



BoS Meeting Minutes of the Programmes offered by the University (2017-22)

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2021-22

CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Paramedics and Allied Health Sciences

Date: 09/07/2021

MINUTES OF BOARD OF STUDIES MEETING held on 09/07/2021

Venue: Hybrid mode (Board Room, CUTM, Bhubaneswar and online)

Time: 11.00 AM

The Board of Studies (BoS) meeting of School of Paramedics and Allied Health Sciences was held on 09/07/2021 at 11 AM in hybrid mode.

The following members were present:

Dr. Bhargavram (MD, Professor of Ophthalmology, Sandhya Eye Hospital, Andhra Pradesh)
Dr. Ajay Kumar Singh (MD, Professor of Ophthalmology)
Dr. L. S. Sunil Avagaada (Consultant Radiologist, Q1 Hospital, Health City, Arilova)
Dr. Debasish Sahoo (MD, Professor in Microbiology, SOA University)
Dr. Debi Prasad Rath (MD, Professor in Pathology, CARE Hospital, Bhubaneswar)
Dr. Ardhendu Praharaj (Ph. D. in Microbiology, District Microbiologist, Nabrangpur)
Dr. Harihar Praharaj (MD, Professor of Medicine, Ex-join Director, Dept. of Family Welfare)
Dr. Manas R. Baisakh (MD, Pathology, PDCC, Oncopathologist)
Dr. Shweta Kumari (RMRC, Bhubaneswar)
Prof. B. N. R Subudhi (Retd. Prof. and Ex- HOD, Department of Ophthalmology, MKCG Medical College)
Dr. Swarna Manjari Mohanty (Ex- Registrar, DMET, Odisha)
Prof. Sunil Kumar Jha (Dean, SoPAHS)
Dr. Soumya Jal (HoD, SoPAHS)
Dr. P.K. Mohanty, Dean (Acad) CUTM

All the members were welcomed to the online session by the Chairperson and were briefed regarding the purpose of the meeting. Thereafter, the Dean of SoPAHS presented on the achievements, improvements of the department in terms of academics and infrastructure.

Following are the programs offered by SoPAHS:

MSc Medical Laboratory Technology (MSc MLT)
MSc Applied and Clinical Microbiology (MSc CMB)
MSc Optometry (MSc Optom)
BSc Medical Laboratory Technology (BSc MLT)
BSc Clinical Microbiology (BSc CMB)
BSc Medical Radiation Technology (BSc MRT)
BSc Optometry (BSc Optom)
BSc Anaesthesia Technology (BSc AT)
BSc Operation Theatre Technology (BSc OTT)
BSc Emergency Medicine Technology (BSc EMT)



Bachelor of Physiotherapy (BPT)

Agenda of the meeting:

Agenda 1: The minutes of the last meeting of the BoS held on 11.07.2020 were confirmed.

Agenda 2: Discussion and approval on the content of syllabus for various courses of SoPAHS.

At first, the Dean of the school presented the feedback received from several stakeholders, on the curriculum of its various departments. With respect to the feedback received from the stakeholders, the committee discussed and approved for incorporation/ modifications in the curriculum for the Academic session 2021-22.

- The following programmes were introduced in SoPAHS for the AY 2021: BSc Anaesthesia Technology; BSc Operation Theatre Technology; BSc Emergency Medicine Technology, Bachelor of Physiotherapy, MSc Optometry. All the programmes implemented the CBCS pattern into their curriculum.
- Syllabus for BSc Medical Radiation Technology; BSc Optometry, BSc Clinical Microbiology were approved without any revision.
- **Diploma in Community Health Practice:** Students can register for this course through the means of Lateral Entry after completion of Certificate Ward Technician Course (6 months). After completion of the Certificate Course, the student will be eligible to complete 1 and ½ years in Diploma in Community Health Practice. On successful completion of the course, the student will be eligible for receiving Registration number from DMET for Certificate Ward Technician and will receive Diploma Completion Certificate from CUTM.
- New courses added into the curriculum are provided in *Annexure A*.

Agenda 3: Inclusion of courses on life skills and value addition

For their overall development and wellbeing of the students, it was advised that students enroll in the various life skills and value-adding courses that are offered by the university. The Board members agreed and gave their approval to the same.

Details of the life skill and value added courses introduced are mentioned in *Annexure B*.

The Dean, SoPAHS extended sincere thanks to all the members of the Board.

The meeting ended with a vote of thanks to the Chair.



Prof. Sunil Kumar Jha
Dean, SoPAHS

School of Paramedics & Allied Health Sciences
Centurion University of Technology & Management
Bhubaneswar, Odisha-752050



Dean, Academics

Dean - Academic
Centurion University of Technology & Management
Bhubaneswar, Khurda. Odisha-752050



Dr. Soumya Jal
HOD, SoPAHS

School of Paramedics & Allied Health Sciences
Centurion University of Technology & Management
Ramchandrapur, Bhubaneswar - 752050



Annexure A

List of new courses added

Sl. No	Course Title	Type (Skill/ Employability/ Entrepreneurship)	Credit
	BSc Anaesthesia Technology		
1.	General Anatomy	Employability	5
2.	General Physiology	Employability	5
3.	Biochemistry	Employability	4
4.	Cell Biology	Employability	4
5.	Basic Computer and Information Science	Employability	2
6.	Medical Law and Ethics	Employability	3
7.	Basics of Nursing	Employability	5
8.	Basics in Medical Physics and Electronics	Employability	4
9.	Microbiology	Employability	5
10.	Introduction to anaesthesia and OT Technology	Employability	4
11.	Pharmacology	Entrepreneurship	4
12.	Pharmacology related to Anaesthesia Technology	Employability	4
13.	Clinical Hospital Practice for AT-I	Employability	4
14.	Concepts of Diseases and Techniques in Regional & General Anaesthesia including Complications medical	Employability	4
15.	Clinical Hospital Practice for AT-II	Employability	4
16.	Anaesthesia for Specialty Surgeries	Employability	4
17.	Anaesthesia for Patients with Medical disorders	Employability	4
18.	Clinical Hospital Practice for AT-III	Employability	4
19.	Post Anaesthesia care Unit	Employability	4
20.	Health Care Management	Entrepreneurship	4
21.	Anaesthesia Techniques Including Complication	Employability	4
22.	Anaesthesia for Specialties (Including Critical Care Assistance and Ventilation)- Paper II	Employability	4
23.	Clinical Hospital Practice for AT-IV	Employability	4



24.	Internship	Employability	12
25.	Project	Employability	12
26.	Environmental Studies	Employability	2
27.	Job Readiness	Employability	3
28.	Proficiency in English	Employability	2
	BSc Emergency Medicine Technology		
1.	General Anatomy	Employability	5
2.	General Physiology	Employability	5
3.	Biochemistry	Employability	4
4.	Cell Biology	Employability	4
5.	Microbiology	Employability	5
6.	Medical Terminology & Record keeping	Employability	3
7.	Basic principles of Hospital management	Entrepreneurship	4
8.	Hospital and clinical Pharmacy	Employability	5
9.	Introduction to emergency services- Part I	Employability	4
10.	Emergency Department Equipment Part - I	Entrepreneurship	4
11.	Emergency Department Pharmacology Part-I	Entrepreneurship	4
12.	Basic Computer and Information Science	Employability	2
13.	Pharmacology	Entrepreneurship	4
14.	Introduction to emergency services - Part II	Employability	4
15.	Emergency department equipment -Part II	Entrepreneurship	4
16.	Emergency Department Pharmacology-Part II	Entrepreneurship	4
17.	Medical Psychology	Employability	3
18.	Psychiatric, Geriatric & Obstetric Emergencies	Employability	2
19.	Medical emergencies - Part I	Employability	4
20.	Medical emergencies- Part II	Employability	4
21.	Medical Laboratory Management	Entrepreneurship	5
22.	Introduction to Quality and Patient Safety	Employability	5
23.	Medical Law and Ethics	Employability	3
24.	Clinical Pathology	Entrepreneurship	4
25.	Project	Employability	12
26.	Internship	Employability	12
27.	Environmental Studies	Employability	2
28.	Job Readiness	Employability	3
29.	Proficiency in English	Employability	2
	BSc Operation Theatre Technology		



1.	General Anatomy	Employability	3
2.	General Physiology	Employability	4
3.	Biochemistry	Employability	4
4.	Cell Biology	Employability	4
5.	Medical Terminology and Record keeping	Employability	3
6.	Basic computer and Information Science	Employability	2
7.	Medical Law and Ethics	Employability	3
8.	Introduction to Quality and Patient safety	Employability	5
9.	Practical orientation on Community and Health care sector industry	Employability	3
10.	Pharmacology	Entrepreneurship	4
11.	Microbiology	Employability	5
12.	Basic principles of Hospital Management	Entrepreneurship	4
13.	Clinical practices in hospital for OTT- I	Entrepreneurship	4
14.	Hospital & Clinical Pharmacy	Entrepreneurship	5
15.	Introduction to Anesthesia and OT Technology	Employability	4
16.	Clinical practices in hospital for OTT- II	Entrepreneurship	4
17.	Basics of Surgical procedures	Employability	3
18.	Basics in Medical Physics & Electronics	Employability	4
19.	CSSD Procedures	Employability	3
20.	Clinical practices in hospital for OTT- III	Entrepreneurship	4
21.	Advance surgical techniques	Employability	3
22.	Basic Intensive care	Employability	3
23.	Clinical practices in hospital for OTT- IV	Employability	4
24.	OTT Project	Employability	12
25.	OTT Internship	Employability	12
26.	Environmental Studies	Employability	2
27.	Job Readiness	Employability	3
28.	Proficiency in English	Employability	2
MSc Optometry			
1.	Research Methodology	Employability	3
2.	Business and Clinical Aspects of Optometry	Employability	3
3.	Recent Advancement in Optometry	Employability	4
4.	Applied Optometric Optics	Employability	4
5.	Advanced Ophthalmic Diagnostic Procedures & Instrumentation	Entrepreneurship	4



6.	Epidemiology and Community Optometry	Employability	3
7.	Introduction to LASER Technology	Employability	3
8.	LASER in Refractive Surgery	Employability	3
9.	Orthoptics and Vision Therapy	Entrepreneurship	4
10.	Advanced contact lens practice - I	Employability	4
11.	LASER in Anterior segment disorders & Glaucoma	Employability	4
12.	Paediatric Optometry and binocular Vision I	Employability	3
13.	LASER in Posterior segment disorders	Employability	3
14.	Paediatric Optometry and Binocular Vision II	Employability	3
15.	Advance contact lens practice II	Entrepreneurship	4
16.	Ocular diseases & Therapeutics	Employability	3
17.	Neuro Optometry	Employability	3
18.	Specialty Clinic	Employability	10
19.	Dissertation	Employability	12
20.	Environmental Studies	Employability	2
21.	Job Readiness	Employability	3
22.	Proficiency in English	Employability	2
	Bachelor of Physiotherapy		
1.	General Anatomy	Employability	5
2.	General Physiology	Employability	5
3.	Biochemistry	Employability	4
4.	Cell Biology	Employability	4
5.	Electrotherapy-I	Entrepreneurship	6
6.	Exercise Therapy	Entrepreneurship	5
7.	Psychology and Sociology	Employability	7
8.	Electrotherapy-II	Entrepreneurship	6
9.	Clinical Pathology	Entrepreneurship	4
10.	Microbiology	Employability	5
11.	Pharmacology	Entrepreneurship	4
12.	Basic Computer and Information Science	Employability	2
13.	Biomechanics and Kinesiology	Entrepreneurship	6
14.	Community Medicine	Entrepreneurship	3
15.	Physiotherapy in Cardio pulmonary condition	Employability	5
16.	Principle of Rehabilitation	Entrepreneurship	6
17.	Pediatrics and Geriatrics	Employability	5
18.	Surgery I	Employability	5
19.	Medicine I (General Medicine)	Employability	5
20.	Medicine II (Cardiology and Work Physiology)	Employability	4
21.	Medicine III (Neurology)	Employability	6



22.	General Orthopedics	Employability	7
23.	Surgery II	Employability	5
24.	Medicine IV (Psychiatry)	Employability	5
25.	Research Methodology	Employability	3
26.	Medical Law and Ethics	Employability	3
27.	Physical Diagnosis and Physical Fitness	Employability	5
28.	Yoga and Naturopathy	Entrepreneurship	4
29.	Physiotherapy in Medical Condition	Entrepreneurship	5
30.	Physiotherapy in Surgical Condition	Entrepreneurship	5
31.	Physiotherapy in Orthopedics	Entrepreneurship	5
32.	Physiotherapy in Neurological Conditions	Entrepreneurship	5
33.	Internship	Employability	12
34.	Project	Employability	12
35.	Environmental Studies	Employability	2
36.	Job Readiness	Employability	3
37.	Proficiency in English	Employability	2

List of Domain courses approved

Sl. No	Domain Course Title	Credit	(T+P+P)
1.	Health Care Assistancy	25	(8+7+10)

List of Skill courses (Basket) approved

Sl. No	Course Title	Credit	(T+P+P)
1.	Refraction Technology (CUTM3057)	4	0+3+1
2.	Emergency Medical Technology (CUTM3058)	4	0+3+1
3.	Medical Lab Technology (CUTM3059)	4	0+3+1
4.	Operation Theatre Technology (CUTM3060)	4	0+3+1
5.	Radiology Technology (CUTM3061)	4	0+3+1
6.	Phlebotomy Technology (CUTM3062)	4	0+3+1
7.	First Aid Service (CUTM3063)	4	0+3+1
8.	General Duty Assistance Service (CUTM3064)	4	0+3+1
9.	X- ray Technology (CUTM3065)	4	0+3+1
10.	Medical Diagnostic Techniques (CUTM3124)	4	0+3+1
11.	Ophthalmic Lens and Spectacles Manufacturing (CUTM3123)	4	0+3+1

List of value-added courses approved

Sl. No	Course Title	Hrs. of input
1.	Gender, Human Rights and Ethics (CUVA4040)	30 hrs



CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Paramedics and Allied Health Sciences

Time: 11.00 AM

Date: 09.07.2021

Venue: Hybrid mode (Board Room, CUTM, Bhubaneswar and online)

Board of Studies Meeting

Attendance Sheet

Sl. No.	Name	Organization	Signature
1	Dr. Debasis Sahoo	MD, Professor of Microbiology, S'O'A University, Bhubaneswar	Attended online
2	Dr. Harihar Praharaj	MD, Professor of Medicine, Gerontology, Ex-Join Director, Dept. of Family Welfare	Attended online
3	Dr. Ajay Kumar Singh	MD, Professor of Ophthalmology, DHC Khordha	Attended online
4	Dr Manas R Baisakh	M.D Pathologist; PDCC (Oncopathologist)	Attended online
5	Dr. Ardhendu Praharaj	Ph.D, Microbiology, District Microbiologist, Nabrangpur	Attended online
6	Dr. Debi Prasad Rath	MD, Professor of Pathology, CARE Hospital, Bhubaneswar	Attended online
7	Dr. Bhargavram	MD, Professor of Ophthalmology, Sandhya Eye Hospital, Andhra Pradesh	Attended online
8	Dr. Shweta Kumari	RMRC, Bhubaneswar, Odisha	Attended online
9	Prof B N R Subudhi	Retd. Prof and Ex HOD, Dept of Ophthalmology, MKCG Medical College	Attended online
10	Dr.L.S.Sunil Avagaada	Consultant Radiologist, Q1 Hospitals, Health City, Arilova,	Attended online
11	Dr. Swarna Manjari Mohanty	Ex Registrar DMET, Odisha	Attended online


Prof. Sunil Kumar Jha

Dean, SoPAHS

School of Paramedics & Allied Health Sciences
Centurion University of Technology & Management
Bhubaneswar, Odisha-752050


Dean, Academics

Dean - Academic

Centurion University of Technology & Management
Bhubaneswar, Khurda. Odisha-752050


HOD, SoPAHS
Dr. Soumya Jal

Associate Professor & HOD

School of Paramedics & Allied Health Sciences
Centurion University of Technology & Management
Ramachandrapur, Bhubaneswar - 752050

CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Engineering & Technology

Department of Civil Engineering

Date: 11/07/2020

MINUTES OF BOARD OF STUDIES MEETING held on 11/07/2020

Venue: Virtual Mode

Time: 11.00 a.m.

