

Centurion University of Technology and Management Odisha

CHOICE BASED CREDIT SYSTEM

COURSE STRUCTURE & SYLLABUS

BASKET - II



School of Engineering & Technology

2022

**Course Structure
Basket - II**

Course Code	Course Title	Credits	Course Type T+P+PJ
CUTM1011	Optimisation Techniques	2	0-2-0
CUTM1012	Engineering Economics and Costing	3	2-0-1
CUTM1013	Project Management	3	2-0-1
CUTM1014	Gender, Human Rights and Ethics	3	1.5-0-1.5
CUTM1015	Climate Change, Sustainability and Organisation	3	1.5-0-1.5
CUTM1016	Job Readiness	6	0-6-0

Syllabus

Optimization Techniques

Code	Course Title	Credit	T-P-PJ
CUTM1011	Optimization Techniques	2	0-2-0

Course Rationale:

Operations research (OR) have many applications in science, engineering, economics, and industry and thus the ability to solve OR problems are crucial for both researchers and practitioners. Being able to solve the real life problems and obtaining the right solution requires understanding and modelling the problem correctly and applying appropriate optimization tools and skills to solve the mathematical model. The goal of this course is to teach you to formulate, analyse, and solve mathematical models that represent real-world problems. We will also discuss how to use EXCEL for solving optimization problems

Course Objectives:

To learn about the operations research techniques, model formulation and applications used to solve business decisions by using computer software

Course Outcomes: After completion of the course students

LO1. Ability to apply the theory of optimization methods and algorithms to develop and for solving various types of optimization problems

LO2. Ability to go in research by applying optimization techniques in problems of Engineering and Technology

LO3. Ability to solve the mathematical results and numerical techniques of optimization theory to concrete Engineering problems by using computer software

Course contents

Module-I: Linear Programming: Graphical Method, Simplex method, Penalty Method,

Module-II: Transportation Models, Assignment Models, Sequencing and Scheduling Models by Johnson's Algorithm

References Recommended:

Books

- Harvey M. Wagner, *Principles of Operations Research*, Englewood Cliffs, Prentice-Hall, 1969
- S D Sharma and Himansu Sharma, *Operations Research: Theory, Methods and Applications*, 15 Edition, Kedarnath Ramnath & Co

External Links:

<https://www.informs.org/Resource-Center/INFORMS-Student-Union/Consider-an-Analytics-OR-Career>

<https://www.informs.org/>

https://en.wikipedia.org/wiki/Operations_research

Google and YouTube

Journals:

- International Journal of operations Research
- European Journal of Operations Research
- International Journal of Operations Research and Optimization

Engineering Economics and Costing

Code	Course Title	Credit	T-P-PJ
CUTM1012	Engineering Economics and Costing	3	2-0-1

Course Rationale:

This course aims at providing the student with advanced concepts of engineering economic analysis and its role in engineering decision making.

Course Objectives:

CO1. Facilitate students to understand the basics of Economics and its application in the field of engineering

CO1.Enable students to understand the concepts of the time value of money and techniques for evaluation of engineering project

CO1.Equip students with the skills required to understand cost statements/records of the product and its effect on decision making

Course Outcomes: After completion of the course students

LO1. Apply the microeconomics concepts related to business and its impact on enterprise

LO1.Develop an awareness and understanding time value of money and techniques for evaluation of engineering project

LO1.Apply cost concepts to analyse common business management decisions such as pricing a product and services.

Course contents

Module: I: Engineering Economics – Nature and scope

General concepts on Micro & Macro Economics. The Theory of demand, Demand function, Law of demand and its exceptions, Elasticity of demand, Law of supply and elasticity of supply. Theory of production, Law of variable proportion, Law of returns to scale.

