financial instruments and evaluation of risk as well as return of an individual security and portfolio - Employability & Entrepreneurship
Project Appraisal & Financing	CUTM1229	2016	Preparation of detailed project report, identification of a project, feasibility analysis including market, technical and financial appraisal of a project; Uses project appraisal techniques for evaluating live projects: Employability & Entrepreneurship



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Current Asset Management	CUTM1230	2020	Use methods of determine optimum current assets level and appropriate working capital management policies to achieve corporate objectives - Employability and entrepreneurship
Rural Marketing	CUTM1233	2020	Able to promote products and services in rural market: Employability & Entrepreneurship
Sales and Distribution Management	CUTM1234	2020	Manage and enhance the sales force productivity and performance:Employability
Services & Financial Services Marketing	CUTM1235	2020	Design financial service quality measurements to build customer loyalty and evaluate the effectiveness and efficiency of customer service offerings: Employability
Brand Management & Consumer Behaviour	CUTM1236	2016	Analyse the relevance of consumer behaviour to the entire marketing process, the nature and stages of consumers' decision making and the factors influencing consumers' choices: Employability
Digital Marketing & Marketing Communications	CUTM1237	2020	Develop various application in diverse areas of sales & marketing - Employability
Retail & Etail Management	CUTM1238	2020	Make merchandise plan and to procure right merchandise: Employability & Entrepreneurship
B2B Marketing	CUTM1239	2020	Formulate decision, evaluate alternative courses of action and finally choose among alternatives-Employability
Environmental Science	CUTM1674	2020	Design and evaluate strategies, technologies and methods for sustainable management of environment- Employability
Summer Internship	CUTM1224	2015	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship
Proficiency in English	CUTM1693	2017	Communicate effectively: Employability
Business Environment	CUTM1695	2017	Analyse business environment and take appropriate decision Employability and Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Financial Accounting	CUTM1677	2017	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Business Economics	CUBC2430	2017	Apply macroeconomic perspective to solve business problems-Employability & Entrepreneurship
Business Mathematics	CUTM1685	2017	Data analysis using mathematical function- Employability & Entrepreneurship
Introduction to Banking	CUBC2433	2017	Carry out operational activities in commercial banks Employability
Reading to Writing	CUTM1694	2017	Increased reading speed and using academic vocabulary in writing - Employability
Business Law	CUTM1678	2017	Utilize legal framework for starting a business venture and running it successfully in conformity with legal parameters- Employability & Entrepreneurship
Business Statistics	CUBC2431	2017	Use statistical tools for managerial decision-making-Employability, Entrepreneurship
Management Principles and Applications	CUTM1683	2017	Application of Basic management principles in organizations- Employability
Fundamentals of Financial Management	CUTM1688	2017	Application of concepts of financial management, investment, financing, working capital and dividend policy decisions: Employability & Entrepreneurship
Income-tax Law and Practice	CUTM1682	2017	Can handle computation of heads of income and taxable income, TDS, advance tax etc.: Employability
Human Resource Management	CUTM1681	2020	Carry out human resource planning and Job analysis, develop, implement and evaluate recruitment and selection-Employability & Entrepreneurship
Corporate Laws	CUTM1680	2017	Utilize the minimum legal framework for starting a business venture and running it successfully in conformity with legal parameters-Empolyability & Entrepreneurship



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Indirect Tax Law / GST	CUTM1690	2017	Calculate and file GST, levy and collection of tax, input tax credit, IGST act GSTN etc.: Employability & Entrepreneurship
Principles of Marketing	CUTM1687	2020	Solving marketing issues faced by a variety of enterprises : Employability & Entrepreneurship;
Financial Market Operation	CUBC2435	2017	Analyse Money market, Capital market, its instruments and apply the same in organizations- Employability
Cost Accounting	CUTM1684	2017	Preparation of cost sheet and analysis of financial statements: Employability & Entrepreneurship
Corporate Accounting	CUTM1679	2017	Develop Accounting procedures used in corporates and the strategies involved in the corporate decisions.: Employability & Entrepreneurship
Banking Law & Practice	CUBC2434	2017	Adhere to Banking laws and practices while working in banking sector- Employability
Internship-I	CUBC2436	2017	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Auditing and Corporate Governance	CUTM1689	2017	Identify the areas of fraud and errors in the accounts and take corrective actions while presenting the audit report and streamline the governance system as per law: Employability
E-Commerce	CUTM1691	2017	carry out entrepreneurial activities electronically (E-commerce) Employability
Internship-II	CUBC2437	2017	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Introduction to Print & Electronic Media	MAMC1102	2018	Competence in Print and Electronic Media and can work in Print and Electronic Media industry- Skill development and Employability
Advanced Digital Media	MAMC1103	2018	Students will be able to Competence skills in modern media and will be able to analyse advertising, Marketing, social networking and using social media for different purposes. - Skill development and Employability



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Digital Media Platforms	MAMC1104	2018	Employability: Get jobs in Television program production or Radio Program production.
Film studies	MAMC1105	2018	Students will be able to develop skills in different aspects of Film and will be able to analyze film-Employability
Advertising and Public Relations	MAMC1106	2018	After studying this paper student will be able to employ Public Relations and Advertising industry and its functioning.-Employability
Thesis	MAMC0301	2018	Employability: Analysing Media issues and analysis of media content.
Animation	MCDE0601	2016	Ability to create quality animation performance through a creative and professional portfolio using principles of animation. Will help in Employability and Skill development
Camera Operator	MCDE0605	2018	Skills development and Employability in camera handling and planning and producing programs for television and Photography.
Adobe tools and Illustrations	MCDE0609	2018	Work on Adobe Illustrator in the beginner level, and on graphics designing. Skill Development and Employability
Communication Research	CUTM1266	2020	Employability: Conduct research on different media elements, Conduct research on radio, TV, advertising and public relations Write research reports and project proposals-Skill development
Print Media Production	CUTM1267	2020	Student will able to get job on Social media-Employability
Exploring Hindi Cinema	CUTM1268	2020	After successful completion of the course the learners will be able to develop skill on the arts and aesthetic values of Hindi Cinema and India Panorama-Skill development and Employability
Graphic Designing & Visual Images	CUTM1269	2020	Application of Graphic Designing & Visual Images in the job-Employability
Television Journalism	CUTM 1270	2020	students will be able to write script, voice over and field reporting-Skill development The student will be able to produce a program



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			from scripting to broadcasting everything can be done by a students. .-Employability
Camera and Editing for TV	CUTM 1272	2020	Improve skills in contemporary video technology and operation of cameras, audio, lighting and other television production equipment Improve in film and video, including shot composition and continuity editing-Skill development
Reporting and Anchoring	CUTM 1273	2018	Employability: reporter, copy editor and bulletin producer in electronic media, can organise live shows, group discussion and exclusive interviews with experts of any field
Integrated Marketing Communication	CUTM1277	2020	Employability: They will be able to design campaign to promote a product, design appropriate media plan to promote product or service according to target audience, online promotion of products or services
Web Content Development	CUMC2383	2016	Skill development and Employability on technology and content of the world wide web, development of contents on web copy writing, digital news writing for various type of web sites. Skill development on write E-books, Blogs, E-Commerce content.
Animation	CUMC2379	2020	Ability to create quality animation performance through a creative and professional portfolio using principles of animation.will help in Employability: and Skill development
Introduction to social media	CUMC2382	2018	Student will able to get employment on Social media
Energy storage materials	CUTM1399	2020	Employability:Understanding of Energy storage behaviour of Various materials and their application for various industrial purpose
Bio and bimimetic nano materials	CUTM1400	2020	Employability: to gain knowledge about biomaterials, their properties, behavior, interaction and use them over in bio medical and pharmaceutical industry.



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Photovoltaic technology and nanocatalysts	CUTM1401	2020	Employability: Understanding the cost effective fabrication route and increasing efficiency of III and IV generation PV cells and use them in various solar industries.
Smart and electronic materials	CUTM1403	2020	Employability: To acquaint with various kinds of smart materials for device application and to use the nanotechnology in electronics
Corrosion and advanced coating application	CUTM1404	2020	Employability: Learn about different surface coating technologies and to know substrate technology and its significance in obtaining high performance coating. Various methods for evaluating the performance of the coating.
Synthesis and application of nano composites	CUTM1405	2020	Skill developmet: To provide knowledge of the advantages of using different types of nanocomposites and to make the students familiar with the mechanism of nanocomposites. Employability: Students will understand and appreciate the significance of the nanocomposites as an important class of materials and they will be well equipped to design and develop nanocomposites for specialized applications
Emerging materials	CUTM1407	2020	Employability: Students will be able to work in research and industrial set up on material research and the understanding of materials behavior, or conceived, designed, and realized useful products and technology will be included.
Plasma technology	CUTM1410	2020	Employability: To understand fundamental characteristics of plasma, various plasma generation methods, various applications of plasma technology in nanomaterial synthesis, energy production and storage, medicine/health care, etc. and to acquire comprehensive knowledge of how plasmas are utilized for different types of materials processing specially



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			in nanotechnology and developing advanced materials
Industrial chemicals	CUTM1415	2020	Employability-Plastic Additive, Specialty Chemicals, Market Directed Specialty and Fine Chemicals, Management and treatments of Waste chemicals, Sustainable chemicals market and chemical safety. Skill-Extraction and isolation of Fine Chemicals, Selected Industrial process and all projects
Pharmacognosy and phytochemistry	CUTM1416	2020	Employability-The whole content of the syllabus
Polymer chemistry	CUTM1417	2020	Employability-Fundamental , Copolymerization, Radical Polymerization , Ionic Polymerization , Conducting Polymers Application of Polymers . Skill-Analysis of Polymers and All Practices
Packaging	CUTM1418	2020	Employability-Fundamentals of packaging , Conversion technology , Specialty packaging , barrier properties Skill-Package Testing and all projects
Industrial pollution and its waste management	CUTM1419	2020	Employability-Fundamentals of pollution , Water quality standard , Methods of treatment of waste water , Air pollution and its Permissible limit , Solid waste disposal and Management , Industrial water and air pollution Skill- Industrial Waste Water Treatment and all practices
Toxicology	CUTM1420	2020	Employability-Concepts of toxicology, Toxicity Pathways, Toxicity mechanism, Integrated Testing Strategies, Toxicity beyond chemicals, Ecotoxicology and Risk assessment, Toxicity remediation and Application of toxicants Skill- All Practices
Biopolymer and hydrogel	CUTM1421	2020	Employability-Fundamentals of biopolymers, Polymer biodegradation and biocomposites, Basics of biomaterials, Properties of Hydrogels, Applications of Hydrogels. Skill- Surface modification and characterization of



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			biomaterials, Synthesis and Characterization of hydrogels and all practices.
Nano-pharmaceuticals and biomedical science	CUTM1422	2020	Employability-Nanotechnology in Food and pharmaceutical industry ,Nanotechnology in Biomedical and Pharmaceutical Industry ,Nanotechnology in Agriculture ,Molecular Cell Biology ,Optical and non-optical probes ,Protein Labelling and bio-medical applications ,Target Identification and Drug designing Skill-A practical approach to antibody labelling
Synthetic organic chemistry	CUTM1423	2020	Employability-Fundamentals ,Organic Reagents ,Molecular Rearrangement ,Stereochemistry , Photochemistry, Pericyclic Reaction, Retrosynthesis Skill- All Practices
Energy storage system	CUTM1424	2020	Employability-whole content of Energy storage system syllabus
Sustainable chemistry	CUTM1425	2020	Employability-Fundamental, Green Chemistry, Green Solvents, Green Synthetic Methods, Value addition to Waste Biomass, Sustainable materials, Recycling and circular economy Skill-All Practices
Analytical techniques	CUTM1426	2020	Employability-Basic Tools of Analytical Methods, Chemical Equilibria for Quantitative Analysis-I, Electrochemical Analysis, Spectrophotometry, Molecular analysis by Spectroscopy, Spectrochemical Analysis, Analytical Separations. Skill- All Practices.
Numerical Methods for CFD	CUTM1526	2020	Skill- Evaluate finite difference/volume schemes on model problems of computational fluid dynamics using python Employability - Solution of Simultaneous Equations
Fluid Dynamics	CUTM1527	2020	Skill-To apply fluid dynamics problems using different tools. Employability - Methods describing Fluid motion, Lagrangian and Eulerian Methods



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Geometry and Grid Generation	CUTM1528	2020	Employability- Understand the construction techniques of structured and unstructured grids using Simulia.
Applications of CFD using Computational Tool-Simulia	CUTM1529	2020	Employability- Understand the construction techniques of structured and unstructured grids using Simulia.
Advanced differential equations	CUTM1530	2020	Skill – Solve the problems choosing the most suitable method Employability - Solution of Diffusion equation in n-dimensional
Graph Theory	CUTM1531	2020	Skill –To impart knowledge about tracing of graphs and network analysis Employability - Minimum spanning trees;Fundamental Circuit;Cut set and Separability
Advanced Statistical Methods	CUTM1533	2020	Skill – Ability to learn new statistical analysis techniques using python Employability - Understand Chi Squared Tests
Applied Number Theory	CUTM1534	2020	Skill- Enhance and reinforce the student's understanding of concepts through the use of technology when appropriate Employability - Divisibility, Representations of Integers,Computer Operations with Integers,Prime Numbers
ADVANCED COMPLEX ANALYSIS	CUTM1535	2020	Employability - To know about special functions like Riemann zeta function which plays a pivotal role in analytic number theory and has applications in physics, probability theory, and applied statistics.
TOPOLOGY	CUTM1536	2020	Skill - To introduce the student to maps between topological spaces Employability - student's ability to handle abstract ideas of Mathematics and Mathematical proofs
DIFFERENTIAL GEOMETRY	CUTM 1537	2020	Employability - Study about notations and operations of Tensor



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
ADVANCED ALGEBRA	CUTM1538	2020	Employability - Effectively write abstract mathematical proofs in a clear and logical manner
Herbal Cosmetic Technology	CUTM1427	2020	Employability and Skill- Students Completed practice on analysis of carbohydrates, protein, reducing sugars etc.
Plant Physiology and Metabolism	CUTM 1428	2020	Employability and Skill - Hand on Isolation of chloroplast and measurement of electron transport activity, Racker's experiment, role of uncouplers. Inhibitors of oxidative phosphorylation and prospects of C4 and C3 plants
Developmental Biology and Phytotomy	CUTM 1430	2020	Employability and Skill- understand the morphology and development of reproductive parts. Learn identification of plants based on cytotaxonomy, helps in forensic science, pharmacognosy and drug development. This will be helpful for higher studies and research
Systematics and Diversity of Plants	CUTM 1431	2020	Employability and Skill- Identification of plants based on morphology and cytotaxonomy, provide a comprehensive knowledge on diversity of plant kingdom with focus on all plant groups; algal biomass production and utilization, algal blooms and their environmental impacts, seaweed cultivation and utilization ; help to pursue higher studies and employability in National organization;
Biochemistry and Enzyme Technology	CUTM 1433	2020	Employability-Learn techniques employed in enzymes purification and characterization, applications of enzyme technology in food, medical, and household industries; application of enzyme technology for the commercialization purpose of biotechnological products.
Advances In Plant Ecology	CUTM 1434	2020	Employability and Skill- Learn to critically evaluate environment pollution issues, practice on E-waste management, smart waste management.



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Computational Biology	CUTM 1435	2020	Employability and Skill- Hand on skill and practical knowledgr on different databases., Sequence homology and Gene annotation etc.
Microbiology	CUTM 1436	2020	Employability and Skill-Students can do practicals and learnt on preparation and sterilization of media, plating, tubing, slanting of media, Isolation of bacteria in pure culture
Cell and Molecular Biology	CUTM 1437	2020	Employability and Skill-Perform comparative karyotypic analysis, techniques like extraction and separation of DNA by gel electrophoresis, squashing technique for the study of different stages of mitosis and meiosis
Plant Genomics	CUTM 1441	2020	Skill-Learn to understand genomics and proteomics and the different approaches and techniques employed in these fundamental fields of study; analyse information from plant genomic research and recognise its potential applications in crop improvement
Animal Biotechnology	CUTM1452	2020	Employability - Media preparation, Role of important components of culture media; Common laboratory hazards and safety issues to consider in cell culture laboratory, Sterilization techniques used in animal cell culture, Preparation of media for animal cell culture, Opportunities and challenges in animal cell and tissue culture technology, Study of primary cell culture technique using chick embryo, Animal cell batch culture technique, Methods of producing transgenic farm animals; Reproduction biotechnologies and their use in livestock; Somatic cell nuclear transfer cloning; In Vitro Fertilization, Embryo production, preservation and transfer; Sperm and embryo sexing; Intracytoplasmic sperm injection (ICSI); Cryopreservation and gamete banking, Polyculture of fish for high yield; Edible oyster production; Pearl oyster production; Vermi-



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			culture and vermicomposting for alternative and sustainable agriculture; Fish culture in flow through system and recirculation technology, Vermicompost preparation from plant debris, cattle dung and paper waste, Recombinant therapeutics and production of pharmaceuticals; Production of tissues and organs for humans and xenotransplantation, Preparation of competent cell (Calcium chloride treatment method)
Animal Breeding	CUTM1453	2020	Employability - Problems relating to gene and genotypic frequencies under different conditions. Estimation of inbreeding in regular and irregular systems. Computation of quantitative genetic effects. Estimation of variance components. Computation of heritability, repeatability, genetic, environmental and phenotypic correlations and their standard errors. Estimation of breeding values from different sources of information. Prediction of direct and correlated response to different bases of selection :- a) Computation of realized heritability and genetic correlation. b) Selection index: Computation, Accuracy and response in component trait c) Estimation of heterosis for different types of crosses. d) Estimation of GCA and SCA
Water and Soil Quality Management in Aquaculture	CUTM1443	2020	Skill - Fertilizers and manures: Different kinds of fertilizers and manures; fertilizer grade, source, rate and frequency of application; Use of treated sewage for pond fertilization and biofertilizers, Ecological changes taking place after fertilizing. Water analysis: measurement of temperature, turbidity, determination of pH and EC. Determination of inorganic nitrogen, and phosphorus. Utilization of bioactive compounds



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			<p>by microorganisms; Cat clay/pyrite soil and its management; seepage and its control. Estimation of primary productivity and chlorophyll. water treatment, water filtration devices, aeration, chlorination, ozonization and UV radiation; eutrophication; Algal bloom control; Aquatic weed management. Determination of salinity, Chlorinity, Total solids, Redox potential, DO, Free CO₂., Determination of total alkalinity, hardness. Waste water treatment practices; Waste discharge standards; Water quality management in carp culture; Water quality management in brackishwater shrimp culture; Water quality management in hatcheries. Calculation of dose of fertilizers and pond liming. Soil and water amendments: lime, manures, fertilizers, micronutrients, zeolites, alum, gypsum, Effluent Treatment plant; Aeration, Chlorination, Ozonisation and UV radiation; Waste and water Treatment Practices; Machine Learning for water quality analysis.</p>
Animal Physiology and Biochemistry	CUTM1450	2020	<p>Employability -</p> <ul style="list-style-type: none"> • Study of T.S/L.S/V.S of digestive organs (Stomach, Liver, Kidney, intestine etc.) • Study of TLC/DLC from prepared blood smear/Determination of ABO Blood group • Estimation of haemoglobin using Sahli's haemoglobinometer / Enumeration of RBC & WBC using haemocytometer • Estimation of presence of lipid/carbohydrate from supplied sample by using spectrophotometer • Estimation of total protein content by spectrophotometer/Lowrey's Method • To demonstrate the effect of temperature/pH/concentration on salivary enzyme activity



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Immunology and Cancer Biology	CUTM1451	2020	Employability - Cells and Organs of the Immune System, Structure and function of antibodies, Inflammation, To isolate the lymphocyte from whole blood by density gradient centrifugation method, Screening antisera or hybridoma supernatants for specific antibodies, To detect the presence of an antigen in a sample, To learn coupling of antibody to enzyme Horse Radish Peroxidase (HRP), Study of basic Ouchterlony's double immuno-diffusion method, Tumor cell growth in different media,
Ornamental Aquaculture	CUTM1449	2020	Skill - External morphology of important marine aquarium fishes, External morphology of important fresh water aquarium fishes , Identification of common ornamental fishes and plants, Aquarium accessories and decorative, Lighting and aeration, Aquarium fish feeds. Dry, wet and live feeds, Setting up and maintenance of Aquarium accessories and equipment, , Ornamental fish breeding - Brood stock maintenance, Breeding techniques of ornamental fishes, Nursery rearing of ornamental fishes, Transportation of ornamental fishes, Application of genetics and biotechnology for producing quality strains, Conditioning and packing of ornamental fishes. Preparation of feed, Ornamental Fish Farm Management Construction of commercial ornamental fish farm, Feeding and maintenance of stock, , Conditioning and packing of ornamental fishes. Preparation of feed, ,Management practices of backyard culture of ornamental fish, Conditioning, packing, transport and quarantine methods, Setting up of breeding tank for live bearers, barbs, goldfish, tetras, chichlids, gouramis, fighters and catfishes, Starting an aquarium shop – a business opportunity, Small scale ornamental fish farming business, Identification of ornamental



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			fish diseases and prophylactic measures., Employability - Construction and setting of aquarium - Types of aquarium tanks, Construction of home aquarium, Setting up of home aquarium 1, Maintenance of aquarium (cleaning and water quality management), Feeding of aquarium fishes Fabrication of all-glass aquarium
Thermal Physics	CUTM1485	2020	Employability - Laws of Thermodynamics, Carnot engine & efficiency. Carnot's Theorem. Refrigerator & coefficient of performance, 2nd Law of Thermodynamics: Kelvin-Planck and Clausius Statements and their Equivalence. Applications of Second Law of thermodynamics, Entropy, Thermodynamic Potentials, Kinetic Theory of Gases, Molecular Collisions, Real Gases. Skill- Thermal Physics Lab
Waves and Optics	CUTM1486	2020	Employability - Interferometer, Diffraction grating. Resolving power of grating, Fresnel's half-Period Zones Skill - Waves and Optics Lab.
Electricity and Magnetism	CUTM1488	2020	Employability - Magnetic Properties of Matter, Magnetization, Electromagnetic Induction, Electrical Circuits, Network Theorem. Skill - Electricity and Magnetism Lab
Analog System and Application	CUTM1489	2020	Employability - Semiconductor Diodes, Two-terminal Devices and their Application, Amplifiers, Applications of Op-Amp. Skill - Analog Systems and ApplicationsLab
Elements of Modern Physics	CUTM1491	2020	Employability - Radioactivity, Fission and Fusion, Lasers. Skill - Elements of Modern Physics Lab
Digital Systems and Applications	CUTM1492	2020	Employability - CRO uses, Integrated Circuits, Digital Circuits, Data processing circuit, Microprocessor Architecture. Skill - Digital system Lab



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Quantum Mechanics and Applications	CUTM1493	2020	Employability - Schrodinger equation and its solution, its application, hydrogen-like atoms, Atoms in Electric & Magnetic Fields, Many electron atoms. Skill - Learn to solve quantum problems through computational methods
Solid State Physics	CUTM1494	2020	Employability - Magnetic properties of materials, dielectric properties of materials, superconductivity. Skill - Solid state physics lab
Atomic Structure and Chemical bonding-I	CUTM1469	2020	Employability-Wave mechanics,Atomic structure-2,Periodic Properties-I &II,Ionic bond,Covalent bond, Covalent character in ionic compounds Skill-Practice 1 to 12
States of matter and ionic equilibrium	CUTM1470	2020	Employability- Gaseous State-I & II, Liquid State, Solid State,Ionic Equilibria I,II and III. Skill- Practice 1 to 12
Basics and Hydrocarbons	CUTM1471	2020	Employability-Basics Organic Compounds, Reaction Intermediate , Chemistry of alkanes,Carbon-Carbon pi bonds, Aromatic HydrocarbonsCycloalkanes and Conformational Analysis,Stereochemistry. Skill-Practice 1 to 12
Chemical Thermodynamics and its application	CUTM1472	2020	Employability-Chemical Thermodynamics,Chemical Thermodynamics and Open System ,Chemical Equilibrium I&II,Colligative Properties .Skill- Practice 1 to 12
S- and P-block elements	CUTM1473	2020	Employability- General Principles of Metallurgy,Acids and Bases,Chemistry of s and p Block Elements I,II and III, Noble Gases,Inorganic Polymers .Skill-1 to 12.
Oxygen Containing Functional Groups	CUTM1474	2020	Employability- Chemistry of Alkyl Halides,Aryl Halides and Organometallic compounds,Alcohols,Carbonyl Compounds 1,Carboxylic Acids and their Derivatives and Sulfer containing compounds. Skill- All Practices
Phase Equilibria& Chemical Kinetics	CUTM1475	2020	Employability-Phase Equilibria-1,3 , Chemical Kinetics 1&2, Catalysis, Surface Chemistry, Skill- All practices



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Coordination Chemistry	CUTM1476	2020	Enterprenurship-Crystal Field Theory, Transition Elements Employability-Bio-inorganic Chemistry-1& 2 Skill- All practices
Heterocyclic Chemistry	CUTM1477	2020	Empoybility-Amines, 5 and 6 membered Heterocyclic Compounds containing one heteroatom, Six membered and condensed Heterocyclic Compounds. Skill-All practices
Electrochemistry	CUTM1478	2020	Employbility-Conductance I,II, and III , Electrochemistry I.II Enterprernership-Energy Storage and Conversion, Skill- All Practices
Bio-molecules	CUTM1479	2020	Employbility-Amino acids, peptide and proteins, Enzymes, Bio-imaging and Bio-Medical science Enterpreneurship-Concept of Energy in Biosystems ,Pharmaceutical Compounds . Skill- All Practices
Quantum Chemistry & Spectroscopy	CUTM1480	2020	Employbility-Quantum Chemistry ,Introduction to Molecular Spectroscopy Skill-Nuclear Magnetic Resonance (NMR) spectroscopy, Electron Spin Resonance (ESR) spectroscopy, Photochemistry and all practices
Spectroscopy	CUTM1482	2020	Employbility- Carbohydrates, Enterprenurship-Dyes Skill- Chromatography and All practices.
Calculus	CUTM1511	2020	Skill- Tracing of different curves and functions. Employability - To explain about vector, different types of vector and vector algebra with suitable example
Linear Algebra	CUTM1512	2020	Skill –To gain the knowledge on MATLAB and uses in algebra. Employability - Preparation of working rule for finding rank of a matrix with example.
ANALYSIS-I	CUTM-1513	2020	Skill –• Describe the real line as a complete, ordered field. Employability - Determine the continuity, differentiability, and integrability
ANALYSIS-II	CUTM-1515	2020	Skill –• Describe the Riemann integrable and Riemann sums Employability - To evaluate the definite integral, double integral and triple integral



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ADVANCED ANALYSIS	CUTM1519	2020	Skill –To point out that iterative processes and convergence of sequences occur in many areas of mathematics, and to develop a general context in metric spaces. Employability - To reinforce ideas of proof
Ordinary Differential Equations	CUTM1514	2020	Skill –To understand solving Free Undamped Motion of a Spring System using Python and other skills Employability - Find power series solutions of 2nd order differential equations
Partial Differential Equations and System of Ordinary Differential Equation	CUTM1517	2020	Skill –Application of MATLAB in system of differential equations Employability - To practice heat and wave equations in 2D and 3D..
Complex Analysis	CUTM1520	2020	Skill –Learn the Plotting of complex functions using Matlab Employability - To get equipped with the understanding of the fundamental concepts of functions of a complex variable along with the concepts of analyticity, Cauchy-Riemann relations and harmonic functions.
Integral Transformations	CUTM1521	2020	Skill –To learn the Fourier series expansions of periodic functions by using Matlab Employability - Learn application of MATLAB programming
Linear Programming	CUTM1523	2020	Skill - To demonstration of the utilization of Linear Programming Problems in industry and business. Employability - • Formulate the necessary and sufficient optimality conditions for linear programming and demonstrate the geometrical interpretation of these conditions
Phycology and Microbiology	CUTM1455	2020	Employability- Classification and identification of microbes and algae. Skill-Practice on staining procedure of different Algae and Bacteria. Hand on practice on Classification and identification of microbes and algae.