The Board of Studies (BoS) meeting of Department of Civil Engineering was held on 11/07/2020, in virtual mode. The following are the members:

1. Dr Vazeer Mahmood, Andhra University College of Engineering, Visakhapatnam, AP, India
2. Dr Debi Prasanna Kanungo, senior professor and scientist CSIR central building research institute
- 3 Prof. Prafulla Kumar Panda, Internal Expert
- 4 Prof. Kamal Kumar Barik, Internal Expert
- 5 Mr Vishal Kumar Singh, Internal Expert

The Chairperson welcomed all members of the Board and briefly outlined the purpose of the meeting. Thereafter, the Head of the Department of Civil Engineering presented the achievements and improvements of the department in the areas of academics, research, consultancy and infrastructure.

The following agenda items were taken up subsequently:

Agenda 1: The minutes of the last meeting of the BoS held on 22/06/2019 were confirmed.

Agenda 2: Credits distributions, courses and baskets layouts, and new inclusions of Smart Basket (Basket-III) Interdisciplinary domains.

The HoD, Civil Engg. gave a presentation on the feedback received on curriculum outlining the suggestions made by the various stakeholders. Based on this, the Board accepted and approved a few suggestions for course revision to be implemented from the Academic Year 2020-21.

- The Smart stack to be delivered by people from the industry and/or enabling internal faculty members to deliver the industry aligned courses.
- The strategy of keeping at least twenty percent online delivery of courses in the curriculum was appreciated by everyone.
- It was suggested to have more MOUs with academia and industry for effective rollout.
- Everyone appreciated having the "Job Readiness" course of Basket-II as compulsory across branches and also the delivery plan of the course.
- Present final year student welcomed Job readiness component and domain course content.
- The briefing comprised of credits distributions, courses and baskets layouts, and new inclusions such as the Smart Basket (Basket-III) Interdisciplinary domains etc.
- In Basket 4 there are overlaps in construction material testing and concrete technology course curriculum, also to include recycling of construction waste materials in construction materials testing courses. (Annexure A)



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- Rock mechanics and field laboratory test to be included in the geotechnical engineering
- The domain course should be taught in practice and project mode.

Agenda 3: Inclusion of courses on life skills and value addition

It was suggested that students take up the various courses offered by the University in the areas of life skills and value addition for their overall improvement and well being. The same was agreed upon and approved by the Board members. (Annexure B).

Agenda 4: Introduced New Course M. Sc Geoinformatics

The committee unanimously decided that, One new course M.Sc Geoinformatics will be introduced under SoAS but the subject should be under Department of Civil Engineering. The syllabus must be CBCS system followed by 96 credits. Aerial Surveying and Remote Sensing Application domain subjects must be inside the syllabus of M.Sc Geoinformatics. The output of the domain must be research papers. This course will float in the next academic year (2021-2022).

The HoD, Department of Civil Engg. extended sincere thanks to all members of the Board.

The meeting ended with a vote of thanks to the Chair.

Dean, SoET
Dean, SOET
Centurion University of Technology & Management
Odisha

Dean, Academics
Dean - Academic
Centurion University of Technology & Management
Bhubaneswar, Khurda, Odisha-752050

HoD, Civil Engineering
HOD
Dept. of Civil Engineering
Centurion University of
Technology & Management, SoAS

List of existing courses where syllabus was revised

Basket/ Semester	Name of Course	No. of Modules/ Topics revised	Revised Modules/Topics (details)
IV	Geotechnical Engineering	1	One module has been added depending on the industry requirement
IV	Construction Material Testing	2	One module has been added depending on the industry requirement
IV	Structural Detailing and Drawing	2	One module has been added and another module is merged with slight change as per industry requirement
IV	Quantity Estimation & Costing	1	One module has been added depending on the industry requirement
IV	Geometric Modeling	1	One module has been added depending on the industry requirement
IV	Hydrology and Irrigation	1	One module has been added depending on the industry requirement
IV	Surveying Techniques	1	One module has been added depending on the industry requirement
IV	Geospatial Survey	1	One module has been added depending on the industry requirement
IV	Concrete Technology	1	One module has been added depending on the industry requirement
IV	Electrical, Plumbing and Wood Works	1	One module has been added depending on the industry requirement
IV	Design of Structures	1	One module has been added depending on the industry requirement
IV	Road Engineering	1	One module has been added depending on the industry requirement
IV	Construction Materials	1	One module has been added depending on the industry requirement
IV	Water supply and Sanitary Engineering	1	One module has been added depending on the industry requirement
IV	Computer Aided Engineering	2	One module has been added and another module is merged with slight change as per industry requirement
IV	Hydraulic Machinery	2	One module has been added and another module is merged with slight change as per industry requirement
IV	Fluid Mechanics with Finite Volume Method	2	One module has been added and another module is merged with slight change as per industry requirement
IV	Theories of Failure Using Finite Element Analysis	2	One module has been added depending on the industry requirement
IV	Disaster Preparedness & Planning Management	1	One module has been added depending on the industry requirement

List of Skill courses

Sl. No	Course Title	Credit	(T+P+P)
1	Introduction to Quantum Computing	4	0+3+1
2	Organic Farming	4	0+3+1
3	Mushroom Farming	4	0+3+1
4	Hydroponics Technology	4	0+3+1
5	Poultry Farming	4	0+3+1
6	Dairy Farming	4	0+3+1
7	Vermicomposting Farming	4	0+3+1
8	Transformer Manufacturing, Repairing and Maintenance	4	0+3+1
9	Electrical Installation	4	0+3+1
10	Repair and Maintenance of Home Appliances	4	0+3+1
11	Refrigeration and air conditioning	4	0+3+1
12	Super critical Co2 plant operation	4	0+3+1
13	Business Plan Preparation	4	0+3+1
14	Composite fabrication practice	4	0+3+1
15	Powder coating practice	4	0+3+1
16	Farm appliances operation	4	0+3+1
17	Bio fertilisers preparation	4	0+3+1
18	PCB designing & fabrication	4	0+3+1
19	Introduction to Block Chain Technology	4	0+3+1
20	Introduction to Nutraceuticals	4	0+3+1
21	Introduction to NLP	4	0+3+1
22	Introduction to Computational Biology	4	0+3+1
23	Product Life Cycle Management through Gate process	4	0+3+1
24	New material development with Biovia	4	0+3+1
25	Spectral image processing using Python	4	0+3+1
26	Satellite data processing	4	0+3+1
27	Working with Graphene and carbon fibre	4	0+3+1
28	Adobe Tools and Illustrations	4	0+3+1
29	Digital Painting	4	0+3+1
30	Computer Installation and Maintenance	4	0+3+1

List of value added courses

Sl. No	Course Title	Hrs. of input
1	Natural Resource Management	30
2	Research Methodology and IPR	30
3	Urban Gardens using Hydroponics	30
4	Introduction to Python	30
5	MATLAB	30
6	Waste to Wealth	30
7	Technical Writing	30
8	Organic Farming	30
9	Disaster Management	30
10	Ethical Hacking	30



11	Web Development	30
12	Food & Nutrition	30
13	Clinical Practice	30
14	Innovation Management	30
15	Financial Literacy	30
16	Yoga and Meditation	30
17	Steps for Career Plan	30
18	MS Excel Basics	30
19	Quality Analysis	30
20	Ethical Writing Practice	30
21	Ansys	30
22	Video Making for Youtubers	30

List of Domain courses

Sl. No.	Name of the Domain	Category
1	Advance Video Processing, Computer Vision and Machine Learning	A/B/D
2	Aerial Survey and Remote Sensing Applications	A/B
3	Agri Business Management	A/B/D
4	Architectural and Structural Design	A/B
5	Business Analytics	A/B/D
6	Chip Design and Fabrication using VLSI	B
7	Commodity and Food Storage	A/B/D
8	Communication Systems	B
9	Composite Design and Manufacturing	A/B
10	Computational Fluid Dynamics	A/B
11	Cyber Security	B
12	Dairy Processing and Development	A/B
13	Fish Processing Technology	A/B
14	Food Processing	A/B/D
15	Gaming and Immersive Learning (AR & VR)	A/B/D
16	Genetic Engineering & Genomics	A
17	Go-To-Market	A/B/D
18	Health Care Assistancy	A/B
19	Intensive Aquaculture	A
20	Manufacturing Execution System	B
21	Nutraceuticals	A/C
22	Organic Farming	A
23	Protected Horticulture	A/B
24	Renewable Energy Applications	A/B
25	Seed Production using Manual and Molecular Methods	A
26	Smart Agriculture	A/B
27	Smart Farm Machinery	A/B
28	Soil and Water Conservation through Watershed	A/B



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CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Engineering & Technology

Department of Civil Engineering

Time: 11.00 a.m.

Date: 11/07/2020

Venue: Virtual

Board of Studies Meeting Attendance Sheet

Sl. No	Name of the BoS Member (Internal Faculty and External Resource)	Designation	Signature
1	Dr. Vazeer Mahmood	Andhra University College of Engineering, Visakhapatnam, AP, India	Attended Online
2	Dr Debi Prasanna Kanungo	senior professor and scientist CSIR central building research institute	Attended Online
3	Dr Kamal Kumar Barik	Assistant Professor, Civil Engineering, CUTM	Attended Online
4	Dr Prafulla Kumar Panda	Assistant Professor, Civil Engineering, CUTM	Attended Online
5	Mr Vishal Kumar Singh	Professor, Civil Engineering, CUTM	Attended Online

Dean, SoET

Dean, SOET

Centurion University of Technology & Management
Odisha

Dean, Academics

Dean - Academic

Centurion University of Technology & Management
Bhubaneswar, Khurda, Odisha-752050



CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Agricultural and Bio-Engineering

Department of Agricultural Engineering

Date: 11/07/2020

MINUTES OF BOARD OF STUDIES MEETING held on 11/07/2020

Virtual Mode

Time: 12.00 p.m.

The Board of Studies (BoS) meeting of Department of Agricultural Engineering was held on 11/07/2020 at 12 p.m. in online mode (due to the continuing Covid-19 Pandemic). The following members are present during the meeting.

1. Dr. Prasanta Kumar Mohanty, Dean Academics, CUTM
2. Dr. Sivala Kumar, Dean SoABE, CUTM
3. Dr. Khalid Khan, Retd Dean, OUAT
4. Mr. Bharat Agrawal, CEO, ABS KRISHI UDYOG, Odisha
5. Dr. Gitanjali Behera, HOD, Agricultural Engineering, CUTM
6. Dr. Prasanta Kumar Choudhury, Head Dairy Technology, SoABE, CUTM
7. Dr. Bhisma Narayan Rath, Head Phytopharmaceuticals, SoABE, CUTM
8. Dr. S. P. Nanda, Dean Administration, MSSSoA, CUTM
9. Dr. Devendra Reddy, Dean Academics, MSSSoA, CUTM

Dean SoABE have given a presentation on course structure of Agriculture Engineering. There was a thoroughly discussion on the syllabus of Agricultural Engineering and the following feedback was suggested by the Experts.

The following agenda items were taken up subsequently:

Agenda 1: The minutes of the last meeting of the BoS held on 22/06/2019 were confirmed.

Agenda 2: Revision of Curriculum for the programme B.Tech AG

- It was discussed and decided to follow the CBCS structure of 5 Basket systems of Syllabus of School of Engineering & Technology in the B. Tech Agriculture programme.
- Dr. Khalid Khan: A lot of emphasis has been given to Foundation course which will help the foundation knowledge building of Agricultural Engineering students. Now Agricultural engineering is going to play a vital role for post-COVID scenario. The curriculum designed by the Centurion University will surely help students for preparing for the future. The new syllabus contains all of core courses and foundation courses. One core agricultural engineering course is missing in Basket-4.B that is Post-harvest engineering of cereal, pulses and oil seeds which should be a compulsory course for students doing graduation in agricultural Engineering. Other courses like Engg. Properties of Agricultural Produce, Agricultural Structures & Environmental Control which involves so many components will be difficult to complete the course within 1-0-1 credit hour. Or else, the course has



been designed as per academic and industry's needs. Dean SoABE clarified the experts that the Course titled Post-harvest engineering of cereal, pulses and oil seeds is included in the domain course. Also, the courses like Engg. Properties of Agricultural Produce, Agricultural Structures & Environmental Control can be completed in 1-0-1 credit as the session plan has been designed in courseware as per the time allotment and will be justify all components present in the syllabus.

- Industry Expert: The department have taken up everything in the course syllabus to graduate a best student from the University. The student should be exposed to more field visit and industrial visit, so that the outcome will be best. Dean SoABE explained that we have already taking our students to field and industry visit to have a better practical understanding of the subjects.

Agenda 3: Discussion on modification of syllabus of Basket- 4, 5

The Board approved the changes suggested in the core courses. List of new courses is given in Annexure A and existing courses where syllabus was changed in (Annexure B)

Agenda 4: Inclusion of courses on life skills and value addition

It was suggested that students take up the various courses offered by the University in the areas of life skills and value addition for their overall improvement and well being. The same was agreed upon and approved by the Board members. (Annexure C)

The Dean, SoABE, extended sincere thanks to all members of the Board.

The meeting ended with a vote of thanks to the Chair.

Dean, SoABE

Dean, Academics
Dean - Academic
Centurion University of Technology & Management
Bhubaneswar, Khurda, Odisha-752050

HoD, Agricultural Engineering



Annexure-A

List of new courses added

Sl. No	Course Title	Type(Skill/Employability/Entrepreneurship)	Credit
1	Differential Equations and Laplace Transformation	Skill	3
2	Linear Algebra & Vector Calculus	Skill	3
3	Complex Analysis, Numerical Methods	Skill	3
4	Discrete Mathematics	Skill	3
5	Probability & Statistics	Skill	3
6	Mechanics for Engineers	Skill	3
7	Optics and Optical Fibres	Skill	3
8	Applied Analytical Chemistry	Skill	3
9	Applied Engineering Materials	Skill	3
10	Environmental Studies	Entrepreneurship	2
11	Optimisation Techniques	Employability	2
12	Engineering Economics and Costing	Entrepreneurship	3
13	Project Management	Entrepreneurship	3
14	Gender, Human Rights and Ethics	Employability	3
15	Climate Change, Sustainability and Organisation	Employability	3
16	Job readiness	Skill	6
17	Industrial IOT and Automation	Employability	6
18	Data Analysis and Visualisation using Python	Entrepreneurship	4
19	Machine Learning using Python	Entrepreneurship	4
20	Robotic automation with ROS and C++	Employability	4
21	Design Thinking	Employability	2
22	System Integration with DYMOLA	Employability	2
23	Smart Engineering Project (G2M)	Employability	3
24	Theory of failure analysis using FPA	Employability	4
25	Computer Aided Engineering	Employability	3
26	Theory of Machine	Employability	3
27	Heat Transfer with FVM	Entrepreneurship	3
28	Fluid Mechanics with FVM	Skill	3
29	Hydraulic machinery	Skill	2
30	Thermodynamics	Employability and skill development	3
31	Electrical Machines Operation and Control	Employability and skill development	4
32	Digital Measurement & Instrumentation	Employability	3



33	Optimisation Techniques	Skill	2
34	Geotechnical Engg.	Employability	3
35	Design of structures	Skill	4
36	Digital Signal & Image Processing	Skill	3
37	Quantity Estimation and Costing	Employability	3
38	Sensor, Actuators and Robot Operating Systems	Skill	4
39	Farm Machinery Design	Employability	3
40	Piloting a Drone	Employability	3
41	PLM using Dassault Tools	Skill	3
42	Testing of Farm Machinery	Employability	3
43	Project and internship	Skill	10
44	Rainwater Harvesting and Artificial Recharge	Employability	3
45	Integrated watershed management	Employability	3
46	Sustainable Watershed	Employability	3
47	R programming in watershed hydrology	Skill	3
48	Modelling and Simulation of Watershed Processes	Employability	3
49	Geo-spatial application in watershed management	Employability	3
50	Project and internship	Employability	10
51	Processing Technology of Cereals and Millets	Employability	3
52	Processing Technology of Legumes and Oilseeds	Skill	3
53	Processing Technology of Fruits, Vegetables, Spices and Condiments	Skill	3
54	Product Development and Packaging Technologies	Skill	3
55	Food Standards and Regulations and HACCP Systems	Employability	3
56	Sensory Evaluation and Nutritional Labelling of Foods	Skill	3
57	AELP Linked Project and Internship	Employability	11