Module-II: Time value of money:

Simple and compound interest, Cash flow diagram, Principle of economic equivalence. Evaluation of engineering projects: Present worth method, Future worth method, Net present value method, internal rate of return method, Cost-benefit analysis in public projects. Depreciation: Meaning Causes, Factors affecting depreciation, Methods of providing depreciation, Straight Line Method & Diminishing Balance Method

Module-III

Cost concepts, Elements of costs, Preparation of cost sheet, Segregation of costs into fixed and variable costs. Break-even analysis (Simple numerical problems to be solved)

Indian Banking System: Banks: Meaning, nature, characteristic of the Indian banking system, functions of commercial banks, functions of Reserve Bank of India, Overview of Indian Financial System.

Books

- Riggs, Bedworth and Randhwa, “Engineering Economics”, McGraw Hill Education India.
- Mithani, D.M., Principles of Economics. Himalaya Publishing House
- Mishra, S. “Engineering Economics & Costing”, PHI
- Sullivan and Wicks, “Engineering Economics”, Pearson
- Paneer Seelvan, R., “Engineering Economics”, PHI
- Gupta, G.S., “Managerial Economics”, TMH
- Lal and Srivastav, “Cost Accounting”, TMH

Links to websites:

- <http://courseware.cutm.ac.in/>

Project Management

Code	Course Title	Credit	T-P-PJ
CUTM1013	Project Management	3	2-0-1

Course Objective:

- The successful development and implementation of all project's procedures.
- Learn project management methodology to initiate and manage projects efficiently and effectively
- Acquire key project management skills and strategies for Productive guidance, efficient communication and supervision of the project's team
- The achievement of the project's main goal within the given constraints

Course outcome:

- Develop a Project Charter document for any project
- Develop Project Management Plan document
- Acquire 10 knowledge area identified by PMI and its application while delivering a projects
- Implement the Project and Prepare a project document that they have undertaken as a learning tool
- Qualify CAPM/PMP certification offered by PMI

Course Content:

Unit: I

Project Management framework; Introduction to Project Management; Project Life Cycle and Organisation, Project vs. Operational work, Stakeholders, Organisational Influences

Project Management Process for a Project, groups, Initiating, planning, executing, monitoring &controlling and closing process groups.

Project management Knowledge area;

Project Integration Management; Develop project charter, develop project management plan, direct and manage project execution, monitor and control project work, perform integrated change control, close project or phase.

Unit: II

Project Scope Management; collect requirements, define scope, create WBS, verify scope, control scope

Project Time Management; Define activities, sequence activities, estimate, develop and schedule

Project Cost Management; Estimate costs, determine budget, control costs

Unit: III

Project Quality Management; Plan quality, perform quality assurance, perform quality control

Project HR Management; Develop HR plan, acquire project team, develop and manage project team

Project Communications Management; Identify stakeholders, plan communication, distribute information, manage expectation of stake holders, report performance

Unit: IV

Project Risk Management; Plan risks; identify risks, perform quality and quantitative risk analysis, plan risk responses, monitor and control risks

Project Procurement Management; Plan procurements, conduct procurements, administer procurements, close procurements

Project Stakeholders Management;Identifying stakeholders, stakeholder analysis, engagement

Note: Students can use any of these software for their project; MS. Excel/ Bitrix 24/Primavera/ Microsoft Projects

Books Recommended:

- 1) Project Management: A Managerial Process, Clifford F Gray & Eric W Larson, Tata McGrawHill
[Text book]
- 2) A Guide to the Project Management Body of Knowledge, 6th Edition, PMI
- 3) Project Management- A system Approach to Planning, Scheduling and Controlling (Harold Kerzner). CBS Publishers and Distributers, New Delhi.
- 4) Projects, Preparation, Appraisal and Implementation (Prasanna Chandra), 3rd Edition, Tata Mc Graw Hill, New Delhi.
- 5) Project Management (Nagarajan, K), New Age Publishers, New Delhi.
- 6) Project Management. A Managerial Approach (Meredith, R.J and Mantel, S.J), Wiley (India).