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Biomolecules & Cell biology	CUTM1456	2020	Employability- Carbohydrates,Lipids,Nucleic Acids,Bioenergetics Skill- Students Completed practice on analysis of carbohydrates, protein, reducing sugars etc.
Archegoniate	CUTM1458	2020	Employability-Learn the phylogeny of archegoniate . Skill-Practice on cutting thin sections and staining procedure of Archegoniates
Anatomy of Angiosperms	CUTM1459	2020	Employability-Learn identification of plants based on cytotaxonomy, helps in forensic science, pharmacology and drug development. Skill- To gain hands on skills about the anatomical details of conducting tissues and secretory tissues.
Plant Systematics	CUTM 1464	2020	Employability- Students can easily identify plants, prepared and deposited herbarium, they also practiced digital documentation of herbarium. Skill- Hands on skill on herbarium preparation.
Reproductive Biology of Angiosperm	CUTM1465	2020	Employability -Keen Observations of some of the variation in different parts of sample fruits, and relate these modifications to changes in function,significance of angiosperm gametogenesis and fertilization, including double fertilization. Help to pursue higher studies. Skill -Hands on skill on Pollen viability: Tetrazoliumtest. Germination: Calculation of percentage germination in different media using hanging drop method.
Plant Physiology	CUTM1466	2020	Employability- A keen observation and application of Plant water relationship and Growth regulators. Skill-Hands on practice on calculate the area of an open stoma and percentage of leaf area open through stomata;Study the phenomenon of seed germination



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Plant Metabolism	CUTM1467	2020	Employability- Students isolate and quantify the biomolecules, metabolites present on plants and analyse them. Skill- Hand on skill of bioassay of Avena coleoptile.
Non – Chordates-I-	CUTM1497	2020	Employability - General characteristics and Classification up to classes, General characteristics and Classification up to classes, General characteristics and Classification up to classes, General characteristics and Classification up to classes, General characteristics and Classification up to classes, Life cycle, and pathogenicity of Ascaris lumbricoides and Wuchereriabancrofti 6. Study of adult Fasciola hepatica, Taenia solium and their life cycles (Slides/microphotographs), 7. Study of adult Ascaris lumbricoides and its life stages (Slides/micro-photographs)., 8. Study of adult Wuchereriabancroftii and its life stages (Slides/micro-photographs)., 9. To submit a Project Report on any related topic on life cycles/coral/ coral reefs.
Non Chordates-II	CUTM1498	2020	Employability - General characteristics and Classification up to classes, General characteristics and Classification up to classes, General characteristics and Classification up to classes, General characteristics and Classification up to classes
Developmental Biology	CUTM1509	2020	Employability - Late Embryonic Development: Fate of Germ Layers, Extra-embryonic membranes in birds, Implantation of embryo in humans, Placenta (Structure, types and functions of placenta), Post Embryonic Development. Metamorphosis: Changes, hormonal regulations in amphibians and insects., Ageing: Concepts and Theories, Implications of Developmental Biology Teratogenesis: Teratogenic agents and their effects on embryonic, development, In vitro



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			fertilization ,Concept of Stem cell, Amniocentesis, 5. Study of Whole mounts of chick embryo 21, 24, 28, 33, 36, 48, 72, and 96 hours of incubation,
Principles of Genetics	CUTM1508	2020	Employability - Genetic and environmental basis of sex determination; Chromosomal mechanisms of sex determination in Drosophila and Man., Criteria for extra-chromosomal inheritance, Antibiotic resistance in Chlamydomonas, Mitochondrial mutations in Saccharomyces, Infective heredity in Paramecium and Maternal effects, Complementation Test in Transposable Genetic Elements: Transposons in bacteria, Ac-Ds elements in maize and P elements In Drosophila, Transposons in humans.
Animal Physiology- Life sustaining system	CUTM1505	2020	Employability - Cardiac cycle, Cardiac output and its regulation, Frank-Starling Law of the heart, Nervous and chemical regulation of heart rate, Electrocardiogram-Blood pressure and its regulation, 1. Histological study of gastrointestinal tract 2. Study of Histology of trachea and lung 3. Estimation of haemoglobin using Sahli's haemoglobinometer 4. Enumeration of R.B.C.& W.B.C. using haemocytometer 5. Determination of ABO Blood group 6. Preparation of haemin and haemochromogen crystals 7. Recording of blood pressure using sphygmomanometer 8. Histological study of kidney(Human) 9. Histological study of nephron 10. Histological study of testis(mammal) 11. Histological study of ovary(mammal) 12. Histological study of artery & vein



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Diversity of Chordates	CUTM1501	2020	Employability - General characteristics of Chondrichthyes and Osteichthyes, Classification up to order Migration, Osmoregulation in fishes, Parental care in fishes, Parental care in Amphibians & Neoteny, General characteristics and Classification of Reptilia, Affinities of Sphenodon, Poison apparatus and biting mechanism in snakes, Adaptive characteristics of crocodile, General characteristics and classification (up to order Archaeopteryx), Principles and aerodynamics of flight, Flight adaptations, Migration in birds. 1. Museum specimen on Protochordata- Balanoglossus, Herdmania, Branchiostoma 2. Sections of Balanoglossus through proboscis and branchio-genital regions 3. Museum specimen on Petromyzon, Myxine 4. Museum specimen on : Fishes-Scoliodon, Pristis, Torpedo, Chimaera 5. Museum specimen on Labeo, Exocoetus, Echeneis, Anguilla, Hippocampus, Tetradodon/ Diodon, Anabas 6. Museum specimen on-Amphibia: Ichthyophis/Ureotyphlus, Necturus 7. Bufo, Hyla, Alytes, Salamandra 8. Museum specimen on Reptilia Hemidactylus, Varanus, Uromastix, Chamaeleon, Draco 9. Draco, Vipera, Naja, Hydrophis (Identification of poisonous and non-poisonous snakes) 10. Aves :Study of two common birds from different orders 11. Aves :Study of types beaks and claws 12. Mammalia Sorex, Bat (Insectivorous and Frugivorous), Funambulus, Loris, Herpestes, Erinaceus
Biochemistry of Metabolic Processes	CUTM1506	2020	Employability - Sequence of reactions and regulation of glycolysis & Gluconeogenesis, Citric acid cycle and significance, Phosphate Pentose Pathway (Role and significance),



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			Glycogenesis, Glycogenolysis 1. To demonstrate the effect of temperature on enzyme activity 2. To estimate the carbohydrate content of supplied tissue by Spectrophotometry method 3. To estimate the glycogen content of supplied tissue by colorimeter method 4. To estimate the lipid content from the given sample 5. To estimate the protein content of supplied tissue by colorimeter method 6. Estimation of total protein content in the given sample by Lowry's /Barfoed's Method 7. To estimate amino acids from a mixture by using chromatography (paper/Thin layer) 8. To estimate amino acids from a mixture by using chromatography (paper/Thin layer) 9. Determination of SGPT in given sample by using available kit.(Chick/Goat Serum) 10. Estimation of known and unknown protein 11. Preparation of Standard Curve of Bovine serum Albumin 12. Study the enzymatic activity of Trypsin and Lipase
Principles of Ecology	CUTM1499	2020	Employability - Population: Unitary and Modular populations Unique and group attributes of population: Density, nasality, mortality, life tables, fecundity tables, survivorship curves, age ratio, sex ratio, dispersal and dispersion. Exponential and logistic growth, equation and patterns, r and K strategies, Population regulation - density-dependent and independent factors Population interactions, Gause's Principle with laboratory and field examples, Lotka-Volterra equation for competition and Predation, functional and numerical Responses., Ecosystem: Types of ecosystems with one example in detail, Food chain: Detritus and Grazing food chains, Linear



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			<p>and Y-shaped food chains, Food web. . Study of life tables and plotting of survivorship curves of different types from the hypothetical/real data provided., Determination of population density in a natural/hypothetical community by quadrat method and calculation of Shannon-Weiner diversity index for the same community., Study of an aquatic ecosystem: Phytoplankton and zooplankton, Measurement of area, temperature, turbidity/penetration of light, determination of pH, and Dissolved Oxygen content., (Winkler’s method), Chemical Oxygen Demand and free CO₂., Report on a visit to National Park/Biodiversity Park/Wild life sanctuary.</p>
Cell Biology	CUTM1500	2020	<p>Employability -Cell Division and Cell cycle: Mitosis, Meiosis; Regulation of cell cycle. Cell Signaling: Overview of cell signaling, signaling molecules and receptors, GPCR, Second messengers, Role of second messenger (cAMP) in cell signaling, Activation of gene transcription by GPCR,</p> <ol style="list-style-type: none"> 1. Cell Organization and Sub Cellular Structure Studies 2. Gram’s staining technique for visualization of prokaryotic cells 3. Counting of cells using Hemocytometer 4. Study of cell attachment 5. Study of cell proliferation 6. Isolation of Endoplasmic Reticulum 7. Isolation and microscopic study of mitochondria 8. Study the presence of Barr body in human female blood cells/cheek cell 9. Study of Actin Assembly 10. Study various stages of mitosis using permanent slides 11. Study various stages of meiosis using



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			permanent slides 12. Maintenance of mammalian cell lines
Fundamentals of Biochemistry	CUTM1503	2020	Employability - Enzyme kinetics; Factors affecting rate of enzyme-catalyzed reactions; Derivation of Michaelis-Menten equation; Concept of K_m and V_{max} , and Lineweaver-Burk plot; Multi-substrate reactions. 1. Qualitative tests of functional groups in carbohydrates 2. Qualitative tests of functional groups in lipids. 3. Qualitative tests of functional groups in protein 4. Separation of amino acid using Paper Chromatography. 5. Quantitative estimation of salmon sperm/calf thymus DNA using colorimeter (Diphenylamine reagent) or spectrophotometer (A_{260} measurement) 6. Action of salivary amylase under optimum conditions. 7. Effect of different pH on salivary amylase activity. 8. Demonstration of proteins separation by SDS-PAGE. 9. Effect of different Temperature on salivary amylase activity. 10. Effect of inhibitor on salivary amylase activity
Animal Physiology: Controlling and Coordinating System	CUTM1502	2017	Employability - Components of blood and their functions, Structure and functions of haemoglobin, Haemostasis, Blood clotting system, Kallikrein-Kininogen system, Haemopoiesis Blood groups: Rh factor, ABO and MN. 1. Preparation of temporary mounts: Squamous epithelium, Striated muscle fibres and nerve cells 2. Preparation of permanent slide of



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			liver/skeletal muscle/any other tissue of given specimen. 3. Determination of blood groups 4. Preparation of blood smear from blood cells. 5. Estimation of haemoglobin using Sahli's haemoglobinometer 6. Demonstration of the unconditioned reflex action (Deep tendon reflex such as knee jerk reflex) 7. Anatomical model of eye . 8. Anatomical model of ear . 9. Study of permanent slides of various Mammalian tissues 10. Study of slides of endocrine glands 11. Identification of histological slides of lymphoid tissue 12. Preparation of permanent slide of any five mammalian (goat/chick) tissues by microtomy
Comparative Anatomy of Vertebrates	CUTM1504	2017	Employability - 1. Temporary mount of external scales in fishes (cycloid, placoid, ganoid, ctenoid) 2. Study of disarticulated skeleton of Amphibia/Reptilia/Aves/Mammal 3. Demonstration of Chick to study arterial system
Evolutionary Biology	CUTM1510	2017	Employability - Phylogenetic trees , Multiple sequence alignment , constructions of phylogenetic trees
Molecular Biology	CUTM1507	2017	Employability - 1. Isolation and spectrophotometric estimation of DNA 2. Isolation and spectrophotometric estimation of RNA 3. Visualization of DNA/RNA using agarose gel electrophoresis 4. Preparation of equilibrated phenol 5. Quantitative estimation of RNA using Orcinol reaction 6. Demonstration of DNA & RNA by MGP 7. Preparation of liquid culture medium (LB) and



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			<p>raise culture of E. coli</p> <p>8. Preparation of solid agarose medium (LB) and raise colonies of E. coli</p> <p>9. Demonstration of DNA replication, transcription and translation using Photograph, slides and/or videos.</p> <p>10. Application of in silico tools (BIOVIA's DISCOVERY STUDIO) to study the three dimensional structure of proteins.</p>
Fundamentals of Genetics	ASPG1101	2018	Application of genetic principles in plant breeding:employability& skill dev.
Fundamentals of Soil Science	ASAC1101	2018	Understanding the theory of soil science and its characteristics :employibility.
Fundamentals of Horticulture	ASHO1101	2018	Understanding the fundamentals of various aspects of horticulture crops :employibility
Fundamentals of Plant Pathology	ASPP1101	2018	Understanding the fundamentals of plant disease causing organisms and their management: employibility
Rural Sociology & Educational Psychology	ASEE1102	2018	Learning the basic concepts of rural sociology and psychology for its application in ag.extension : employibility.
Soil and Water Conservation Engineering	ASAE1101	2018	Understanding about the principles of soil water conservation:employibility
NSS/NCC/Physical Education & Yoga Practices	ASPE1101	2018	Understanding and application of different yoga asanas and pranayama techniques for physical and mental well-being :Skill & Employability
Comprehension & Communication Skills in English	ASEL1101/	2018	Develop knowledge of english communication through presentation, extempore and GD: Skill & Employability
Irrigation water management	ASAG1206	2018	Understandsanding the practices of water management and its application in irrigation management : skill dev.& employibility
Fundamentals of Entomology –I (Insect Morphology and Taxonomy)	ASEN1201	2018	Understanding the basic principles of morphology of different plant disease causing insects: Employability



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Fundamentals of Agricultural Extension Education	ASEE1201	2018	Learning about the latest extension methods i.e. audio-visual aids, field demonstration: Employability
Farm Machinery and Power	ASAE1202	2018	Learning about latest machines used in crop production: employability
Crop Production Technology – I (Cereals, millets and pulses) Kharif crops	ASAG2103	2018	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability
Fundamentals of Plant Breeding	ASPG2103	2018	Understand the basic methods of plant breeding i.e. emasculation and crossing : Skill & Employability
Fundamentals of Entomology- II (Insect ecology and concepts of IPM)	ASEN2102	2018	Understanding the basic principles of morphology of different plant disease causing insects: Employability
Weed management	ASAG2105	2018	Identification of Weeds and its management in different crops : employability
Agricultural Informatics	ASAI2101	2018	To disseminate,capture,access information to achieve sustainable use of agricultural resources : employment.
Communication skills and personality development	ASEE2104	2018	Develop knowledge of english communication through presentation, extempore and GD: Skill & Employability
Crop Production Technology –II (Oil seeds, fiber, sugar, tobacco, and fodder Crops) Rabi crops	ASAG2204	2018	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability
Production Technology for Ornamental Crops, MAP and Landscaping	ASHO2204	2018	To gain expertise in production of ornamental crops and landscaping : ,employability & skill development
Renewable Energy and Green Technology	ASAE2203	2018	Understanding the principles of renewable energy for agriculture practice: employability



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Manures, Fertilizers and Soil Fertility Management	ASAC2202	2018	Understanding the manures and fertilizer and its application:skill and employability.
Fundamentals of Plant Biotechnology	ASPB2201	2018	Understanding and learning about the methods of plant biotechnology i.e. DNA Microinjection and Short-gun method: Employability
Rain-fed Agriculture & Watershed Management	ASAG2211	2018	Understanding the methods of rainwater harvesting and groundwater rechargement :employability
Principles of seed technology	ASPG2202	2018	Gaining knowledge in seed storage, certification and marketing ways: employment
Diseases of Field and Horticultural Crops and their Management –I	ASPP2202	2018	Identification and management of diseases of field crops :employability
Problematic Soils and their Management	ASAC3103	2018	Understanding fertility and pH levels of soil to manage problematic soils :skill dev and employability
Pests of field Crops and Stored Grain and their Management	ASEN3103	2018	Identification and management of store pest and management of field crops :employability
Diseases of Field and Horticultural Crops and their Management-II	ASPP3103	2018	Identification and management of diseases of horticultural crops :employability
Crop Improvement-I (Cereals,millets,pulses and oil seeds etc)(Kharif crops)	ASPG3104	2018	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability
Principles of food science and nutrition	ASFS3101	2018	Identification of microbes in food processing and packaging: employability
Geoinformatics and Nano-technology for Precision Farming	ASAG3110	2018	To gain knowledge in nano materials and geoinformatics applicaions i.e. moonsoon tracking system, drainage networks for precision farming:Employability, skill and enterprenureship
Practical Crop Production – I (Kharif crops)	ASAG3108	2018	To gain expertise in production of commercial kharif crops: employability



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Farming System & Organic farming for Sustainable Agriculture	ASAG3207	2018	To gain expertise in organic farming practice: employability, skill development and Entrepreneurship
Practical crop production II (Rabi crops)	ASAG3209	2018	To gain expertise in commercial rabi crop production: employability
Post-harvest Management and Value Addition of Fruits and Vegetables	ASHO3205	2018	Understanding different practices with relation to Value addition of fruits and vegetables and their packaging and storage :Employability & skill development
Pests of horticultural crops and their management and Beneficial Insects	ASEN3204	2018	Identification and management of crop & stored grain pests :employability & skill dev
Crop Improvement-II (fibre, sugar, starches, narcotics, Vegetables, fruits, and flowers)	ASPG3205	2018	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability
Principles of Integrated Pest and Disease Management (50% Entomology and 50% Pathology)	ASPP3204	2018	Identification of insects pests of different crops and its integrated pest management- Entrepreneurship& skill dev,employability
Protected cultivation and post harvest technologies	ASAE3204	2018	Understanding different practices with relation to Value addition of fruits and vegetables and their packaging and storage :Employability & skill development
Intellectual Property Rights	ASIP3201	2018	Understanding the process to file patent and register for copyrights:skill and employability.
Farm Management	ASEC3204	2018	Expertise to manage agriculture farm : Employability
Commercial Plant Breeding	ASFE2204	2018	Understanding of commercial plant breeding techniques i.e. emasculation, crossing and storage practices :Employability & skill development



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Micro propagation Technologies	ASFE2208	2018	Gaining knowledge in different micro irrigation techniques i.e. sprinkler and drip irrigation: Skill & Employability
Hi-tech. Horticulture	ASFE2202	2018	Gaining knowledge in different techniques i.e. vertical farming and hydroponics of hitech horticulture: skill & employability
Remote Sensing & GIS Applications	ASFE2209	2018	Understanding the applications of remote sensing i.e. analyzing the condition of rural roads and detecting land use: Employability, Entrepreneurship and Skill development
Climate Smart Agriculture	ASFE2210	2018	Gaining knowledge on the usage of drones in agriculture for crop improvement: Employability, Entrepreneurship and Skill development
Principles of Aquaculture	ASFE2213	2018	Understanding the various methods i.e. breeding, raising and harvesting in fish production :Employability, Entrepreneurship and Skill development
RAWEP	AGRW4101	2018	To impart diagnostic and remedial practical training and skills in crop production/horticulture/plant protection through work experience: employability, entrepreneurship and skill development.
AELP	AGEL4201	2018	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship, skill dev. and employability.
Certification and Inspection Systems in Organic Farming in India	CUOF2231	2020	To understand about the quality and safety standards of organic goods-Employment
Organic production-field crops	CUOF2233	2020	To understand about the quality and safety standards of organic field crops-Employment



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Organic production-horticultural crops	CUOF2234	2020	To understand about the quality and safety standards of organic horticultural crops- Employment
AELP Project	CUOF2236	2020	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship, skill dev. and employability.
Seed certification	CUSP2262	2020	Understanding the process of certification of new seed varieties: Employability
AELP Project	CUSP2266	2020	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship, skill dev. and employability.
Computational Biology	CUGE2270	2020	Employment: Molecular modelling of Biomecules using bioinformatics tools
Genetic Engineering and its applications	CUGE2271	2020	Employment: Production of genetically modified varieties using advanced molecular techniques
Molecular Genomics	CUGE2273	2020	Understanding the principles of molecular biology. Production of genetically modified varieties using advanced molecular techniques Employment:
Techniques in Molecular Biology	CUGE2275	2020	Employment: Production of genetically modified varieties using advanced molecular techniques
AELP Project	CUGE2276	2020	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship, skill dev. and employability.
Introduction to Nutraceutical	CUNU2280	2020	Employment: Production of nutritional enriched foods
Functional Food	CUNU2281	2020	Employment: Production of nutritional enriched foods
Nutrigenetics	CUNU2282	2020	Employment: Production of nutritional enriched foods



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Development of Personalized Food and Medicine	CUNU2283	2020	Employment:Production of nutritional enriched foods
AELP Project	CUNU2286	2020	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship,skill dev.and employability.
AELP Project/Industrial internship	CUAG2296	2020	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship,skill dev.and employability.
AELP Project	CUPH2306	2020	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship,skill dev.and employability.
Agri Food Markets and Value Chain Analysis	CUAB2320	2020	Employment:bring agricultural product from production in the field to final consumption, wherein at each stage value is added to the product
Agri Warehouse Management	CUAB2324	2020	To gain knowledge on food grain storage and its management at ware house- Employability & skill
Sales and Distribution of Agrifood Products (Internship at LMDC)	CUAB2325	2020	To gain knowledge on sales and distribution of agri food products-Entrepreneurship and employability.
Storage Entomology	CUFS2330	2020	Employment:Post harvest storage of fruits and vegetables with management practices
Seed pathology	CUFS2331	2020	Skill and employment: Future storage of various seeds under protected condition.
AELP Project	CUFS2336	2020	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship,skill dev.and employability.



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Quality Assurance in Dairy Industry	CUDP2242	2020	Employment:Quality check of milk based products under govt. norms
Project/Industrial internship	CUDP2246	2020	Employability and skill.
Quality assurance, management and certification	CUFT2352	2020	Skill and employment:involves quality assurance of fish and fish based products
Fish and shellfish waste management	CUFT2353	2020	Skill and Employability:To gain knowledge on various fish and shell fish byproducts,and their waste utilization.
Microbiological analysis of fish and fisheries products	CUFT2354	2020	Skill and employability:To gain knowledge on sampling,processing and detection of microbes for safety and quality of sea food products.
Biochemical analysis of fish and fisheries product	CUFT2355	2020	Skill and employment:To familiarize with different fish physiochemical quality estimation parameters.
Preparation of different fisheries products and quality assessment	CUFT2356	2020	Skill and emplyment:To teach scientific techniques of ish processing and value addition as well as quality of processed products.
Health Management in Aquaculture	CUAQ2254	2020	Skill, employability & Enterprenureship- To learn the procedures of health mangement in aquaculture
Principles and practices of water management	MAAG 1103*	2017	Skill development: The students can learn about judicious water management using different efficient technologies which would further lay emphasis on job opportunities as well as they can make themselves self sufficient by serving as entrepreneurs to serve the farming community
Cropping systems and sustainable agriculture	MAAG 1206*	2017	Skill development: The students acquire knowledge about different cropping systems under various climatic situations and they can make themselves self employed as sucessful entrepreneurs
Intellectual property and its management in agriculture	MAIP 1201	2017	Employability and Skill development: students get an overall idea of IPR and their applications towards the protection of property rights



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Agricultural research, research ethics and rural development programmes	MAAR2101	2017	Employability and Skill development: Acquire knowledge for research ethics and government policies.
Development perspectives of extension education	MAEX1101 *	2017	Employability: Some concepts in this course and the rural development programs can help in getting employment
Gender sensitization for development	MAEX1105 *	2017	Research and employability: provide them an opportunity to work in sectors relating to women empowerment
Statistical methods for social sciences	MAST 1203	2017	Skill: Students can learn the usage of different statistical tools that in turn would provide them a scope for employment
Participatory methods for technology development and transfer	MAEX1104	2017	Skill and employability: students can learn the basic concepts of participatory techniques and thereby help in technology transfer from lab to land
Fish Food Organisms	FSAQ2109	2017	Learn and practice the nutritional requirements of fish/shellfish larvae and knowledge on mass culture and enrichment of live food organisms. Employability and Skill development
Freezing Technology	FSPT2103	2017	Understanding the different types of low temperature preservation, handling, storage of different type of fish and fishery products to minimize the spoilage along with post harvest loss. Employability and Skill development
Genetics and Breeding	FSAQ2111	2017	Gain knowledge on genetic basis of inheritance and breeding plans for commercially important fishes. Employability, Entrepreneurship and Skill development
Fish Immunology	FSHM2106	2017	Study the types of immunity, antigen-antibody interactions and learn the Serological methods in disease diagnosis. Employability and Skill development
Fisheries Economics	FSEE2102	2017	Learning the interface between economics and effective management decisions for fisheries



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			business firm. Employability and Skill development
Coastal Aquaculture and Mariculture	FSAQ2204	2017	To gain knowledge in establishing and managing different fish/shellfish farming systems in coastal waters. Employability and skill development
Fish Nutrition and Feed Technology	FSAQ2208	2017	Practical knowledge of feed formulation and different feed processing techniques and prepare feed based on the nutritional requirements of fish/shell fish. Employability and skill development
Fish and Shellfish Pathology	FSHM2201	2017	Study fish and shellfish pathogens, their control measures and treatments. Employability and Skill development.
Shellfish Hatchery Management	FSAQ2206	2017	Practical skills of seed production and hatchery management of commercially important crustaceans and molluscs and can setup his/her own hatchery. Employability, Entrepreneurship and Skill development.
Communication Skills and Personality Development	FSEE2208	2017	Students will improve interpersonal skills, active listening and responding skills, communication into everyday practice, teamwork and group discussions skills. Employability and Skill development.
Intensive Fish Rearing	CUAQ 2250	2020	To enable students intensive production of commercially important fishes in different aquaculture production systems at fish rearing unit and ponds-Skill development and employability
Ornamental fish farming	CUAQ 2251	2020	Aim to Familiar students with ornamental fish culture and aquarium management- Self employability and Skill development
Biofloc Aquaculture	CUAQ 2252	2020	To maintaining biofloc culture system with latest technological advancements-Self employability and Skill development
Health Management in aquaculture	CUAQ 2254	2020	To enable students fish health managements Clinical signs, symptoms and treatment for



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			different diseases- Skill Development and Self employability
Feed Management in Aquaculture	CUAQ 2255	2020	To make practice and familiar with Identification of Suitable locally available feed ingredients and Formulation of high quality fish feed- Skill Development and Self employment.
Instrumental Techniques	CUTM1635	2020	Skill & Employability : Student will perform analysis of various samples by using instruments such as UV, IR, TLC etc.
Crime Scene Management and Forensic Physics	CUTM1636	2020	Skill & Employability : Skill to reconstruct crime scene. Student process the simulated crime scene. Student perform examination of various evidences such as soil, glass, paint, foot print and lip prints.
Finger prints and Questioned Documents	CUTM1637	2020	Skill, Employability & Entrepreneurship, : Student develops latent fingerprints and lift them for comparison & identification purpose.Gains knowledge about various Aspects of AFIS. Student also detects Signature, hand writing & document forgery, examines counterfeit currency, passport and seal impressions. Gains knowledge about instrumental techniques like ESDA, VSC, Stereo Microscope.
Quality Management, Narcotic Drugs, Explosives, and Forensic Chemistry	CUTM1639	2020	Skill & Employability : Student learn and perform examination of NDPS drugs and controlled substances , low explosives, Fire debris, Petroleum Products, Beverages, Bribe Trap Cases, Adulterated food, Fibres.
Forensic Serology and DNA Profiling	CUTM1641	2020	Skill & Employability : Students perform experiments to detect the presence of blood, semen, saliva and other body fluids , Performs DNA extraction,
Forensic Toxicology and Pharmacology	CUTM1642	2020	Skill & Employability, : Student isolate and Extract poisons\ Drugs from samples and determines the presence of various poisons. Also gains knowledge about interpretation of toxicological finding and preparation of reports.