Annexure-B

List of existing courses where syllabus was changed

Basket/ Semester	Name of Course	No. of Modules/Topics revised	Revised Modules/Topics (details)
1	Post-Harvest Engineering of Horticultural Crops	1	Credits modified
2	Principles of Agronomy	1	Aligned with Fundamentals of Agronomy
3	Principles of Soil Science	1	Aligned with Fundamentals of Soil Science
4	Principles of Horticultural Crops and Plant Protection	1	Aligned with Fundamentals of Horticulture
5	Soil and Water Conservation Engineering and Water Harvesting and Soil Conservation Structures	2	The both course was merged into Soil-Water Conservation Engineering and Structure, the credit was modified to 4 credits

Annexure-C

List of Skill courses

Sl. No	Course Title	Credit	(T+P+P)
1	Introduction to Quantum Computing	4	0+3+1
2	Organic Farming	4	0+3+1
3	Mushroom Farming	4	0+3+1
4	Hydroponics Technology	4	0+3+1
5	Poultry Farming	4	0+3+1
6	Dairy Farming	4	0+3+1
7	Vermi composting Farming	4	0+3+1
8	Transformer Manufacturing, Repairing and Maintenance	4	0+3+1
9	Electrical Installation	4	0+3+1
10	Repair and Maintenance of Home Appliances	4	0+3+1
11	Refrigeration and air conditioning	4	0+3+1
12	Super critical Co2 plant operation	4	0+3+1
13	Business Plan Preparation	4	0+3+1
14	Composite fabrication practice	4	0+3+1
15	Powder coating practice	4	0+3+1
16	Farm appliances operation	4	0+3+1
17	Bio fertilizers preparation	4	0+3+1
18	PCB designing & fabrication	4	0+3+1
19	Introduction to Block Chain Technology	4	0+3+1
20	Introduction to Nutraceuticals	4	0+3+1
21	Introduction to NLP	4	0+3+1
22	Introduction to Computational Biology	4	0+3+1
23	Product Life Cycle Management through Gate process	4	0+3+1
24	New material development with Biovia	4	0+3+1
25	Spectral image processing using Python	4	0+3+1
26	Satellite data processing	4	0+3+1
27	Working with Graphene and carbon fibre	4	0+3+1
28	Adobe Tools and Illustrations	4	0+3+1
29	Digital Painting	4	0+3+1
30	Computer Installation and Maintenance	4	0+3+1

List of Domain courses

Group A: Agriculture/ Agri Engineering/Phyto pharma/ Dairy tech/ fisheries/ biological sciences				
Group B: All other engineering/physical and mathematical science/vocational or skills				
Group C: Pharmacy and allied Health				
Group D: Management & media and communication				
Sl. No.	Name of the Domain	Credit	Category	Year of introduction
1	Advance Video Processing, Computer Vision and Machine Learning	30	A/B/D	2020
2	Aerial Survey and Remote Sensing Applications	18	A/B	2020
3	Agri Business Management	23	A/B/D	2020
4	Architectural and Structural Design	20	A/B	2020
5	Business Analytics	21	A/B/D	2020
6	Chip Design and Fabrication using VLSI	18	B	2020
7	Commodity and Food Storage	29	A/B/D	2020
8	Communication Systems	18	B	2020
9	Composite Design and Manufacturing	24	A/B	2020
10	Computational Fluid Dynamics	20	A/B	2020
11	Cyber Security	24	B	2020
12	Dairy Processing and Development	28	A/B	2020
13	Fish Processing Technology	29	A/B	2020
14	Food Processing	29	A/B/D	2020
15	Gaming and Immersive Learning (AR & VR)	20	A/B/D	2020
16	Go-To-Market	22	A/B/D	2020
17	Health Care Assistancy	25	A/B	2020
18	Manufacturing Execution System	18	B	2020
19	Nutraceuticals	29	A/C	2020
20	Protected Horticulture	29	A/B	2020

21	Renewable Energy Applications	22	A/B	2020
22	Smart Agriculture	29	A/B	2020
23	Smart Farm Machinery	28	A/B	2020
24	Soil and Water Conservation through Watershed	28	A/B	2020

List of value added courses

Sl. No	Course Title	Hrs. of input
1	Natural Resource Management	30
2	Research Methodology and IPR	30
3	Urban Gardens using Hydroponics	30
4	Introduction to Python	30
5	MATLAB	30
6	Waste to Wealth	30
7	Technical Writing	30
8	Organic Farming	30
9	Disaster Management	30
10	Ethical Hacking	30
11	Web Development	30
12	Food & Nutrition	30
13	Clinical Practice	30
14	Innovation Management	30
15	Financial Literacy	30
16	Yoga and Meditation	30
17	Steps for Career Plan	30
18	MS Excel Basics	30
19	Quality Analysis	30
20	Ethical Writing Practice	30
21	Ansys	30
22	Video Making for Youtubers	30



CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Agricultural & Bio-Engineering

Department of Agricultural Engineering

Time: 12.00 p.m.

Date: 11/07/2020

Venue: Board Room, CUTM, Bhubaneswar

**Board of Studies Meeting
Attendance Sheet**

Sl. No.	Name of the BOS Member (Internal Faculty and External Resource)	Organization	Signature
1	Dr. Supriya Pattanaik	CUTM	Attended Online
2	Dr. Anita Patra	CUTM	Attended Online
3	Dr. P.K. Mohanty	Dean, Academics	Attended Online
4	Dr. Sivala Kumar	Dean, SOABE	Attended Online
5	Dr. Khalid Khan	Retd. Dean, CAET, OUAT	Attended Online
6	Mr Bharat Agarwal	CEO, ABS KRISHI UDYOG, Odisha	Attended Online
7	Dr. Gitanjali Behera	CUTM	Attended Online
8	Dr. Prasant Kumar Choudhury	CUTM	Attended Online
9	Dr. SP Nanda	CUTM	Attended Online
10	Dr. Devendra Reddy	CUTM	Attended Online
11	Mr. Bhisma Narayan Rath	CUTM	Attended Online

Dean, SoABE

Dean, Academics
Dean - Academic
Centurion University of Technology & Management
Bhubaneswar, Khurda, Odisha-752050



CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Agricultural and Bio-Engineering

Department of Phytopharmaceuticals

Date: 11/07/2020

MINUTES OF BOARD OF STUDIES MEETING held on 11/07/2020

Virtual Mode

Time: 12.00 p.m.

The Board of Studies (BoS) meeting of Department of Phytopharmaceuticals was held on 11/07/2020 at 12 p.m. in online mode (due to the continuing Covid-19 Pandemic). The following members are present during the meeting.

1. Dr. Prasanta Kumar Mohanty, Dean Academics, CUTM
2. Dr. Sivala Kumar, Dean SoABE, CUTM
3. Dr. U V Babu, Head R&D, Himalaya Wellness, Bangalore, India.
4. Dr. R Kannan, Principal Scientist, Himalaya Wellness, Bangalore, India.
5. Mr. Amitesh Roy Choudhury, Corporate Advisor.
6. Dr. Gitanjali Behera, HOD, Agricultural Engineering, CUTM
7. Dr. Prasanta Kumar Choudhury, Head Dairy Technology, SoABE, CUTM
8. Dr. Bhisma Narayan Rath, Head Phytopharmaceuticals, SoABE, CUTM
9. Dr. S. P. Nanda, Dean Administration, MSSSoA, CUTM
10. Dr. Devendra Reddy, Dean Academics, MSSSoA, CUTM
11. Prince K Jha, 3rd Year B.Tech Phyto Student, CUTM

Dean SoABE have given a presentation on course structure of B.Tech Ag, Dairy Technology and Phyto-pharmaceutical department. There was a thorough discussion on the syllabus of B. Tech Phytopharmaceuticals and the following feedback was suggested by the Experts.

The following agenda items were taken up subsequently:

Agenda 1: The minutes of the last meeting of the BoS held on 22/06/2019 were confirmed.

Agenda 2: Revision of Curriculum for the programme B.Tech Phyto

- It was discussed and decided to follow the CBCS structure of 5 Basket systems of Syllabus of School of Engineering & Technology in the B.Tech Phytopharmaceuticals programme.
- Dr. U. V. Babu & Dr. R. Kannan (Himalaya Wellness: Congratulations CUTM for Phytopharma. Basket 4 is very suitable for industry & students will have all desired expertise. Pharmacognosy need addition for bioactive components. Need addition of phytochemistry and natural products analysis by NMR. Regulatory course changes to focus



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on GMP. Ensure students visit industry of students (To engage students in academic/industry interface.)

- Mr. Amitesh Roy Choudhary: CUTM is bridge between industry and academics. Don't give idea only for jobs, encourage entrepreneurship for students.
- Mr. Prince K Jha, Ms. Pragyam Paramita Puti: Agreed that majority of subjects are well planned and delivered. However, they are having biology background and were not comfortable in engineering subjects like (thermodynamics, mathematics).
- Industry Expert: The department have taken up everything in the course syllabus to graduate a best student from the University. The student should be exposed to more field visit and industrial visit, so that the outcome will be best. Dean SoABE explained that we have already taking our students to field and industry visit to have a better practical understanding of the subjects.
- The list of new courses added is given in Annexure A.

Agenda 3: Discussion on modification of syllabus of Basket- 4, 5

The Board approved the changes suggested in the core courses. List of existing courses where syllabus was changed in (*Annexure B*)

Agenda 4: Inclusion of courses on life skills and value addition

It was suggested that students take up the various courses offered by the University in the areas of life skills and value addition for their overall improvement and well being. The same was agreed upon and approved by the Board members. (*Annexure C*).

The Dean, SoABE, extended sincere thanks to all members of the Board. The meeting ended with a vote of thanks to the Chair.

Dean, SoABE

Dean, Academics
Dean - Academic
Centurion University of Technology & Management
Bhubaneswar, Khurda. Odisha-752050

HoD, Phytopharmaceutical



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Engineering Tomorrow.

Annexure-A

List of new courses added

Sl. No	Course Title	Type(Skill/Employability/Entrepreneurship)	Credit
1	Computer Aided Drafting	Skill and Employability	3
2	Product Design and Development	Skill and Employability	2
3	Reverse Engineering and Rapid Prototype	Skill and Employability	4
4	Product Life Cycle Management	Skill and Employability	2
5	Manufacturing Process-process planning and Heat Treatment	Skill and Employability	3
6	Material in product design and development	Skill and Employability	2
7	Computer Aided Engineering	Skill and Employability	3
8	Quality Assurance	Skill and Employability	2
9	Applied Ergonomics	Skill and Employability	2
10	Computer Aided Manufacturing	Skill and Employability	2
11	CNC Programming & CNC Machining	Skill and Employability	2
12	Design of Tools, Jigs and Fixtures	Skill and Employability	3
13	Advance Metrology	Skill and Employability	2
14	Thermodynamics	Skill and Employability	3
15	Fluid Mechanics with Finite Volume Method	Skill and Employability	3
16	Hydraulic Machinery	Skill and Employability	2
17	Theory of Machines	Skill and Employability	3
18	Heat Transfer with FDM/FVM	Skill and Employability	3
19	Theories of Failure Using Finite Element Analysis	Skill and Employability	4
20	Optimization Techniques	Skill and Employability	2
21	Programming in Java (Same as Java Technologies)	Skill and Employability	3
22	Database Management Systems	Skill and Employability	3



Annexure-B

List of existing courses where syllabus was changed

Basket/ Semester	Name of Course	No. of Modules/Topics revised	Revised Modules/Topics (details)
1	Post-Harvest Engineering of Horticultural Crops	1	Credits modified
2	Principles of Agronomy	1	Aligned with Fundamentals of Agronomy
3	Principles of Soil Science	1	Aligned with Fundamentals of Soil Science
4	Principles of Horticultural Crops and Plant Protection	1	Aligned with Fundamentals of Horticulture
5	Soil and Water Conservation Engineering and Water Harvesting and Soil Conservation Structures	2	The both course was merged into Soil-Water Conservation Engineering and Structure, the credit was modified to 4 credits



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Annexure-C

List of Skill courses

Sl. No	Course Title	Credit	(T+P+P)
1	Introduction to Quantum Computing	4	0+3+1
2	Organic Farming	4	0+3+1
3	Mushroom Farming	4	0+3+1
4	Hydroponics Technology	4	0+3+1
5	Poultry Farming	4	0+3+1
6	Dairy Farming	4	0+3+1
7	Vermi composting Farming	4	0+3+1
8	Transformer Manufacturing, Repairing and Maintenance	4	0+3+1
9	Electrical Installation	4	0+3+1
10	Repair and Maintenance of Home Appliances	4	0+3+1
11	Refrigeration and air conditioning	4	0+3+1
12	Super critical Co2 plant operation	4	0+3+1
13	Business Plan Preparation	4	0+3+1
14	Composite fabrication practice	4	0+3+1
15	Powder coating practice	4	0+3+1
16	Farm appliances operation	4	0+3+1
17	Bio fertilizers preparation	4	0+3+1
18	PCB designing & fabrication	4	0+3+1
19	Introduction to Block Chain Technology	4	0+3+1
20	Introduction to Nutraceuticals	4	0+3+1
21	Introduction to NLP	4	0+3+1
22	Introduction to Computational Biology	4	0+3+1
23	Product Life Cycle Management through Gate process	4	0+3+1
24	New material development with Biovia	4	0+3+1
25	Spectral image processing using Python	4	0+3+1
26	Satellite data processing	4	0+3+1
27	Working with Graphene and carbon fibre	4	0+3+1
28	Adobe Tools and Illustrations	4	0+3+1
29	Digital Painting	4	0+3+1
30	Computer Installation and Maintenance	4	0+3+1

List of Domain courses

Group A: Agriculture/ Agri Engineering/Phyto pharma/ Dairy tech/ fisheries/ biological sciences				
Group B: All other engineering/physical and mathematical science/vocational or skills				
Group C: Pharmacy and allied Health				
Group D: Management & media and communication				
Sl. No.	Name of the Domain	Credit	Category	Year of introduction
1	Advance Video Processing, Computer Vision and Machine Learning	30	A/B/D	2020
2	Aerial Survey and Remote Sensing Applications	18	A/B	2020
3	Agri Business Management	23	A/B/D	2020
4	Architectural and Structural Design	20	A/B	2020
5	Business Analytics	21	A/B/D	2020
6	Chip Design and Fabrication using VLSI	18	B	2020
7	Commodity and Food Storage	29	A/B/D	2020
8	Communication Systems	18	B	2020
9	Composite Design and Manufacturing	24	A/B	2020
10	Computational Fluid Dynamics	20	A/B	2020
11	Cyber Security	24	B	2020
12	Dairy Processing and Development	28	A/B	2020
13	Fish Processing Technology	29	A/B	2020
14	Food Processing	29	A/B/D	2020
15	Gaming and Immersive Learning (AR & VR)	20	A/B/D	2020
16	Go-To-Market	22	A/B/D	2020
17	Health Care Assistancy	25	A/B	2020
18	Manufacturing Execution System	18	B	2020
19	Nutraceuticals	29	A/C	2020
20	Protected Horticulture	29	A/B	2020



21	Renewable Energy Applications	22	A/B	2020
22	Smart Agriculture	29	A/B	2020
23	Smart Farm Machinery	28	A/B	2020
24	Soil and Water Conservation through Watershed	28	A/B	2020

List of value added courses

Sl. No	Course Title	Hrs. of input
1	Natural Resource Management	30
2	Research Methodology and IPR	30
3	Urban Gardens using Hydroponics	30
4	Introduction to Python	30
5	MATLAB	30
6	Waste to Wealth	30
7	Technical Writing	30
8	Organic Farming	30
9	Disaster Management	30
10	Ethical Hacking	30
11	Web Development	30
12	Food & Nutrition	30
13	Clinical Practice	30
14	Innovation Management	30
15	Financial Literacy	30
16	Yoga and Meditation	30
17	Steps for Career Plan	30
18	MS Excel Basics	30
19	Quality Analysis	30
20	Ethical Writing Practice	30
21	Ansys	30
22	Video Making for Youtubers	30



CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Agricultural & Bio-Engineering

Department of Agricultural Engineering

Time: 12.00 p.m.