Gender, Human Rights and Ethics

Code	Course Title	Credit	T-P-PJ
CUTM1014	Gender, Human Rights and Ethics	3	1.5-0-1.5

Course Objectives

This course is about gender, human rights and ethics in which the student will be sensitized and exposed to related issues in the context of business and organisations in India. The specific objectives are:

- To develop an understanding of gender, human rights and ethics in an unequal society like India
- Sensitisation of how gender, human rights and ethics are significant in organisations.
- Integrating concerns related to gender, human rights and ethics in organisations.

Course Outcomes

- Understanding the complexity of issues and challenges relating to gender, human rights and ethics
- Be sensitive to gender, human rights and ethics within an organizational context,
- To integrate concerns related to gender, human rights and ethics into the policies, processes and systems in an organization.

Course Syllabus

Module 1

- Difference between sex and gender; social construction of gender and its outcomes in the form of behavior, roles, gender based division of labour, hierarchy; gender relations.
- Gender issues in organisations - significance of relations between structures, practices, context, interactions and power for construction of gender at organisational level
- Gender implications at workplace, management and leadership, Laws and Acts
- Comparing different types of organisations; how to create a gender sensitive organisation.

Module 2

- Introduction to human rights, Meaning and Definition, Types
- Human Rights Law: Protection, violation and the legal framework for their protection - International Human Rights Law, Universal Declaration of Human Rights
- Conflicts of Rights and its Significance to Organisations: Challenges of the past and challenges for the future. Persistence of social discrimination and inequality; efforts in the search for justice for past violations, continued struggle for human rights and accountability in an organisational context.

Module 3

- Introduction to and study of ethics; Indian and Western ethics
- Different ethical systems and perspectives; ethical relativism and its implications, utilitarianism, duty ethics and virtue ethics in organisations
- Critique of various ethical positions and develop their own position in an organizational context.

Session Plan

Session 1

Basic concepts on sex and gender; social construction of gender; constitutional provisions for gender equality.

PPT 1 - [Introduction to Gender](#)

1.5 mins video on Gender Equality and Poverty

<https://www.youtube.com/watch?v=4viXOGvvu0Y>

Session 2

Gender issues in different sectors – Health, Education, Governance, Livelihoods

PPT 2 - [Gender issues in health](#)

PPT 3 - [Gender issues in education](#)

PPT 4 - [Gender issues in Governance](#)

1.3 mins video on gender stereotypes and education

<https://www.youtube.com/watch?v=nrZ21nD9I-0>

Session 3

Approaches to address gender inequality – WID, WAD and GAD

PPT 5 - WID WAD GAD

TED talk by Deepa Bhardwaj - True equality is when both women and men have a voice - 13 mins

https://www.youtube.com/watch?v=BSRTZ_q4RX8

Session 4 & 5

Gender and organizational issues

PPT 6 - Gender and Organisations

PPT 7 - Gender Equality in Organisations

PPT 8 - Gender Mainstreaming and Attitude in Workplace

PPT 9 - Gender Sensitisation

3.22 mins on The Future of Gender Equality in Work by ILO

https://www.ilo.org/global/about-the-ilo/multimedia/video/institutional-videos/WCMS_558508/lang--en/index.htm