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Forensic Ballistics and Computer Forensics	CUTM1643	2020	Skill & Employability : Student gains knowledge about various aspects of ballistics, characteristics of ammunitions and Computer Forensics. Student also perform instrumental analysis of GSR & examines bullets and cartridge cases to determine the source of origin.
Pharmacology and Pharmaceutical Drug Analysis	CUTM1647	2020	Employability : Students do qualitative and quantative analysis of Phramaceutical drug by various chemical and instrumental techniques.
Concepts of Toxicology	CUTM1648	2020	Skill & Employability, : Students do analysis of various poison such as metallic poison, pesticides, plant poisons etc. and gains knowledge about interpretation of toxicological finding and preparation of reports.
Modern and Applied Analytical Forensic Chemistry	CUTM1649	2020	Skill & Employability : Student performs analysis of Various Cases in Forensic Chemistry, Validation of new methods & Accreditation in FSL's, Analysis of NDPS, Explosives, Fire, Petroluem Products, Beverages, Bribe Trap Cases, Adultrated food, Fibres & Exmination of Forensic Chemicals.
Molecular Biology and Genetics	CUTM1644	2020	Skill & Employability : Student performs serological analysis, quantification of DNA, Extraction of DNA from different sources. Also gains knowledge about genotyping and result preparation.
Biotechnology in Pharmaceutical Sciences	CUTM1645	2020	Skill & Employability, : Student studies about recombinant DNA Technology, Quality Assurance and Quality control, Studying Bioinformatics, intelectual property rights. Student performs isolation of bacteria, genomic an plasmid DNA & Western blotting
Environmental Biotechnology	CUTM1646	2020	Skill & Employability, : Student performs practicals to detect pollutants in samples & estimation of BOD. Student gains knowledge about measurement of pollutants with the help of biosensor and biomarker, Measurement of



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			Biomagnification, Waste water management and Treatment.
Modern Trends in Fingerprint Sciences	CUTM1653	2020	Skill, Employability & Entrepreneurship, : Student Classifies, develop, Identifies and Compares fingerprint (latent and patent prints), performs experiments to identify lip prints. Gains knowledge about various Aspects of AFIS and use of nanoparticles in fingerprint development.
Questioned Document and Forensic Accounting	CUTM1654	2020	Skill, Employability, Entrepreneurship, : Student gains knowledge about instrumental techniques like ESDA, VSC, Stereo Microscope. Also performs detection of forgeries & decipherment of Charred Documents, Secret Writing and indented, Examination of aging of paper, Basics of Forensic Accounting.
Forensic Photography and Biometric Traits	CUTM1655	2020	Skill & Employability : Student will gain knowledge about Basics of crime scene photography and laboratory photography. Students take photographs of simulated crime scene and enhances the images using photo shop. Student also gains knowledge about techniques of Biometric recognition (hand fingerprint, facial iris and retina.
Project	CUTM1658	2020	Skill, Employability & Entrepreneurship, : Student develops the skill to undertake research. Student carries out project by getting hands on training on various instruments.
Principles of Information Security	CUTM1618	2020	Employability-Focus on the CIA models, tools, and techniques for enforcement of security
Digital Forensics	CUTM1619	2020	Employability -Focus on analysis and assessment of risk assessment process & control
Computer Networks	CUTM1620	2020	Skill Development , Employability-Learning about computer network & network security
Cyber Crime & Investigations	CUTM1621	2020	Skill Development,Employability-Learning about Analytical Skills,Comprehension of Cybersecurity Fundamentals and good practices for digital



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			evidence and digital forensics: Skill Development
Intellectual Property Rights	CUTM1622	2020	Employability-Making the students aware of their rights for the protection of their invention done in their project work
Number theory & Cryptography	CUTM1623	2020	Skill Development, Employability- implement and analyse algorithms for integer factorization and primality testing: Skill Development
Advanced Information Security	CUTM1624	2020	Skill Development, Employability-Focus on the CIA models, tools, and techniques for enforcement of security
Cyber Forensics	CUTM1625	2020	Skill Development, Employability-Focus on analysis and assessment of risk assessment process & control : Skill Development, Employability
System and Network Security	CUTM1626	2020	Skill Development, Employability-Gaining practical experience in installation, monitoring, and troubleshooting of current LAN systems
Penetration Testing & Vulnerability Assessment	CUTM1631	2020	Employability-uncover vulnerabilities in a network and recommend the appropriate mitigation or remediation to reduce or remove the risks Employability.
Digital Frauds	CUTM1632	2020	Employability-Learning of collecting, investigating, preserving, and presenting evidence of cybercrime left in digital storage devices Employability.
Project/Dissertation	CUTM1633	2020	Employability-Research , Development methodology
Forensic Dermatoglyphics	CUTM1663	2020	Employability & skill : Student locates, develops, lifts and compares fingerprint for identification. Also performs physical and chemical techniques for developing latent fingerprints, collect and examines lipprints, footprints.
Technological methods in forensic sciences	CUTM1664	2020	Employability & skill : Student uses chromatographic methods to separate various samples, gains hands on experience of various instruments



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Criminalistics	CUTM1665	2020	Employability & skill : Students visit the simulated crime scene and documents the crime scene.Gains knowledge about the legal importance of chain of custody, the tools and techniques for analysis of different types of crime scene evidence
Introduction to biometry	CUTM1675	2020	Skill & Employability : Student learns the basics of biometry, classification and importance of behavioural biometry. Student identify individual characteristics of Fingerprints.
Forensic chemistry	CUTM1666	2020	Employability & skill : Student analyses petroleum products in fire debris, adulterants in petroleum products. Gains knowlege about the method of searching, collecting and preserving and analyzing arson evidence, significance of bomb scene management, techniques of locating hidden explosive
Questioned documents	CUTM1667	2020	Employability, Entrepreneurship & skill : Student examines the authenticity of signature, handwriting and other documents.Also gains knowledge of working principles of ESDA, VSC, Projectina nirvis, stereo microscope.
Forensic biology	CUTM1668	2020	Employability & skill : Performs analysis of biological and serological evidence such as blood, urine, semen etc. in crime investigations, Gains knowledge about wild life forensics in conserving natural resources, importance of forensic entomology in death investigations.
Handwriting identification and recognition	CUTM1676	2020	Skill & Employability : Student learns importance features in handwriting identification, basics of handwriting characteristics. Student analyses handwriting samples for presence of forgery and various other security documents.
Analytical Techniques	CUTM1709	2020	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership



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Biological Chemistry	CUTM1710	2020	demonstrate an understanding of fundamental biochemical principles, such as the structure/function of metabolic pathways, and the regulation of biological/biochemical processes: Employability
Clinical Hematology	CUTM1712	2020	Differentiate various hematological procedures and the use of basic equipment essential to working in a Hematology Laboratory: Skill dev. & Employability & Enterpreunership
Clinical Pathology	CUTM1715	2020	Pathological investigations of urine, stool and other biological specimen: Employability/ Enterpreunership/ Skill
Cell and Molecular Biology	CUTM1714	2020	understand the mechanism of gene expression and protein synthesis; understand the use of several molecular techniques in disease diagnosis: Employability
Clinical Biochemistry	CUTM1718	2020	Understanding of principle of biochemical Clinical biochemistry tests; to study about diseases related to biochemical and hormone imbalance in human body: Employability/ Enterpreunership/ Skill
Histology	CUTM1720	2020	Special staining procedures & handling & testing of various cytological specimens: Employability/ Skill dev.
General Microbiology	CUTM1711	2020	practical skills in microscopy and their handling techniques and staining procedures: Employability/ Skill
Systemic Bacteriology	CUTM1713	2020	Conceptual basis for understanding pathogenic microorganisms and the mechanisms by which they cause disease in the human body: Employability/ Skill
Applied microbiology	CUTM1717	2020	Microbiology in diagnostics, hospitals and community: Employability/ Enterpreunership/ Skill
Medical Parasitology and Mycology	CUTM1716	2020	Identification of pathogenic parasite and fungus in disease diagnosis and treatment: Skill dev./ Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Immunology & Virology	CUTM1719	2020	Immunological investigations and viral diagnosis: Skill dev. & Employability
Clinical Bacteriology	CUTM1722	2020	Diagnosis of bacteria from infective regions of the body: Skill dev. & Employability
Mini Project	CUTM1754	2020	Research paper publication/ case study/ clinical study/ community service/ survey: Skill dev and Employability
Project	CUTM1756	2020	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
Internship	CUTM1755	2020	Dealing with patient, analysis and interpretation of diseases: Skill dev. & Employability & Enterpreunership
Medical Laboratory Technology	CUTM1723	2020	Quality management in diagnostic division: Employability/ Enterpreunership
Blood Banking	CUTM1725	2020	Perform phlebotomy and related donor room activity in blood bank: Skill dev and Employability
Health Programme in India	CUTM1726	2020	Perform as a health care team manager: Employability/ Enterpreunership
Medical Microbiology	CUTM1724	2020	Demonstrate practical skills in the use of tools, technologies and methods common to microbiology, and apply the scientific method and hypothesis testing in the design and execution of experiments: Skill dev. & Employability
Immunology & Parasitology	CUTM1728	2020	To diagnose the immunological investigations and parasites: Skill dev. & Employability
Advanced Hematology	CUTM1727	2020	Compare and contrast hematology values under normal and abnormal conditions: Skill dev. & Employability & Enterpreunership
General Anatomy	CUTM1757	2020	Comprehend the normal disposition, inter-relationships, gross, functional and applied anatomy of various structures in the human body: Employability
General Physiology	CUTM1758	2020	Know the physiological principles underlying pathogenesis of disease: Employability



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Biochemistry	CUTM1732	2020	Understanding the significance of biomolecules in metabolic activities and detection of abnormal range of these molecules from patient sample: Employability
Cell Biology	CUTM1729	2020	Understand cell signaling and how it regulates cellular functions, also how its dis- regulation leads to cancer and other diseases: Employability
Basic computer and Information Science	CUTM1742	2020	Understand the difference between an operating system and an application program, and what each is used for in a computer: Employability/ Skill
Introduction to Quality and Patient safety	CUTM1753	2020	Understand policy related to managing lab and infection control:Employability/ Skill/ Enterpreunership
Microbiology	CUTM1733	2020	Concept of the pathogenecity and culturing of microorganisms: Employability/ Skill/ Enterpreunership
Medical Laboratory Management	CUTM1751	2020	Recognize the role of clinical laboratory scientist in the assurance of quality health care:Employability, Skill Dev, Enterpreunership
Medical Instrumentation and Techniques	CUTM1730	2020	handling instruments required in Medical Laboratory set up: Skill dev. & Employability & Enterpreunership
Immunology	CUTM1736	2020	Understanding the concept of Innate & adaptive immune system; performing serological analysis: Skill dev. & Employability & Enterpreunership
Molecular Biology	CUTM1737	2020	Basic techniques applicable in Molecular Biology: Skill dev/ Employability
Hematology	CUTM1731	2020	Differentiate various laboratory test findings with their associated clinical conditions: Employability/ Enterpreunership/ Skill dev
Systemic Virology & Mycology	CUTM1735	2020	Understanding pathogenic microorganisms and the mechanisms by which they cause disease in the human body: Employability/ Skill



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Analytical Biochemistry	CUTM1738	2020	Learning various tests carried out for biochemical analysis & Hormone investigations: Skill dev. & Employability & Enterpreunership
Public Heath Microbiology	CUTM1740	2020	Understanding the role of microbiologist in public health: Employability
Pharmaceutical Microbiology	CUTM1739	2020	understanding of different types of disinfectants/antiseptics and their uses, evaluation of their bactericidal and bacteriostatic action: Employability/ Enterpreunership
Industrial Microbiology	CUTM1741	2020	Enhances analytic ability of various physical parameters which affect production of industrial products by the microorganisms and the safety aspects of the production and use of these products: Employability/ Enterpreunership
Epidemiology	CUTM1746	2020	Apply the terminology of the Epidemiologic Triad to an infectious disease: Employability
Diagnostic Bacteriology	CUTM1747	2020	Lab diagnosis for Enteric infection, Respiratory tract Infection, Oral & Stomach infection, Urinary tract infections: Employability/ Skill
Diagnostic Mycology	CUTM1745	2020	Understanding pathogenic fungi and the mechanisms by which they cause disease in the human body: Skill dev and Employability
Diagnostic Virology	CUTM1743	2020	Collection, transportation, processing and storage of Virus: Skill dev and Employability
Diagnostic Parasitology	CUTM1744	2020	Collectionand identification of Parasites: Skill dev and Employability
Applied Hematology	CUTM1749	2020	Understanding of Haemopoietic disorders and their laboratory diagnosis : Skill dev. & Employability & Enterpreunership
Immunopathology	CUTM1750	2020	organization and functioning of the immune system, their diagnostic tests described on immunological techniques: Skill dev and Employability
Parasitology	CUTM1748	2020	Identification of pathogenic parasite in disease diagnosis and treatment: Skill dev. And Employability



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Mycology & Virology	CUTM1752	2020	Plan and execute investigations relating to fungi to virus: Skill dev and Employability
BIOLOGY	CUTM1760	2020	understand how these cellular components are used to generate and utilize energy in cells: Employability
BASIC BIOCHEMISTRY	CUTM1759	2020	The students become conversant with the Fundamentals of Biochemistry which can be applied in clinical diagnosis of the metabolic disorders: Employability
RADIOGRAPHIC TECHNIQUE -1	CUTM1767	2020	Position the tube; give instructions to the patient; assist radiologist in various procedures: Employability / Skill
BASIC OF MAGNETIC RESONANCE IMAGING	CUTM1776	2020	Understand patient positioning during the MRI procedure of different organ system to obtain well defined images for proper diagnosis of MRI films and images: Employability/ Skill
OCULAR ANATOMY	CUTM1782	2020	Comprehend the basic structure and connections between the various parts of the centra nervous system and the eye so as to understand the neural connections and distribution: Employability
GEOMETRIC OPTICS	CUTM1781	2020	predict the basic properties of the images formed on the retina by the optics of the eye: Employability/ Entrepreneurship
OCULAR PHYSIOLOGY	CUTM1783	2020	List out the physiological principles underlying pathogenesis and treatment of diseases of the eye: Employability
INTRODUCTION TO OPTOMETRY	CUTM1785	2020	Understand the purpose of different instruments used in optometry: Employability
PHYSICAL OPTICS	CUTM1784	2020	Predict the distribution of light under various conditions: Employability/ Skill
VISUAL OPTICS I	CUTM1786	2020	Predict the basic properties of the images formed on the retina by the optics of the eye: Employability/ Skill
OCULAR DISEASES I	CUTM1788	2020	Diagnostic approach and management of the ocular diseases: Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
OCULAR MICROBIOLOGY AND PATHOLOGY	CUTM1789	2020	Knowledge of pathological processes utilized in the investigation, management and prevention of disease: Employability
CLINICAL EXAMINATION OF VISUAL SYSTEM LAB	CUTM1790	2020	Knowledge on the purpose of each test, its indications and contraindications and will be able to perform various clinical tests: Enterpreunership/ Employability/ Skill
VISUAL OPTICS II	CUTM1791	2020	Theoretical knowledge and practical skill on visual acuity measurement, objective and subjective clinical refraction: Employability/ Skill
OPTOMETRIC OPTICS II & DISPENSING OPTICS	CUTM1792	2020	Facial measurements - Interpupillary distance measurement and measuring heights (single vision, multifocal, progressives); Lens verification and axis marking and fitting of all lens types; Final checking of finished spectacle with frame adjustments: Employability/ Enterpreunership/ Skill
OCULAR DISEASES II	CUTM1794	2020	Diagnostic approach, and management of the ocular diseases: Employability
CONTACT LENS- I	CUTM1793	2020	Ability to finalize the CL design for various kinds of patients and Recognize various types of fitting; Ability to fit and Explain all the procedures of Contact Lens fitting to patient: Employability
CONTACT LENSES II	CUTM1795	2020	Special cases CL fitting; Identify and manage the adverse effects of contact lens: Employability/ Skill
BINOCULAR VISION I	CUTM1796	2020	Depth perception; Binocular optical defects; Basic binocular evaluation: Employability/ Skill
LOW VISION AND REHABILITATION	CUTM1797	2020	Optical, Non-Optical, Electronic, and Assistive devices; Training for Low Vision subjects with Low vision devices; Referrals and follow-up: Employability/ Skill
BASIC & OCULAR PHARMACOLOGY	CUTM1798	2020	Commonly used ocular drugs, mechanism, indications, contraindications, drug dosage and adverse effects: Employability/ Skill
BINOCULAR VISION II	CUTM1799	2020	Identify non strabismic anomalies related to accommodation & convergence: Employability



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PEDIATRIC & GERIATRIC OPTOMETRY	CUTM1800	2020	Be able to dispense spectacles with proper instructions; Adequately gained knowledge on common ocular diseases: Employability/ Skill
SYSTEMIC DISEASES AND EYE	CUTM1801	2020	Ocular findings of the systemic conditions: Employability
OCCUPATIONAL OPTOMETRY	CUTM1802	2020	To be able to prescribe suitable corrective lenses and eye protective wear: Employability/ Enterpreunership/ Skill
PUBLIC HEALTH & COMMUNITY OPTOMETRY	CUTM1804	2020	Organize health education programmes in the community; Vision screening for various eye diseases in the community and for different age groups: Employability/ Skill
OPTOMETRIC INSTRUMENTS	CUTM1803	2020	Gain theoretical knowledge and basic practical skill in handling the advanced instruments: Employability/ Enterpreunership/ Skill
PROJECT	CUTM1809	2020	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
INTERNSHIP	CUTM1810	2020	Dealing with patient, analysis and interpretation of diseases: Skill dev. & Employability & Enterpreunership
Human Anatomy and Physiology I – Theory	BPHT1101	2017	Skill-Employability- Hand on practice on various clinical aspects of human physiology and also able to perform different types of experiments
Pharmaceutical Analysis I – Theory	BPHT1102	2017	Skill-Employability-Use the techniques, skills, and modern pharmaceutical instruments and tools necessary for pharmacy profession
Pharmaceutics I – Theory	BPHT1103	2017	Skill- Employability- Entrepreneurship - Understand the impact of pharmaceutical solutions in a global, economic, environmental, and societal context
Pharmaceutical Inorganic Chemistry – Theory	BPHT1104	2017	Skill- Employability- Students can prepare various Pharmaceutical dosage form
Remedial Biology – Theory*	BPHT1106	2017	Employability- Apply knowledge of basic science and pharmacy



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Remedial Mathematics – Theory*	BPHT1107	2017	Employability- Apply knowledge of basic science and pharmacy
Pharmaceutical Analysis I – Practical	BPHL1102	2017	Skill- Employability- Students can assay ,preparaed and standarized various Heavy metals and Chemicals
Pharmaceutics I – Practical	BPHL1103	2017	Skill- Employability- Students can prepare various Pharmaceutical dosage form
Human Anatomy and Physiology II – Theory	BPHT1201	2017	Skill-Employability- Hand on practice on various clinical aspects of human physiology and also able to perform different types of experiments
Pharmaceutical Organic Chemistry I – Theory	BPHT1202	2017	Skill-Employability- synthesis, characterization of synthetic formulation and solve complex pharmaceutical problems in research and development sector.
Biochemistry – Theory	BPHT1203	2017	Employability- Apply knowledgeand concept of basic science and pharmacy and also able to understand all concept regarding biochemical organization.
Pathophysiology – Theory	BPHT1204	2017	Skill-Employability-student get to know about various communicable diseases and pathophysiology along with all thetechniques for screening test .
Computer Applications in Pharmacy – Theory *	BPHT1205	2017	Skill-Employability-Buiding compitancy in programme coding, various softwares, simulation techniques, statistical application etc.
Environmental sciences – Theory *	BPHT1206	2017	Employability- student get to know about basic knowledge about the environment and its allied problems
Pharmaceutical Organic Chemistry II – Theory	BPHT2101	2017	Skill-Employability- synthesis, characterization of synthetic formulation and solve complex pharmaceutical problems in research and development sector.
Physical Pharmaceutics I – Theory	BPHT2102	2017	Skill- Employability- formulate and solve complex pharmaceutical problems in formulation development



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Pharmaceutical Microbiology – Theory	BPHT2103	2017	Skill- Employability- Carried out sterility testing, microbiological standardization of Pharmaceuticals and perform cell culture technology and its applications in pharmaceutical industries
Pharmaceutical Engineering – Theory	BPHT2104	2017	Skill -Employability- Enterprenurship- students can able to unterstand and perform unit operations, material handling techniques, screening test and plant lay out design for optimum use of resources used in Pharmaceutical industries
Pharmaceutical Organic Chemistry III– Theory	BPHT2201	2017	Skill-Employability- synthesis, characterization of synthetic formulation and solve complex pharmaceutical problems in research and development sector.
Medicinal Chemistry I – Theory	BPHT2202	2017	Employability students get to know about the chemistry, pharmacological activity, metabolic pathways, adverse effect, therapeutic value, classification, synthesis, mechanism of action along with structures,structure activity relationship of various drug molecules.
Physical Pharmaceutics II – Theory	BPHT2203	2017	Skill- Employability- formulate and solve complex pharmaceutical problems in formulation development
Pharmacology I – Theory	BPHT2204	2017	skill-Employability- student get to know about correlation of pharmacology with other bio medical sciences, mechanism of action, drug interaction, design and conduct pharmacological screening experiments.
Medicinal Chemistry II – Theory	BPHT3101	2017	Employability students get to know about the chemistry, pharmacological activity, metabolic pathways, adverse effect, therapeutic value, classification, synthesis, mechanism of action along with structures,structure activity relationship of various drug molecules.



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Industrial Pharmacy– I Theory	BPHT3102	2017	Skill-Employability-Entrepreneurship- students get to design and develop process to meet desired needs within realistic constraints to formulate and solve complex pharmaceutical problems.
Pharmacology II – Theory	BPHT3103	2017	skill-Employability- student get to know about correlation of pharmacology with other bio medical sciences, mechanism of action, drug interaction, design and conduct pharmacological screening experiments.
Pharmaceutical Jurisprudence – Theory	BPHT3105	2017	Employability- students can able to apply knowledge in the area of pharmaceutical legislation, rules, laws, ethics, acts and amendments related to drugs, engage in life-long learning.
Medicinal Chemistry III – Theory	BPHT3201	2017	Employability students get to know about the chemistry, pharmacological activity, metabolic pathways, adverse effect, therapeutic value, classification, synthesis, mechanism of action along with structures,structure activity relationship of various drug molecules.
Pharmacology III – Theory	BPHT3202	2017	skill-Employability- student get to know about correlation of pharmacology with other bio medical sciences, mechanism of action, drug interaction, design and conduct pharmacological screening experiments.
Herbal Drug Technology – Theory	BPHT3203	2017	Skill-Employability- students get to know basic principles of traditional medicinal systems with method of preparation and standardization of ayurvedic formulations
Biopharmaceutics and Pharmacokinetics – Theory	BPHT3204	2017	Skill- Employability- student get to know about pharmacokinetic and pharmacodynamic parameters of different dosage form and use the techniques, skills, and modern pharmaceutical instruments and tools necessary for pharmacy profession



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Pharmaceutical Biotechnology – Theory	BPHT3205	2017	Employability- Students can design and develop process to meet desired needs within realistic constraints of pharmacy sector.
Quality Assurance – Theory	BPHT3206	2017	Skill-Employability- students get to know about the validation, confirmation of test product substance and able to analyze, screen and ensure quality of drugs/pharmaceuticals.
Instrumental Methods of Analysis – Theory	BPHT4101	2017	Skill-Employability- Use the techniques, skills, and modern pharmaceutical instruments and tools necessary for pharmacy profession.
Industrial Pharmacy – II Theory	BPHT4102	2017	Skill-Employability-Entrepreneurship- students get to design and develop process to meet desired needs within realistic constraints to formulate and solve complex pharmaceutical problems.
Pharmacy Practice – Theory	BPHT4103	2017	Skill-Employability-Entrepreneurship- Understanding of professional and ethical responsibility, Manage contemporary pharmaceutical projects, Function effectively as a leader and member of multidisciplinary teams.
Novel Drug Delivery System – Theory	BPHT4104	2017	Skill-Employability-To Design and develop process to meet desired needs in formulation and evaluation of various drug delivery system.
Practice School*	BPHL4102	2017	Employability- Skill- Entrepreneurship Students get to know about practice work for any subjective topics, Engage in life-long learning.
Social and Preventive Pharmacy	BPHT4202	2017	Skill-Employability-students get to know different preventive measures in pharmacy, Understanding of professional and ethical responsibility.
Pharmaceutical Regulatory Science	BPHT4204	2017	Skill-Employability-students get to know about different regulatory bodies, Engage in life-long learning.
Project Work	BPHP4201	2017	Skill-Employability-Entrepreneurship-Students get to know about plan of work related to the subjective topics and question answer discussion.