Date: 11/07/2020

Venue: Board Room, CUTM, Bhubaneswar

**Board of Studies Meeting
Attendance Sheet**

Sl. No.	Name of the BOS Member (Internal Faculty and External Resource)	Organization	Signature
1	Dr. Supriya Pattanaik	CUTM	Attended Online
2	Dr. Anita Patra	CUTM	Attended Online
3	Dr. P.K. Mohanty	Dean, Academics	Attended Online
4	Dr. Sivala Kumar	Dean, SOABE	Attended Online
5	Dr. U V Babu	Himalaya Drug Company	Attended Online
6	Dr. R Kannan	Himalaya Drug Company	Attended Online
7	Mr. Amitesh Roy Choudhary	Corporate Advisor	Attended Online
8	Dr. Gitanjali Behera	CUTM	Attended Online
9	Dr. Prasant Kumar Choudhury	CUTM	Attended Online
10	Dr. SP Nanda	CUTM	Attended Online
11	Dr. Devendra Reddy	CUTM	Attended Online
12	Mr. Bhisma Narayan Rath	CUTM	Attended Online
13	Prince K Jha	Student, CUTM	Attended Online

Dean, SoABE

Dean, Academics
Dean - Academic
Centurion University of Technology & Management
Bhubaneswar, Khurda. Odisha-752050



CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Agricultural and Bio-Engineering

Department of Dairy Technology

Date: 11/07/2020

MINUTES OF BOARD OF STUDIES MEETING held on 11/07/2020

Virtual Mode

Time: 12.00 PM

The Board of Studies (BoS) meeting of Department of Dairy Technology was held on 11/07/2020 at 12 PM. in online mode (due to the continuing Covid-19 Pandemic). The following members are present during the meeting.

1. Dr. Prasanta Kumar Mohanty, Dean Academics, CUTM
2. Dr. Sivala Kumar, Dean SoABE, CUTM
3. Dr. Anil Kumar Puniya PS and Head, Dairy Microbiology, ICAR-NDRI, Karnal
4. Mr. Harinder Singh Grewal, Ex. General Manager (Retd.), Milkfed Punjab.
5. Dr. Gitanjali Behera, HOD, Agricultural Engineering, CUTM
6. Dr. Prasanta Kumar Choudhury, Head Dairy Technology, SoABE, CUTM
7. Dr. Bhisma Narayan Rath, Head Phytopharmaceuticals, SoABE, CUTM
8. Dr. S. P. Nanda, Dean Administration, MSSSoA, CUTM
9. Dr. Devendra Reddy, Dean Academics, MSSSoA, CUTM

Dean, SoABE have given a presentation on course structure of Dairy Technology. There was a thoroughly discussion on the syllabus of Dairy Technology and the following feedback was suggested by the Experts.

The following agenda items were taken up subsequently:

Agenda 1: The minutes of the last meeting of the BoS held on 22/06/2019 were confirmed.

Agenda 2: Revision of Curriculum for the programme B.Tech Dairy Technology

- It was discussed and decided to follow the CBCS structure of 5 Basket systems of Syllabus of School of Engineering & Technology in the B. Tech Dairy Technology programme.
- To the comments of Dr. Anil Kumar Puniya (Academic Expert) Dean, SoABE suggested that, most of the course and course contents have been referred from Dairy Technology course syllabus of ICAR-Fifth Dean's Committee recommendations. Few courses related to economics, extension and management have been removed and in place we have added some advance courses of humanities and management in Basket-II. The food technology courses have been included in food Processing domain course, which can be opted by students. In addition to that, to make students enable to smart technologies few more courses have been added in the form of Smart Stack in Basket-III. Hope this will not affect the passing students for higher studies.



- To the comments to Mr. Harinder Singh Grewal (Industry Expert), Dean SoABE explained that we have cattle yard facilities inside campus and students have opportunities to conduct practices related to cattle feeding and management. In the practice session all the farm practices are already included.
- In Summer training-I students have the exposure on milk production and procurement to be taken up in State Dairy Federations/Dairy Development Departments/Private Dairies/Animal Husbandry Department/Cattle farm/Progressive dairy farmers, where they have field exposure to these activities (Included in summer training-I).
- Chapters regarding Dairy economics, product balancing and preparation of daily balance sheet are added in the syllabus of Dairy Plant Management.
- We will work on the research and development activities. Also, we have included students major project to provide research exposure to students with the involvement of faculties and available institutional facilities.

Agenda 3: Discussion on modification of syllabus of Basket- 4, 5

The Board approved the changes suggested in the core courses. List of new courses is given in Annexure A and existing courses where syllabus was changed in (Annexure B)

Agenda 4: Inclusion of courses on life skills and value addition

It was suggested that students take up the various courses offered by the University in the areas of life skills and value addition for their overall improvement and well being. The same was agreed upon and approved by the Board members. (Annexure C)

The Dean, SoABE, extended sincere thanks to all members of the Board.

The meeting ended with a vote of thanks to the Chair.

Dean, SoABE

Dean, Academics

HoD, Dairy Technology

Dean - Academic
Centurion University of Technology & Management
Bhubaneswar, Khurda, Odisha-752050

List of new courses added

Sl. No	Course Title	Type (Skill/ Employability/ Entrepreneurship)	Credit
1	Differential Equations and Linear Algebra	Skill	3
2	Laplace and Fourier Transforms	Skill	3
3	Complex Analysis, Numerical Methods	Skill	3
4	Discrete Mathematics	Skill	3
5	Probability & Statistics	Skill	3
6	Mechanics for Engineers	Skill	3
7	Optics and Optical Fibres	Skill	3
8	Applied Analytical Chemistry	Skill	3
9	Applied Engineering Materials	Skill	3
10	Environmental Studies	Entrepreneurship	2
11	Optimization Techniques	Employability	2
12	Engineering Economics and Costing	Entrepreneurship	3
13	Project Management	Entrepreneurship	3
14	Gender, Human Rights and Ethics	Employability	3
15	Climate Change, Sustainability and Organization	Employability	3
16	Job readiness	Skill	6
17	Industrial IOT and Automation	Employability	6
18	Data Analysis and Visualization using Python	Entrepreneurship	4
19	Machine Learning using Python	Entrepreneurship	4
20	Robotic automation with ROS and C++	Employability	4
21	Design Thinking	Employability	2
22	System Integration with DYMOLA	Employability	2
23	Smart Engineering Project (G2M)	Employability	3
24	Design of structures	Skill	4
25	Dairy and Food Engineering	Entrepreneurship	3
26	Milk Processing in Dairy Industry	Skill and Employability	3
27	Dairy Starters in Fermented Milk Products	Skill and Employability	3
28	Quality Assurance in Dairy Industry	Skill and Employability	3
29	Dairy Products Development	Skill and Employability	3
30	Synbiotic Dairy Foods	Skill and Employability	3
31	Quality Analysis of Milk and Milk Products	Skill and Employability	3
32	AELP Linked Project and Internship	Employability	10

Annexure-B

List of existing courses where syllabus was changed

Basket/ Semester	Name of Course	No. of Modules/Topics revised	Revised Modules/Topics (details)
1	Fundamentals of Microbiology/General Microbiology	2	Aligned with CMB General Microbiology course
2	Biochemistry/Fundamentals of Plant Biochemistry		Aligned with B. Sc. Agriculture courses
3	Thermodynamics	2	Credits modified
4	Heat and Mass Transfer	1	Credits modified
5	Basic Electrical Engineering	2	Credits modified
6	Fluid Mechanics with FVM	3	Credits modified and FVM added
7	Dairy and Food Engineering	2	Dairy engineering and Food engineering merged



List of Skill courses

Sl. No	Course Title	Credit	(T+P+P)
1	Introduction to Quantum Computing	4	0+3+1
2	Organic Farming	4	0+3+1
3	Mushroom Farming	4	0+3+1
4	Hydroponics Technology	4	0+3+1
5	Poultry Farming	4	0+3+1
6	Dairy Farming	4	0+3+1
7	Vermi composting Farming	4	0+3+1
8	Transformer Manufacturing, Repairing and Maintenance	4	0+3+1
9	Electrical Installation	4	0+3+1
10	Repair and Maintenance of Home Appliances	4	0+3+1
11	Refrigeration and air conditioning	4	0+3+1
12	Super critical Co2 plant operation	4	0+3+1
13	Business Plan Preparation	4	0+3+1
14	Composite fabrication practice	4	0+3+1
15	Powder coating practice	4	0+3+1
16	Farm appliances operation	4	0+3+1
17	Bio fertilizers preparation	4	0+3+1
18	PCB designing & fabrication	4	0+3+1
19	Introduction to Block Chain Technology	4	0+3+1
20	Introduction to Nutraceuticals	4	0+3+1
21	Introduction to NLP	4	0+3+1
22	Introduction to Computational Biology	4	0+3+1
23	Product Life Cycle Management through Gate process	4	0+3+1
24	New material development with Biovia	4	0+3+1
25	Spectral image processing using Python	4	0+3+1
26	Satellite data processing	4	0+3+1
27	Working with Graphene and carbon fibre	4	0+3+1
28	Adobe Tools and Illustrations	4	0+3+1
29	Digital Painting	4	0+3+1
30	Computer Installation and Maintenance	4	0+3+1

List of Domain courses

Group A: Agriculture/ Agri Engineering/Phyto pharma/ Dairy tech/ fisheries/ biological sciences				
Group B: All other engineering/physical and mathematical science/vocational or skills				
Group C: Pharmacy and allied Health				
Group D: Management & media and communication				
Sl. No.	Name of the Domain	Credit	Category	Year of introduction
1	Advance Video Processing, Computer Vision and Machine Learning	30	A/B/D	2020
2	Aerial Survey and Remote Sensing Applications	18	A/B	2020
3	Agri Business Management	23	A/B/D	2020
4	Architectural and Structural Design	20	A/B	2020
5	Business Analytics	21	A/B/D	2020
6	Chip Design and Fabrication using VLSI	18	B	2020
7	Commodity and Food Storage	29	A/B/D	2020
8	Communication Systems	18	B	2020
9	Composite Design and Manufacturing	24	A/B	2020
10	Computational Fluid Dynamics	20	A/B	2020
11	Cyber Security	24	B	2020
12	Dairy Processing and Development	28	A/B	2020
13	Fish Processing Technology	29	A/B	2020
14	Food Processing	29	A/B/D	2020
15	Gaming and Immersive Learning (AR & VR)	20	A/B/D	2020
16	Go-To-Market	22	A/B/D	2020
17	Health Care Assistancy	25	A/B	2020
18	Manufacturing Execution System	18	B	2020



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19	Nutraceuticals	29	A/C	2020
20	Protected Horticulture	29	A/B	2020
21	Renewable Energy Applications	22	A/B	2020
22	Smart Agriculture	29	A/B	2020
23	Smart Farm Machinery	28	A/B	2020
24	Soil and Water Conservation through Watershed	28	A/B	2020

List of value added courses

Sl. No	Course Title	Hrs. of input
1	Natural Resource Management	30
2	Research Methodology and IPR	30
3	Urban Gardens using Hydroponics	30
4	Introduction to Python	30
5	MATLAB	30
6	Waste to Wealth	30
7	Technical Writing	30
8	Organic Farming	30
9	Disaster Management	30
10	Ethical Hacking	30
11	Web Development	30
12	Food & Nutrition	30
13	Clinical Practice	30
14	Innovation Management	30
15	Financial Literacy	30
16	Yoga and Meditation	30
17	Steps for Career Plan	30
18	MS Excel Basics	30
19	Quality Analysis	30
20	Ethical Writing Practice	30
21	Ansys	30
22	Video Making for Youtubers	30



CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Agricultural & Bio-Engineering

Department of Dairy Technology

Time: 12.00 PM

Date: 11/07/2020

Venue: Board Room, CUTM, Bhubaneswar

**Board of Studies Meeting
Attendance Sheet**

Sl. No.	Name of the BOS Member (Internal Faculty and External Resource)	Organization	Signature
1	Dr. Supriya Pattanaik	CUTM	Attended Online
2	Dr. Anita Patra	CUTM	Attended Online
3	Dr. P.K. Mohanty	Dean, Academics	Attended Online
4	Dr. Sivala Kumar	Dean, SOABE	Attended Online
5	Dr. Anil Kumar Puniya	PS and Head, Dairy Microbiology, ICAR-NDRI, Karnal	Attended online
6	Mr. Harinder Singh Grewal	Ex. General Manager (Retd.), Milkfed Punjab.	Attended online
7	Dr. Gitanjali Behera	CUTM	Attended Online
8	Dr. Prasant Kumar Choudhury	CUTM	Attended Online
9	Dr. SP Nanda	CUTM	Attended Online
10	Dr. Devendra Reddy	CUTM	Attended Online
11	Mr. Bhisma Narayan Rath	CUTM	Attended Online

Dean, SoABE

Dean, Academics
Dean - Academic
Centurion University of Technology & Management
Bhubaneswar, Khurda, Odisha-752050



CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Paramedics and Allied Health Sciences

Date: 11/07/2020

MINUTES OF BOARD OF STUDIES MEETING held on 11/07/2020

Venue: Hybrid mode (Board Room, CUTM, Bhubaneswar and online)

Time: 11.00 AM

The Board of Studies (BoS) meeting of School of Paramedics and Allied Health Sciences was held on **11/07/2020** at 11 AM in hybrid mode.

The following members were present:

Dr. Bhargavram (MD, Professor of Ophthalmology)

Dr. Ajay Kumar Singh (MD, Professor of Ophthalmology)

Dr. Santosh Kumar Behera (Senior Scientist)

Dr. Debasish Sahoo (MD, Professor in Microbiology)

Dr. Debi Prasad Rath (MD, Professor in Pathology)

Dr. Ardhendu Praharaj (Ph. D. in Microbiology)

Dr. Harihar Praharaj (MD, Professor of Medicine)

Dr. Chandra Mouli (MD, Professor of Radiology)

Dr. Teja, Anesthesian

Prof. Sourav Karmakar (Asst. Prof. SoPAHS)

Ms. SNS Neelima (Asst. Prof. SoPAHS)

Mr. M. Vinay Dinakaran (Asst. Prof. SoPAHS)

Ms. N. Anuhya (Asst. Prof. SoPAHS)

Dr. M.L.N. Acharyulu (Associate Dean, SoPAHS)

Dr. CH. Nooka Raju (Associate Prof., SoPAHS)

Mr. Rajesh Sukkala (Asst. Prof. SoPAHS)

Dr. Ashish Kumar Sen (Adjunct Faculty, SoPAHS)

Dr. Monali P. Mishra (Assistant Prof., SoPAHS)

Ms. Sonali Dash (Assistant Prof., SoPAHS)

Ms. Susmita Chakrabarty (Lecturer, SoPAHS)

Prof. Sunil Kumar Jha (Dean, SoPAHS)

Dr. Soumya Jal (HoD, SoPAHS)

Dr. P.K. Mohanty, Dean (Acad) CUTM

All the members were welcomed to the online session by the Chairperson and were briefed regarding the purpose of the meeting. Thereafter, the Dean of SoPAHS presented on the achievements, improvements of the department in terms of academics and infrastructure.

Following are the programs offered by SoPAHS:

MSc Medical Laboratory Technology (MSc MLT)
MSc Applied and Clinical Microbiology (MSc CMB)
BSc Medical Laboratory Technology (BSc MLT)
BSc Clinical Microbiology (BSc CMB)
BSc Medical Radiation Technology (BSc MRT)
BSc Optometry (BSc Optom)

Agenda of the meeting:

Agenda 1: The minutes of the last meeting of the BoS held on 22.06.2019 were confirmed.

Agenda 2: Discussion and approval on the content of syllabus for various courses of SoPAHS. Implementation of CBCS pattern.

At first, the Dean of the school presented the feedback received from several stakeholders, on the curriculum of its various departments. With respect to the feedback received from the stakeholders, the committee discussed and approved for incorporation/ modifications in the curriculum for the Academic session 2020-21.