4.22 mins video on Gender Based Analysis

<https://www.youtube.com/watch?v=p6w-d1mmjFU>

Free Readings

Gender and Development - Concepts and Definitions

Gender and Organisational Change Training

Project

-Gender Responsive Governance in times of COVID 19

<https://in.one.un.org/gender-responsive-governance-in-the-times-of-covid-19/>

- SDG - Gender Equality Goal 5

<https://in.one.un.org/page/sustainable-development-goals/sdg-5/>

- Gender, Sustainability and Environment

Women Environment and Sustainable Development A Ca

- Good Practices of Gender Mainstreaming in India

Good Practices for Gender Mainstreaming

- Gender Equality Case Study

Gender Equality - Kerala Case Study

Session 6

Basic concepts on human rights; history of human rights; current significance

Videos on Basic concepts of human rights

<https://www.youtube.com/watch?v=ew993Wdc0zo>

<https://www.youtube.com/watch?v=JpY9s1Agbsw>

Videos on History of Human Rights

<https://www.youtube.com/watch?v=nDgIVseTkuE>

https://www.youtube.com/watch?v=6XXGF_V8_7M

Session 7

Violation and legal framework for the protection of human rights

Video on the Paris Principles

https://www.youtube.com/watch?v=ZEgD7pdXt_c

Video on Protection of Human Rights Act 1993 (for reference, bilingual)

<https://www.youtube.com/watch?v=qAiiOyL5WAw>

Session 8

Human rights and sustainability framework

Video on Human Rights and Sustainable Development

<https://www.youtube.com/watch?v=mHHy1gDn4x8>

Session 9 & 10

Human rights in the organizational context

Video on Why should your company care about human rights

<https://www.youtube.com/watch?v=mCtNx3hHZ08>

Video on UN Reporting Framework: Salient Human Rights Issues

<https://www.youtube.com/watch?v=LswDupgiZug>

Books:

1. *Arihants UGC NET Human Rights and Duties*

2. *Kapoor, S. K. Central Law Agency's Human Rights under International Law and National Law*

Ciapham Andrew, 2015, Human Rights: A Very Short Introduction, Oxford University Press

Smith Rhona, 2015, Textbook on International Human Rights, Oxford University Press

Free Online Sources:

<https://www.humanrightscareers.com/.../10-human-rights-study-books-you-can-download>

<https://www.humanrightscareers.com/courses/>

Session 11

Basic concepts in ethics

PPT - [Introduction to Ethics](#)

Video on Ethics defined

<https://www.youtube.com/watch?v=4vWXpzlL7Mo>

Session 12

Theoretical perspectives – utilitarianism, virtue ethics, duty ethics

PPTs - [Duty Ethics](#)

[Utilitarianism](#)

[Virtue Ethics](#)

Video on Utilitarianism

https://www.youtube.com/watch?v=-FrZl22_79Q

Video on virtue ethics

<https://www.youtube.com/watch?v=NMB1KpkKYao>

Video on deontology (duty) ethics

<https://www.youtube.com/watch?v=wWZi-8Wji7M>

Project (self exploration through case studies)

Fraudulent Books_1

Gifts from the Boss's Friend_1

Gifts from the Sales Representative_1

Session 13

Ethical relativism

PPT - Ethical Relativism

Video on Moral relativism

<https://www.youtube.com/watch?v=5RU7M6JSVtk>

Project (self-exploration through case studies)

Mining Data docx_1

Office Affair_2

On-time Delivery

Session 14 & 15

Ethics in organisations

Video on ethics in the workplace

<https://www.youtube.com/watch?v=0mUxMpMTT28>

Project (self-exploration through case studies)

Falsifying Attendance_1

Family Loyalty vs. Meritocracy_1

Rumors_1

The Supervisor's Choice_1

Books

Frankena, WK, 1973, Ethics (2nd Edition), Pearson.

Singer, P. 2011, Practical Ethics (3rd ed), Cambridge University Press.

Smart, JJC and Williams, B. 1973, Utilitarianism: For and Against, Cambridge University Press.

Climate Change, Sustainability and Organisations

Code	Course Title	Credit	T-P-PJ
CUTM1015	Climate Change, Sustainability and Organisations	3	1.5-0-1.5

Course Rationale:

This course is about climate change, sustainability and its implications for organisations. Climate change and sustainability are closely interlinked. Students will be exposed to related issues, challenges and debates on the subjects. They will develop an understanding of how organizational performance gets affected by climate change today. As organisations grow and diversify in India, there is a need to sensitise Management students to the significance of climate change and its impact on humanity and environment; Sustainable Development Goals (SDGs) and integrated reporting framework for sustainability of organisations.