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Apparel Production & Marketing	CUTM3029	2017	Employability/Skill - Practice and Project
Line Stitching Supervising	CUTM3030	2017	Employability/Skill - Practice and Project
Apparel Production	CUTM3031	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Light Motor Vehicle Driving	CUTM3032	2017	Employability/Skill - Practice and Project
Fork Lift Operation	CUTM3033	2017	Employability/Skill - Practice and Project
Heavy Vehicle Technology	CUTM3034	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Two Wheeler Service Technology	CUTM3035	2017	Employability/Skill - Practice and Project
Four Wheeler Service Technology	CUTM3036	2017	Employability/Skill - Practice and Project
E-Vehicle Assembly and Service Technology	CUTM3037	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Robotics	CUTM3038	2017	Employability/Skill - Practice and Project
Poultry Farming	CUTM3039	2017	Employability/ Entrepreneurship/Skill
CNC Programming (CAM)	CUTM3040	2017	Employability/Skill - Practice and Project
Design Supervising Wooden and Modular Furniture	CUTM3041	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Introduction to Composite Manufacturing	CUTM3042	2018	Employability/Skill - Practice and Project
3D Modelling and Printing	CUTM3043	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Precast Concrete Manufacturing	CUTM3045	2018	Employability/ Entrepreneurship/Skill - Practice and Project



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Fabrication	CUTM3046	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Hi-Tech Surveying	CUTM3047	2018	Employability/Skill - Practice and Project
Internet of Things	CUTM3048	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Mechatronics System Design	CUTM3049	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Introduction to Nanotechnology	CUTM3051	2018	Employability/Skill - Practice and Project
Drone Piloting	CUTM3052	2018	Employability/Skill - Practice and Project
Camera Operation	CUTM3053	2018	Employability/Skill - Practice and Project
Editor	CUTM3054	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Desktop Publishing	CUTM3055	2018	Employability/Skill - Practice and Project
Introduction to Blender and Unity tools	CUTM3056	2018	Employability/Skill - Practice and Project
Refraction Technology	CUTM3057	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Emergency Medical Technology	CUTM3058	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Medical Lab Technology	CUTM3059	2019	Employability/Skill - Practice and Project
Operating Theatre Technology	CUTM3060	2019	Employability/Skill - Practice and Project
Radiology Technology	CUTM3061	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Phlebotomy Technology	CUTM3062	2019	Employability/Skill - Practice and Project



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
First Aid Service	CUTM3063	2019	Employability/Skill - Practice and Project
General Duty Assistance Service	CUTM3064	2019	Employability/Skill - Practice and Project
X- ray Technology	CUTM3065	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Retail Sales	CUTM3067	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Basketball	CUTM3068	2019	Employability/Skill - Practice and Project
Gym Fitness	CUTM3069	2019	Employability/Skill - Practice and Project
Swimming	CUTM3070	2019	Employability/Skill - Practice and Project
Yoga & Meditation	CUTM3072	2019	Employability/Skill - Practice and Project
Solar PV Installation	CUTM3073	2019	Employability/Skill - Practice and Project
Solar Lighting Technology	CUTM3074	2019	Employability/Skill - Practice and Project
Solar PV Microgrid System	CUTM3076	2019	Employability/Skill - Practice and Project
Solar PV Driven Equipment O/M & Assembly	CUTM3077	2019	Employability/Skill - Practice and Project
Solar Thermal Engineering	CUTM3078	2019	Employability/Skill - Practice and Project
Introduction to Quantum Computing	CUTM3079	2020	Employability/Skill - Practice and Project
Organic Farming	CUTM3081	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Mushroom Farming	CUTM3082	2020	Employability/ Entrepreneurship/Skill - Practice and Project



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Hydroponics Technology	CUTM3083	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Poultry Farming	CUTM3084	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Dairy Farming	CUTM3085	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Vermicomposting Farming	CUTM3086	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Transformer Manufacturing, Repairing and Maintenance	CUTM3087	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Electrical Installation	CUTM3089	2020	Employability/Skill - Practice and Project
Repair and Maintenance of Home Appliances	CUTM3090	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Refrigeration and air conditioning	CUTM3091	2020	Employability/Skill - Practice and Project
Super critical Co2 plant operation	CUTM3092	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Business Plan Preparation	CUTM3095	2020	Employability/Skill - Practice and Project
Composite fabrication practice	CUTM3098	2020	Employability/Skill - Practice and Project
Powder coating practice	CUTM3099	2020	Employability/Skill - Practice and Project
Farm appliances operation	CUTM3100	2020	Employability/Skill - Practice and Project
Bio fertilisers preparation	CUTM3103	2020	Employability/ Entrepreneurship/Skill - Practice and Project
PCB designing & fabrication	CUTM3104	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Introduction to Block Chain Technology	CUTM3105	2020	Employability/ Entrepreneurship/Skill - Practice and Project



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Introduction to Nutraceuticals	CUTM3106	2020	Employability/Skill - Practice and Project
Introduction to NLP	CUTM3107	2020	Employability/Skill - Practice and Project
Introduction to Computational Biology	CUTM3108	2020	Employability/Skill - Practice and Project
Product Life Cycle Management through Gate process	CUTM3109	2020	Employability/Skill - Practice and Project
New material development with Biovia	CUTM3110	2020	Employability/Skill - Practice and Project
Spectral image processing using Python	CUTM3111	2020	Employability/Skill - Practice and Project
Satellite data processing	CUTM3112	2020	Employability/Skill - Practice and Project
Working with Graphene and carbon fibre	CUTM3113	2020	Employability/Skill - Practice and Project
Adobe Tools and Illustrations	CUTM3114	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Computer Installation and Maintenance	CUTM3120	2020	Employability/ Entrepreneurship/Skill - Practice and Project
2021-22			
Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Probability & Statistics	CUTM1005	2020	Employability (Students will know about probability distribution) Skill (Students will know about mean, media, mode)
Calculus	CUTM1925	2020	Employability (Students will know about curvature, asymptotes)



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Mechanics for Engineers	CUTM1006	2020	Employability (knowledge enhancement)
Optics and Optical Fibres	CUTM1007	2020	Employability (knowledge enhancement) / Skill development (LASER and Optical fiber portion)
Applied Analytical Chemistry	CUTM1008	2020	Employability-Water softening processes,Soil Analysis,fuels,petroleum,Corrosion,Electrochemical Phenomenon,error analysis Skill-All Practices.
Applied Engineering Materials	CUTM1009	2020	Employability- Nanostructures and nanomaterials,Carbon nanomaterials,Polymers,Composites:,Adhesives Lubricants ,: Energy Storages material-I&II Skill-All Projects.
Environmental Studies	CUTM1010	2020	Employability-Environment and its multidisciplinary nature,Biodiversity and its conservation,Causes, effects and control measures of pollution.
Optimisation Techniques	CUTM1011	2020	Skill Development (Students shall be able to apply the theory of optimization methods and algorithms to develop and for solving various types of optimization problems). Employability and Entrepreneurship (Students shall be able to solve the mathematical results and numerical techniques of optimization theory to concrete Engineering problems by using computer software)
Engineering Economics and Costing	CUTM1012	2020	Skill Development (Students shall be able to apply the microeconomics concepts related to business and its impact on enterprise). Employability and Entrepreneurship (Students shall be able to apply cost concepts to analyse common business management decisions such as pricing a product and services)
Project Management	CUTM1013	2020	Skill Development (Students shall be able to develop a Project Charter document for any project). Employability and Entrepreneurship (Students shall be able to implement the Project



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			and Prepare a project document that they have undertaken as a learning tool)
Gender, Human Rights and Ethics	CUTM1014	2020	Skill Development (Students shall be sensitive to gender, human rights and ethics within an organizational context). Employability and Entrepreneurship (Students shall be able to integrate concerns related to gender, human rights and ethics into the policies, processes and systems in an organization)
Climate Change, Sustainability and Organisation	CUTM1015	2020	Skill Development (Students will be exposed to current climate change issues, challenges and debates). Employability and Entrepreneurship (Students shall be equipped to develop strategies for perspective planning of organisations)
Job Readiness	CUTM1016	2020	Skill Development (Develop additional skills (verbal, logical, quantitative and reasoning) required to enhance employability as well as the entrepreneurial ability of the students). Employability (Students will develop skill in the area of proficiency in english, reasoning and aptitude, which are required to obtain a job)
Industrial IOT and Automation	CUTM1017	2020	Skill Development and Employability (the new evolution in hardware, software, and data. While the promise of the Industrial Internet of Things (IIoT) brings many new business prospects, it also presents significant challenges ranging from technology architectural choices to security concerns)
Data Analysis and Visualisation using Python	CUTM1018	2020	Skill And Employability(Students had Created data visualizations of various data sets using matplotlib and the seaborn modules with python and also developed portfolios of various data analysis projects .)
Machine Learning using Python	CUTM1019	2020	Skill And Employability(Implement ML algorithms that generates insight to high volume data and helps to make better classifications and prediction. The students are able to solve



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			problems in areas computational finance, image processing and computer vision, energy and natural language processing.)
Robotic automation with ROS and C++	CUTM1020	2020	Employability (upgrading knowledge levels of robotic application in modern industries Project based training)
Design Thinking	CUTM1021	2020	Skill And Employability (student will be able to apply the design thinking process to innovative problem solving)
System Integration with DYMOLA	CUTM1022	2020	Employability (designing of high-fidelity modeling of complex integrated systems, intuitive modeling i.e. advanced, formally defined object-oriented modeling language, To increase the ability to integrate with complex 3D geometry for integrated simulation, to increase powerful model management, calibration & optimization capabilities.)
Smart Engineering Project (G2M)	CUTM1023	2020	Employability (learn different tools and collaborate together to build a smart live project, express the imagination to reality, industry readiness.)
Geotechnical Engineering	CUTM1073	2020	Employability(To obtain knowledge about soil properties and methods of soil properties determination in the laboratory, using field tests and considering comparable experience. Basic stability and deformation problems. Principle of spread and deep foundation design. To understand fundamental knowledge of geotechnical works for soil improvement, interaction of structure and subsoil. Basic design methods for excavation and foundation pits with dewatering and sealing systems)
Structural Detailing and Drawing	CUTM1061	2020	Employability(Perform free hand sketching of basic geometrical constructions and multiple views of objects. Concept of projection, Types of section, PEB structure & Steel structure work. able to know the process of making sketches,



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			types of projections, designing of beam, columns and shear walls.)
IT Infrastructure Management	CUTM1024	2020	Skill And Employability(Students developed skills to build and manage IT infrastructure in Enterprise level using CISCO packet tracer)
Cloud Practitioners	CUTM1025	2020	Skill And Employability(Analyze and Understand the functioning of different components involved in Amazon web services and also acquire cloud technology skill for cloud partitioner certification which helps students in getting jobs in different MNCs)
Information Security	CUTM1027	2020	Skill And Employability(Students have done activities like network analysis, intrusion detection in the network and file integrity using different open source tool.)
Programming in C	CUTM1602	2021	Skill And Employability(Case study to be given to students on uses of C program for development of various real time applications like online examination system, online quiz competition etc.)
Data Structures	CUTM1603	2021	Skill And Employability(Understand asymptotic analysis and different methods. Understand linear data structures and its applications. Understand different non-linear data structures and its applications Understand divide and conquer strategy for various sorting and searching techniques. Understand and apply the greedy approach for various problems)
Advanced Web Programming	CUTM1030	2020	Skill And Employability(Develop a static, interactive and well-formed webpage using JavaScript, CSS3 and HTML5)
Java Technologies	CUTM1031	2020	Skill And Employability(Understands the concepts of Threads, exception handling, file handling and event handling and applets implemented in the Java, which helps students in getting jobs in different IT firms)
Database Creation and Maintenance	CUTM1033	2020	Skill And Employability(Hands on training on Client/Server Architecture- System Structure ,



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			Instance and schema, Data Models, Types of DBMS Query Processing and Optimization: Evaluation of Relational algebra expressions- Query Equivalence-Transaction Processing: Built in SQL functions, Sub Queries-Joins-DCL – TCL- Views – Sequences – Index – Locks PL/SQL Basics – Exceptions – Cursors - Stored Functions – Triggers Case study in industrial standards of Database Management)
Android App Development	CUTM1036	2020	Skill And Employability(Understand Android UI design, activity and fragments, intents, notifications, SQL Lite are implemented. As a course project students should implement a mobile app with the app idea and design user interface/wireframes of mobile app and also set up the mobile app development environment)
AWS Solution Architect (SAA-CO2)	CUCT2030	2020	Skill And Employability(Developed scalable and secure Cloud applications and acquired cloud solution architect certification)
AWS Developer (DVA-CO1)	CUCT2031	2020	Skill And Employability(Able to develop scalable and secure Cloud applications and acquired cloud developer certification)
Project	CUCT2032	2020	Skill And Employability(Able to develop scalable and secure Cloud applications)
Web Services Using Java	CUST2010	2020	Skill And Employability(Developed knowledge-based force to serve the IT industry with the latest technologies.)
Advanced Java Programming	CUST2011	2020	Skill And Employability(Understands the advance concepts of Threads, exception handling, file handling and even handling and applets implemented in the Java, which helps students in getting jobs in different IT firms)
Web Programming Using React	CUST2012	2020	Skill And Employability(Develop knowledge-based force to serve the IT industry with the latest technologies.)
Product Development	CUST2013	2020	Skill And Employability(Develop knowledge-based force to serve the IT industry with the latest technologies.)



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ML for Predictive Analysis	CUML2002	2020	Skill And Employability(Implement ML algorithms that generates insight to high volume datasets and helps to make better prediction, classifications and clustering. The students are able to solve problems in areas computational finance and computer vision, energy and natural language processing.)
ML for Image Analytics	CUML2003	2020	Skill And Employability(Implemented different Real life Projects in the field of medical and Agricultural image processing)
ML for Hyperspectral imaging	CUML2004	2020	Skill And Employability(Implemented different Real life Projects in the field of medical and Agricultural hyperspectral images)
Internship	CUML2005	2020	Skill And Employability(Implemented different Real life Projects in the field of medical and Agricultural image processing)
Project	CUML2006	2020	Skill And Employability(Implemented different Real life Projects in the field of medical and Agricultural image processing)
Linux Administration	CUCS2040	2020	Skill And Employability(Developed skills to manage a Linux server and provide basic security to the server)
Advanced Hacking Techniques	CUCS2041	2020	Skill And Employability(Learned different white hat hacking tools to defend different cyber attacks)
System and Network Security	CUCS2042	2020	Skill And Employability(Learned different network security tools to defend different cyber attacks)
IT Data Security	CUCS2043	2020	Skill And Employability(Students able to detect different data leakage and able to prevent some of it)
Project	CUCS2044	2020	Skill And Employability(Analyzed a self developed website for various types of vulnerability and defense)
Introduction to Gaming & Simulation	CUAR2060	2020	Skill And Employability(End to End Game Development Pipeline)



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Game Assets & Game Objects	CUAR2061	2020	Skill And Employability(Able to built different models, assets and objects like temple, park, agriculture field etc..)
Building Game Environment	CUAR2062	2020	Skill And Employability(Able to built game environment)
Game Animation, Scripting & UI	CUAR2063	2020	Skill And Employability(Able to design different cartoon animations and UI)
Binary Deployment and Cross-Platform Controls	CUAR2064	2020	Skill And Employability(Design several 3D games which supports cross platforms)
Project	CUAR2065	2020	Skill And Employability(End to End Game Development Pipeline such as 3D games, model of konark temple)
Embedded System Programming with ARM-Cortex	CUTM1039	2020	Skill Development, Employability (Embedded System sectors to learn programming / Interfacing peripherals to ARM Cortex based Microcontroller)
VLSI Design (NSQF level 5)	CUTM1040	2020	Skill Development, Employability (Design combinational and sequential circuit using CMOS logic Enhancement of complex digital VLSI logic design skill of students which will help them to complete any project work undertaken in higher semesters. Perform back-end physical design)
Electronic Devices and Systems	CUTM1046	2020	Employability (A broad introduction to electronic systems for students from diverse engineering disciplines, necessary foundation to understand the role, capabilities and constraints of electronics in contemporary engineering systems, provides basic understanding of the fundamentals and principles of analog and digital circuits and electronic devices.)
Network Analysis	CUTM1043	2020	Employability (techniques of solving circuits involving different active and passive elements, analyze the behavior of the circuit's response in time



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			domain, analyze the behavior of the circuit's response in frequency domain, synthesize an electrical network from a given impedance/admittance function.)
Analog Communication Systems	CUTM1045	2020	Employability (Familiar with analog radio transmitters and receivers Verify the Noise performance of different Modulation Techniques)
Digital Communication Systems	CUTM1044	2020	Employability (Illustrate the classification of channels, Entropy coding methods and different types of Error control codes along with their encoding/decoding algorithms. Examine the Performance of different Digital Carrier Modulation schemes of Coherent and Non-coherent type based on Probability of error)
Principles of wireless communication	CUTM1047	2020	Skill Development and Employability Knowledge about the characteristic of wireless channel, designing of a cellular system, study the various digital signaling techniques and multipath mitigation techniques, understanding the concepts of multiple antenna techniques
Digital Signal & Image Processing	CUTM1048	2020	Employability (knowledge of time domain, frequency domain, discrete time signals, properties and digital filter design techniques, knowledge on basic concepts of image and its processing techniques, basic knowledge on Enhancement, Restoration, Segmentation techniques)
Antenna Design and Analysis	CUTM104	2020	Employability (understanding the theory and fundamentals of antenna design, learning key aspects of practical antenna design, knowledge of a broad range of antennas such as dipole, loop, microstrip patch, horn, smart etc.)



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Wireless communication for IIOT	CUTM1050	2020	Employability (understanding of the physical aspects of Wireless Communication for IIoT Applications)
Optical Fiber Communication	CUCS2084	2021	Employability The basic elements of optical fiber transmission link, fiber modes configurations and structures. To understand the different kind of losses, signal distortion, SM fibers. To learn the various optical sources, materials and fiber splicing. To learn the fiber optical receivers and noise performance in photo detector. To learn link budget, WDM, solitons and SONET/SDH network.
Satellite & TV Communication	CUCS2081	2020	Employability (Acquire knowledge on importance of satellite in TV broadcasting, mobile communication, which is important in Communication Fields.)
Project	CUCS2085	2020	Employability (Skill development course)
Power Markets	CUEG2094	2020	Employability (Student will learn power market operation & energy audit process with hands on practice which will lead them to placement in power & energy trading company)
Product Design and Development	CUTM1076	2020	Employability and Skill development (Student will understand and explain the concept of Industrial design and robust design concepts. Student will understand the concept of Design for manufacture and assembly.)
Reverse Engineering and Rapid Prototype	CUTM1077	2020	Employability and Skill development (Student will understand principles of imaging, cross-sectional scanning, digital data, computational graphics.)
Product Life Cycle Management	CUTM1078	2020	Employability and Skill development (Students will use ENOVIA Engineering BOM Management)



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Manufacturing Process	CUTM1604	2021	Employability and Skill development (Student will understand the Importance of Materials, Manufacturing Processes, Process Planning & Design in Product Manufacturing)
Material in product design and development	CUTM1080	2020	Employability and Skill development (Student will understand the various material selection for manufacturing processes. Students will be able to identify and select suitable material for product design. Students will be able to understand Application of smart materials, shape memory metal, Nano material.
Quality Assurance	CUTM1082	2020	Employability and Skill development (Students will carry out statistical analysis of experiment, ANOVA ratio test and apply advanced DOE method for product testing. Students will understand SIX SIGMA process and lean production concept.)
Applied Ergonomics	CUTM1083	2020	Employability and Skill development (Students will be able to use the Human Ergonomics software to create an accurate simulation of a human entity and its work environment to ensure a natural operation)
CNC Programming & CNC Machining	CUTM1085	2020	Employability and Skill development (Demonstrate and explain various CNC control Calculate technological data for CNC machining. Prepare programs, demonstrate, simulate and operate CNC milling machines for various machining operations)
Introduction to Automobile Engineering	CUAE2170	2020	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad. There are large number of job opportunities in automobile designing, research & development, sales & service. The students can also successfully run their own business in this field.)
Subsystems of Automobile	CUAE2171	2020	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad. There are large



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			number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Electric Vehicles	CUAE2172	2020	Employability and Skill development (This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Maintenance of Automobile	CUAE2173	2020	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Project	CUAE2174	2020	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Internship	CUAE2175	2020	Employability and Skill development(This gives jobs opportunity in automobile manufacturing companies in India and abroad.There are large number of job opportunities in automobile designing, research & development, sales & service.The students can also successfully run their own business in this field.)
Introduction to composites	CUCD2130	2020	Employability and Skill development (students will be able to learn how to design a composite material using Catia software. Material properties can be studied by Biovia software. Students will get familiar with 3d experience software. Well-equipped laboratory with



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			different types of matrix and fiber where students will do hands-on practice and fabricate different types of composite which can be used in our day to day work)
Composite materials and characterization	CUCD2131	2020	Employability and Skill development (students will be able to learn how to design a composite material using Catia software. Material properties can be studied by Biovia software. Students will get familiar with 3d experience software. Well-equipped laboratory with different types of matrix and fiber where students will do hands-on practice and fabricate different types of composite which can be used in our day to day work)
CATIA-Composites Design	CUCD2132	2020	Employability and Skill development (students will be able to learn how to design a composite material using Catia software. Material properties can be studied by Biovia software. Students will get familiar with 3d experience software. Well-equipped laboratory with different types of matrix and fiber where students will do hands-on practice and fabricate different types of composite which can be used in our day to day work)
Composite Product Validation; Simulia	CUCD2133	2020	Employability and Skill development (students will be able to learn how to design a composite material using Catia software. Material properties can be studied by Biovia software. Students will get familiar with 3d experience software. Well-equipped laboratory with different types of matrix and fiber where students will do hands-on practice and fabricate different types of composite which can be used in our day to day work)
Machineries and Technologies used for Manufacturing of Composites	CUCD2134	2020	Employability and Skill development (students will be able to learn how to design a composite material using Catia software. Material properties can be studied by Biovia software. Students will get familiar with 3d experience



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			software. Well-equipped laboratory with different types of matrix and fiber where students will do hands-on practice and fabricate different types of composite which can be used in our day to day work)
Quality control and Fabrication of Composite Structure	CUCD2135	2020	Employability and Skill development (students will be able to learn how to design a composite material using Catia software. Material properties can be studied by Biovia software. Students will get familiar with 3d experience software. Well-equipped laboratory with different types of matrix and fiber where students will do hands-on practice and fabricate different types of composite which can be used in our day to day work)
Project	CUCD2136	2020	Employability and Skill development (students will be able to learn how to design a composite material using Catia software. Material properties can be studied by Biovia software. Students will get familiar with 3d experience software. Well-equipped laboratory with different types of matrix and fiber where students will do hands-on practice and fabricate different types of composite which can be used in our day to day work)
Manufacturing Requirements and Planning (Jigs & Fixtures; Process Planning & Cost Estimation)	CUCM2150	2020	Employability and Skill development (Developing the visibility of skills and potentials of students in ways that are relevant to manufacturing need & employability and also promoting a production oriented learning method.)
Conventional Machining for Cylindrical and Prismatic Shape Components	CUCM2151	2020	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides



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			in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
CNC Machining	CUCM2152	2020	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Non-Traditional Machining and 3D Printing	CUCM2153	2020	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and machineries. Strengthens the Industrial-Institutional partnership.)
Wood Engineering	CUCM2154	2020	Employability and Skill development(Makes student Industry ready through hands-on education. Provides required industrial experience within the academic environment to apply theoretical and practical concepts to improve manufacturing processes. Helps bright students to achieve more and struggling learners to find new ways to master. Provides in-depth technical training & knowledge of latest manufacturing processes and



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			machineries. Strengthens the Industrial-Institutional partnership.)
Internship	CUCM2155	2020	Employability and Skill development(Students go to different corporate industry to carry out their internship for 3month duration.This help students to give specific skills followed by internships
Joining Processes and Technology	CUWI2160	2020	Employability and Skill development (ASNT Level II (LPI and UT) or NSQF skill certification will make the candidate recognised in national and international levels in the industry. He/she can be self employed by opening a small scale welding shop to a medium scale industry.)
Metal Transfer and Weld Metallurgy	CUWI2161	2020	Employability and Skill development ASNT Level II (LPI and UT) or NSQF skill certification will make the candidate recognised in national and international levels in the industry. He/she can be self employed by opening a small scale welding shop to a medium scale industry.)
Design of Welded Joints	CUWI2162	2020	Employability and Skill development (ASNT Level II (LPI and UT) or NSQF skill certification will make the candidate recognised in national and international levels in the industry. He/she can be self employed by opening a small scale welding shop to a medium scale industry.)
Testing of Welded Joints	CUWI2163	2020	Employability and Skill development (ASNT Level II (LPI and UT) or NSQF skill certification will make the candidate recognised in national and international levels in the industry. He/she can be self employed by opening a small scale welding shop to a medium scale industry.)
Computer Graphics	MTSE1106	2019	Skill development(At the end of the course, the students have a skill and employability to: Event driven I/O and callback programming & typical structure of an interactive, real-time computer graphics program .. 2&3D transformations, homogeneous co-



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			ordinates, post-multiplication " Modelling and instantiati)
MATLAB for Civil Engineers	MTSE1107	2019	Employability (Differential equations and its application to engineering problems Soft computing applications to engineering problems)
Finite Element Method	MTSE1201	2019	Skill development(• Enable the students to identify, formulate and skill to engineering problems related to one, two and three Dimensional structures subjected to static loads. • To show the impact of engineering solutions on the society and also will be aware of contemporary issues regarding failure of structures due to wrong analysis)
Industry Internship and Project - I	MTIP2101	2019	Employability(On successful completion of this course student will able to: • Get Experience of working conditions on live projects of company. • learn soft skill viz. Self-Confidence, widen Strong Work Ethic toward work, Positive Attitude towards work, develop effective Communication Skills, Time Management Abilities, Problem-Solving Skills etc. • Find successful employment after graduation.)
Industry Internship and Project - II	MTIP2201	2019	Employability(On successful completion of this course student will able to: • Get Experience of working conditions on live projects of company. • learn soft skill viz. Self-Confidence, widen Strong Work Ethic toward work, Positive Attitude towards work, develop effective Communication Skills, Time Management Abilities, Problem-Solving Skills etc. • Find successful employment after graduation.)
Pavement Materials And Construction	ISTE1102	2019	Employability(• To learn about characteristic of subgrade soil. • To learn about characteristic of road aggregates.