- The committee approved to introduce the following programmes in SoPAHS:
BSc Anaesthesia Technology;
BSc Operation Theatre Technology;
BSc Emergency Medicine Technology
- The curriculum was framed adopting the CBCS pattern.
- Based on the feedback from stakeholders, the curriculum was framed in a manner to incorporate Project/ Practical based learning. The Project and Practical components of relevant subjects were embedded along with their theory component. Much of practical exposure/ hands on training/ research and project exposure is emphasized.
- The curriculum developed is available on <http://courseware.cutm.ac.in/> (links/ notes/ videos for relevant notes are also available). It was adapted in a way to ease flip class technique and enhance Virtual learning along with real time learning, which was highly appreciated by the board members.
- New courses added into the curriculum are provided in *Annexure A*.

Agenda 3: Inclusion of courses on life skills and value addition

For their overall development and wellbeing of the students, it was advised that students enroll in the various life skills and value-adding courses that are offered by the university. The Board members agreed and gave their approval to the same.

Details of the life skill and value added courses introduced are mentioned in *Annexure B*.



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The Dean, SoPAHS extended sincere thanks to all the members of the Board.

The meeting ended with a vote of thanks to the Chair.

Dean, SoPAHS

Prof. Sunil Kumar Jha

DEAN

School of Paramedics & Allied Health Sciences
Centurion University of Technology & Management
Bhubaneswar, Odisha-752050

Dean, Academics

Dean - Academic

Centurion University of Technology & Management
Bhubaneswar, Khurda. Odisha-752050

11/7/20

HOD, SoPAHS

Dr. Soumya Jai

Associate Professor & HOD

School of Paramedics & Allied Health Sciences
Centurion University of Technology & Management
Ramchandrapur, Bhubaneswar - 752050

Annexure A

List of new courses added

Sl. No	Course Title	Type (Skill/ Employability/ Entrepreneurship)	Credit
	MSc MLT		
1.	Human Anatomy and Physiology	Employability	3
2.	Analytical Techniques	Entrepreneurship	4
3.	Biological Chemistry	Employability	3
4.	Clinical Hematology	Entrepreneurship	4
5.	Clinical Pathology	Entrepreneurship	4
6.	Cell and Molecular Biology	Employability	3
7.	Clinical Biochemistry	Employability	3
8.	Histology	Employability	4
9.	Medical Laboratory Technology	Entrepreneurship	5
10.	Blood Banking	Entrepreneurship	4
11.	Health Programme in India	Entrepreneurship	3
12.	Medical Microbiology	Employability	4
13.	Immunology & Parasitology	Employability	5
14.	Advanced Hematology	Entrepreneurship	4
15.	Research Methodology	Employability	3
16.	Mini Project	Employability	2
17.	Internship	Employability	12
18.	Project	Employability	12
19.	Environmental Studies	Employability	2
20.	Job Readiness	Employability	3
21.	Proficiency in English	Employability	2
	MSc CMB		
1.	Human Anatomy and Physiology	Employability	3
2.	Analytical Techniques	Entrepreneurship	4
3.	Biological Chemistry	Employability	3
4.	Clinical Hematology	Entrepreneurship	4
5.	Clinical Pathology	Entrepreneurship	4
6.	Cell and Molecular Biology	Employability	3
7.	Clinical Biochemistry	Employability	3
8.	Histology	Employability	4
9.	General Microbiology	Employability	4
10.	Systematic Bacteriology	Employability	4
11.	Applied microbiology	Employability	3
12.	Medical Parasitology and Mycology	Employability	5
13.	Immunology & Virology	Employability	5
14.	Clinical Bacteriology	Employability	4
15.	Research Methodology	Employability	3

16.	Mini Project	Employability	2
17.	Internship	Employability	12
18.	Project	Employability	12
19.	Environmental Studies	Employability	2
20.	Job Readiness	Employability	3
21.	Proficiency in English	Employability	2
	BSc MLT		
1.	Human Anatomy and Physiology	Employability	3
2.	Cell Biology	Employability	4
3.	Medical Instrumentation and Technique	Entrepreneurship	4
4.	Biochemistry	Employability	4
5.	Clinical Pathology	Entrepreneurship	4
6.	Immunology	Employability	5
7.	Molecular Biology	Entrepreneurship	4
8.	Haematology	Entrepreneurship	5
9.	Microbiology	Employability	5
10.	Medical Law and Ethics	Employability	3
11.	Histology	Employability	4
12.	Advanced Hematology	Entrepreneurship	4
13.	Research Methodology	Employability	3
14.	Analytical Biochemistry	Employability	5
15.	Applied Haematology	Entrepreneurship	5
16.	Immunopathology	Employability	4
17.	Parasitology	Employability	5
18.	Basic Computer and Information Science	Employability	2
19.	Blood Banking	Entrepreneurship	4
20.	Medical Laboratory Management	Entrepreneurship	5
21.	Introduction to Quality and Patient Safety	Employability	5
22.	Mycology & Virology	Employability	5
23.	Mini Project	Employability	2
24.	Internship	Employability	12
25.	Project	Employability	12
26.	Environmental Studies	Employability	2
27.	Job Readiness	Employability	3
28.	Proficiency in English	Employability	2
	BSc CMB		
1.	Human Anatomy and Physiology	Employability	3
2.	Cell Biology	Employability	4
3.	Medical Instrumentation and Technique	Entrepreneurship	4
4.	Biochemistry	Employability	4
5.	Clinical Pathology	Entrepreneurship	4
6.	Immunology	Employability	5
7.	Molecular Biology	Entrepreneurship	4



8.	Haematology	Entrepreneurship	5
9.	Microbiology	Employability	5
10.	Medical Law and Ethics	Employability	3
11.	Systemic Bacteriology	Employability	4
12.	Systemic Virology & Mycology	Employability	5
13.	Research Methodology	Employability	3
14.	Analytical Biochemistry	Employability	5
15.	Public Health Microbiology	Employability	4
16.	Pharmaceutical Microbiology	Employability	4
17.	Industrial Microbiology	Employability	4
18.	Basic Computer and Information Science	Employability	2
19.	Epidemiology	Employability	3
20.	Diagnostic Bacteriology	Entrepreneurship	5
21.	Diagnostic Mycology	Entrepreneurship	4
22.	Diagnostic Virology	Entrepreneurship	4
23.	Diagnostic Parasitology	Entrepreneurship	4
24.	Mini Project	Employability	2
25.	Internship	Employability	12
26.	Project	Employability	12
27.	Environmental Studies	Employability	2
28.	Job Readiness	Employability	3
29.	Proficiency in English	Employability	2
	BSc MRT		
1.	General Anatomy	Employability	5
2.	General Physiology	Employability	5
3.	Basic Biochemistry	Employability	5
4.	Biology	Employability	5
5.	Cell Biology	Employability	5
6.	Mathematics	Employability	5
7.	Basic Radiation Physics	Employability	4
8.	Fundamental Medical Imaging	Entrepreneurship	6
9.	Principles of Radiation Therapy	Employability	4
10.	Basic Medical Instrumentation & Technique	Entrepreneurship	4
11.	Applied Radiation Physics & Radiation Protection	Employability	4
12.	Radiographic Technique - 1	Employability	5
13.	Basic Equipment in Radiotherapy	Employability	4
14.	Mammography and Ultrasound	Entrepreneurship	4
15.	Applied Equipment of Radio Diagnosis	Employability	4
16.	Radiotherapy and Brachy Therapy in Malignant & Non-malignant Disease	Employability	4
17.	Radiographic Technique - 2	Employability	5
18.	Physics of CT & MRI	Employability	4
19.	Interventional Radiology and	Employability	5

	Drug Diagnostic Radiology		
20.	Computerized Tomography (CT Scanning) Method & Procedure	Employability	4
21.	Basic of Magnetic Resonance Imaging	Employability	4
22.	Image Interpretation of X-Ray Mammography, CT & MRI	Entrepreneurship	5
23.	Medical Law and Ethics	Employability	3
24.	Orientation in Clinical Sciences Course contents	Employability	4
25.	Basic Computer and Information Science	Employability	2
26.	Project	Employability	18
27.	Internship	Employability	18
28.	Environmental Studies	Employability	2
29.	Job Readiness	Employability	3
30.	Proficiency in English	Employability	2
	BSc Optometry		
1.	Biology	Employability	4
2.	Maths	Employability	4
3.	Cell Biology	Employability	4
4.	General Anatomy	Employability	5
5.	General Physiology	Employability	5
6.	Basic Biochemistry	Employability	5
7.	GEOMETRIC OPTICS	Employability	5
8.	BASIC COMPUTER AND INFORMATION SCIENCE	Employability	2
9.	OCULAR ANATOMY	Employability	4
10.	OCULAR PHYSIOLOGY	Employability	4
11.	INTRODUCTION TO OPTOMETRY	Employability	2
12.	PHYSICAL OPTICS	Entrepreneurship	4
13.	VISUAL OPTICS –I	Entrepreneurship	5
14.	OPTOMETRIC OPTICS –I	Entrepreneurship	5
15.	OCULAR DISEASES –I	Entrepreneurship	4
16.	OCULAR MICROBIOLOGY & PATHOLOGY	Employability	4
17.	CLINICAL EXAMINATION OF VISUAL SYSTEM LAB	Entrepreneurship	2
18.	VISUAL OPTICS –II	Entrepreneurship	5
19.	OPTOMETRIC OPTICS –II & DISPENSING OPTICS	Employability	5
20.	OCULAR DISEASES –II	Employability	4
21.	CONTACT LENSES-I	Entrepreneurship	5
22.	CONTACT LENSES-II	Entrepreneurship	5
23.	BINOCULAR VISION –I	Entrepreneurship	5
24.	LOW VISION & REHABILITATION	Entrepreneurship	4
25.	BASIC & OCULAR PHARMACOLOGY	Employability	4
26.	BINOCULAR VISION –II	Entrepreneurship	5
27.	PEDIATRIC & GERIATRIC	Employability	4



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	OPTOMETRY		
28.	SYSTEMIC DISEASES & EYE	Employability	4
29.	OCCUPATIONAL OPTOMETRY	Entrepreneurship	3
30.	LAW & OPTOMETRY	Employability	3
31.	PUBLIC HEALTH& COMMUNITY OPTOMETRY	Employability	3
32.	OPTOMETRIC INSTRUMENTS	Entrepreneurship	4
33.	PROJECT	Employability	18
34.	INTERNSHIP	Employability	20
35.	Environmental Studies	Employability	2
36.	Job Readiness	Employability	3
37.	Proficiency in English	Employability	2

Annexure B

List of Skill courses (Basket) approved

Sl. No	Course Title	Credit	(T+P+P)
1.	Refraction Technology (CUTM3057)	4	0+3+1
2.	Emergency Medical Technology (CUTM3058)	4	0+3+1
3.	Medical Lab Technology (CUTM3059)	4	0+3+1
4.	Operation Theatre Technology (CUTM3060)	4	0+3+1
5.	Radiology Technology (CUTM3061)	4	0+3+1
6.	Phlebotomy Technology (CUTM3062)	4	0+3+1
7.	First Aid Service (CUTM3063)	4	0+3+1
8.	General Duty Assistance Service (CUTM3064)	4	0+3+1
9.	X- ray Technology (CUTM3065)	4	0+3+1

List of value-added courses approved

Sl. No	Course Title	Hrs. of input
1.	Gender, Human Rights and Ethics (CUVA4040)	30 hrs



CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Paramedics and Allied Health Sciences

Time: 11.00 AM

Date: 11.07.2020

Venue: Hybrid mode (Board Room, CUTM, Bhubaneswar and online)

Board of Studies Meeting

Attendance Sheet

Sl. No.	Name of the BOS Member (Internal Faculty and External Resource)	Designation	Signature
1	Dr. Santosh Kumar Behera	Regional Medical Research Center	Attended online
2	Dr. Debasish Sahoo	SOA University	Attended online
3	Dr. Debi Prasad Rath	CARE Hospital	Attended online
4	Dr. Ardhendu Praharaj	District Microbiology Lab, Nabarangpur	Attended online
5	Dr. Harihar Praharaj	Directorate of Medical Education and Training, Odisha	Attended online
6	Dr. Bhargavram	MD, Professor of Ophthalmology, Sandhya Eye Hospital, Andhra Pradesh	Attended online
7	Dr. Ajay Kumar Singh	MD, Professor of Ophthalmology, DHC Khordha	Attended online
8	Dr. Chandra Mouli	Radiology Dept., GVP Institute of Health Care and Medical Technology, Marika valasa, Visakhapatnam, A.P	Attended online
9	Dr. M. Bhargava Ram	Ophthalmologist, Sandhya Eye Hospital, Maddilapale, Visakhapatnam	Attended online
10	Dr. Teja	Anesthesian	Attended online
11	Dr. Monali P. Mishra	Assistant Prof., SoPAHS (CUTM)	Attended online
12	Ms. Sonali Dash	Assistant Prof., SoPAHS (CUTM)	Attended online
13	Ms. Susmita Chakrabarty	Lecturer, SoPAHS (CUTM)	Attended online
14	Prof. Sourav Karmakar	Asst. Prof. & HoD, SoPAHS (CUTM)	Attended online
15	Ms. SNS Neelima	Asst. Prof. SoPAHS (CUTM)	Attended online
16	Dr. CH. Nooka Raju	Associate Prof., SoPAHS (CUTM)	Attended online
17	Mr. M. Vinay Dinakaran	Asst. Prof. SoPAHS (CUTM)	Attended online



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18	Ms. N.Anuhya	Asst. Prof. SoPAHS (CUTM)	Attended online
19	Dr.M.L.N.Acharyulu	Associate Dean, SoPAHS (CUTM)	Attended online

Dean, SoPAHS

Prof. Sunil Kumar Jha

DEAN

School of Paramedics & Allied Health Sciences
Centurion University of Technology & Management
Bhubaneswar, Odisha-752050

Dean, Academics

Dean - Academic

Centurion University of Technology & Management
Bhubaneswar, Khurda, Odisha-752050

Dr. Soumyajit
HOD, SoPAHS

School of Paramedics & Allied Health Sciences
Centurion University of Technology & Management
Ramachandrapur, Bhubaneswar - 752050

CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Applied Sciences

Department of Zoology

Date: 11. 07.2020

MINUTES OF BOARD OF STUDIES MEETING held on 11.07.2020

Virtual Mode

Time: 2:30 pm.

The Board of Studies (BoS) meeting of Department of Zoology was held on 11th July 2020 at 2:30 p.m. in online mode due to ongoing Covid-19 Pandemic. The following members were present:

1. Dr. Siba Prasad Parida, HoD, Dept. of Zoology, SoAS, CUTM, Bhubaneswar
2. Dr. Sabuj Sahoo, Dept. of Biotechnology, Utkal University, Bhubaneswar
3. Dr. Mohammad Siddique, Associate Dean, Centurion University of Technology and Management

The Chairperson welcomed all members of the Board and briefly outlined the purpose of the meeting. Thereafter, the Head of the Department of Zoology presented the achievements and improvements of the department in the areas of academics, research and infrastructure.

The following agenda items were taken up subsequently:

Agenda 1: The minutes of the last meeting of the BoS held on 30th July 2019 were confirmed.

Agenda 2: Inclusion of new courses in the curriculum of B.Sc. and M.Sc. Zoology (Hons.) syllabus

- The HoD, of dept. of Zoology gave a presentation on the feedback received on curriculum outlining the suggestions made by the various stakeholders. Based on this, the Board accepted and approved a few suggestions for the courses and programme to be implemented from the Academic Year 2019-20.
- The syllabus of B. Sc. Zoology (Hons) (CBCS) pattern was revised with new codes and prepared as per UGC guidelines. New courses were introduced in M. Sc. Zoology syllabus and approved by the board. Emphasis was given on course related to fish culture and management in the syllabus of M.Sc. Zoology programme for their overall improvement and well-being were approved by the Board members. (Annexure I)

Agenda 3: Discussion and incorporation of new Domain courses by the University

- Inclusion of new Domain courses by the University for both B.Sc. Zoology (Hons.) and M.Sc. Zoology programme for their overall improvement and well-being were approved by the Board members. **(Annexure-II)**

Agenda 4: Discussion and incorporation of new Skills courses by the University

- Inclusion of new skill courses offered by the University for both B.Sc. Zoology (Hons.) and M.Sc. Zoology programme and approved by the Board members. **(Annexure-III)**

The HoD, Department of extended sincere thanks to all members of the Board.