Module 1: Climate Change and Organisations

Course Objectives:

- CO1. To develop an understanding about climate change in general, responses and debates
- CO2. To create awareness about the impact of climate change on organisations in performance, growth and sustainability
- CO3. To facilitate in developing reference points to factor in aspects of climate change in organizational planning and development

Course Outcomes:

- LO1. Students will be exposed to current climate change issues, challenges and debates
- LO2. They will be sensitive to its implications for organisations in different sectors
- LO3. The course will equip the students of Management to develop strategies for perspective planning of organisations

Course Contents:

1. Basics of climate change; impacts on various sectors; responses and mitigation efforts by the state and non-state agencies; debates and critiques
2. Sectoral implications of climate change – Agriculture and Forestry; Transportation; Buildings; Energy; Industry and Manufacturing
3. Climate change – specific impacts (Migration, Disasters and Pandemics)
4. Mitigation and adaptation keeping the sustainability of business organisations

Projects: Case study, videos, small group workshops, book reviews

Session Plan for Module 1 – Climate Change and Organisations (10 one hour sessions)

Session 1: Basic concepts of climate change, impacts, issues and challenges

Session 2: Responses and mitigation efforts by state and non-state agencies

Session 3: Debates and critiques on climate change

Session 4: Climate change and ecosystem

Session 5: Climate change and social sector – health, education and livelihood/food security

Session 6: Climate change and infrastructure and services – buildings, transportation, communication, electricity/energy

Session 7: Mitigation and adaptation of climate change impacts on business organisations

Session 8 and 9: Climate change impacts of migration, disasters and pandemics – societal and organisational implication

Session 10: Develop reference points to factor into perspective planning and development of organisations

Module 2 – Sustainability in Organisations

Course Objectives:

CO1. To develop an understanding of sustainable development, SDGs and their relevance for sustainability of organisations

CO2. To comprehend the application of the Integrated Reporting Framework for Sustainability in business.

Course Outcomes:

LO1. The student will develop an understanding of perspectives on SDGs, sustainability and development in the context of organisations

LO2. Argue the business case for sustainability informed by an understanding of the impact of current global and local economic, social and environmental pressures (including pandemics)

- LO3. Develop an Action Plan through a Case Study for integrating sustainability across an organisation's value chain
- LO4. Develop and apply the Integrated Reporting Framework for Sustainability through a case.

Course Contents:

1. Sustainable development, debates, SDGs, challenges and opportunities; The business case and leadership for action
2. Regulatory environment and International policy; Integrated Reporting Framework for Sustainability
3. Production and consumption; Design, technology, and planning for sustainability
4. Communication and marketing; Collaboration and partnerships

Projects: Small group exercises, case analysis, video and book reviews

Session Plan for Module 2 – Sustainability in Organisations (10 one hour sessions)

Session 1: Sustainable development basics and introduction to SDGs (rationale, issues and challenges for India)

Session 2 to 6: Discussion on the 17 SDGs

Session 7: SDGs and its relevance for organisations

Session 8 to 10: Integrated framework for reporting sustainability in organisations; factoring aspects of SD into performance of organisations

The 17 sustainable development goals (SDGs) to transform our world:

GOAL 1: No Poverty

GOAL 2: Zero Hunger

GOAL 3: Good Health and Well-being

GOAL 4: Quality Education

GOAL 5: Gender Equality

GOAL 6: Clean Water and Sanitation

GOAL 7: Affordable and Clean Energy

GOAL 8: Decent Work and Economic Growth

GOAL 9: Industry, Innovation and Infrastructure

- GOAL 10: Reduced Inequality
- GOAL 11: Sustainable Cities and Communities
- GOAL 12: Responsible Consumption and Production
- GOAL 13: Climate Action
- GOAL 14: Life Below Water
- GOAL 15: Life on Land
- GOAL 16: Peace and Justice Strong Institutions
- GOAL 17: Partnerships to achieve the Goal