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			<ul style="list-style-type: none"> • To learn about characteristic of paving grade bitumen. • To learn about characteristic of cement used in road construction.)
Urban Transportation Planning	ISTE1103	2019	Employability(• To learn the planning methodology of Urban transportation systems. <ul style="list-style-type: none"> • To learn methods of data collection for planning. • To learn about travel demand models. • To learn Planning for sustainable urban mobility)
Transportation Infrastructure Design	ISTE1104	2019	Employability(• To learn Geometric Design of Cross Sectional Elements of various types of roads. <ul style="list-style-type: none"> • To learn Geometric Design of Horizontal Alignment of Roads • To learn Geometric Design of Vertical Alignment of Roads. • To learn transportation system management)
Highway Project formulation and Economics	ISTE1202	2019	Employability(• To learn Geometric Design of Cross Sectional Elements of various types of roads. <ul style="list-style-type: none"> • To learn Geometric Design of Horizontal Alignment of Roads • To learn Geometric Design of Vertical Alignment of Roads. • To learn transportation system management)
Research Methodology For Engineers	ISRM1201	2019	Employability(Meaning of Research , Objectives of Research ,Motivation in Research ,Types of Research Research Approaches ,Significance of Research ,Research Methods versus Methodology Research and Scientific Method ,Importance of Knowing How Research is Done ,)
Pavement Evaluation ,Rehabilitation and Maintenance	ISTE1208	2019	Employability(• To learn about characteristic of subgrade soil. <ul style="list-style-type: none"> • To learn about characteristic of road aggregates.



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			<ul style="list-style-type: none"> • To learn about characteristic of paving grade bitumen. • To learn about characteristic of cement used in road construction.)
Project Management	ISTE1209	2019	Employability(Identify functions of project management including estimating, job controls, field data collection, scheduling, accounting and design. * method that uses technology to measure cost and productivity through the full life-cycle of enterprise level projects * Contract Management and Tendering
Environmental Impact Assessment for Transportation Projects	ISTE1210	2019	Employability(• environmental issues in decision-making) .• impacts of transportation projects on air quality, society, economy, ecology and travel .• Ecological disturbances . Environmental Issues in Industrial Development
Industry Internship and Project-1	ISTE2101	2019	Employability(Student will be doing live project For 4 months in an Industry and submit a Project Report to concerned guide certified by the Industry Engineer)
Industry Internship and Project-II	ISTE2200	2019	Employability(Student will be performing internship for 3-months in Industry and submitted a report and duly certified certificate from the competent Engineer in charge)
Industry Internship and Project – II/Dissertation	MTIP2102	2019	employability (Student will learn on power system operation & energy audit process with on the job training which will lead them to placement in power & energy company)
Tractor Systems and Controls	CUTM1132	2020	Employability(Learning fundamentals of tractor chassis design and traction theory.)
Farm Machinery and Equipment-I	CUTM1133	2020	Employability(To equip the students with technical knowledge and skills required for the



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			operation of Tillage, Sowing and intercropping machinery needed for agricultural farms.)
Agricultural Structures and Environmental Control	CUTM1134	2020	Employability(To prepare estimate for different farm buildings, structures, roads, fencing and construction, repair and maintenance of farm structures.)
Tractor and Farm Machinery Operation and Maintenance	CUTM1142	2020	Employability(To acquire knowledge regarding makes and models of tractors, different systems and periodic maintenance tractors.)
Product Development and Packaging Technologies	CUFP2313	2020	(Employability) Gain insights into the scientific, regulatory, and consumer interests that interact in determining the safety of food
Sensory Evaluation and Nutritional Labelling of Foods	CUFP2315	2020	(Employability)Adopt hygienic and sanitation practices during product preparation
AELP Training		2020	(Employability)Pursue research and develop capabilities to handle multi-disciplinary field projects
AELP Linked Project	CUFP2316	2020	(Employability)Pursue research and develop capabilities to handle multi-disciplinary field projects
Rainwater Harvesting and Artificial Recharge	CUSW2340	2020	(Employability)Apply hydrological modelling along with Geospatial application to manage the watershed
Integrated watershed management	CUSW2341	2020	(Employability)Improving livelihoods in rainfed areas through integrated watershed management
R programming in watershed hydrology	CUSW2343	2020	(Employability)Analyzing and visualization of watershed data using R Programming
Modelling and Simulation of Watershed Processes	CUSW2344	2020	(Employability)Application of different hydrological models to simulate watershed process
Geo-spatial application in watershed management	CUSW2345	2020	(Employability)Application of rainwater harvesting in an integrated watershed management approach



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Industrial internship	CUSW2346	2020	(Employability)Pursue research and develop capabilities to handle multi-disciplinary field projects
Sensor, Actuators and Robot Operating Systems	CUFM2221	2020	(Employability)To make student learn how to design farm machinery and develop its 3D model in software.
Farm Machinery Design	CUFM2222	2020	(Employability)To make student learn how to simulate the model using software
PLM using Dassault Tools	CUFM2224	2020	(Employability)To make student learn how to develop a prototype model and test it in real conditions
Product Development Project	CUFM2226	2020	(Employability)Pursue research and develop capabilities to handle multi-disciplinary field projects
Pharmacognosy and Phytochemistry of Important Medicinal Herbs	CUTM1167	2020	(Skill development/Employability) Identification of medicinal herbs and gaining knowledge of their pharmaceutical use
Ayurveda and fermentation technology	CUTM1168	2020	(Skill development/Employability) Formulation of herbal dosage forms, leading to improved employability
Material Science of Excipients and Additives	CUTM1170	2020	(Skill development/Employability) Practical aspects of pharmaceutical dosage form formulation
Advanced separation technologies and downstream processing	CUTM1172	2020	(Employability) Separation and isolation of bioactive components from medicinal herbs
Herbal Cosmetic Technology	CUTM1175	2020	(Employability/Entrepreneurship) Project based learning of different cosmetic formulation with extensive hands on experience
Plant Biotechnology	CUTM1177	2020	(Skill Development/Employability) Extensive application of plant biotechnology in herbal drug industry practice and classroom mode
Good Manufacturing Practices-Herbal Industry	CUTM1178	2020	(Employability) Learn about GMP international standards which will assist in bagging jobs



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Statistical Quality Control & Design of Experiments	CUTM1180	2020	(Skill Development/Employability) learn about pharmaceutical formulations
Industrial Pharmacy-II	CUTM1588	2020	(Skill development/Employability) Practical aspects of pharmaceutical dosage form formulation
Heat and Mass Transfer	CUTM1525	2020	(Employability and skill development) learn about heat and mass transfer under industrial set up
Introduction to Nutraceutical	CUNU2280	2020	Employment:Production of nutritional enriched foods
Functional Food	CUNU2281	2020	Employment:Production of nutritional enriched foods
Nutrigenetics	CUNU2282	2020	Employment:Production of nutritional enriched foods
Computational Biology	CUGE2270	2020	Employment:Molecular modelling of Biomecules using bioinformatics tools
Genetic Engineering and its applications	CUGE2271	2020	Employment:Production of genetically modified varieties using advanced molecular techniques
Job Readiness	CUTM1182	2020	Analytical Ability, ability to plan & strategic, creative & logical thinking, attention to details, ability to recall (Working Memory), problem solving ability, communication skills (written), spatial ability articulation, data interpretation skills, active Listening, ability to visualize, adaptation skills, decision making, ability to analyze pattern & trends- Employability
Quantitative Techniques	CUTM1183	2020	Application of quantitative techniques in business decision making- Employability
Micro Economics	CUTM1184	2020	Utilize micro economic concepts and techniques to take business decisions Employability & Entrepreneurship
Economic Environment of Business	CUTM1186	2020	Analyse of policy environment to take appropriate decision -Employability
Indian Society and Culture	CUTM1187	2020	Analysing social issues, Societal Analysis- Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Operation Research	CUTM1188	2020	Manage and enhance the sales force productivity and performance:Employability & Entrepreneurship
Principles of Management	CUTM1189	2020	Application of Basic mangement principles-Employability
Basics of Design Thinking	CUTM1190	2020	Utilize design thinking for innovation - employability & Entrepreneurship
Introduction to AI/ML	CUTM1192	2020	Utilize AI/ML to drive business in industry 4.0. - Employability
Introduction Data Analytics	CUTM1193	2020	Use analytics in decision making - Employability
Introduction Additive Manufacturing/3D Printing	CUTM1194	2020	Application of Additive Manufacturing-Employability
Introduction to AR/VR	CUTM1195	2020	Application of AR/VR in business - Employability
Introduction to Emerging Mobility Solutions	CUTM1196	2020	Analyse emerging mobility solutions and its impact on business & society - Employability
Introduction to Blockchain	CUTM1197	2020	Use Database, cryptography & Bitcoin - Employability
Introduction to Robotics	CUTM1198	2020	Impact of Robotics in business & Management - Employability
Accounting for Managers	CUTM1199	2020	Preparation of financial statement, preparation of cost sheet and financial analysis of financial statements: Employability & Entrepreneurship
Marketing Management	CUTM1200	2020	Interpret complex marketing issues facing a variety of enterprises they would be employed in or setting up as entrepreneurs: Employability & Entrepreneurship;
Organizational Behaviour and Structure	CUTM1201	2020	Analyze and compare different models of Human Behaviour - Employability, Entrepreneurship
Talent Acquisition and Development	CUTM1202	2020	Assess, design and implement various methods, techniques and sources of training-Employability, Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Marketing Research	CUTM1203	2020	Plan and undertake qualitative or quantitative Market Research and demonstrate the ability to appropriately analyze data to resolve marketing issues: Employability, Entrepreneurship
Corporate Finance	CUTM1204	2020	Utilize the concepts of financial management, investment, financing, working capital and dividend policy decisions: Use techniques of minimising risk in investment, techniques of leverage as well as optimum cost of capital structure of company.- Employability & Entrepreneurship
Production & Operations Management	CUTM1205	2020	Developing aggregate capacity plans and MPS in operation environments- Employability, Entrepreneurship
Introduction to PLM (Platforms such as 3DS) ⁵	CUTM1206	2020	Develop Product specification Document and digital prototype- Employability, Entrepreneurship
Supply Chain Management	CUTM1208	2020	Analyzing the manufacturing operations of a firm- Employability, Entrepreneurship
Advanced Managerial Accounting	CUFM2350	2020	Preparation of cost sheet and analysis of financial statements: Employability & Entrepreneurship;
Financial Institutions, Markets & Services	CUFM2351	2020	Use techniques for raising funds from capital market and from different sources- Employability & Entrepreneurship;
Commercial Banking and ALM	CUFM2352	2020	Use techniques for Asset/Liability Management for smooth operation of the Bank. Employability
Security Analysis And Portfolio Management	CUFM2353	2020	Use methods of valuations of financial instruments and evaluation of risk as well as return of an individual security and portfolio - Employability & Entrepreneurship
Project Appraisal & Financing	CUFM2354	2020	Preparation of detailed project report, identification of a project, feasibility analysis including market, technical and financial appraisal of a project; Uses project appraisal techniques for evaluating live projects: Employability & Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Current Asset Management	CUFM2355	2020	Use methods of determine optimum current assets level and appropriate working capital management policies to achieve corporate objectives - Employability and entrepreneurship
Rural Marketing	CUMM2360	2020	Able to promote products and services in rural market: Employability & Entrepreneurship
Sales and Distribution Management	CUMM2361	2020	Manage and enhance the sales force productivity and performance:Employability
Services & Financial Services Marketing	CUMM2362	2020	Design financial service quality measurements to build customer loyalty and evaluate the effectiveness and efficiency of customer service offerings: Employability
Brand Management & Consumer Behaviour	CUMM2363	2020	Analyse the relevance of consumer behaviour to the entire marketing process, the nature and stages of consumers' decision making and the factors influencing consumers' choices: Employability
Digital Marketing & Marketing Communications	CUMM2364	2020	Develop various application in diverse areas of sales & marketing - Employability
Retail & Etail Management	CUMM2365	2020	Make merchandise plan and to procure right merchandise: Employability & Entrepreneurship
B2B Marketing	CUMM2366	2020	Formulate decision, evaluate alternative courses of action and finally choose among alternatives-Employability
Performance Management	MGHR2317	2011	Analyze and adopt different models of Human Behaviour to achieve desired performance-Employability
Organization Change and Development	MGHR2318	2011	Assess, design and implement various methods, techniques and sources of training-Employability
Human Resource Planning and Sourcing	MGHR2319	2015	Development, implementation, and evaluation of employee recruitment, selection, and retention plans and processes- Employability, Entrepreneurship
Training and Development	MGHR2320	2011	Assess, design and implement various methods, techniques and sources of training-Employability & Skill development



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Anatomy Physiology & Health Education	CUTM1607	2020	Apply knowledge on structure and function of body parts for therapies-Employability
Pharmacology	CUTM1608	2020	Able to advise use of drugs for therapeutic purposes-Employability
Basic Epidemiology	CUTM 1609	2020	Analysis of distribution and determinant of health and diseases condition in defined population-Employability
Selling And Reporting Skills Of Pharmaceutical Product	CUTM 1610	2020	Handle pharmaceutical marketing efficiently-Employability, Entrepreneurship
Pharmaceutical Brand Management	CUTM 1611	2020	Development of brand of a product-Employability, Entrepreneurship
Pharmaceutical Sales and Distribution Management	CUTM 1612	2020	Increase pharmaceutical sales, develop promotional strategy,-Employability, Entrepreneurship
Drug Regulatory Affairs & Intellectual Property Rights	CUTM 1614	2020	Able to manufacture and sale of pharmaceuticals-Employability, Entrepreneurship
Manufacturing Management	CUTM 1615	2020	Able to plan and design pharmaceutical production system-Employability
Financial Reporting & Analysis	CUTM 1616	2020	Analyze financial statements-Employability
Pharmaceutical Advertising & Services Management	CUTM 1617	2020	Able to design managerial process to oversee and control the various advertising activities-Employability
Contemporary Development Communication	CUTM1218	2020	Communicate appropriately using tools for development - Employability
Natural Resource Management	CUTM1243	2020	Work effectively with, and within, interdisciplinary and diverse groups to resolve-management problems and achieve management objectives- Employability and Entrepreneurship
Development Theory and Practice	CUTM1222	2020	Utilization of development theories in practical field- Employability and Skill



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Social Research Methods	CUTM1246	2020	Apply various data collection techniques, for both quantitative and qualitative research, Select and describe appropriate analytical techniques for quantitative and qualitative methods- Employability and Skill Development
Agricultural Marketing	CUTM1247	2020	Effectively evaluate the challenges and prospects of agri marketing system, : Employability
Strategic Management	CUTM1929	2020	Conduct analysis of competitive situations of the enterprise - Employability
Community Organization and Development	CUTM1930	2020	Managing and developing community organizations- Employability
Food Security and Right to Food	CUTM1931	2020	Promoting food security- Employability
Financial Inclusion and Micro Finance	CUTM1932	2020	To appraise the scenario of financial inclusion in the country , acquire skills to opearte in Micro Finance sector - Employability, Entrepreneurship
Organization Behaviour	CUTM1933	2020	Analyze and compare different models of Human Behaviour for organizational effectiveness- Employability
Human Resource Management and Organisation Development	CUTM1934	2020	Carry out human resource planning and Job analysis, develop, implement and evaluate recruitment and selection-Employability, Entrepreneurship
Public Policy: Design, Analysis and Implementation	CUTM1935	2020	Disigning campaigns and implementation of policies- Employability and Skill
Digital and Social Media Marketing	CUTM1937	2020	Development and usages of social media marketing-Employability, Entrepreneurship
Skill Ecosystem development	CUDM2356	2020	Create skill ecosyetm and analyse its dimensions - Employability
Local Governance systems	CUDM2357	2020	Developing collaboration with local government institutions- Employability
Rural Haat & Market Analysis	CUDM2358	2020	Assessing rural markets and develop appropriate marketing strategies - Employability, Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Community Owned and Managed Businesses	CUDM2359	2020	Promoting community owned business organizations- Employability
Corporate Social Responsibility	CUDM2360	2020	Demonstrate a multi-stakeholder perspective in viewing CSR issues, Compare and contrast the multiple viewpoints and tradeoffs that exist in the area of CSR, design CSR strategies focusing agri sector- Employability, Skill Development
Disaster Management	CUDM2361	2020	To build skills and abilities in analyzing potential effects of disasters and the strategies to avert the disasters: Employability, Entrepreneurship & Skill development
Management of Rural Health	CUDM2362	2020	Developing strategies for Rural Health and management- Employability
Management of Rural Education	CUDM2363	2020	Promoting rural education- Employability
Sustainable Rural Livelihoods	CUDM2364	2020	Developing Livelihood opportunities and linking livelihood programs- Employability
Organizing Conference	CUDM2381	2020	Learning skills for organizing events - Employability, Entrepreneurship & Skill development
Managing Watersheds	CUDM2365	2020	Watershed management- Employability and skill
M&E of Development Projects	CUDM2366	2020	Project Management- Employability and Entrepreneurship
Poverty reduction strategies	CUDM2353	2020	Can address the issues related to poverty and develop appropriate strategies to mitigate the issue- Employability
Issues in Tribal Development	CUDM2367	2020	Develop strategies to handle tribal issues- Employability
Extension strategies for development	CUDM2355	2020	Implement development strategies- Employability
Fund Raising for Social Cause	CUDM2368	2020	Develop strategies for fund raising- Employability and Entrepreneurship



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Fundamentals of Management	CUTM1209	2020	Apply appropriate managerial principles and theories on the work front- Employability and Entrepreneurship
Organisational Behaviour	CUTM1210	2020	Analyze and compare different models of Human Behaviour - Employability
Statistics for Business Decisions	CUTM1211	2020	Use appropriate sampling techniques, formulate the appropriate hypothesis, use the appropriate measures of central tendency, measures of dispersion, hypothesis testing technique, and interpret the results thereof- Employability, Entrepreneurship
Managerial Economics	CUTM1212	2020	make optimal decisions by integrating the concept of economics and business- make optimal decisions by integrating the concept of developmenteconomics and business- Employability
Business Accounting	CUTM1213	2020	interpret the nature and role of the principal financial statements (i.e., the Income Statement, the Statement of Financial Position, and the Statement of Cash Flows). Read, interpret and analyze financial statements; combine financial analysis with other information to assess the financial performance and position of a company;- Employability and Entrepreneurship
Macro Economics	CUTM1214	2020	Develop knowledge to apply macroeconomic perspective to solve business problems- Employability & Entrepreneurship
Principles of Marketing	CUTM1215	2020	Solving simple marketing issues facing by a variety of enterprises they would be employed in or setting up as entrepreneurs: Employability & Entrepreneurship;
Management Accounting	CUTM1216	2020	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Business Research	CUTM1217	2020	Formulate the hypothesis and conduct independent research- Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Financial Management	CUTM1219	2020	Utilize concepts of financial management, investment, financing, working capital and dividend policy in decisions: Employability & Entrepreneurship
Quantitative Techniques for Management	CUTM1220	2020	formulate complex problems into mathematical models to solve using software- Employability
Legal Aspects of Business	CUTM1221	2020	Adhere to legal framework for starting a business venture and running it successfully in conformity with legal parameters- Entrepreneurship and Employability
Advanced Managerial Accounting	CUTM1225	2020	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Financial Institutions, Markets & Services	CUTM1226	2020	Use techniques for raising funds from capital market and from different source- Employability
Commercial Banking and ALM	CUTM1227	2020	Use techniques for Asset/Liability Management for smooth operation of the Bank. Employability
Security Analysis And Portfolio Management	CUTM1228	2020	Use methods of valuations of financial instruments and evaluation of risk as well as return of an individual security and portfolio - Employability & Entrepreneurship
Project Appraisal & Financing	CUTM1229	2020	Preparation of detailed project report, identification of a project, feasibility analysis including market, technical and financial appraisal of a project; Uses project appraisal techniques for evaluating live projects: Employability & Entrepreneurship
Current Asset Management	CUTM1230	2020	Use methods of determine optimum current assets level and appropriate working capital management policies to achieve corporate objectives - Employability and entrepreneurship
Rural Marketing	CUTM1233	2020	Able to promote products and services in rural market: Employability & Entrepreneurship
Sales and Distribution Management	CUTM1234	2020	Manage and enhance the sales force productivity and performance:Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Services & Financial Services Marketing	CUTM1235	2020	Design financial service quality measurements to build customer loyalty and evaluate the effectiveness and efficiency of customer service offerings: Employability
Brand Management & Consumer Behaviour	CUTM1236	2020	Analyse the relevance of consumer behaviour to the entire marketing process, the nature and stages of consumers' decision making and the factors influencing consumers' choices: Employability
Digital Marketing & Marketing Communications	CUTM1237	2020	Develop various application in diverse areas of sales & marketing - Employability
Retail & Etail Management	CUTM1238	2020	Make merchandise plan and to procure right merchandise: Employability & Entrepreneurship
B2B Marketing	CUTM1239	2020	Formulate decision, evaluate alternative courses of action and finally choose among alternatives-Employability
Environmental Science	CUTM1674	2020	Design and evaluate strategies, technologies and methods for sustainable management of environment- Employability
Summer Internship	CUTM1224	2020	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship
Financial Accounting	CUTM1942	2020	Preparation and use of financial statement of different types of organisations: Employability & Entrepreneurship
Business Economics	CUTM1948	2020	Apply macroeconomic perspective to solve business problems-Employability & Entrepreneurship
Business Mathematics	CUTM1951	2020	Data analysis using mathematical function- Employability & Entrepreneurship
Introduction to Banking	CUBC2433	2020	Carry out operational activities in commercial banks Employability
Business Law	CUTM1943	2020	Utilize legal framework for starting a business venture and running it successfully in conformity with legal parameters- Employability & Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Business Statistics	CUTM1944	2020	Use statistical tools for managerial decision-making-Employability, Entrepreneurship
Income-tax Law and Practice	CUTM1949	2020	Can handle computation of heads of income and taxable income, TDS, advance tax etc.: Employability
Corporate Laws	CUTM1946	2020	Utilize the minimum legal framework for starting a business venture and running it successfully in conformity with legal parameters-Empolyability & Entrepreneurship
Cost Accounting	CUTM1950	2020	Preparation of cost sheet and analysis of financial statements: Employability & Entrepreneurship
Corporate Accounting	CUTM1945	2020	Develop Accounting procedures used in corporates and the strategies involved in the corporate decisions.: Employability & Entrepreneurship
Banking Law & Practice	CUBC2434	2020	Adhere to Banking laws and practices while working in banking sector- Employanbility
Auditing and Corporate Governance	CUTM1689	2020	Identify the areas of fraud and errors in the accounts and take corrective actions while presenting the audit report and streamline the governance system as per law: Employability
E-Commerce	CUTM1957	2020	carry out entrepreneurial activities electronically (E-commerce) Employability
Goods & Services Tax (GST) and Customs Law	CUTM1952	2021	Calculate and file GST, levy and collection of tax, input tax credit, IGST act GSTN etc.: Employability & Entrepreneurship
Banking and Insurance	CUTM1954	2021	Adhere to Regulatory Framework in the Indian Banking system, Regulatory Environment, Evaluation of Bank Performance; Use techniques for Asset/Liability Management for smooth operation of the Bank- Employability & Entrepreneurship
Advanced Corporate Accounting	CUTM1955	2021	Develop Accounting procedures used in corporates and the strategies involved in the corporate decisions.: Employability & Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
On Job Internship-I	CUBC2436	2021	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
On Job Internship-II	CUBC2437	2021	To make self-disciplined, self-motivated and integrate theory and practice- Employability, Entrepreneurship & Skill development
Introduction to Print & Electronic Media	MAMC1102	2018	Competence in Print and Electronic Media and can work in Print and Electronic Media industry- Skill development and Employability
Advanced Digital Media	MAMC1103	2018	Students will be able to Competence skills in modern media and will be able to analyse advertising, Marketing, social networking and using social media for different purposes. - Skill development and Employability
Digital Media Platforms	MAMC1104	2018	Employability: Get jobs in Television program production or Radio Program production.
Film studies	MAMC1105	2018	Students will be able to develop skills in different aspects of Film and will be able to analyze film-Employability
Advertising and Public Relations	MAMC1106	2018	After studying this paper student will be able to employ Public Relations and Advertising industry and its functioning.-Employability
Thesis	MAMC0301	2018	Employability: Analysing Media issues and analysis of media content.
Animation	MCDE0601	2016	Ability to create quality animation performance through a creative and professional portfolio using principles of animation. Will help in Employability and Skill development
Camera Operator	MCDE0605	2018	Skills development and Employability in camera handling and planning and producing programs for television and Photography.
Adobe tools and Illustrations	MCDE0609	2018	Work on Adobe Illustrator in the beginner level, and on graphics designing. Skill Development and Employability
Communication Research	CUTM1266	2020	Employability: Conduct research on different media elements, Conduct research on radio, TV, advertising and public relations



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			Write research reports and project proposals-Skill development
Print Media Production	CUTM1267	2020	Student will able to get job on Social media-Employability
Exploring Hindi Cinema	CUTM1268	2020	After successful completion of the course the learners will be able to develop skill on the arts and aesthetic values of Hindi Cinema and India Panorama-Skill development and Employability
Graphic Designing & Visual Images	CUTM1269	2020	Application of Graphic Designing & Visual Images in the job-Employability
Television Journalism	CUTM 1270	2020	students will be able to write script, voice over and field reporting-Skill development The student will be able to produce a program from scripting to broadcasting everything can be done by a students. .-Employability
Camera and Editing for TV	CUTM 1272	2020	Improve skills in contemporary video technology and operation of cameras, audio, lighting and other television production equipment Improve in film and video, including shot composition and continuity editing-Skill development
Reporting and Anchoring	CUTM 1273	2020	Employability: reporter, copy editor and bulletin producer in electronic media, can organise live shows, group discussion and exclusive interviews with experts of any field
Integrated Marketing Communication	CUTM1277	2020	Employability: They will be able to design campaign to promote a product, design appropriate media plan to promote product or service according to target audience, online promotion of products or services
Web Content Development	CUMC2383	2020	Skill development and Employability on technology and content of the world wide web, development of contents on web copy writing, digital news writing for various type of web sites. Skill development on write E-books, Blogs, E-Commerce content.