The meeting ended with a vote of thanks to the Chair.



HoD, Zoology

H O D

Department of Zoology

School of Applied Sciences

CENTURION UNIVERSITY OF TECHNOLOGY & MANAGEMENT

Bhubaneswar Odisha



Dean, SoAS

DEAN

School of Applied Sciences

CENTURION UNIVERSITY OF TECHNOLOGY & MANAGEMENT

Bhubaneswar, Odisha



Dean, Academics

Dean - Academic

Centurion University of Technology & Management

Bhubaneswar, Khurda, Odisha-752050

Annexure I
B.Sc. Core Courses (CC)

Sl. No.	Code	Subject Name	Type of course	T-P-Pr (Credit)	Credits
1.	CUTM1497	Non-Chordates I	Theory + Practice	3-1-2	6
2.	CUTM1499	Principles of Ecology	Theory + Practice	3-1-2	6
3.	CUTM1498	Non-Chordates II	Theory + Practice	3-1-2	6
4.	CUTM1500	Cell Biology	Theory + Practice	3-1-2	6
5.	CUTM1501	Diversity of Chordates	Theory + Practice	3-1-2	6
6.	CUTM1502	Physiology: Controlling and Coordinating Systems	Theory + Practice	3-1-2	6
7.	CUTM1503	Fundamentals of Biochemistry	Theory + Practice	3-1-2	6
8.	CUTM1504	Comparative Anatomy of Vertebrates	Theory + Practice	3-1-2	6
9.	CUTM1505	Physiology: Life Sustaining Systems	Theory + Practice	3-1-2	6
10.	CUTM1506	Biochemistry of Metabolic Processes	Theory + Practice	3-1-2	6
11.	CUTM1507	Molecular Biology	Theory + Practice	3-1-2	6
12.	CUTM1510	Evolutionary Biology	Theory + Practice	3-1-2	6
13.	CUTM1509	Developmental Biology	Theory + Practice	3-1-2	6
14.	CUTM1508	Principle of Genetics	Theory + Practice	3-1-2	6
Total					84

M. Sc. Zoology Syllabus (1st to 4th semester)
Course Structure-2020

Sl. No.	Code	Subject Name	T-T-P	Credit
1.	CUTM1437	Cell and Molecular Biology	3-1-0	4
2.	CUTM1443	Water and Soil Quality Management in Aquaculture	3-1-0	4
3.	CUTM1437	Genetics and Epigenetics	3-1-0	4
4.	CUTM1446	Anatomy and Biology of Fish and shellfish	3-1-0	4
5.	CUTM1451	Bioanalytical Techniques	3-1-0	4
6.	CUTM1451	Immunology and Cancer Biology	3-1-0	4
7.	CUTM1436	Microbiology	3-1-0	4
8.	CUTM1448	Fish Processing and Value Addition	3-1-0	4
9.	CUTM1452	Animal Biotechnology	3-1-0	4
10.	CUTM1452	Animal Breeding	3-1-0	4
11.	CUTM1450	Animal Physiology and Biochemistry	3-1-0	4
12.	CUTM1444	Fish and Shell fish Nutrition	3-1-0	4
13.	CUTM1442	Advanced Aquaculture	3-1-0	4
14.	CUTM1447	Coastal Aquaculture	3-1-0	4
15.	CUTM1445	Fish and Shellfish Health Management	3-1-0	4
16.	CUTM1449	Ornamental Aquaculture	3-1-0	4
Basket II (Domain Courses)				32
Total				96

Annexure II

Domain Courses offered by the University in 2020-21

Sl. No.	Name of the Domain	Credit	Category	Year of introduction
	Group A: Agriculture/ Agri Engineering/Phyto pharma/ Dairy tech/ fisheries/ biological sciences			
	Group B: All other engineering/physical and mathematical science/vocational or skills			
	Group C: Pharmacy and allied Health			
	Group D: Management & media and communication			
1	Advance Video Processing, Computer Vision and Machine Learning	30	A/B/D	2020
2	Aerial Survey and Remote Sensing Applications	18	A/B	2020
3	Agri Business Management	23	A/B/D	2020
4	Architectural and Structural Design	20	A/B	2020
5	Business Analytics	21	A/B/D	2020
6	Composite Design and Manufacturing	24	A/B	2020
7	Computational Fluid Dynamics	20	A/B	2020
8	Commodity and Food Storage	29	A/B/D	2020
9	Gaming and Immersive Learning (AR & VR)	20	A/B/D	2020
10	Genetic Engineering & Genomics	29	A	2020
11	Go-To-Market	22	A/B/D	2020
12	Health Care Assistancy	25	A/B	2020
13	Intensive Aquaculture	29	A	2020
15	Nutraceuticals	29	A/C	2020
16	Organic Farming	29	A	2020
17	Protected Horticulture	22	A/B	2020
18	Renewable Energy Applications	29	A/B	2020
19	Seed Production using Manual and Molecular Methods	29	A	2020
20	Smart Agriculture	28	A/B	2020
21	Smart Farm Machinery	28	A/B	2020
22	Soil and Water Conservation through Watershed	29	A/C	2020

Annexure III

Skill Courses offered by the University in 2020-21

Sl. No.	Course Title	Credit
1	Introduction to Quantum Computing	4
2	Organic Farming	4
3	Mushroom Farming	4
4	Hydroponics Technology	4
5	Poultry Farming	4
6	Dairy Farming	4
7	Vermicomposting Farming	4
8	Transformer Manufacturing, Repairing and Maintenance	4
9	Electrical Installation	4
10	Repair and Maintenance of Home Appliances	4
11	Refrigeration and air conditioning	4
12	Super critical Co2 plant operation	4
13	Business Plan Preparation	4
14	Composite fabrication practice	4
15	Powder coating practice	
16	Farm appliances operation	4
17	Bio fertilisers preparation	4
18	PCB designing & fabrication	4
19	Introduction to Block Chain Technology	4
20	Introduction to Nutraceuticals	4
21	Introduction to NLP	4
22	Introduction to Computational Biology	4
23	Product Life Cycle Management through Gate process	4
24	New material development with Biovia	4
25	Spectral image processing using Python	4
26	Satellite data processing	4
27	Working with Graphene and carbon fibre	4
28	Adobe Tools and Illustrations	4
29	Digital Painting	4
30	Computer Installation and Maintenance	4

Value added Courses offered by the University in 2020-21

Sl. No.	List of Courses	Duration of course
1	Natural Resource Management	30 Hours
2	Research Methodology and IPR	30 Hours
3	Urban Gardens using Hydroponics	30 Hours
4	Introduction to Python	30 Hours
5	MATLAB	30 Hours
6	Waste to Wealth	30 Hours
7	Technical Writing	30 Hours
8	Organic Farming	30 Hours
9	Disaster Management	30 Hours
10	Ethical Hacking	30 Hours
11	Web Development	30 Hours
12	Food & Nutrition	30 Hours
13	Clinical Practice	30 Hours
14	Innovation Management	30 Hours
15	Financial Literacy	30 Hours
16	Yoga and Meditation	30 Hours
17	Steps for Career Plan	30 Hours
18	MS Excel Basics	30 Hours
19	Quality Analysis	30 Hours
20	Ethical Writing Practice	30 Hours
21	Ansys	30 Hours
22	Video Making for Youtubers	30 Hours

CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Applied Sciences

Department of Zoology

Time: 11.00 a.m.

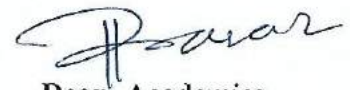
Date: 11.07.2020

Virtual Mode

Board of Studies Meeting

Attendance Sheet

Sl. No.	Name	Organization	Signature
1.	Dr. Sabuj Sahoo	Utkal University	Attended Online
2.	Dr. Sangram Kumar Lenka	TERI – Deakin Nanobiotechnology Centre	Attended Online
3.	Dr. E.M. Chhanda Prajnadarsini	ICAR – CMFRI, Chennai	Attended Online
4.	Prof. Dipankar Bhattacharyay	Dean – SoAS, Centurion University of Technology and Management	Attended Online
5.	Prof. Mohammed Siddique	Associate Dean- SoAS, Centurion University of Technology and Management	Attended Online
6.	Prof. Yashaswi Nayak	HoD- Dept of Zoology- SoAS, Centurion University of Technology and Management	Attended Online



Dean, Academics

Dean - Academic

Centurion University of Technology & Management
Bhubaneswar, Khurda. Odisha-752050

CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Forensic Sciences

Date: 30.06.2019

MINUTES OF BOARD OF STUDIES MEETING held on 30.06.2019

Venue: Board Room, CUTM, Bhubaneswar

Time: 11.00 a.m.

The Board of Studies (BoS) meeting of School of Forensic Sciences was held on 30.06.2018 at 11 a.m. in the Board Room, CUTM Bhubaneswar. The following members were present:

1. Dr. Gurudutta Pattnaik, Principal, SoPLS
2. Mr. Mahesh Patnaik, Director, HVET
3. Dr. Debashish Jena, Associate Professor, Dept of CSC, IIIT, BBSR
4. Mr. Gyanranjan Panigrahi, Assistant Professor, BJB Autonomous College, BBSR
5. Ms. Shruti Rajwar, Assistant Professor, School of Forensic Sciences, CUTM

The Chairperson welcomed all members of the Board and briefly outlined the purpose of the meeting. Thereafter, the Dr. Gurudutta Pattnaik, **Principal, SoPLS and SoFS** presented achievements and improvements of the department in the areas of academics and infrastructure.

The following agenda items were taken up subsequently:

Agenda 1: The minutes of the last meeting of the BoS held on 30-06-2018 were confirmed.

Agenda 2: Discussion and approval on any revision required in the Curriculum of M.Sc. Forensic Science

- The Principal, SoFS gave a presentation on the feedback received on curriculum outlining the suggestions made by the various stakeholders. Based on the feedback, it was decided that the same syllabus will continue. The curriculum was passed by BOS without any changes.
- No new courses were introduced in M.Sc. Forensic Science.

Agenda 3: Introduction of B.Sc. Forensic Science programme and discussion on Course curriculum and credit system.

- Syllabus recommended by UGC was referred for the same and expert feedback was also considered while framing the curriculum.
- Type of curriculum: CBCS
- Duration of Programme: 3 yrs
- The Board approved the courses of Program. Total 38 no. of courses were approved. (Annexure-I)

Agenda 4: Introduction of M.Sc. Cyber Security & Digital Forensics programme and discussion on Course curriculum and credit system.

- Syllabus recommended by UGC was referred for the same and expert feedback was also considered while framing the curriculum.



- Duration of Programme: 2 yrs
- The Board approved the courses of Program. Total 16 no. of courses were approved. (Annexure-II)

Dr. Gurudutta Pattnaik, Principal, SoFS & SoPLS extended sincere thanks to all members of the Board. The meeting ended with a vote of thanks to the Chair.

GP
30/06/19

Principal, SoPLS & SoFS

Basan

DEAN Academics
Centurion University of Technology & Management
Bhubaneswar, Khurda, Odisha-752050

ANNEXURE - I

• List of New Courses of B.Sc. Forensic Science

Sl. No	Course Title	Type(Skill/Employability/Entrepreneurship)	Credit
Semester I			
1.	BSFS0401 - Basics of Forensic	Skill	6
2.	BSFS0402 - Crime and Society	Skill	6
3.	Ability enhancement Course	Skill	2
4.	Generic Elective	Skill	6
Semester II			
5.	BSFS0403 - Criminal Law	Skill	6
6.	BSFS0404 - Forensic Psychology	Skill	6
7.	Ability enhancement Course	Skill	2
8.	Generic Elective	Skill	6
Semester III			
9.	BSFS0405 - Forensic Dermatoglyphics	Employability & Skill	6
10.	BSFS0406 - Technological Methods in Forensic	Employability & Skill	6
11.	BSFS0407 - Criminalistics	Employability & Skill	6
12.	Ability Enhancement Elective (Skill Based) course	Skill	2
13.	Generic Elective	Skill	6
Semester IV			
14.	BSFS0408 - Forensic Chemistry	Employability & Skill	6
15.	BSFS0409 - Questioned Documents	Employability, Entrepreneurship & Skill	6
16.	BSFS0410 - Forensic Biology	Employability & Skill	6
17.	Ability Enhancement Elective (Skill Based) course	Skill	2
18.	Generic Elective	Skill	6
Semester V			
19.	BSFS0411 - Forensics Ballistics	Employability & Skill	6
20.	BSFS0412 - Forensic Toxicology	Employability & Skill	6
21.	Discipline Specific Elective (DSE)	Employability & Skill	6
22.	Discipline Specific Elective (DSE)	Employability & Skill	6
Semester VI			
23.	BSFS0413 - Forensic Anthropology	Employability & Skill	6
24.	BSFS0414 - Forensic Medicine	Employability & Skill	6
25.	Discipline Specific Elective (DSE)	Employability & Skill	6
26.	Discipline Specific Elective (DSE)	Employability & Skill	6
ABILITY ENHANCEMENT COURSE			
27.	BSFL1101 - English	Skill	2
28.	FCBS0101 - Environmental Science	Skill	2
ABILITY ENHANCEMENT ELECTIVE (SKILL BASED) COURSE			
29.	BSSE0201 - Introduction to Biometry	Skill	2
30.	BSSE020 - Handwriting Identification and Recognition	Skill	2
DISCIPLINE SPECIFIC ELECTIVE (DSE COURSES)			



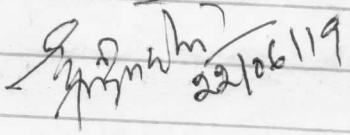
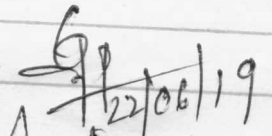
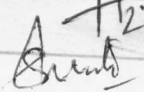
31.	DEFS0401 - Digital Forensics	Employability & Skill	6
32.	DEFS0402 - Economic Offences	Employability & Skill	6
33.	DEFS0403- Forensic Serology	Employability & Skill	6
34.	DEFS0404 - Accident Investigations	Employability & Skill	6
35.	DEFS0405 - DNA Forensics	Employability & Skill	6
36.	DEFS0406 - Audio Recognition and Video Analysis	Employability & Skill	6
37.	DEFS0407 - Explosive Analysis and Post Blast	Employability & Skill	6
38.	DEFS0408 - Quality control and Quality Assurance	Employability & Skill	6
<p>GENERIC ELECTIVE (GE) Subjects From other Disciplines (One each in Semester I, II, III, IV)</p>			

ANNEXURE-II

- List of new courses of M.Sc. Cyber Security and Digital Forensics

Sl. No	Course Title	Type(Skill/Employability/Entrepreneurship)	Credit
Semester I			
1.	MSCS1101 - Principles of Information Security	Employability	4
2.	MSCS1102 - Digital Forensics	Employability	6
3.	MSCS1103 - Computer Networks	Employability & Skill	6
4.	MSCS1104 - Cyber Crime & Investigations	Employability & Skill	4
5.	MSCS1105 - Intellectual Property Rights	Employability	4
Semester II			
6.	MSCS1201 - Number theory & Cryptography	Employability & Skill	4
7.	MSCS1202 - Advanced Information Security	Employability & Skill	4
8.	MSCS1203 - Cyber Forensics	Employability & Skill	6
9.	MSCS1204 - System and Network Security	Employability & Skill	6
10.	MSCS1205 - Cyber Law	Entrepreneurship	4
Semester III			
11.	MSCS2101 - Mobile Security Analysis	Entrepreneurship	6
12.	MSCS2102 - IT Governance, Risk and Compliance	Entrepreneurship	4
13.	MSCS2103 - Business Continuity Planning (BCP) And Disaster Recovery (Dr)	Skill	4
14.	MSCS2104 - Penetration Testing & Vulnerability Assessment	Employability	6
15.	MSCS2105 - Digital Frauds	Employability	4
Semester IV			
16.	MSCS0301 - Project/Dissertation	Employability	24

Members Present:

- | | <u>Signature</u> |
|---|---|
| ① Dr. Debasish Jena, (EXTERNAL)
Associate Professor,
Dept. of CSC, IIT, Bhubaneswar | 
22/06/19 |
| ② Mr. Mahesh Pattnaik (INTERNAL) | 
22/06/19 |
| ③ Mr. Gyana Ranjan Panigrahi | 
22/06/19 |
| ④ Prof. Gurudutta Pattnaik (INTERNAL) | 
22/06/19 |
| ⑤ Ms. Shruti Rajwar (INTERNAL) | 
22.06.19 |



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Empowering Communities*

2018-19

Board of Studies

CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Applied Sciences
Department of Chemistry

Date: 30.06.2018

MINUTES OF BOARD OF STUDIES MEETING held on 30.06.2018

Venue: Board Room, CUTM, Bhubaneswar

Time: 11.00 a.m.