Videos – Climate Change

1. CSE Climate Change Analysis - <https://www.youtube.com/watch?v=5fyT3-9kxU4> (7.5 mins)
2. Climate Change is having Massive Impact on Indian Farmers - <https://www.youtube.com/watch?v=A8gcGaIzqIw> (8.5 mins)
3. Climate Change in India: The Risks we face (NDTV) - <https://www.youtube.com/watch?v=AT1yi1tDenM> (20.28 mins)

Videos – Sustainable Development

1. Short Videos (5) on Sustainable Development Goals and one TED Talk <https://developmenteducation.ie/blog/2017/09/5-videos-sustainable-development-goals-worth-view-useful-ted-talk/>
2. Overview of Sustainable Development Goals - <https://www.youtube.com/watch?v=s190sjqYRdg> (7.43 mins)

Projects:

1. Climate change impacts on agriculture and policy responses – what is the current practice and its implications for the sector and people; give your own recommendations based on your understanding of issues, challenges, debates, critiques.
2. Marine fishing – fisherfolk
3. Forest dwellers
4. Business organisations – MSMEs, manufacturing, service industries; application of the integrated framework for sustainability reporting

Job Readiness

Code	Course Title	Credit	T-P-PJ
CUTM1016	Job Readiness	6	0-6-0

Course Objectives

Develop additional skills (verbal, logical, quantitative and reasoning) required to enhance employability as well as the entrepreneurial ability of the students

Course Outcomes

Achieve the following scores as a minimum:

IELTS 6.5

Verbal: 60% (average of 10 exams)

Quantitative: 60% (average of 10 exams)

Logical Reasoning: 60% (average of 10 exams)

Note: A student will be awarded the credits and grades as outlined in the attached presentation:
<https://drive.google.com/file/d/1Wst-jdAJuHHVtYC4F-p3SKuw1PHWOI1U/view?usp=sharing>

Course Syllabus

Course Division

Course I: IELTS - Reading, Listening, Speaking and Writing

Course II: IELTS Verbal

Course III: Quantitative Aptitude

Course IV: Logical Reasoning

Course I: IELTS - Reading, Listening, Speaking and Writing

Module I: IELTS Reading (18hrs)

- Skimming and Scanning
- Sentence Completion
- Choose the Correct options (A, B, C, D)
- Locating the Specific Information
- Assessment on Reading Skill

Module II: IELTS Listening (6hrs)

- Notes/ Form/Table completion
- Label the Map/Passage, Multiple Choice Questions
- Complete the Sentences, Listening to Find Information
- Assessment on Listening Skills

Module III: IELTS Speaking (18hrs)

- Speaking about yourself, your family, your work and your interests
- Introduction & Interview
- Topic Discussion (e.g, Environment, Covid 19, Job)
- Assessment on Speaking Skills

Module IV: IELTS Writing (6 hrs)

- Summarising the chart, table or graph
- Comparing and contrasting graphs and tables
- Describing maps & diagrams
- Agreeing & disagreeing
- Expressing a personal view & opinion
- Assessment on Writing Skill
- CV Writing (2nd year)
- Letter Writing
- Email Writing(2nd year)
- Getting Started –writing an introduction

Course II: IELTS Verbal

Module I: Grammar (4 Hrs)

- Articles
- Prepositions
- Subject-Verb
- Spotting Errors
- Sentence Correction

Module II: Vocabulary (5 Hrs)

- Synonyms
- Antonyms
- Contextual Vocabulary

Module III: Reading Comprehension (3 Hrs)

- Paragraph/ Sentence Completion
- Jumbled Sentences/ Jumbled Paragraph
- Reading Comprehension

Module IV: Verbal Analogies (3 Hrs)**Course III: Quantitative Aptitude****Module I: Number System & Operation (14 Hrs)**