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Animation	CUMC2379	2020	Ability to create quality animation performance through a creative and professional portfolio using principles of animation.will help in Employability: and Skill development
Introduction to social media	CUMC2382	2020	Student will able to get employment on Social media
Energy storage materials	CUTM1399	2020	Employability:Understanding of Energy storage behaviour of Various materials and their application for various industrial purpose
Bio and bimimetic nano materials	CUTM1400	2020	Employability: to gain knowledge about biomaterials, their properties, behavior, interaction and use them over in bio medical and pharmaceutical industry.
Photovoltaic technology and nanocatalysts	CUTM1401	2020	Employability:Understanding the cost effective fabrication route and increasing efficiency of III and IV generation PV cells and use them in various solar industries.
Smart and electronic materials	CUTM1403	2020	Employability:To acquaint with various kinds of smart materials for device application and to use the nanotechnology in electronics
Corrosion and advanced coating application	CUTM1404	2020	Employability:Learn about different surface coating technologies and to know substrate technology and its significance in obtaining high performance coating. Various methods for evaluating the performance of the coating.
Synthesis and application of nano composites	CUTM1405	2020	Skill developmet:To provide knowledge of the advantages of using different types of nanocomposites and to make the students familiar with the mechanism of nanocomposites. Employability:Students will understand and appreciate the significance of the nanocomposites as an important class of materials and they will be well equipped to design and develop nanocomposites for specialized applications
Emerging materials	CUTM1407	2020	Employability: Students will be able to work in research and industrial set up on material



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			research and the understanding of materials behavior, or conceived, designed, and realized useful products and technology will be included.
Plasma technology	CUTM1410	2020	Employability: To understand fundamental characteristics of plasma, various plasma generation methods, various applications of plasma technology in nanomaterial synthesis, energy production and storage, medicine/health care, etc. and to acquire comprehensive knowledge of how plasmas are utilized for different types of materials processing specially in nanotechnology and developing advanced materials
Industrial chemicals	CUTM1415	2021	Employability-Plastic Additive, Specialty Chemicals, Market Directed Specialty and Fine Chemicals, Management and treatments of Waste chemicals, Sustainable chemicals market and chemical safety. Skill-Extraction and isolation of Fine Chemicals, Selected Industrial process and all projects
Pharmacognosy and phytochemistry	CUTM1416	2021	Employability-The whole content of the syllabus
Polymer chemistry	CUTM1417	2021	Employability-Fundamental , Copolymerization, Radical Polymerization , Ionic Polymerization , Conducting Polymers Application of Polymers . Skill-Analysis of Polymers and All Practices
Packaging	CUTM1418	2021	Employability-Fundamentals of packaging , Conversion technology , Specialty packaging , barrier properties Skill-Package Testing and all projects
Industrial pollution and its waste management	CUTM1419	2021	Employability-Fundamentals of pollution , Water quality standard , Methods of treatment of waste water , Air pollution and its Permissible limit , Solid waste disposal and Management , Industrial water and air pollution Skill-



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			Industrial Waste Water Treatment and all practices
Toxicology	CUTM1420	2021	Employability-Concepts of toxicology, Toxicity Pathways, Toxicity mechanism, Integrated Testing Strategies, Toxicity beyond chemicals, Ecotoxicology and Risk assessment, Toxicity remediation and Application of toxicants Skill- All Practices
Biopolymer and hydrogel	CUTM1421	2021	Employability-Fundamentals of biopolymers, Polymer biodegradation and biocomposites, Basics of biomaterials, Properties of Hydrogels, Applications of Hydrogels. Skill- Surface modification and characterization of biomaterials, Synthesis and Characterization of hydrogels and all practices.
Nano-pharmaceuticals and biomedical science	CUTM1422	2021	Employability-Nanotechnology in Food and pharmaceutical industry, Nanotechnology in Biomedical and Pharmaceutical Industry, Nanotechnology in Agriculture, Molecular Cell Biology, Optical and non-optical probes, Protein Labelling and bio-medical applications, Target Identification and Drug designing Skill-A practical approach to antibody labelling
Synthetic organic chemistry	CUTM1423	2021	Employability-Fundamentals, Organic Reagents, Molecular Rearrangement, Stereochemistry, Photochemistry, Pericyclic Reaction, Retrosynthesis Skill- All Practices
Energy storage system	CUTM1424	2021	Employability-whole content of Energy storage system syllabus
Sustainable chemistry	CUTM1425	2021	Employability-Fundamental, Green Chemistry, Green Solvents, Green Synthetic Methods, Value addition to Waste Biomass, Sustainable materials, Recycling and circular economy Skill-All Practices
Analytical techniques	CUTM1426	2021	Employability-Basic Tools of Analytical Methods, Chemical Equilibria for Quantitative Analysis-I, Electrochemical Analysis, Spectrophotometry, Molecular analysis



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			by Spectroscopy, Spectrochemical Analysis, Analytical Separations. Skill- All Practices.
Numerical Methods for CFD	CUTM1526	2020	Skill- Evaluate finite difference/volume schemes on model problems of computational fluid dynamics using python Employability - Solution of Simultaneous Equations
Fluid Dynamics	CUTM1527	2020	Skill-To apply fluid dynamics problems using different tools. Employability - Methods describing Fluid motion, Lagrangian and Eulerian Methods
Geometry and Grid Generation	CUTM1528	2020	Employability- Understand the construction techniques of structured and unstructured grids using Simulia.
Applications of CFD using Computational Tool-Simulia	CUTM1529	2020	Employability- Understand the construction techniques of structured and unstructured grids using Simulia.
Advanced differential equations	CUTM1530	2020	Skill – Solve the problems choosing the most suitable method Employability - Solution of Diffusion equation in n-dimensional
Graph Theory	CUTM1531	2020	Skill –To impart knowledge about tracing of graphs and network analysis Employability - Minimum spanning trees;Fundamental Circuit;Cut set and Separability
Advanced Statistical Methods	CUTM1533	2020	Skill – Ability to learn new statistical analysis techniques using python Employability - Understand Chi Squared Tests
Applied Number Theory	CUTM1534	2020	Skill- Enhance and reinforce the student's understanding of concepts through the use of technology when appropriate Employability - Divisibility, Representations of Integers,Computer Operations with Integers,Prime Numbers
ADVANCED COMPLEX ANALYSIS	CUTM1535	2020	Employability - To know about special functions like Riemann zeta function which plays a pivotal role in analytic number theory and has



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			applications in physics, probability theory, and applied statistics.
TOPOLOGY	CUTM1536	2020	Skill - To introduce the student to maps between topological spaces Employability - student's ability to handle abstract ideas of Mathematics and Mathematical proofs
DIFFERENTIAL GEOMETRY	CUTM 1537	2020	Employability - Study about notations and operations of Tensor
ADVANCED ALGEBRA	CUTM1538	2020	Employability - Effectively write abstract mathematical proofs in a clear and logical manner
Herbal Cosmetic Technology	CUTM1427	2020	Employability and Skill- Students Completed practice on analysis of carbohydrates, protein, reducing sugars etc.
Plant Physiology and Metabolism	CUTM 1428	2020	Employability and Skill - Hand on Isolation of chloroplast and measurement of electron transport activity, Racker's experiment, role of uncouplers. Inhibitors of oxidative phosphorylation and prospects of C4 and C3 plants
Developmental Biology and Phytotomy	CUTM 1430	2020	Employability and Skill- understand the morphology and development of reproductive parts. Learn identification of plants based on cytotaxonomy, helps in forensic science, pharmacology and drug development. This will be helpful for higher studies and research
Systematics and Diversity of Plants	CUTM 1431	2020	Employability and Skill- Identification of plants based on morphology and cytotaxonomy, provide a comprehensive knowledge on diversity of plant kingdom with focus on all plant groups; algal biomass production and utilization, algal blooms and their environmental impacts, seaweed cultivation and utilization ; help to pursue higher studies and employability in National organization;



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Biochemistry and Enzyme Technology	CUTM 1433	2020	Employability-Learn techniques employed in enzymes purification and characterization, applications of enzyme technology in food, medical, and household industries; application of enzyme technology for the commercialization purpose of biotechnological products.
Advances In Plant Ecology	CUTM 1434	2020	Employability and Skill- Learn to critically evaluate environment pollution issues, practice on E-waste management, smart waste management.
Computational Biology	CUTM 1435	2020	Employability and Skill- Hand on skill and practical knowledge on different databases., Sequence homology and Gene annotation etc.
Microbiology	CUTM 1436	2020	Employability and Skill-Students can do practicals and learnt on preparation and sterilization of media, plating, tubing, slanting of media, Isolation of bacteria in pure culture
Cell and Molecular Biology	CUTM 1437	2020	Employability and Skill-Perform comparative karyotypic analysis, techniques like extraction and separation of DNA by gel electrophoresis, squashing technique for the study of different stages of mitosis and meiosis
Plant Genomics	CUTM 1441	2020	Skill-Learn to understand genomics and proteomics and the different approaches and techniques employed in these fundamental fields of study; analyse information from plant genomic research and recognise its potential applications in crop improvement
Animal Biotechnology	CUTM1452	2021	Employability - Media preparation, Role of important components of culture media; Common laboratory hazards and safety issues to consider in cell culture laboratory, Sterilization techniques used in animal cell culture, Preparation of media for animal cell culture, Opportunities and challenges in animal cell and tissue culture technology, Study of primary cell culture technique using chick embryo, Animal



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			<p>cell batch culture technique, Methods of producing transgenic farm animals; Reproduction biotechnologies and their use in livestock; Somatic cell nuclear transfer cloning; In Vitro Fertilization, Embryo production, preservation and transfer; Sperm and embryo sexing; Intracytoplasmic sperm injection (ICSI); Cryopreservation and gamete banking, Polyculture of fish for high yield; Edible oyster production; Pearl oyster production; Vermiculture and vermicomposting for alternative and sustainable agriculture; Fish culture in flow through system and recirculation technology, Vermicompost preparation from plant debris, cattle dung and paper waste, Recombinant therapeutics and production of pharmaceuticals; Production of tissues and organs for humans and xenotransplantation, Preparation of competent cell (Calcium chloride treatment method)</p>
Animal Breeding	CUTM1453	2021	<p>Employability - Problems relating to gene and genotypic frequencies under different conditions. Estimation of inbreeding in regular and irregular systems. Computation of quantitative genetic effects. Estimation of variance components. Computation of heritability, repeatability, genetic, environmental and phenotypic correlations and their standard errors. Estimation of breeding values from different sources of information. Prediction of direct and correlated response to different bases of selection :- a) Computation of realized heritability and genetic correlation. b) Selection index: Computation, Accuracy and response in component trait c) Estimation of heterosis for</p>



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			different types of crosses. d) Estimation of GCA and SCA
Water and Soil Quality Management in Aquaculture	CUTM1443	2021	Skill - Fertilizers and manures: Different kinds of fertilizers and manures; fertilizer grade, source, rate and frequency of application; Use of treated sewage for pond fertilization and biofertilizers, Ecological changes taking place after fertilizing. Water analysis: measurement of temperature, turbidity, determination of pH and EC. Determination of inorganic nitrogen, and phosphorus. Utilization of bioactive compounds by microorganisms; Cat clay/pyrite soil and its management; seepage and its control. Estimation of primary productivity and chlorophyll. water treatment, water filtration devices, aeration, chlorination, ozonization and UV radiation; eutrophication; Algal bloom control; Aquatic weed management. Determination of salinity, Chlorinity, Total solids, Redox potential, DO, Free CO ₂ ., Determination of total alkalinity, hardness. Waste water treatment practices; Waste discharge standards; Water quality management in carp culture; Water quality management in brackishwater shrimp culture; Water quality management in hatcheries. Calculation of dose of fertilizers and pond liming. Soil and water amendments: lime, manures, fertilizers, micronutrients, zeolites, alum, gypsum, Effluent Treatment plant; Aeration, Chlorination, Ozonisation and UV radiation; Waste and water Treatment Practices; Machine Learning for water quality analysis.
Animal Physiology and Biochemistry	CUTM1450	2021	Employability - • Study of T.S/L.S/V.S of digestive organs (Stomach, Liver, Kidney, intestine etc.) • Study of TLC/DLC from prepared blood



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			smear/Determination of ABO Blood group <ul style="list-style-type: none"> • Estimation of haemoglobin using Sahli's haemoglobinometer /Enumeration of RBC & WBC using haemocytometer • Estimation of presence of lipid/carbohydrate from supplied sample by using spectrophotometer • Estimation of total protein content by spectrophotometer/Lowrey's Method • To demonstrate the effect of temperature/pH/concentration on salivary enzyme activity
Immunology and Cancer Biology	CUTM1451	2021	Employability - Cells and Organs of the Immune System, Structure and function of antibodies, Inflammation, To isolate the lymphocyte from whole blood by density gradient centrifugation method, Screening antisera or hybridoma supernatants for specific antibodies, To detect the presence of an antigen in a sample, To learn coupling of antibody to enzyme Horse Radish Peroxidase (HRP), Study of basic Ouchterlony's double immuno-diffusion method, Tumor cell growth in different media,
Thermal Physics	CUTM1485	2020	Employability - Laws of Thermodynamics, Carnot engine & efficiency. Carnot's Theorem. Refrigerator & coefficient of performance, 2nd Law of Thermodynamics: Kelvin-Planck and Clausius Statements and their Equivalence. Applications of Second Law of thermodynamics, Entropy, Thermodynamic Potentials, Kinetic Theory of Gases, Molecular Collisions, Real Gases. Skill- Thermal Physics Lab
Waves and Optics	CUTM1486	2020	Employability - Interferometer, Diffraction grating. Resolving power of grating, Fresnel's half-Period Zones Skill - Waves and Optics Lab.



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Electricity and Magnetism	CUTM1488	2020	Employability - Magnetic Properties of Matter, Magnetization, Electromagnetic Induction, Electrical Circuits, Network Theorem. Skill - Electricity and Magnetism Lab
Analog System and Application	CUTM1489	2020	Employability - Semiconductor Diodes, Two-terminal Devices and their Application, Amplifiers, Applications of Op-Amp. Skill - Analog Systems and Applications Lab
Elements of Modern Physics	CUTM1491	2020	Employability - Radioactivity, Fission and Fusion, Lasers. Skill - Elements of Modern Physics Lab
Digital Systems and Applications	CUTM1492	2020	Employability - CRO uses, Integrated Circuits, Digital Circuits, Data processing circuit, Microprocessor Architecture. Skill - Digital system Lab
Quantum Mechanics and Applications	CUTM1493	2020	Employability - Schrodinger equation and its solution, its application, hydrogen-like atoms, Atoms in Electric & Magnetic Fields, Many electron atoms. Skill - Learn to solve quantum problems through computational methods
Solid State Physics	CUTM1494	2020	Employability - Magnetic properties of materials, dielectric properties of materials, superconductivity. Skill - Solid state physics lab
Atomic Structure and Chemical bonding-I	CUTM1469	2021	Employability-Wave mechanics, Atomic structure-2, Periodic Properties-I & II, Ionic bond, Covalent bond, Covalent character in ionic compounds Skill-Practice 1 to 12
States of matter and ionic equilibrium	CUTM1470	2021	Employability- Gaseous State-I & II, Liquid State, Solid State, Ionic Equilibria I, II and III. Skill-Practice 1 to 12
Basics and Hydrocarbons	CUTM1471	2021	Employability-Basics Organic Compounds, Reaction Intermediate, Chemistry of alkanes, Carbon-Carbon pi bonds, Aromatic Hydrocarbons Cycloalkanes and Conformational Analysis, Stereochemistry. Skill-Practice 1 to 12



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Chemical Thermodynamics and its application	CUTM1472	2021	Employability-Chemical Thermodynamics,Chemical Thermodynamics and Open System ,Chemical Equilibrium I&II,Colligative Properties .Skill- Practice 1 to 12
S- and P-block elements	CUTM1473	2021	Employability- General Principles of Metallurgy,Acids and Bases,Chemistry of s and p Block Elements I,II and III, Noble Gases,Inorganic Polymers .Skill-1 to 12.
Oxygen Containing Functional Groups	CUTM1474	2021	Employability- Chemistry of Alkyl Halides,Aryl Halides and Organometallic compounds,Alcohols,Carbonyl Compounds 1,Carboxylic Acids and their Derivatives and Sulfer containing compounds. Skill- All Practices
Phase Equilibria& Chemical Kinetics	CUTM1475	2021	Employability-Phase Equilibria-1,3 , Chemical Kinetics 1&2, Catalysis, Surface Chemistry, Skill- All practices
Coordination Chemistry	CUTM1476	2021	Enterprenurship-Crystal Field Theory,Transition Elements Employability-Bio-inorganic Chemistry-1& 2 Skill- All practices
Heterocyclic Chemistry	CUTM1477	2021	Empoybility-Amines, 5 and 6 membered Heterocyclic Compounds containing one heteroatom,Six membered and condensed Heterocyclic Compounds. Skill-All practices
Electrochemistry	CUTM1478	2021	Employability-Conductance I,II, and III , Electrochemistry I.II Enterprernership-Energy Storage and Conversion, Skill- All Practices
Bio-molecules	CUTM1479	2021	Employability-Amino acids, peptide and proteins, Enzymes, Bio-imaging and Bio-Medical science Entrepreneurship-Concept of Energy in Biosystems ,Pharmaceutical Compounds . Skill- All Practices
Quantum Chemistry & Spectroscopy	CUTM1480	2021	Employability-Quantum Chemistry ,Introduction to Molecular Spectroscopy Skill-Nuclear Magnetic Resonance (NMR) spectroscopy,Electron Spin Resonance (ESR) spectroscopy,Photochemistry and all practices
Spectroscopy	CUTM1482	2021	Employability- Carbohydrates, Enterprenurship-Dyes Skill- Chromatography and All practices.



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Calculus	CUTM1511	2020	Skill- Tracing of different curves and functions. Employability - To explain about vector, different types of vector and vector algebra with suitable example
Linear Algebra	CUTM1512	2020	Skill –To gain the knowledge on MATLAB and uses in algebra. Employability - Preparation of working rule for finding rank of a matrix with example.
ANALYSIS-I	CUTM-1513	2020	Skill –• Describe the real line as a complete, ordered field. Employability - Determine the continuity, differentiability, and integrability
ANALYSIS-II	CUTM-1515	2020	Skill –• Describe the Riemann integrable and Riemann sums Employability - To evaluate the definite integral, double integral and triple integral
ADVANCED ANALYSIS	CUTM1519	2020	Skill –To point out that iterative processes and convergence of sequences occur in many areas of mathematics, and to develop a general context in metric spaces. Employability - To reinforce ideas of proof
Ordinary Differential Equations	CUTM1514	2020	Skill –To understand solving Free Undamped Motion of a Spring System using Python and other skills Employability - Find power series solutions of 2nd order differential equations
Partial Differential Equations and System of Ordinary Differential Equation	CUTM1517	2020	Skill –Application of MATLAB in system of differential equations Employability - To practice heat and wave equations in 2D and 3D..
Complex Analysis	CUTM1520	2020	Skill –Learn the Plotting of complex functions using Matlab Employability - To get equipped with the understanding of the fundamental concepts of functions of a complex variable along with the concepts of analyticity, Cauchy-Riemann relations and harmonic functions.



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Integral Transformations	CUTM1521	2020	Skill –To learn the Fourier series expansions of periodic functions by using Matlab Employability - Learn application of MATLAB programming
Linear Programming	CUTM1523	2020	Skill - To demonstration of the utilization of Linear Programming Problems in industry and business. Employability - • Formulate the necessary and sufficient optimality conditions for linear programming and demonstrate the geometrical interpretation of these conditions
Phycology and Microbiology	CUTM1455	2020	Employability- Classification and identification of microbes and algae. Skill-Practice on staining procedure of different Algae and Bacteria. Hand on practice on Classification and identification of microbes and algae.
Biomolecules & Cell biology	CUTM1456	2020	Employability- Carbohydrates,Lipids,Nucleic Acids,Bioenergetics Skill- Students Completed practice on analysis of carbohydrates, protein, reducing sugars etc.
Archegoniate	CUTM1458	2020	Employability-Learn the phylogeny of archegoniate . Skill-Practice on cutting thin sections and staining procedure of Archegoniates
Anatomy of Angiosperms	CUTM1459	2020	Employability-Learn identification of plants based on cytotaxonomy, helps in forensic science, pharmacology and drug development. Skill- To gain hand on skills about the anatomical details of conducting tissues and secretory tissues.
Plant Systematics	CUTM 1464	2020	Employability- Students can easily identify plants, prepared and deposited herbarium, they also practiced digital documentation of herbarium. Skill- Hands on skill on herbarium preparation.
Reproductive Biology of Angiosperm	CUTM1465	2020	Employability -Keen Observations of some of the variation in different parts of sample fruits,



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			<p>and relate these modifications to changes in function,significance of angiosperm gametogenesis and fertilization, including double fertilization. Help to pursue higher studies.</p> <p>Skill -Hands on skill on Pollen viability: Tetrazoliumtest. Germination: Calculation of percentage germination in different media using hanging drop method.</p>
Plant Physiology	CUTM1466	2020	<p>Employability- A keen observation and application of Plant water relationship and Growth regulators.</p> <p>Skill-Hand on practice on calculate the area of an open stoma and percentage of leaf area open through stomata;Study the phenomenon of seed germination</p>
Plant Metabolism	CUTM1467	2020	<p>Employability- Students isolate and quantify the biomolecules, metabolites present on plants and analyse them.</p> <p>Skill- Hand on skill of bioassay of Avena coleoptile.</p>
Non – Chordates-I-	CUTM1497	2021	<p>Employability - General characteristics and Classification up to classes, General characteristics and Classification up to classes, General characteristics and Classification up to classes, General characteristics and Classification up to classes, General characteristics and Classification up to classes, Life cycle, and pathogenicity of <i>Ascaris lumbricoides</i> and <i>Wuchereriabancrofti</i> 6. Study of adult <i>Fasciola hepatica</i>, <i>Taenia solium</i> and their life cycles (Slides/microphotographs), 7. Study of adult <i>Ascaris lumbricoides</i> and its life stages (Slides/micro-photographs)., 8. Study of adult <i>Wuchereriabancroftii</i> and its life stages (Slides/micro-photographs)., 9. To submit a Project Report on any related topic on life cycles/coral/ coral reefs.</p>



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Non Chordates-II	CUTM1498	2021	Employability - General characteristics and Classification up to classes, General characteristics and Classification up to classes, General characteristics and Classification up to classes, General characteristics and Classification up to classes
Developmental Biology	CUTM1509	2021	Employability - Late Embryonic Development: Fate of Germ Layers, Extra-embryonic membranes in birds, Implantation of embryo in humans, Placenta (Structure, types and functions of placenta), Post Embryonic Development. Metamorphosis: Changes, hormonal regulations in amphibians and insects., Ageing: Concepts and Theories, Implications of Developmental Biology Teratogenesis: Teratogenic agents and their effects on embryonic, development, In vitro fertilization ,Concept of Stem cell, Amniocentesis, 5. Study of Whole mounts of chick embryo 21, 24, 28, 33, 36, 48, 72, and 96 hours of incubation,
Principles of Genetics	CUTM1508	2021	Employability - Genetic and environmental basis of sex determination; Chromosomal mechanisms of sex determination in Drosophila and Man., Criteria for extra-chromosomal inheritance, Antibiotic resistance in Chlamydomonas, Mitochondrial mutations in Saccharomyces, Infective heredity in Paramecium and Maternal effects, Complementation Test in Transposable Genetic Elements: Transposons in bacteria, Ac-Ds elements in maize and P elements In Drosophila, Transposons in humans.
Animal Physiology- Life sustaining system	CUTM1505	2021	Employability - Cardiac cycle, Cardiac output and its regulation, Frank-Starling Law of the heart, Nervous and chemical regulation of heart rate, Electrocardiogram-Blood pressure and its regulation, 1. Histological study of gastrointestinal tract



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			2. Study of Histology of trachea and lung 3. Estimation of haemoglobin using Sahli's haemoglobinometer 4. Enumeration of R.B.C.& W.B.C. using haemocytometer 5. Determination of ABO Blood group 6. Preparation of haemin and haemochromogen crystals 7. Recording of blood pressure using sphygmomanometer 8. Histological study of kidney(Human) 9. Histological study of nephron 10. Histological study of testis(mammal) 11. Histological study of ovary(mammal) 12. Histological study of artery & vein
Diversity of Chordates	CUTM1501	2021	Employability - General characteristics of Chondrichthyes and Osteichthyes, Classification up to order Migration, Osmoregulation in fishes, Parental care in fishes, Parental care in Amphibians & Neoteny, General characteristics and Classification of Reptilia, Affinities of Sphenodon, Poison apparatus and biting mechanism in snakes, Adaptive characteristics of crocodile, General characteristics and classification (up to order Archaeopteryx), Principles and aerodynamics of flight, Flight adaptations, Migration in birds. 1. Museum specimen on Protochordata- Balanoglossus, Herdmania, Branchiostoma 2. Sections of Balanoglossus through proboscis and branchio-genital regions 3. Museum specimen on Petromyzon, Myxine 4. Museum specimen on : Fishes-Scoliodon, Pristis, Torpedo, Chimaera 5. Museum specimen on Labeo, Exocoetus, Echeneis, Anguilla, Hippocampus, Tetrodon/ Diodon, Anabas 6. Museum specimen on-Amphibia: Ichthyophis/Ureotyphlus, Necturus



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			7. Bufo, Hyla, Alytes, Salamandra 8. Museum specimen on Reptilia Hemidactylus, Varanus, Uromastix, Chamaeleon, Draco 9. Draco, Vipera, Naja, Hydrophis (Identification of poisonous and non-poisonous snakes) 10. Aves :Study of two common birds from different orders 11. Aves :Study of types beaks and claws 12. Mammalia Sorex, Bat (Insectivorous and Frugivorous), Funambulus, Loris, Herpestes, Erinaceous
Biochemistry of Metabolic Processes	CUTM1506	2021	Employability - Sequence of reactions and regulation of glycolysis & Gluconeogenesis, Citric acid cycle and significance, Phosphate Pentose Pathway (Role and significance), Glycogenesis, Glycogenolysis 1. To demonstrate the effect of temperature on enzyme activity 2. To estimate the carbohydrate content of supplied tissue by Spectrophotometry method 3. To estimate the glycogen content of supplied tissue by colorimeter method 4. To estimate the lipid content from the given sample 5. To estimate the protein content of supplied tissue by colorimeter method 6. Estimation of total protein content in the given sample by Lowry's /Barfoed's Method 7. To estimate amino acids from a mixture by using chromatography (paper/Thin layer) 8. To estimate amino acids from a mixture by using chromatography (paper/Thin layer) 9. Determination of SGPT in given sample by using available kit.(Chick/Goat Serum) 10. Estimation of known and unknown protein 11. Preparation of Standard Curve of Bovine serum Albumin 12. Study the enzymatic activity of Trypsin and Lipase



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Principles of Ecology	CUTM1499	2021	Employability - Population: Unitary and Modular populations Unique and group attributes of population: Density, nasality, mortality, life tables, fecundity tables, survivorship curves, age ratio, sex ratio, dispersal and dispersion. Exponential and logistic growth, equation and patterns, r and K strategies, Population regulation - density-dependent and independent factors Population interactions, Gause’s Principle with laboratory and field examples, Lotka-Volterra equation for competition and Predation, functional and numerical Responses., Ecosystem: Types of ecosystems with one example in detail, Food chain: Detritus and Grazing food chains, Linear and Y-shaped food chains, Food web. . Study of life tables and plotting of survivorship curves of different types from the hypothetical/real data provided., Determination of population density in a natural/hypothetical community by quadrat method and calculation of Shannon-Weiner diversity index for the same community., Study of an aquatic ecosystem: Phytoplankton and zooplankton, Measurement of area, temperature, turbidity/penetration of light, determination of pH, and Dissolved Oxygen content., (Winkler’s method), Chemical Oxygen Demand and free CO ₂ ., Report on a visit to National Park/Biodiversity Park/Wild life sanctuary.
Cell Biology	CUTM1500	2021	Employability -Cell Division and Cell cycle: Mitosis, Meiosis; Regulation of cell cycle. Cell Signaling: Overview of cell signaling, signaling molecules and receptors, GPCR, Second messengers, Role of second messenger (cAMP) in cell signaling, Activation of gene transcription by GPCR, 1. Cell Organization and Sub Cellular Structure



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			<p>Studies</p> <ol style="list-style-type: none"> 2. Gram's staining technique for visualization of prokaryotic cells 3. Counting of cells using Hemocytometer 4. Study of cell attachment 5. Study of cell proliferation 6. Isolation of Endoplasmic Reticulum 7. Isolation and microscopic study of mitochondria 8. Study the presence of Barr body in human female blood cells/cheek cell 9. Study of Actin Assembly 10. Study various stages of mitosis using permanent slides 11. Study various stages of meiosis using permanent slides 12. Maintenance of mammalian cell lines
Fundamentals of Biochemistry	CUTM1503	2021	<p>Employability - Enzyme kinetics; Factors affecting rate of enzyme-catalyzed reactions; Derivation of Michaelis-Menten equation; Concept of K_m and V_{max}, and Lineweaver-Burk plot; Multi-substrate reactions.</p> <ol style="list-style-type: none"> 1. Qualitative tests of functional groups in carbohydrates 2. Qualitative tests of functional groups in lipids. 3. Qualitative tests of functional groups in protein 4. Separation of amino acid using Paper Chromatography. 5. Quantitative estimation of salmon sperm/calf thymus DNA using colorimeter (Diphenylamine reagent) or spectrophotometer (A_{260} measurement) 6. Action of salivary amylase under optimum conditions. 7. Effect of different pH on salivary amylase activity. 8. Demonstration of proteins separation by SDS-PAGE.