The Board of Studies (BoS) meeting of Department of Chemistry was held on 30.06.2018 at 11 a.m. in the Board Room, CUTM Bhubaneswar. The following members were present:

1. Dr. Prafulla Kumar Sahoo, Utkal University (Subject expert)
2. Dr. SK Biswal (Dean SoAS), CUTM, BBSR Campus
3. Dr. Dojalisa Sahu (HoD, Chemistry), CUTM, BBSR Campus
4. Dr Chandana Adhukari, CUTM, Rayagarh Campus
5. Dr Suman Panda, CUT M, Bolangir Campus
6. MLN Acharyulu, CUTM, VIZAG Campus

The Chairperson welcomed all members of the Board and briefly outlined the purpose of the meeting. Thereafter, the Head of the Department of Chemistry presented the achievements and improvements of the department in the areas of academics, research, consultancy and infrastructure.

The following agenda items were taken up subsequently:

Agenda 1: The minutes of the last meeting of the BoS held on 12.06.2017 were confirmed.

Agenda 2: Discussion and approval in the domain content (Pharmaceutical Chemistry) Curriculum of B.Sc (Hons.)

- The B.Sc. (Hons.) core syllabus is not changed only one domain course is introduced. The syllabus of the domain (Pharmaceutical Chemistry) is prepared by the following pharmacy council of India syllabus. (Annexure-1)
- The domain syllabus is received by the external members Prof (Dr.) Prafulla Kumar Sahoo. The syllabus has been recommended for the implementation in the coming semester for 2018-2019 batch.

Agenda 3: Discussion and modification in B.Tech (CBCS) for Basket-I to be approved

- Dr MLN Acharyalu has suggested some modification in the B.Tech (CBCS) Basket -I syllabus. However, the members of BOS has not been recommended the said modification for immediate implementation (Annexure-2)



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Board of Studies

Agenda 4: Inclusion of courses on life skills and value addition

It was suggested that students take up the various courses offered by the University in the areas of life skills and value addition for their overall improvement and well being. The same was agreed upon and approved by the Board members. (Annexure-3)

The HoD, Department of Chemistry. extended sincere thanks to all members of the Board.

The meeting ended with a vote of thanks to the Chair.

[Handwritten Signature]
HoD, Chemistry
30.6.2018

Department of Chemistry
School of Applied Sciences
CENTURION UNIVERSITY OF TECHNOLOGY & MANAGEMENT
Bhubaneswar, Odisha

[Handwritten Signature]
Dean, SoAS
30.6.2018

DEAN
School of Applied Sciences
CENTURION UNIVERSITY OF TECHNOLOGY & MANAGEMENT
Bhubaneswar, Odisha

[Handwritten Signature]

Dean, Academics
Dean - Academic
Centurion University of Technology & Management
Bhubaneswar, Khurda, Odisha-752050





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Empowering Communities

Board of Studies

Annexure I

B. Sc. Chemistry Syllabus (III to VI semester)

Type of curriculum; CBCS/Elective/NEP: B.Sc : CBCS

List of new courses added

Sl. No	Course Title	Type(Skill/Employability/ Entrepreneurship)	Credit
B.Sc(Semester -III)			
1	Inorganic chemistry-II	Employability	6
2	Organic Chemistry-II	Employability	6
3	Physical Chemistry-III	Employability	6
4	Inorganic Chemistry-III	Employability	6
B.Sc(Semester -IV)			
1	Organic Chemistry-III	Employability	6
2	Physical Chemistry-IV	Employability	6
3	Organic Chemistry-IV	Employability and Skill	6
4	Physical Chemistry-V	Employability and Skill	6
B.Sc(Semester -V)			
5	Inorganic Chemistry-IV	Employability and Skill	6
6	Organic Chemistry-V	Skill	6
7	Environmental Science	Employability and Skill	6
8	Industrial Chemicals and Environment	Employability	6
9	Inorganic Materials of Industrial Importance	Skill	6
10	Research Methodology for Chemistry	Skill and Employability	6
B.Sc(Semester -VI)			
11	Instrumental Methods of Chemical Analysis	Skill	6
12	Basic Pharmaceutical Chemistry	Skill	6
13	Analytical Clinical	Skill	6



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Board of Studies

	Biochemistry		
14	Green Methods in Chemistry	Skill	6
15	Basic Analytical Chemistry	Skill	6



Annexure-II

BASKET - I (B.Tech-All
programs)

<i>Course Code</i>	<i>Course Title</i>	<i>Course Type</i>	<i>Credits</i>	<i>Prerequisite</i>	<i>Department Offering</i>
<i>FCBS0401</i>	<i>Applied Analytical Chemistry</i>	<i>Theory + Practice</i>	<i>3</i>	<i>Nil</i>	<i>Chemistry</i>
<i>FCBS0402</i>	<i>Industrial Chemistry</i>	<i>Theory + Practice</i>	<i>3</i>	<i>Nil</i>	<i>Chemistry</i>
<i>FCBS0403</i>	<i>Applied Engineering Materials</i>	<i>Theory + Practice</i>	<i>3</i>	<i>Nil</i>	<i>Chemistry</i>
<i>FCBS 0101</i>	<i>Environmental Science</i>	<i>Theory</i>	<i>3</i>	<i>Nil</i>	<i>Chemistry</i>



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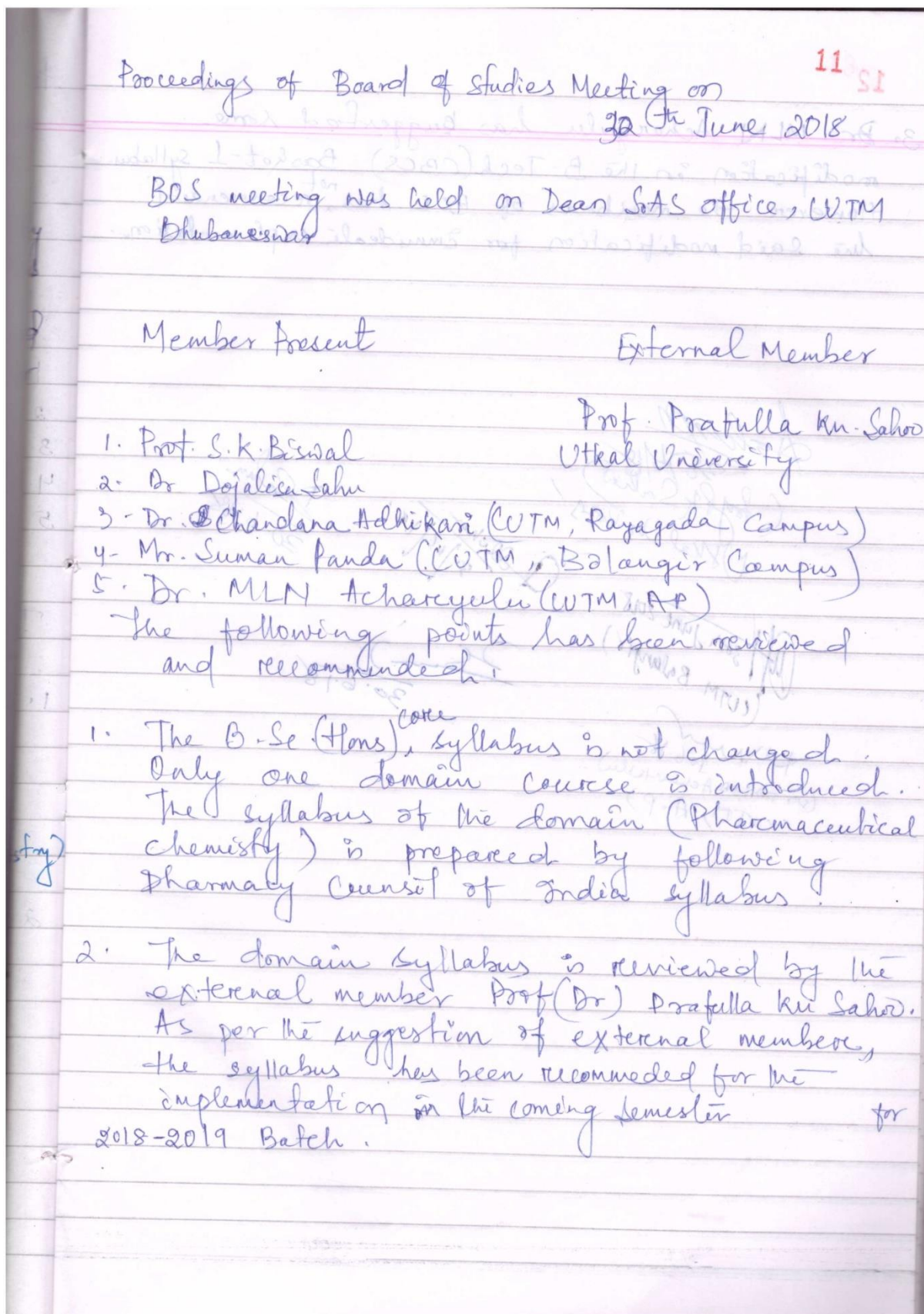
Board of Studies

Annexure-III

List of Value added courses

List of Skill Courses

Sl. No	Course Title	Type(Skill/Employability/Entrepreneurship)	Credit
1	Basic Herbal Technology	Skill	2
2	Extraction and Isolation of Drugs	Skill	2
3	Chemical Identification of Drugs	Skill-Chemical identification of drugs	2
4	Chemistry of Biomolecules	Employability and Skill	4
5	Physical Chemistry of Pharmaceuticals	Employability and Skill	4
6	Essentials of Pharmaceutical Chemistry	Employability and Skill	4
7	Analytical Techniques for Pharmaceutical Drugs	Employability and Skill	4
8	Project	Skill	6





12 11

3. Dr. MLN Acharyulu has suggested some modification in the B.Tech(CSCE) Basket-I syllabus. However the members of BOS, has ^{not} recommended the said modification for immediate implementation.

(Signature)
25/6/18
(Prof. K. Sarthi)
OJSCU

(Signature)
25/6/18

(Signature)
30.6.18

(Signature)
30th June 2018
(CUM Balangir)

(Signature)
30.6.18

(Signature)
30.6.18
(Dr. MLN Acharyulu)
CUM, A.P



CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Engineering & Technology

Department of Civil Engineering

Date: 30/06/2018

MINUTES OF BOARD OF STUDIES MEETING held on 30/06/2018

Venue: Board Room, CUTM, Bhubaneswar

Time: 11.00 a.m.

The Board of Studies (BoS) meeting of Department of Civil Engineering was held on 30/06/2018 at 11 a.m. in the Board Room, CUTM Bhubaneswar.

The following are the members:

1. Prof. C.N.V. Satyanarayan Reddy, Professor, Dept. of Civil Eng., Andhra University
2. Prof. Manoj Ku Rath, Prof. Dept. of Civil Engg, CUTM,BBSR Campus
3. Prof. R. C. Padhy, General Major
4. Dr. Siba Mishra, Assosiate Prof. Dept. of Civil Engg, CUTM,BBSR Campus
5. Prof. Prafulla Kumar Panda, HOD Dept. of Civil Engg, CUTM,PKD Campus
6. Prof. Sagarika Panda, HOD Dept. of Civil Engg, CUTM,BBSR Campus

The Chairperson welcomed all members of the Board and briefly outlined the purpose of the meeting. Thereafter, the Head of the Department of Civil Engineering presented the achievements and improvements of the department in the areas of academics, research, consultancy and infrastructure.

The following agenda items were taken up subsequently:

Agenda 1: The minutes of the last meeting of the BoS held on 12.06.2017 were confirmed.

Agenda 2: Approval for B.Tech Civil Engineering Course structure and syllabus for basket 3 and 4 of CBCS system.

The HoD, Civil Engg. gave a presentation on the feedback received on curriculum outlining the suggestions made by the various stakeholders. Based on this , the Board accepted and approved a few suggestions for course revision to be implemented from the Academic Year 2017-18.

- Contact hour need to be less and more hours should be allotted for practice.
- As per the AICTE Regulation, to give extra 20 credits for specialization as major degree and minor degree.
- Subject wise feedback was given for courses in basket 3 and basket 4.
- This subject has been renamed in CBCS basket IV and the content has been modified.
- Two courses from each domain in basket V is to be carried over to basket IV as advanced learning.
- The new domain planning, design and drawing has been restructured and the new courses are to be incorporated. Architectural Design, Green building design, 3D modeling and VR experience of Building, Earthquake Resistant design, Barrier free design, and intelligent Building design with project and internship. (Annexure A)



- The Board approved the changes suggested in the Hydraulics and hydraulics machines, Hydrology and water resources engineering, GIS and Digital cartography, Workshop Practice as per the latest Software and technology being used by the industry. List of existing courses where syllabus was revised in (*Annexure B*)

Agenda 3: Inclusion of courses on Domain, skills and value addition

It was suggested that students take up the various courses offered by the University in the areas of life skills and value addition for their overall improvement and well being. The same was agreed upon and approved by the Board members. (*Annexure C*)

The HoD, Department of Civil Engg. extended sincere thanks to all members of the Board.

The meeting ended with a vote of thanks to the Chair.