- Speed Math-1 : Multiplication tricks, Square, cube, square root, Cube root tricks
- Speed Math-2 : Speed Calculations
- Number System-01 : Operation on Numbers, Classification of Numbers, Tests of Divisibility, Unit Digit Calculation
- Number System-02 : Arithmetic Progression, Geometric Progression, Factors & Factorials, Trailing Zeroes, Remainder Theorem
- HCF & LCM : Concepts, short tricks, question discussion
- Average : Concepts, short tricks, question discussion
- Assessments

Module II: Basic Arithmetic (16 Hrs)

- Percentage-01 : Basics of Percentage, Effective percentage, shortcuts
- Percentage-02 : Advanced questions and discussions
- Profit & Loss-01 : Basics and advanced questions of Profit & Loss and shortcuts
- Profit & Loss-02 : MRP, Discount, Successive discount
- Ratio & Proportion : Types of ratios, Basics & Advanced Question
- Age : Concepts & Shortcuts
- Partnership : Concepts & Shortcuts

- Mixture & Alligation : Rule of Alligation, Basics & Advanced question, Short tricks
- Assessments

Module III: Time & Analysis (17 Hrs)

- Time, Speed, Distance : Concepts, Problems based on relations, Average speed, Stoppage time
- Trains : Relative Speed & All types of train problems
- Boats & Streams : Basics, Upstream, Downstream & Shortcuts
- Race : All concepts & Shortcuts
- Time & Work : Efficiency, wages, alternative day, chain rule
- Pipes & Cistern : Positive & Negative work
- Simple Interest : Concepts & Shortcuts on Simple Interest & Installments
- Compound Interest : Concepts & Shortcuts on Simple Interest & Installments
- Logarithm : All Formulae, concepts & Shortcuts
- Assessments

Module IV: Advanced Arithmetic (16 Hrs)

- Equation : Linear & Quadratic
- Permutation : All concepts & Shortcuts on factorial, fundamental principles of counting
- Combination : All concepts & Shortcuts on Selection (Groups/teams)
- Probability : Terms related to Probability, Event, Theorems related Probability, Conditional Probability. Shortcuts on coins, dices, balls, cards, etc
- Data Interpretation : (Bar/Pi-Chart /Line) graph
- Mensuration : Area & Volume
- Height & Distance : Lines of Sight, Horizontal line, Angle of Elevation, Angle of Depression
- Assessments

Course IV: Logical Reasoning

Module I: Verbal Reasoning-I (14 Hrs)

- Series-1 : Number series (Missing & Wrong)
- Series-2 : Letter, Alpha numeric, Miscellaneous series
- Coding & Decoding : Letter Coding, Number coding, Message coding, Substitution coding, Conditional coding
- Word Problem : Analogy, Odd man out, word formation, letter pair
- Logical Thinking : Brain Riddles
- Assessments

Module II : Verbal Reasoning-II (14 Hrs)

- Order & Ranking : Ranking & Sequence
- Direction Sense Test : Shortest Distance, Angular movement concept and Dusk & Dawn
- Clock : Concepts of Angle, Reflex angle, Right angle Opposite, Coincide and Incorrect clock
- Calendar : All concepts & Shortcuts
- Blood Relation : Jumbled-up descriptions, coded relations, Relation Puzzles
- Assessments

Module III : Non Verbal Reasoning (14 Hrs)

- Cubes & Dices
- Cubes & Cuboids
- Embedded Figure & Figure series
- Figure Puzzle & Figure grouping
- Figure Counting
- Mirror & Water Image
- Paper Cutting & Paper folding
- Assessments

Module IV: Advanced Reasoning (16 Hrs)

- Sitting Arrangement : Circular, Square, Rectangular, Linear, Triangular
- Puzzle : Box, Floor, Month, Day
- Advanced Puzzle : 3 variable
- Logical Venn Diagram
- Syllogism
- Statement & Conclusion
- Data Sufficiency
- Assessments