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			9. Effect of different Temperature on salivary amylase activity. 10. Effect of inhibitor on salivary amylase activity
Animal Physiology: Controlling and Coordinating System	CUTM1502	2021	Employability - Components of blood and their functions, Structure and functions of haemoglobin, Haemostasis, Blood clotting system, Kallikrein-Kininogen system, Haemopoiesis Blood groups: Rh factor, ABO and MN. 1. Preparation of temporary mounts: Squamous epithelium, Striated muscle fibres and nerve cells 2. Preparation of permanent slide of liver/skeletal muscle/any other tissue of given specimen. 3. Determination of blood groups 4. Preparation of blood smear from blood cells. 5. Estimation of haemoglobin using Sahli's haemoglobinometer 6. Demonstration of the unconditioned reflex action (Deep tendon reflex such as knee jerk reflex) 7. Anatomical model of eye . 8. Anatomical model of ear . 9. Study of permanent slides of various Mammalian tissues 10. Study of slides of endocrine glands 11. Identification of histological slides of lymphoid tissue 12. Preparation of permanent slide of any five mammalian (goat/chick) tissues by microtomy
Comparative Anatomy of Vertebrates	CUTM1504	2021	Employability - 1. Temporary mount of external scales in fishes (cycloid, placoid, ganoid, ctenoid) 2. Study of disarticulated skeleton of Amphibia/Reptilia/Aves/Mammal 3. Demonstration of Chick to study arterial system



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Evolutionary Biology	CUTM1510	2021	Employability - Phylogenetic trees , Multiple sequence alignment , constructions of phylogenetic trees
Molecular Biology	CUTM1507	2021	Employability - 1. Isolation and spectrophotometric estimation of DNA 2. Isolation and spectrophotometric estimation of RNA 3. Visualization of DNA/RNA using agarose gel electrophoresis 4. Preparation of equilibrated phenol 5. Quantitative estimation of RNA using Orcinol reaction 6. Demonstration of DNA & RNA by MGP 7. Preparation of liquid culture medium (LB) and raise culture of E. coli 8. Preparation of solid agarose medium (LB) and raise colonies of E. coli 9. Demonstration of DNA replication, transcription and translation using Photograph, slides and/or videos. 10. Application of in silico tools (BIOVIA's DISCOVERY STUDIO) to study the three dimensional structure of proteins.
Fundamentals of Genetics	ASPG1101	2018	Application of genetic principles in plant breeding:employability& skill dev.
Fundamentals of Soil Science	ASAC1101	2018	Understanding the theory of soil science and its characteristics :employability.
Fundamentals of Horticulture	ASHO1101	2018	Understanding the fundamentals of various aspects of horticulture crops :employability
Fundamentals of Plant Pathology	ASPP1101	2018	Understanding the fundamentals of plant disease causing organisms and their management: employability
Rural Sociology & Educational Psychology	ASEE1102	2018	Learning the basic concepts of rural sociology and psychology for its application in ag.extension : employability.
Soil and Water Conservation Engineering	ASAE1101	2018	Understanding about the principles of soil water conservation:employability



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NSS/NCC/Physical Education & Yoga Practices	ASPE1101	2018	Understanding and application of different yoga asanas and pranayama techniques for physical and mental well-being :Skill & Employability
Irrigation water management	ASAG1206	2018	Understanding the practices of water management and its application in irrigation management : skill dev.& employability
Fundamentals of Entomology –I (Insect Morphology and Taxonomy)	ASEN1201	2018	Understanding the basic principles of morphology of different plant disease causing insects: Employability
Fundamentals of Agricultural Extension Education	ASEE1201	2018	Learning about the latest extension methods i.e. audio-visual aids, field demonstration: Employability
Farm Machinery and Power	ASAE1202	2018	Learning about latest machines used in crop production: employability
Crop Production Technology – I (Cereals, millets and pulses) Kharif crops	ASAG2103	2018	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability
Fundamentals of Plant Breeding	ASPG2103	2018	Understand the basic methods of plant breeding i.e. emasculation and crossing : Skill & Employability
Fundamentals of Entomology- II (Insect ecology and concepts of IPM)	ASEN2102	2018	Understanding the basic principles of morphology of different plant disease causing insects: Employability
Weed management	ASAG2105	2018	Identification of Weeds and its management in different crops : employability
Agricultural Informatics	ASAI2101	2018	To disseminate, capture, access information to achieve sustainable use of agricultural resources : employment.
Communication skills and personality development	ASEE2104	2018	Develop knowledge of english communication through presentation, extempore and GD: Skill & Employability
Crop Production Technology –II (Oil seeds, fiber, sugar,	ASAG2204	2018	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability



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tobacco, and fodder Crops) Rabi crops			
Production Technology for Ornamental Crops, MAP and Landscaping	ASHO2204	2018	To gain expertise in production of ornamental crops and landscaping : ,employability & skill development
Renewable Energy and Green Technology	ASAE2203	2018	Understanding the principles of renewable energy for agriculture practice: employability
Manures, Fertilizers and Soil Fertility Management	ASAC2202	2018	Understanding the manures and fertilizer and its application:skill and employability.
Fundamentals of Plant Biotechnology	ASPB2201	2018	Understanding and learning about the methods of plant biotechnology i.e. DNA Microinjection and Short-gun method: Employability
Rain-fed Agriculture & Watershed Management	ASAG2211	2018	Understanding the methods of rainwater harvesting and groundwater rechargement :employability
Principles of seed technology	ASPG2202	2018	Gaining knowledge in seed storage, certification and marketing ways: employment
Diseases of Field and Horticultural Crops and their Management –I	ASPP2202	2018	Identification and management of diseases of field crops :employability
Problematic Soils and their Management	ASAC3103	2018	Understanding fertility and pH levels of soil to manage problematic soils :skill dev and employability
Pests of field Crops and Stored Grain and their Management	ASEN3103	2018	Identification and management of store pest and management of field crops :employability
Diseases of Field and Horticultural Crops and their Management-II	ASPP3103	2018	Identification and management of diseases of horticultural crops :employability
Crop Improvement-I (Cereals,millet,s pulses and oil seeds etc)(Kharif crops)	ASPG3104	2018	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability



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Principles of food science and nutrition	ASFS3101	2018	Identification of microbes in food processing and packaging: employability
Geoinformatics and Nano-technology for Precision Farming	ASAG3110	2018	To gain knowledge in nano materials and geoinformatics applications i.e. moonsoon tracking system, drainage networks for precision farming: Employability, skill and entrepreneurship
Practical Crop Production – I (Kharif crops)	ASAG3108	2018	To gain expertise in production of commercial kharif crops: employability
Farming System & Organic farming for Sustainable Agriculture	ASAG3207	2018	To gain expertise in organic farming practice: employability, skill development and Entrepreneurship
Practical crop production II (Rabi crops)	ASAG3209	2018	To gain expertise in commercial rabi crop production: employability
Post-harvest Management and Value Addition of Fruits and Vegetables	ASHO3205	2018	Understanding different practices with relation to Value addition of fruits and vegetables and their packaging and storage :Employability & skill development
Pests of horticultural crops and their management and Beneficial Insects	ASEN3204	2018	Identification and management of crop & stored grain pests :employability & skill dev
Crop Improvement-II (fibre, sugar, starches, narcotics, Vegetables, fruits, and flowers)	ASPG3205	2018	Developing skills i.e. field management, cultural practices, disease and pest management for field crop production :skill & employability
Principles of Integrated Pest and Disease Management (50% Entomology and 50% Pathology)	ASPP3204	2018	Identification of insects pests of different crops and its integrated pest management- Entrepreneurship& skill dev, employability
Protected cultivation and post harvest technologies	ASAE3204	2018	Understanding different practices with relation to Value addition of fruits and vegetables and their packaging and storage :Employability & skill development



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Intellectual Property Rights	ASIP3201	2018	Understanding the process to file patent and register for copyrights:skill and employability.
Farm Management	ASEC3204	2018	Expertise to manage agriculture farm : Employability
Commercial Plant Breeding	ASFE2204	2018	Understanding of commercial plant breeding techniques i.e. emasculation, crossing and storage practices :Employability & skill development
Micro propagation Technologies	ASFE2208	2018	Gaining knowledge in different micro irrigation techniques i.e. sprinkler and drip irrigation: Skill &Employability
Hi-tech. Horticulture	ASFE2202	2018	Gaining knowledge in different techniques i.e. vertical farming and hydroponics of hitech horticulture: skill & employability
Remote Sensing & GIS Applications	ASFE2209	2018	Understanding the applications of remote sensing i.e. analyzing the condition of rural roads and detecting land use: Employability, Entrepreneurship and Skill development
Climate Smart Agriculture	ASFE2210	2018	Gaining knowledge on the usage of drones in agriculture for crop improvement: Employability, Entrepreneurship and Skill development
Principles of Aquaculture	ASFE2213	2018	Understanding the various methods i.e. breeding, raising and harvesting in fish production :Employability, Entrepreneurship and Skill development
RAWEP	AGRW4101	2018	To impart diagnostic and remedial practical training and skills in crop production/horticulture/plant protection through work experience: employability,enterpreneurship and skill development.
AELP	AGEL4201	2018	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship,skill dev.and employability.



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Certification and Inspection Systems in Organic Farming in India	CUOF2231	2020	To understand about the quality and safety standards of organic goods-Employment
Organic production-field crops	CUOF2233	2020	To understand about the quality and safety standards of organic field crops-Employment
Organic production-horticultural crops	CUOF2234	2020	To understand about the quality and safety standards of organic horticultural crops-Employment
AELP Project	CUOF2236	2020	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship,skill dev.and employability.
Seed certification	CUSP2262	2020	Understanding the process of certification of new seed varieties: Employability
AELP Project	CUSP2266	2020	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship,skill dev.and employability.
Molecular Genomics	CUGE2273	2020	Understanding the principles of molecular biology. Production of genetically modified varieties using advanced molecular techniquesEmployment:
Techniques in Molecular Biology	CUGE2275	2020	Employment:Production of genetically modified varieties using advanced molecular techniques
AELP Project	CUGE2276	2020	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship,skill dev.and employability.
Development of Personalized Food and Medicine	CUNU2283	2020	Employment:Production of nutritional enriched foods



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AELP Project	CUNU2286	2020	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship,skill dev.and employability.
AELP Project/Industrial internship	CUAG2296	2020	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship,skill dev.and employability.
AELP Project	CUPH2306	2020	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship,skill dev.and employability.
Agri Food Markets and Value Chain Analysis	CUAB2320	2020	Employment:bring agricultural product from production in the field to final consumption, wherein at each stage value is added to the product
Agri Warehouse Management	CUAB2324	2020	To gain knowledge on food grain storage and its management at ware house- Employability & skill
Sales and Distribution of Agrifood Products (Internship at LMDC)	CUAB2325	2020	To gain knowledge on sales and distribution of agri food products-Entrepreneurship and employability.
Storage Entomology	CUFS2330	2020	Employment:Post harvest storage of fruits and vegetables with management practices
Seed pathology	CUFS2331	2020	Skill and employment: Future storage of various seeds under protected condition.
AELP Project	CUFS2336	2020	To promote professional skills and knowledge through hands on experience. To build confidence and ability to work in project mode. To acquire enterprise management capabilities: entrepreneurship,skill dev.and employability.
Quality Assurance in Dairy Industry	CUDP2242	2020	Employment:Quality check of milk based products under govt. norms
Project/Industrial internship	CUDP2246	2020	Employability and skill.



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Quality assurance, management and certification	CUFT2352	2020	Skill and employment:involves quality assurance of fish and fish based products
Fish and shellfish waste management	CUFT2353	2020	Skill and Employability:To gain knowledge on various fish and shell fish byproducts,and their waste utilization.
Microbiological analysis of fish and fisheries products	CUFT2354	2020	Skill and employability:To gain knowledge on sampling,processing and detection of microbes for safety and quality of sea food products.
Biochemical analysis of fish and fisheries product	CUFT2355	2020	Skill and employment:To familiarize with diffrent fish physiochemical quality estimation parameters.
Preparation of different fisheries products and quality assesment	CUFT2356	2020	Skill and emplyment:To teach scientific techniques of ish processing and value addition as well as quality of processed products.
Health Management in Aquaculture	CUAQ2254	2020	Skill, employability & Enterprenureship- To learn the procedures of health mangement in aquaculture
Principles and practices of water management	MAAG 1103*	2017	Skill development: The students can learn about judicious water management using different efficient technologies which would further lay emphasis on job opportunities as well as they can make themselves self sufficient by serving as entrepreneurs to serve the farming community
Cropping systems and sustainable agriculture	MAAG 1206*	2017	Skill development: The students acquire knowledge about different cropping systems under various climatic situations and they can make themselves self employed as sucessful entrepreneurs
Intellectual property and its management in agriculture	MAIP 1201	2017	Employability and Skill development: students get an overall idea of IPR and their applications towards the protection of property rights
Agricultural research, research ethics and rural development programmes	MAAR2101	2017	Employability and Skill development: Acquire knowledge for research ethics and government policies.



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Development perspectives of extension education	MAEX1101*	2017	Employability: Some concepts in this course and the rural development programs can help in getting employment
Gender sensitization for development	MAEX1105*	2017	Research and employability: provide them an opportunity to work in sectors relating to women empowerment
Statistical methods for social sciences	MAST 1203	2017	Skill: Students can learn the usage of different statistical tools that in turn would provide them a scope for employment
Participatory methods for technology development and transfer	MAEX1104	2017	Skill and employability: students can learn the basic concepts of participatory techniques and thereby help in technology transfer from lab to land
Fish Food Organisms	FSAQ2109	2017	Learn and practice the nutritional requirements of fish/shellfish larvae and knowledge on mass culture and enrichment of live food organisms. Employability and Skill development
Freezing Technology	FSPT2103	2017	Understanding the different types of low temperature preservation, handling, storage of different type of fish and fishery products to minimize the spoilage along with post harvest loss. Employability and Skill development
Genetics and Breeding	FSAQ2111	2017	Gain knowledge on genetic basis of inheritance and breeding plans for commercially important fishes. Employability, Entrepreneurship and Skill development
Fish Immunology	FSHM2106	2017	Study the types of immunity, antigen-antibody interactions and learn the Serological methods in disease diagnosis. Employability and Skill development
Fisheries Economics	FSEE2102	2017	Learning the interface between economics and effective management decisions for fisheries business firm. Employability and Skill development
Coastal Aquaculture and Mariculture	FSAQ2204	2017	To gain knowledge in establishing and managing different fish/shellfish farming systems in



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			coastal waters. Employability and skill development
Fish Nutrition and Feed Technology	FSAQ2208	2017	Practical knowledge of feed formulation and different feed processing techniques and prepare feed based on the nutritional requirements of fish/shell fish. Employability and skill development
Fish and Shellfish Pathology	FSHM2201	2017	Study fish and shellfish pathogens, their control measures and treatments. Employability and Skill development.
Shellfish Hatchery Management	FSAQ2206	2017	Practical skills of seed production and hatchery management of commercially important crustaceans and molluscs and can setup his/her own hatchery. Employability, Entrepreneurship and Skill development.
Communication Skills and Personality Development	FSEE2208	2017	Students will improve interpersonal skills, active listening and responding skills, communication into everyday practice, teamwork and group discussions skills. Employability and Skill development.
Intensive Fish Rearing	CUAQ 2250	2020	To enable students intensive production of commercially important fishes in different aquaculture production systems at fish rearing unit and ponds-Skill development and employability
Ornamental fish farming	CUAQ 2251	2020	Aim to Familiar students with ornamental fish culture and aquarium management- Self employability and Skill development
Biofloc Aquaculture	CUAQ 2252	2020	To maintaining biofloc culture system with latest technological advancements-Self employability and Skill development
Health Management in aquaculture	CUAQ 2254	2020	To enable students fish health managements Clinical signs, symptoms and treatment for different diseases- Skill Development and Self employability
Feed Management in Aquaculture	CUAQ 2255	2020	To make practice and familiar with Identification of Suitable locally available feed ingredients and



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			Formulation of high quality fish feed- Skill Development and Self employment.
Instrumental Techniques	CUTM1635	2020	Skill & Employability : Student will perform analysis of various samples by using instruments such as UV, IR, TLC etc.
Crime Scene Management and Forensic Physics	CUTM1636	2020	Skill & Employability : Skill to reconstruct crime scene. Student process the simulated crime scene. Student perform examination of various evidences such as soil, glass, paint, foot print and lip prints.
Finger prints and Questioned Documents	CUTM1637	2020	Skill, Employability & Entrepreneurship, : Student develops latent fingerprints and lift them for comparison & identification purpose.Gains knowledge about various Aspects of AFIS. Student also detects Signature, hand writing & document forgery, examines counterfeit currency, passport and seal impressions. Gains knowledge about instrumental techniques like ESDA, VSC, Stereo Microscope.
Quality Management, Narcotic Drugs, Explosives, and Forensic Chemistry	CUTM1639	2020	Skill & Employability : Student learn and perform examination of NDPS drugs and controlled substanes , low explosives, Fire debris, Petroluem Products, Beverages, Bribe Trap Cases, Adultrated food, Fibres.
Forensic Serology and DNA Profiling	CUTM1641	2020	Skill & Employability : Students perform experiments to detect the presence of blood, semen, saliva and other body fluids , Performs DNA extraction,
Forensic Toxicology and Pharmacology	CUTM1642	2020	Skill & Employability, : Student isolate and Extract poisons\ Drugs from samples and detrmnes the presence of various poisons. Also gains knowledge about interpretation of toxicological finding and preparation of reports.
Forensic Ballistics and Computer Forensics	CUTM1643	2020	Skill & Employability : Student gains knowledge about various aspects of ballistics, characteristics of ammunitions and Computer Forensics. Student also perform instrumental



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			analysis of GSR & examines bullets and cartridge cases to determine the source of origin.
Pharmacology and Pharmaceutical Drug Analysis	CUTM1647	2020	Employability : Students do qualitative and quantitative analysis of Pharmaceutical drug by various chemical and instrumental techniques.
Concepts of Toxicology	CUTM1648	2020	Skill & Employability, : Students do analysis of various poison such as metallic poison, pesticides, plant poisons etc. and gains knowledge about interpretation of toxicological finding and preparation of reports.
Modern and Applied Analytical Forensic Chemistry	CUTM1649	2020	Skill & Employability : Student performs analysis of Various Cases in Forensic Chemistry, Validation of new methods & Accreditation in FSL's, Analysis of NDPS, Explosives, Fire, Petroleum Products, Beverages, Bribe Trap Cases, Adulterated food, Fibres & Examination of Forensic Chemicals.
Molecular Biology and Genetics	CUTM1644	2020	Skill & Employability : Student performs serological analysis, quantification of DNA, Extraction of DNA from different sources. Also gains knowledge about genotyping and result preparation.
Biotechnology in Pharmaceutical Sciences	CUTM1645	2020	Skill & Employability, : Student studies about recombinant DNA Technology, Quality Assurance and Quality control, Studying Bioinformatics, intellectual property rights. Student performs isolation of bacteria, genomic and plasmid DNA & Western blotting
Environmental Biotechnology	CUTM1646	2020	Skill & Employability, : Student performs practicals to detect pollutants in samples & estimation of BOD. Student gains knowledge about measurement of pollutants with the help of biosensor and biomarker, Measurement of Biomagnification, Waste water management and Treatment.
Principles of Information Security	CUTM1618	2020	Employability-Focus on the CIA models, tools, and techniques for enforcement of security



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Digital Forensics	CUTM1619	2020	Employability -Focus on analysis and assessment of risk assesment process & control
Computer Networks	CUTM1620	2020	Skill Development , Employability-Learning about computer network & network security
Cyber Crime & Investigations	CUTM1621	2020	Skill Development,Employability-Learning about Analytical Skills,Comprehension of Cybersecurity Fundamentals and good practices for digital evidence and digital forensics: Skill Development
Intellectual Property Rights	CUTM1622	2020	Employability-Making the students aware of their rights for the protection of their invention done in their project work
Number theory &Cryptography	CUTM1623	2020	Skill Development,Employability-implement and analyse algorithms for integer factorization and primality testing: Skill Development
Advanced Information Security	CUTM1624	2020	Skill Development, Employability-Focus on the CIA models, tools, and techniques for enforcement of security
Cyber Forensics	CUTM1625	2020	Skill Development, Employability-Focus on analysis and assessment of risk assesment process & control : Skill Development, Employability
System and Network Security	CUTM1626	2020	Skill Development, Employability-Gaining practical experience in installation, monitoring, and troubleshooting of current LAN systems
Penetration Testing & Vulnerability Assessment	CUTM1631	2020	Employabilty-uncover vulnerabilities in a network and recommend the appropriate mitigation or remediation to reduce or remove the risksEmployabilty.
Digital Frauds	CUTM1632	2020	Employabilty-Learning of collecting, investigating, preserving, and presenting evidence of cybercrime left in digital storage devices Employabilty.
Project/Dissertation	CUTM1633	2020	Employabilty-Research , Development methodology
Forensic Dermatoglyphics	CUTM1663	2020	Employability & skill : Student locates, develops, lifts and compares fingerprint for identification. Also performs physical and chemical techniques



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			for developing latent fingerprints, collect and examines lipprints, footprints.
Technological methods in forensic sciences	CUTM1664	2020	Employability & skill : Student uses chromatographic methods to separate various samples, gains hands on experience of various instruments
Criminalistics	CUTM1665	2020	Employability & skill : Students visit the simulated crime scene and documents the crime scene.Gains knowledge about the legal importance of chain of custody, the tools and techniques for analysis of different types of crime scene evidence
Introduction to biometry	CUTM1675	2020	Skill & Employability : Student learns the basics of biometry, classification and importance of behavioural biometry. Student identify individual characteristics of Fingerprints.
Handwriting identification and recognition	CUTM1676	2020	Skill & Employability : Student learns importance features in handwriting identification, basics of handwriting characteristics. Student analyses handwriting samples for presence of forgery and various other security documents.
Forensic ballistics	CUTM1669	2020	Employability & skill : Student learns classification of firearms, firing mechanism, method of identifying firearms, characteristics of ammunitions, importance of firearm evidence, nature of firearm injuries. They also do characterization of gunshot residues
Forensic toxicology	CUTM1670	2020	Employability & skill : significance of toxicological studies in forensic sciences, classification of poison and their modes of actions, absorption of poison in body fluids, forensic identification of illicit liquors, classification and characteristics of the narcotics drugs and psychotropic substances, menace of designer drugs
Forensic serology	CUFS2412	2020	Skill & Employability : Student learns significance of serological evidences such as



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			blood, urine, saliva etc. in crime scene investigations, usefulness of genetic markers in forensic investigations, forensic importance of blood stain patterns. Student performs preliminary and confirmatory test for detection of all the body fluids.
Audio recognition and video analysis	CUFS2415	2020	Skill & Employability : Learns principle of voice production, forensic significance speaker identification and recognition and video analysis. Student analyses voice samples and performs video analysis.
Accident Investigations	CUFS2413	2020	Employability : Student lifts the tire impressions and analyse them for determining the source of origin
Explosives Analysis and Post Blast Investigation	CUFS2416	2020	Skill & Employability : Student learns about management of bomb scene and performs examination of various explosives.
Analytical Techniques	CUTM1709	2020	Understanding the working principle of Common instruments used in a diagnostic lab: Skill dev. & Employability & Enterpreunership
Biological Chemistry	CUTM1710	2020	demonstrate an understanding of fundamental biochemical principles, such as the structure/function of metabolic pathways, and the regulation of biological/biochemical processes: Employability
Clinical Hematology	CUTM1712	2020	Differentiate various hematological procedures and the use of basic equipment essential to working in a Hematology Laboratory: Skill dev. & Employability & Enterpreunership
Clinical Pathology	CUTM1715	2020	Pathological investigations of urine, stool and other biological specimen: Employability/ Enterpreunership/ Skill
Cell and Molecular Biology	CUTM1714	2020	understand the mechanism of gene expression and protein synthesis; understand the use of several molecular techniques in disease diagnosis: Employability
Clinical Biochemistry	CUTM1718	2020	Understanding of principle of biochemical Clinical biochemistry tests; to study about



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			diseases related to biochemical and hormone imbalance in human body: Employability/ Enterpreneurship/ Skill
Histology	CUTM1720	2020	Special staining procedures & handling & testing of various cytological specimens: Employability/ Skill dev.
Systemic Bacteriology	CUTM1713	2020	Conceptual basis for understanding pathogenic microorganisms and the mechanisms by which they cause disease in the human body: Employability/ Skill
Applied microbiology	CUTM1717	2020	Microbiology in diagnostics, hospitals and community: Employability/ Enterpreneurship/ Skill
Medical Parasitology and Mycology	CUTM1716	2020	Identification of pathogenic parasite and fungus in disease diagnosis and treatment: Skill dev./ Employability
Immunology & Virology	CUTM1719	2020	Immunological investigations and viral diagnosis: Skill dev. & Employability
Clinical Bacteriology	CUTM1722	2020	Diagnosis of bacteria from infective regions of the body: Skill dev. & Employability
Mini Project	CUTM1754	2020	Research paper publication/ case study/ clinical study/ community service/ survey: Skill dev and Employability
Project	CUTM1756	2020	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
Internship	CUTM1755	2020	Dealing with patient, analysis and interpretation of diseases: Skill dev. & Employability & Enterpreneurship
Medical Laboratory Technology	CUTM1723	2020	Quality management in diagnostic division: Employability/ Enterpreneurship
Blood Banking	CUTM1725	2020	Perform phlebotomy and related donor room activity in blood bank: Skill dev and Employability
Health Programme in India	CUTM1726	2020	Perform as a health care team manager: Employability/ Enterpreneurship
Medical Microbiology	CUTM1724	2020	Demonstrate practical skills in the use of tools, technologies and methods common to