Dean, SoET

Dean, SOET

Centurion University of Technology & Management
Odisha

Dean, Academics
Dean - Academic

Centurion University of Technology & Management
Bhubaneswar, Khurda, Odisha-752050

HoD, Civil Engineering

HOD

Dept. of Civil Engineering
Centurion University of
Technology & Management, BBSR

List of new courses

Sl. No	Course Title	Type (Skill/Employability/Entrepreneurship)	Credit
1	Disaster Preparedness & Planning management	Entrepreneurship	2
2	Functional planning and DPR	Employability	3
3	Site Supervision & Measurement Methods.	Employability	4
4	Tendering Process, Bidding Contract Agreements & Arbitration.	Employability	3
5	Green Building Design	Employability	3
6	Barrier Free Design	Employability	2
7	Intelligent Building Design	Employability	2
8	3D Modelling and VR experience of Building	Skill Development	4
9	Geospatial Technology and its Application	Employability	5
10	Photogrammetry and its Application	Employability	4
11	Concrete Technology	Skill Development	2

Annexure-B

List of existing courses where syllabus was revised

Basket/ Semester	Name of Course	No. of Modules/To pics revised	Revised Modules/Topics (details)
IV	Pre-Fabricated Structures	1	One module has been added depending on the industry requirement
IV	Transportation Engineering	2	One module has been added depending on the industry requirement
IV	Water supply & Waste water Management	2	One module has been added and another module is merged with slight change as per industry requirement
IV	Hydrology & Water Resources Engineering	1	One module has been added depending on the industry requirement
IV	Quality Control and Risk Management in Construction	1	One module has been added depending on the industry requirement
IV	Geotechnical Investigations	1	One module has been added depending on the industry requirement
IV	Repairs, Renovation and Rehabilitation of Structures	1	One module has been added depending on the industry requirement
IV	Software Based Project Scheduling and Management	1	One module has been added depending on the industry requirement
IV	Earthquake Resistant Design	1	One module has been added depending on the industry requirement
IV	Architectural Design	1	One module has been added depending on the industry requirement
IV	Remote Sensing & Digital Image Processing	1	One module has been added depending on the industry requirement
IV	Lidar Remote Sensing and its Applications	1	One module has been added depending on the industry requirement
IV	Smart City Planning	1	One module has been added depending on the industry requirement
IV	Geometric Modeling Lab	1	One module has been added depending on the industry requirement
IV	Hydraulics & Hydraulic Machine	2	One module has been added depending on the industry requirement
IV	Pre-Fabricated Structures	1	One module has been added depending on the industry requirement
IV	Foundation Engineering	1	One module has been added depending on the industry requirement
IV	Computer Aided Design of Concrete Structure	1	One module has been added depending on the industry requirement
IV	GIS and Digital Cartography	2	One module has been added depending on the industry requirement
IV	Construction Equipment Management	2	One module has been added depending on the industry requirement
IV	Geotechnical Investigations	2	One module has been added depending on the industry requirement
IV	Software Based Project Scheduling and Management	3	One module has been added depending on the industry requirement
IV	Architectural Design	1	One module has been added



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			depending on the industry requirement
IV	Remote Sensing and Digital Image Processing	1	One module has been added depending on the industry requirement

Annexure-C

List of Skill courses (Basket) approved

Sl. No	Course Title	Credit	(T+P+P)
1	Introduction to Composite Manufacturing	CUTM3042	0+3+1
2	3D Modelling and Printing	CUTM3043	0+3+1
3	Precast Concrete Manufacturing	CUTM3045	0+3+1
4	Fabrication	CUTM3046	0+3+1
5	Hi-Tech Surveying	CUTM3047	0+3+1
6	Internet of Things	CUTM3048	0+3+1
7	Mechatronics System Design	CUTM3049	0+3+1
8	Introduction to Nanotechnology	CUTM3051	0+3+1
9	Drone Piloting	CUTM3052	0+3+1
10	Camera Operation	CUTM3053	0+3+1
11	Editor	CUTM3054	0+3+1
12	Desktop Publishing	CUTM3055	0+3+1
13	Introduction to Blender and Unity tools	CUTM3056	0+3+1

List of Domain courses

	Name of the Domain	Credit	Category
1	Cyber Security and Digital Forensic	20	A/B
2	Data Science and Machine Learning	26	A/B/D
3	Microbiology	28	A/C
4	Medical Lab Technician	28	A/C
5	Pharmaceutical Chemistry	20	A/B/C
6	Radiology and Imaging Technology	30	A/C
7	Unity Gaming	26	B
8	Cyber Security and Digital Forensic	20	A/B
9	Data Science and Machine Learning	26	A/B/D
10	Microbiology	28	A/C
11	Medical Lab Technician	28	A/C
12	Pharmaceutical Chemistry	20	A/B/C
13	Radiology and Imaging Technology	30	A/C
14	Unity Gaming	26	B

List of value added courses

Sl. No	Course Title	Hrs. of input
1	LSD-2	30
2	Conduct in daily Life-Insights from The Panchatantra	30
3	Human Rights	30
4	Renewable Energy	30
5	Data science & ML	30
6	Introduction to Nutraceuticals	30
7	Introduction to Tableau	30
8	Basics of Photography	30
9	Innovation Management	30
10	Effective Writing	30





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11	Indian Culture and History	30
12	Critical Thinking	30
13	Disability, Diversity and Development	30
14	Intellectual Property Rights	30
15	Emotional Intelligence	30
16	Home remedies for healthy living	30
17	Self-Management: Insights from Srimad Bhagavad Gita	30

Proceedings of Board of Studies in Civil
Engg held on 30/06/2018 at Jajni Campus.

Considered the syllabus Basket-3 & 4 and following recommendations were made.

Recommendation - 1.

→ Inclusion of soil mechanics in basket IV as it is strongly recommended.

Recommendation - 2

→ In foundation Engg. course, the following changes are suggested.

Mod 1: Shallow foundation

Mod 2: Deep foundations.

Mod 3: Earth pressure & stability of slopes.

Mod 4: Computer aided design of shallow & deep foundation.

→ Module name: mention.

* Recommendation - 3

→ In Transportation Engg module-2, in place of conc. pavement design write flexible & rigid pavement design & analysis, pavement failures.

* Recommendation - 4

Highway materials characterisation.

* Recommendation - 5

Credit reduction from one each, TE, RCCI, Functional planning & DPR.

1. Prof. C.H.V. Sanyalreddy

2. Prof. Manoj Kumar Raut

3. Genaraj, Prof. R.C. Pathy

4. Mr. Siba Mishra

5. Prof. D. S. Sankar

Prof. S. Sankar

Prof. S. Sankar



2017-18

CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

MS Swaminathan School of Agriculture

Date:12.06.2017

MINUTES OF BOARD OF STUDIES MEETING held on 12.06.2017

Venue: Board Room, CUTM, Bhubaneswar

Time: 11.00 a.m.

The Board of Studies (BoS) meeting of MS Swaminathan School of Agriculture was held on 12.06.2017 at 11 a.m. in the Board Room, CUTM Bhubaneswar. The following members were present:

1. Prof.P.K.Mahapatro
2. Prof.B K Mishra
3. Prof. M.Devender Reddy
4. Prof. Satya Prasad Nanda

The Chairperson welcomed all members of the Board and briefly outlined the purpose of the meeting. Thereafter, the Dean of the MS Swaminathan School of Agriculture represented the achievements and improvements of the department in the areas of academics, research, consultancy and infrastructure.

The following agenda items were taken up subsequently:

Agenda 1: The minutes of the last meeting of the BoS held on 12.06.2017 were confirmed.

Agenda 2: Discussion and approval on any revision required in the Curriculum of B.Sc Agriculture

- The Dean Agriculture. gave a presentation on the feedback received on curriculum outlining the suggestions made by the various stakeholders. Based on this , the Board accepted and approved a few suggestions for course revision to be implemented from the Academic Year 2017-18.
- The syllabus of 3rd to 8th semester of B. Sc agriculture. was considered and approved by the Board.
- The Board approved the updation of the courses important from higher studies point of view and replacement of contents of open basket with new courses with greater practice component
- Courses that can be executed in Practice mode were placed for approval to be reconfigured to Theory + Practice and Project + Practice.

Agenda 3: Inclusion of courses on life skills and value addition

It was suggested that students take up the various courses offered by the University in the areas of life skills and value addition for their overall improvement and well being. The same was agreed upon and approved by the Board members.



The Dean , MS Swaminathan School of Agriculture. extended sincere thanks to all members of the Board.

The meeting ended with a vote of thanks to the Chair.

M. Swaminathan 12/16/2017
Convenor of BoS & Dean MSSoA (Academics)

S. K. P.
Dean Administration 12/16/17

43
41

Proceedings of the Board of Studies held on 12th June 2015 at 10 AM.

(B.Sc Agriculture)

Members present

Dated: 12.06.17

1. Prof. (Dr.) P.K. Mahapatra, former Dean, OAT.
2. Prof. (Dr.) B.N. Mishra, — do —
3. Prof. (Dr.) M.D. Reddy, Dean (Academics) MSSCOA
4. Dr. S.P. Khandu, Dean (Admin) "

The members have gone through the prepared curriculum and syllabus and suggested the following things for modification:

B.Sc Ag

1. The course Fundamentals of Biochemistry should be 3 credits (2+1) instead of (1+1), total credits in 3rd semester should be 24 (15+9)
2. In semester II, ^{Under} Crop Production Part I, it should be wheat crops
In " IV, " " " " " Rabi crops
3. In semester IV, DFHC at their mgmt - I should be deleted with field crops.
4. In semester V, Principles of Integrated part of mgmt should be offered by both Entomology department (50%) each)
5. In Semester - I, the remedial course should be ^{taken into} ~~deleted~~ and calculate total CAPA.
6. An elective course can be offered provided there should be a minimum of 30 students.
7. The climatic smart agriculture should be included ~~in~~ in place of climatic smart agriculture and ~~irrigation~~ ~~irrigation~~

Should be included in FE subjects.

8. In modular courses the course on Insect pests & biofertilizers
Prevention should have biopesticides also.
9. The AELP should be a Continuous Program.

M.Sc Ag

1. Agronomy: Computer & Core Courses are
AGROM 501, 503, 504, 506, 507, 511, 512
591, 599

2. Fruit Science: FSC 501, 504, 505, 506, 507, 508, 511,
591, 599

Add Fruit Preservation ^{if it} should be a minor for the
Vegetable science students

Add vegetable preservation in vegetable science and it
should be minor for fruit science students.

Vegetable Science: VSC 501, 502, 503, 504, 505, 507, 509,
591, 599

Agricultural

3. Extension and communication: EXT 502, 503, 504, 505
Core courses: 506, 512, 591, 599

4. Genetics and Plant Breeding: GP 501, 502, 503, 504, 505
Core course: 508, 509, 591, 599

5. Plant Mol. Biology and Biochemistry: MAB 501, 502, 503, 505
Details are given in the appendix 507, 509, 552, 591, 599

Malapattar.
12/6/17

M. Suresh Babu
12/6/17

Prasanna
12/6/17

G. Raju
12-06-17

CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

School of Forensic Sciences

Date: 12.06.2017

MINUTES OF BOARD OF STUDIES MEETING held on 12.06.2017

Venue: Board Room, CUTM, Bhubaneswar

Time: 11.00 a.m.

The Board of Studies (BoS) meeting of School of Forensic Sciences was held on 12.06.2017 at 11 a.m. in the Board Room, CUTM Bhubaneswar. The following members were present:

1. Dr. Gurudutta Pattnaik, Principal, SoPLS
2. Dr. Amulyaratna Behera, Associate Professor, SoPLS
3. Mr. Mahesh Patnaik, Director, HVET
4. Mr. Sisir Panigrahy, Director, HVET
5. Dr. S.K. Sahu, Reader, Utkal University
6. Mr. Chinmay Chidananda Behera, Assistant Professor, SoPLS

The Chairperson welcomed all members of the Board and briefly outlined the purpose of the meeting. Thereafter, the **Principal** presented the Curriculum design of M.Sc. Forensic Science which will be run under School of Forensic Sciences.

The following agenda items were taken up subsequently:

Agenda 1: Introduction of M.Sc. Forensic Science programme and discussion on Course curriculum and credit system.

- M.Sc. Forensic Science will be launched under School of Forensic Sciences, from academic session 2017-2018, with GFSU as its knowledge partner.
- Faculty members of Gujarat Forensic Sciences University (GFSU) have visited the campus and discussed the requirements in the presence of External Experts. The curriculum was first discussed with the experts from Gujarat Forensic Sciences University, Gandhinagar, Gujarat. Curriculum M.Sc. and then it was introduced in the BOS.
- Curriculum of M.Sc. Forensic Science was aligned with that of GFSU. 1st year will be common for all the students, in 3rd semester, students will opt for specialization and 4th semester will be project.
- Students will have one month visit to GFSU for training.
- Faculties from GFSU will take Guest lectures for student of CUTM.
- Minimum qualification for admission: B.Sc. in Chemistry, Zoology, Botany, biotech or any science discipline with minimum 50%.
- Duration of Programme: 2 yrs
- Examination and Assessment:

Each course carries 30 marks for internal assessment and 70 marks for end semester




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examination for theory and 50 marks for internal assessment and 50 marks for external assessment for practical.

- Promotion and award of grade:
Minimum 50% marks is required in each subject which include both internal as well as external exam to pass in the respective subject.
- The Board approved the courses of Program. Total 45 no. of courses were approved. (Annexure-I)

Dr. Gurudutta Pattnaik, Principal, SoPLS extended sincere thanks to all members of the Board. The meeting ended with a vote of thanks to the Chair.


12/06/17

Principal, SoPLS & SoFS



Dean, Academics

Dean - Academic
Centurion University of Technology & Management
Bhubaneswar, Khurda. Odisha-752050



ANNEXURE-I

- List of new courses added

Sl. No	Course Title	Type (Skill/Employability /Entrepreneurship)	Credit
Semester I			
1.	MSFS1101 – Introduction to Forensics, Psychology, Law and Statistics	Skill	6
2.	MSFS1102 - Instrumental Techniques	Skill	4
3.	MSFS1103 - Crime Scene Management and Forensic Physics	Skill & Employability	4
4.	MSFS1104 - Fingerprints and Questioned Documents	Skill, Employability & Entrepreneurship	4
5.	FCHU1203 - Business Communication	Skill	2
6.	MSFS1105 - Instrumental Techniques Laboratory	Skill & Employability	2
7.	MSFS1106 - Crime Scene Management and Forensic Physics Laboratory	Skill & Employability	2
8.	MSFS1107 - Fingerprints and Questioned Documents Laboratory	Skill & Employability	2
Semester II			
9.	MSFS1201 - Quality Management, Narcotic Drugs, Explosives, and Forensic Chemistry	Skill	4
10.	MSFS1202 - Forensic Biology and Forensic Medicine	Skill	4
11.	MSFS1203 - Forensic Serology and DNA Profiling	Skill & Employability	4
12.	MSFS1204 - Forensic Toxicology and Pharmacology	Skill & Employability	4
13.	MSFS1205 - Forensic Ballistics and Computer Forensics	Skill & Employability	4
14.	MSFS1206 - Quality Management, Narcotic Drugs, Explosives, and Forensic Chemistry Laboratory	Skill	2
15.	MSFS1207 - Forensic Biology and Forensic Medicine Laboratory	Skill	2
16.	MSFS1208 - Forensic Serology and DNA Profiling Laboratory	Skill & Employability	2
17.	MSFS1209 - Forensic Toxicology and Pharmacology Laboratory	Skill & Employability	2
18.	MSFS1210 - Forensic Ballistics and Computer Forensics Laboratory	Skill & Employability	2
Semester III			
19.	MSFS2107 - Assignment	Skill	06
20.	MSFS2108 - Seminar	Skill	06
SPECIALIZATION IN FORENSIC CHEMISTRY AND TOXICOLOGY			



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21.	MSFS2101 - Pharmacology and Pharmaceutical Drug Analysis	Employability	4
22.	MSFS2102 - Concepts of Toxicology	Skill & Employability	4
23.	MSFS2103 - Modern and Applied Analytical Forensic Chemistry	Skill & Employability	4
24.	MSFS2104 - Pharmacology and Pharmaceutical Drug Analysis Laboratory	Skill & Employability	2
25.	MSFS2105 - Concepts of Toxicology Laboratory	Skill & Employability	2
26.	MSFS2106 - Modern and Applied Analytical Forensic Chemistry Laboratory	Skill & Employability	2
SPECIALIZATION IN FORENSIC BIOLOGY			
27.	MSFS2111 - Molecular Biology and Genetics	Skill & Employability	4
28.	MSFS2112 - Biotechnology in Pharmaceutical Sciences	Skill & Employability	4
29.	MSFS2113 - Environmental Biotechnology	Skill & Employability	4
30.	MSFS2114 - Molecular Biology and Genetics Laboratory	Skill & Employability	2
31.	MSFS2115 - Biotechnology in Pharmaceutical Sciences Laboratory	Skill & Employability	2
32.	MSFS2116 - Environmental Biotechnology Laboratory	Skill & Employability	2
SPECIALIZATION IN FORENSIC PHYSICS			
33.	MSFS2121 - Advances in Physical Techniques	Employability	4
34.	MSFS2122 - Concepts of Conventional and Modern Ballistics	Employability	4
35.	MSFS2123 - Audio Recognition and Video Analysis	Employability	4
36.	MSFS2124 - Advances in Physical Techniques Laboratory	Skill & Employability	2
37.	MSFS2125 - Concepts of Conventional and Modern Ballistics Laboratory	Skill & Employability	2
38.	MSFS2126 - Audio Recognition and Video Analysis Laboratory	Skill & Employability	2
SPECIALIZATION IN FINGERPRINTS AND QUESTIONED DOCUMENT			
39.	MSFS2131 - Modern Trends in Fingerprint Sciences	Employability	4
40.	MSFS2132 - Questioned Document and Forensic Accounting	Skill, Employability & Entrepreneurship	4
41.	MSFS2133 - Forensic Photography and Biometric Traits	Skill & Employability	4
42.	MSFS2134 - Modern Trends in Fingerprint Sciences Laboratory	Skill, Employability & Entrepreneurship	2
43.	MSFS2135 - Questioned Document and Forensic Accounting Laboratory	Skill, Employability & Entrepreneurship	2





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44.	MSFS2136 - Forensic Photography and Biometric Traits Laboratory	Skill & Employability	2
Semester IV			
45.	MSFS 2200 - Project	Skill, Employability & Entrepreneurship	12