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			microbiology, and apply the scientific method and hypothesis testing in the design and execution of experiments: Skill dev. & Employability
Immunology & Parasitology	CUTM1728	2020	To diagnose the immunological investigations and parasites: Skill dev. & Employability
Advanced Hematology	CUTM1727	2020	Compare and contrast hematology values under normal and abnormal conditions: Skill dev. & Employability & Enterpreunership
General Anatomy	CUTM1757	2021	Comprehend the normal disposition, inter-relationships, gross, functional and applied anatomy of various structures in the human body: Employability
General Physiology	CUTM1758	2021	Know the physiological principles underlying pathogenesis of disease: Employability
Cell Biology	CUTM1729	2021	Understand cell signaling and how it regulates cellular functions. Also how its dis- regulation leads to cancer and other diseases: Employability
Introduction to Quality and Patient safety	CUTM1753	2021	Understand policy related to managing lab and infection control:Employability/ Skill/ Enterpreunership
Medical Laboratory Management	CUTM1751	2021	Recognize the role of clinical laboratory scientist in the assurance of quality health care:Employability, Skill Dev, Enterpreunership
Basic Computer and Information Science	CUTM1742	2021	Understand the difference between an operating system and an application program, and what each is used for in a computer: Employability/ Skill
Basics of Nursing	CUTM1815	2020	Understand the basics of Nursing Processes, first Aid and Emergencies, and OT Organization, health & hygiene: Employability, Skill Dev
Introduction to anesthesia and OT Technology	CUTM1816	2020	Understanding the importance of anesthesia,Machine breathing system,Oxygen Therapy,Face Masks & Airway Laryngoscopes: Employability, Skill Dev
Medical Instrumentation and Techniques	CUTM1730	2020	handling instruments required in Medical Laboratory set up: Skill dev. & Employability & Enterpreunership



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Immunology	CUTM1736	2020	Understanding the concept of Innate & adaptive immune system; performing serological analysis: Skill dev. & Employability & Enterpreunership
Molecular Biology	CUTM1737	2020	Basic techniques applicable in Molecular Biology: Skill dev/ Employability
Hematology	CUTM1731	2020	Differentiate various laboratory test findings with their associated clinical conditions: Employability/ Enterpreunership/ Skill dev
Systemic Virology & Mycology	CUTM1735	2020	Understanding pathogenic microorganisms and the mechanisms by which they cause disease in the human body: Employability/ Skill
Analytical Biochemistry	CUTM1738	2020	Learning various tests carried out for biochemical analysis & Hormone investigations: Skill dev. & Employability & Enterpreunership
Public Heath Microbiology	CUTM1740	2020	Understanding the role of microbiologist in public health: Employability
Pharmaceutical Microbiology	CUTM1739	2020	understanding of different types of disinfectants/antiseptics and their uses, evaluation of their bactericidal and bacteriostatic action: Employability/ Enterepreneurship
Industrial Microbiology	CUTM1741	2020	Enhances analytic ability of various physical parameters which affect production of industrial products by the microorganisms and the safety aspects of the production and use of these products: Employability/ Enterepreneurship
Epidemiology	CUTM1746	2020	Apply the terminology of the Epidemiologic Triad to an infectious disease: Employability
Diagnostic Bacteriology	CUTM1747	2020	Lab diagnosis for Enteric infection, Respiratory tract Infection, Oral & Stomach infection, Urinary tract infections: Employability/ Skill
Diagnostic Mycology	CUTM1745	2020	Understanding pathogenic fungi and the mechanisms by which they cause disease in the human body: Skill dev and Employability
Diagnostic Virology	CUTM1743	2020	Collection, transportation, processing and storage of Virus: Skill dev and Employability



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Diagnostic Parasitology	CUTM1744	2020	Collection and identification of Parasites: Skill dev and Employability
Applied Hematology	CUTM1749	2020	Understanding of Haemopoietic disorders and their laboratory diagnosis : Skill dev. & Employability & Entrepreneurship
Immunopathology	CUTM1750	2020	organization and functioning of the immune system, their diagnostic tests described on immunological techniques: Skill dev and Employability
Parasitology	CUTM1748	2020	Identification of pathogenic parasite in disease diagnosis and treatment: Skill dev. And Employability
Mycology & Virology	CUTM1752	2020	Plan and execute investigations relating to fungi to virus: Skill dev and Employability
BIOLOGY	CUTM1760	2020	understand how these cellular components are used to generate and utilize energy in cells: Employability
BASIC BIOCHEMISTRY	CUTM1759	2020	The students become conversant with the Fundamentals of Biochemistry which can be applied in clinical diagnosis of the metabolic disorders: Employability
RADIOGRAPHIC TECHNIQUE -1	CUTM1767	2020	Position the tube; give instructions to the patient; assist radiologist in various procedures: Employability / Skill
BASIC OF MAGNETIC RESONANCE IMAGING	CUTM1776	2020	Understand patient positioning during the MRI procedure of different organ system to obtain well defined images for proper diagnosis of MRI films and images: Employability/ Skill
OCULAR ANATOMY	CUTM1782	2020	Comprehend the basic structure and connections between the various parts of the central nervous system and the eye so as to understand the neural connections and distribution: Employability
GEOMETRIC OPTICS	CUTM1781	2020	predict the basic properties of the images formed on the retina by the optics of the eye: Employability/ Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
OCULAR PHYSIOLOGY	CUTM1783	2020	List out the physiological principles underlying pathogenesis and treatment of diseases of the eye: Employability
INTRODUCTION TO OPTOMETRY	CUTM1785	2020	Understand the purpose of different instruments used in optometry: Employability
PHYSICAL OPTICS	CUTM1784	2020	Predict the distribution of light under various conditions: Employability/ Skill
VISUAL OPTICS I	CUTM1786	2020	Predict the basic properties of the images formed on the retina by the optics of the eye: Employability/ Skill
OCULAR DISEASES I	CUTM1788	2020	Diagnostic approach and management of the ocular diseases: Employability
OCULAR MICROBIOLOGY AND PATHOLOGY	CUTM1789	2020	Knowledge of pathological processes utilized in the investigation, management and prevention of disease: Employability
CLINICAL EXAMINATION OF VISUAL SYSTEM LAB	CUTM1790	2020	Knowledge on the purpose of each test, its indications and contraindications and will be able to perform various clinical tests: Entrepreneurship/ Employability/ Skill
VISUAL OPTICS II	CUTM1791	2020	Theoretical knowledge and practical skill on visual acuity measurement, objective and subjective clinical refraction: Employability/ Skill
OPTOMETRIC OPTICS II & DISPENSING OPTICS	CUTM1792	2020	Facial measurements - Interpupillary distance measurement and measuring heights (single vision, multifocal, progressives); Lens verification and axis marking and fitting of all lens types; Final checking of finished spectacle with frame adjustments: Employability/ Entrepreneurship/ Skill
OCULAR DISEASES II	CUTM1794	2020	Diagnostic approach, and management of the ocular diseases: Employability
CONTACT LENS- I	CUTM1793	2020	Ability to finalize the CL design for various kinds of patients and Recognize various types of fitting; Ability to fit and Explain all the procedures of Contact Lens fitting to patient: Employability



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
CONTACT LENSES II	CUTM1795	2020	Special cases CL fitting; Identify and manage the adverse effects of contact lens: Employability/ Skill
BINOCULAR VISION I	CUTM1796	2020	Depth perception; Binocular optical defects; Basic binocular evaluation: Employability/ Skill
LOW VISION AND REHABILITATION	CUTM1797	2020	Optical, Non-Optical, Electronic, and Assistive devices; Training for Low Vision subjects with Low vision devices; Referrals and follow-up: Employability/ Skill
BASIC & OCULAR PHARMACOLOGY	CUTM1798	2020	Commonly used ocular drugs, mechanism, indications, contraindications, drug dosage and adverse effects: Employability/ Skill
BINOCULAR VISION II	CUTM1799	2020	Identify non strabismic anomalies related to accommodation & convergence: Employability
PEDIATRIC & GERIATRIC OPTOMETRY	CUTM1800	2020	Be able to dispense spectacles with proper instructions; Adequately gained knowledge on common ocular diseases: Employability/ Skill
SYSTEMIC DISEASES AND EYE	CUTM1801	2020	Ocular findings of the systemic conditions: Employability
OCCUPATIONAL OPTOMETRY	CUTM1802	2020	To be able to prescribe suitable corrective lenses and eye protective wear: Employability/ Entrepreneurship/ Skill
PUBLIC HEALTH & COMMUNITY OPTOMETRY	CUTM1804	2020	Organize health education programmes in the community; Vision screening for various eye diseases in the community and for different age groups: Employability/ Skill
OPTOMETRIC INSTRUMENTS	CUTM1803	2020	Gain theoretical knowledge and basic practical skill in handling the advanced instruments: Employability/ Entrepreneurship/ Skill
PROJECT	CUTM1809	2020	Working on a disease/ disorder specific assignment to fill the research gap in the specific area: Skill dev & Employability
INTERNSHIP	CUTM1810	2020	Dealing with patient, analysis and interpretation of diseases: Skill dev. & Employability & Entrepreneurship



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Human Anatomy and Physiology I – Theory	BPHT1101	2017	Skill-Employability- Hand on practice on various clinical aspects of human physiology and also able to perform different types of experiments
Pharmaceutical Analysis I – Theory	BPHT1102	2017	Skill-Employability-Use the techniques, skills, and modern pharmaceutical instruments and tools necessary for pharmacy profession
Pharmaceutics I – Theory	BPHT1103	2017	Skill- Employability- Entrepreneurship - Understand the impact of pharmaceutical solutions in a global, economic, environmental, and societal context
Pharmaceutical Inorganic Chemistry – Theory	BPHT1104	2017	Skill- Employability- Students can prepare various Pharmaceutical dosage form
Remedial Biology – Theory*	BPHT1106	2017	Employability- Apply knowledge of basic science and pharmacy
Remedial Mathematics – Theory*	BPHT1107	2017	Employability- Apply knowledge of basic science and pharmacy
Pharmaceutical Analysis I – Practical	BPHL1102	2017	Skill- Employability- Students can assay ,preparaed and standarized various Heavy metals and Chemicals
Pharmaceutics I – Practical	BPHL1103	2017	Skill- Employability- Students can prepare various Pharmaceutical dosage form
Human Anatomy and Physiology II – Theory	BPHT1201	2017	Skill-Employability- Hand on practice on various clinical aspects of human physiology and also able to perform different types of experiments
Pharmaceutical Organic Chemistry I – Theory	BPHT1202	2017	Skill-Employability- synthesis, characterization of synthetic formulation and solve complex pharmaceutical problems in research and development sector.
Biochemistry – Theory	BPHT1203	2017	Employability- Apply knowledgand concept of basic science and pharmacy and also able to understand all concept regarding biochemical organization.
Pathophysiology – Theory	BPHT1204	2017	Skill-Employability-student get to know about various communicable diseases and pathophysiology along with all the techniques for screening test .



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Computer Applications in Pharmacy – Theory *	BPHT1205	2017	Skill-Employability-Building competency in programme coding, various softwares, simulation techniques, statistical application etc.
Environmental sciences – Theory *	BPHT1206	2017	Employability- student get to know about basic knowledge about the environment and its allied problems
Pharmaceutical Organic Chemistry II – Theory	BPHT2101	2017	Skill-Employability- synthesis, characterization of synthetic formulation and solve complex pharmaceutical problems in research and development sector.
Physical Pharmaceutics I – Theory	BPHT2102	2017	Skill- Employability- formulate and solve complex pharmaceutical problems in formulation development
Pharmaceutical Microbiology – Theory	BPHT2103	2017	Skill- Employability- Carried out sterility testing, microbiological standardization of Pharmaceuticals and perform cell culture technology and its applications in pharmaceutical industries
Pharmaceutical Engineering – Theory	BPHT2104	2017	Skill -Employability- Enterprenurship- students can able to understand and perform unit operations, material handling techniques, screening test and plant lay out design for optimum use of resources used in Pharmaceutical industries
Pharmaceutical Organic Chemistry III– Theory	BPHT2201	2017	Skill-Employability- synthesis, characterization of synthetic formulation and solve complex pharmaceutical problems in research and development sector.
Medicinal Chemistry I – Theory	BPHT2202	2017	Employability students get to know about the chemistry, pharmacological activity, metabolic pathways, adverse effect, therapeutic value, classification, synthesis, mechanism of action along with structures, structure activity relationship of various drug molecules.



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Physical Pharmaceutics II – Theory	BPHT2203	2017	Skill- Employability- formulate and solve complex pharmaceutical problems in formulation development
Pharmacology I – Theory	BPHT2204	2017	skill-Employability- student get to know about correlation of pharmacology with other bio medical sciences, mechanism of action, drug interaction, design and conduct pharmacological screening experiments.
Medicinal Chemistry II – Theory	BPHT3101	2017	Employability students get to know about the chemistry, pharmacological activity, metabolic pathways, adverse effect, therapeutic value, classification, synthesis, mechanism of action along with structures,structure activity relationship of various drug molecules.
Industrial Pharmacy– I Theory	BPHT3102	2017	Skill-Employability-Entrepreneurship- students get to design and develop process to meet desired needs within realistic constraints to formulate and solve complex pharmaceutical problems.
Pharmacology II – Theory	BPHT3103	2017	skill-Employability- student get to know about correlation of pharmacology with other bio medical sciences, mechanism of action, drug interaction, design and conduct pharmacological screening experiments.
Pharmaceutical Jurisprudence – Theory	BPHT3105	2017	Employability- students can able to apply knowledge in the area of pharmaceutical legislation, rules, laws, ethics, acts and amendments related to drugs, engage in life-long learning.
Medicinal Chemistry III – Theory	BPHT3201	2017	Employability students get to know about the chemistry, pharmacological activity, metabolic pathways, adverse effect, therapeutic value, classification, synthesis, mechanism of action along with structures,structure activity relationship of various drug molecules.
Pharmacology III – Theory	BPHT3202	2017	skill-Employability- student get to know about correlation of pharmacology with other bio medical sciences, mechanism of action, drug



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
			interaction, design and conduct pharmacological screening experiments.
Herbal Drug Technology – Theory	BPHT3203	2017	Skill-Employability- students get to know basic principles of traditional medicinal systems with method of preparation and standardization of ayurvedic formulations
Biopharmaceutics and Pharmacokinetics – Theory	BPHT3204	2017	Skill- Employability- student get to know about pharmacokinetic and pharmacodynamic parameters of different dosage form and use the techniques, skills, and modern pharmaceutical instruments and tools necessary for pharmacy profession
Pharmaceutical Biotechnology – Theory	BPHT3205	2017	Employability- Students van design and develop process to meet desired needs within realistic constraints of pharmacy sector.
Quality Assurance – Theory	BPHT3206	2017	Skill-Employability- students get to know about the validation, confirmation of test product substance and able to analyze, screen and ensure quality of drugs/pharmaceuticals.
Instrumental Methods of Analysis – Theory	BPHT4101	2017	Skill-Employability- Use the techniques, skills, and modern pharmaceutical instruments and tools necessary for pharmacy profession.
Industrial Pharmacy – II Theory	BPHT4102	2017	Skill-Employability-Entrepreneurship- students get to design and develop process to meet desired needs within realistic constraints to formulate and solve complex pharmaceutical problems.
Pharmacy Practice – Theory	BPHT4103	2017	Skill-Emloyability-Enterprenurship- Understanding of professional and ethical responsibility, Manage contemporary pharmaceutical projects, Function effectively as a leader and member of multidisciplinary teams.
Novel Drug Delivery System – Theory	BPHT4104	2017	Skill-Employability-To Design and develop process to meet desired needs in formulation and evaluation of various drug delivery system.
Practice School*	BPHL4102	2017	Employability- Skill- Enterprenership Sudents get to know about practice work for any subjective topics, Engage in life-long learning.



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Social and Preventive Pharmacy	BPHT4202	2017	Skill-Employability-students get to know different preventive measures in pharmacy, Understanding of professional and ethical responsibility.
Pharmaceutical Regulatory Science	BPHT4204	2017	Skill-Employability-students get to know about different regulatory bodies, Engage in life-long learning.
Cosmetic Science	BPHT4209	2017	Skill-Employability- Students get to know the advanced current technology used for manufacturing the cosmetics at lab scale and industry scale
Project Work	BPHP4201	2017	Skill-Employability-Entrepreneurship-Students get to know about plan of work related to the subjective topics and question answer discussion.
Modern Pharmaceutical Analytical Technique	CUTM2000	2021	Skill-Employability- Use the techniques, skills, and modern pharmaceutical instruments and tools necessary for pharmacy profession.
Pharmaceutical Formulation Development	CUTM2001	2021	Skill-Employability-Entrepreneurship- students get to design and develop process to meet desired needs within realistic constraints to formulate and solve complex pharmaceutical problems.
Novel drug delivery systems	CUTM2002	2021	Skill-Employability-To Design and develop process to meet desired needs in formulation and evaluation of various drug delivery system.
Intellectual Property Rights	CUTM2003	2021	Skill-Employability-students get to know about different regulatory bodies, Engage in life-long learning.
Advanced Biopharmaceutics and Pharmacokinetics	CUTM2006	2021	Skill- Employability- student get to know about pharmacokinetic and pharmacodynamic parameters of different dosage form.
Scale up and Technology Transfer	CUTM2007	2021	Skill-Employability- student can get to design to impart knowledge and skills necessary to train the students to be on scale up, technology transfer process and industrial safety issues



Name of the Course	Course Code	Year of introduction	Activities/Content with direct bearing on Employability
Pharmaceutical Production Technology	CUTM2008	2021	Skill- Employability- students can designed to impart knowledge and skills necessary to train the students to be on par with the routine of Industrial activities in Production
Modern Pharmaceutical Analytical Technique	CUTM1583	2021	Skill-Employability- Use the techniques, skills, and modern pharmaceutical instruments and tools necessary for pharmacy profession.
Drug Delivery System	CUTM1584	2021	Skill-Employability-To Design and develop process to meet desired needs in formulation and evaluation of various drug delivery system.
Modern Pharmaceutics	CUTM1585	2021	Skill-Employability-Entrepreneurship- students get to design and develop process to meet desired needs within realistic constraints to formulate and solve complex pharmaceutical problems.
Pharmaceutics Practical I	CUTM1587	2021	Skill-Employability-Entrepreneurship- students get to design and develop process to meet desired needs within realistic constraints to formulate and solve complex pharmaceutical problems.
Molecular Pharmaceutics (Nano Tech and Targeted DDS)	CUTM1589	2021	Skill-Employability-students can design to impart knowledge on the area of advances in novel drug delivery systems
Advanced Biopharmaceutics & Pharmacokinetics	CUTM1590	2021	Skill- Employability- student get to know about pharmacokinetic and pharmacodynamic parameters of different dosage form.
Computer Aided Drug Delivery System	CUTM1591	2021	Skill-Employability -students get to know about the different drug designing softwares, application of simulation techniques, bioinformatics, molecular docking tools.
Cosmetic and Cosmeceuticals	CUTM1592	2021	Skill-Employability- Students get to know the advanced current technology used for manufacturing the cosmetics at lab scale and industry scale
Pharmaceutics Practical II	CUTM1593	2021	Skill-Employability-Students can design and develop various drug delivery system



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Computer Networks	CUTM1606	2021	Employability(develop knowledge on networking to handle network setup, which help students in job)
Software Engineering	CUTM1605	2021	Skill And Employability(Developed knowledge to develop SRS for appication, which helps students in their job)
Apparel Production & Marketing	CUTM3029	2017	Employability/Skill - Practice and Project
Line Stitching Supervising	CUTM3030	2017	Employability/Skill - Practice and Project
Apparel Production	CUTM3031	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Light Motor Vehicle Driving	CUTM3032	2017	Employability/Skill - Practice and Project
Fork Lift Operation	CUTM3033	2017	Employability/Skill - Practice and Project
Heavy Vehicle Technology	CUTM3034	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Two Wheeler Service Technology	CUTM3035	2017	Employability/Skill - Practice and Project
Four Wheeler Service Technology	CUTM3036	2017	Employability/Skill - Practice and Project
E-Vehicle Assembly and Service Technology	CUTM3037	2017	Employability/ Entrepreneurship/Skill - Practice and Project
Robotics	CUTM3038	2017	Employability/Skill - Practice and Project
Poultry Farming	CUTM3039	2017	Employability/ Entrepreneurship/Skill
CNC Programming (CAM)	CUTM3040	2017	Employability/Skill - Practice and Project
Design Supervising Wooden and Modular Furniture	CUTM3041	2017	Employability/ Entrepreneurship/Skill - Practice and Project



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Introduction to Composite Manufacturing	CUTM3042	2018	Employability/Skill - Practice and Project
3D Modelling and Printing	CUTM3043	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Precast Concrete Manufacturing	CUTM3045	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Fabrication	CUTM3046	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Hi-Tech Surveying	CUTM3047	2018	Employability/Skill - Practice and Project
Internet of Things	CUTM3048	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Mechatronics System Design	CUTM3049	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Introduction to Nanotechnology	CUTM3051	2018	Employability/Skill - Practice and Project
Drone Piloting	CUTM3052	2018	Employability/Skill - Practice and Project
Camera Operation	CUTM3053	2018	Employability/Skill - Practice and Project
Editor	CUTM3054	2018	Employability/ Entrepreneurship/Skill - Practice and Project
Desktop Publishing	CUTM3055	2018	Employability/Skill - Practice and Project
Introduction to Blender and Unity tools	CUTM3056	2018	Employability/Skill - Practice and Project
Refraction Technology	CUTM3057	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Emergency Medical Technology	CUTM3058	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Medical Lab Technology	CUTM3059	2019	Employability/Skill - Practice and Project



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Operating Theatre Technology	CUTM3060	2019	Employability/Skill - Practice and Project
Radiology Technology	CUTM3061	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Phlebotomy Technology	CUTM3062	2019	Employability/Skill - Practice and Project
First Aid Service	CUTM3063	2019	Employability/Skill - Practice and Project
General Duty Assistance Service	CUTM3064	2019	Employability/Skill - Practice and Project
X- ray Technology	CUTM3065	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Retail Sales	CUTM3067	2019	Employability/ Entrepreneurship/Skill - Practice and Project
Basketball	CUTM3068	2019	Employability/Skill - Practice and Project
Gym Fitness	CUTM3069	2019	Employability/Skill - Practice and Project
Swimming	CUTM3070	2019	Employability/Skill - Practice and Project
Yoga & Meditation	CUTM3072	2019	Employability/Skill - Practice and Project
Solar PV Installation	CUTM3073	2019	Employability/Skill - Practice and Project
Solar Lighting Technology	CUTM3074	2019	Employability/Skill - Practice and Project
Solar PV Microgrid System	CUTM3076	2019	Employability/Skill - Practice and Project
Solar PV Driven Equipment O/M & Assembly	CUTM3077	2019	Employability/Skill - Practice and Project
Solar Thermal Engineering	CUTM3078	2019	Employability/Skill - Practice and Project



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Introduction to Quantum Computing	CUTM3079	2020	Employability/Skill - Practice and Project
Organic Farming	CUTM3081	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Mushroom Farming	CUTM3082	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Hydroponics Technology	CUTM3083	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Poultry Farming	CUTM3084	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Dairy Farming	CUTM3085	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Vermicomposting Farming	CUTM3086	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Transformer Manufacturing, Repairing and Maintenance	CUTM3087	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Electrical Installation	CUTM3089	2020	Employability/Skill - Practice and Project
Repair and Maintenance of Home Appliances	CUTM3090	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Refrigeration and air conditioning	CUTM3091	2020	Employability/Skill - Practice and Project
Super critical Co2 plant operation	CUTM3092	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Business Plan Preparation	CUTM3095	2020	Employability/Skill - Practice and Project
Composite fabrication practice	CUTM3098	2020	Employability/Skill - Practice and Project
Powder coating practice	CUTM3099	2020	Employability/Skill - Practice and Project
Farm appliances operation	CUTM3100	2020	Employability/Skill - Practice and Project



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Bio fertilisers preparation	CUTM3103	2020	Employability/ Entrepreneurship/Skill - Practice and Project
PCB designing & fabrication	CUTM3104	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Introduction to Block Chain Technology	CUTM3105	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Introduction to Nutraceuticals	CUTM3106	2020	Employability/Skill - Practice and Project
Introduction to NLP	CUTM3107	2020	Employability/Skill - Practice and Project
Introduction to Computational Biology	CUTM3108	2020	Employability/Skill - Practice and Project
Product Life Cycle Management through Gate process	CUTM3109	2020	Employability/Skill - Practice and Project
New material development with Biovia	CUTM3110	2020	Employability/Skill - Practice and Project
Spectral image processing using Python	CUTM3111	2020	Employability/Skill - Practice and Project
Satellite data processing	CUTM3112	2020	Employability/Skill - Practice and Project
Working with Graphene and carbon fibre	CUTM3113	2020	Employability/Skill - Practice and Project
Adobe Tools and Illustrations	CUTM3114	2020	Employability/ Entrepreneurship/Skill - Practice and Project
Computer Installation and Maintenance	CUTM3120	2020	Employability/ Entrepreneurship/Skill - Practice and Project
3D Game Art	CUTM3121	2021	Employability/Skill - Practice and Project
Drug Design using Biovia Discovery Studio	CUTM3122	2021	Employability/ Entrepreneurship/Skill - Practice and Project



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Ophthalmic Lens and spectacle manufacturing Techniques	CUTM3123	2021	Employability/ Entrepreneurship/Skill - Practice and Project
Medical Diagnostic Techniques_	CUTM3124	2021	Employability/ Entrepreneurship/Skill - Practice and Project
Introduction to Aquaponics	CUTM3125	2021	Employability/Skill - Practice and Project
Polyhouse Automation	CUTM3126	2021	Employability/ Entrepreneurship/Skill - Practice and Project
Development of Processor (Shakti)	CUTM3127	2021	Employability/Skill - Practice and Project
Spectroscopy	CUTM3128	2021	Employability/Skill - Practice and Project
Extraction Technologies	CUTM3129	2021	Employability/Skill - Practice and Project
Gamified DIY kits using Lasers	CUTM3130	2021	Employability/Skill - Practice and Project
VR Assets Development	CUTM3131	2021	Employability/ Entrepreneurship/Skill - Practice and Project
GIS and Remote Sensing: Applications in Participatory Natural Resource Management	CUTM3133	2021	Employability/Skill - Practice and Project
GIS and Remote Sensing: Application Development	CUTM3134	2021	Employability/Skill - Practice and Project
3D Modelling and Printing	CUTM3135	2021	Employability/ Entrepreneurship/Skill - Practice and Project
Brew Master	CUTM3142	2021	Employability/ Entrepreneurship/Skill - Practice and Project