

**DEPARTMENT OF HUMANITIES, SOCIAL SCIENCES & MANAGEMENT**

**In collaboration with**

**INNOVATION, INCUBATION & ENTREPRENEURSHIP DEVELOPMENT CENTRE**

**NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR**



**Semester & Subject Wise Course Structure & Content  
For**

**Master of Technology, Innovation and Entrepreneurial Management  
(MTIEM)**

**(1st to 4th Semester)**

**with effect from  
Academic Year 2021**

## **About the Department of Humanities, Social Sciences & Management**

The Department of Humanities, Social Sciences & Management (HSS&M) was established in 1960 with some other departments of the Institute. The Department offers various programs including PhD, MBA and MSc-TIED (Technology Innovation Entrepreneurship Dynamics). At post-graduate level MBA and MSc (TIED) programmes are being offered to the students to prepare them with analytical abilities, critical thinking and management perspective. These programmes offer a wide variety of subjects that will enhance their leadership skills, innovative thinking and creativity. This will help the students to grow in the challenging and competitive environment. These courses will help to build up the entrepreneurial abilities in students and provide framework for problem-solving skills.

In addition to these courses, the Department offers PhD in various areas of Management and English. Also, subjects at Graduate, Postgraduate and Doctoral level have rigorous syllabus to familiarise students with modern concepts of Management, Social Sciences, Communication Skills and English language. The subjects Management and Economics will go a long way in improving the professional capability of the students. The courses intend to enhance employment opportunities of students in both public and private sector.

### **VISION**

To lead in innovative teaching, knowledge enrichment, and value-based educational experiences by providing quality education.

### **MISSION**

To develop strong critical thinking, analytical reasoning, problem-solving skills, management, and communication talents in students with an aim to enhance creative ideas that will transform students as knowledgeable, engaged, and confident professionals, citizens and leaders.

## **About the IIED Centre**

The IIED Centre NIT Srinagar has been promoting incubation, innovation and entrepreneurship within and outside the campus and facilitating industry-academia interaction and transfer of knowledge to increase the technology quotient in the businesses operation within valley. It has also created an incubation centre 'Greenovator' (as a section-8 company) that focuses on Green Technologies – AgriTech, EnviroTech and AlterTech. These thrust areas enable the centre to cater to the maximum requirements of immediate business and economy ecosystem in the region, especially the valley. This is also India's first Green Technologies incubation centre.

## **Vision of the IIED Centre**

The IIED Centre of NIT Srinagar aims to coordinate and leverage, through Innovations, Incubation and Entrepreneurship, an ecosystem fostering a culture of cutting edge technology making NIT Srinagar the harbinger of innovations in the UT of Jammu and Kashmir in sectors of Science & Technology by offering technical solutions with emphasis on national growth and social upliftment.

### **The Broad Objectives of the Centre are:**

- To promote a vibrant, innovative and entrepreneurial environment among various institutions of the valley in particular and masses in general.
- To involve various stakeholders for creating an ecosystem of problem solving through innovations.
- To create and develop sustainable, globally competitive facilities that will contribute towards the accelerated economic growth of the region by identifying, exploring and developing regional competitiveness.
- To strengthen institute-industry- innovator linkages.
- To assist and develop new business opportunities and ventures in specific sectors those are aligned with region's unique areas of opportunity.
- To impart skill development programs for the students and unemployed youths.

## **Master of Technology, Innovation and Entrepreneurial Management (MTIEM)**

### **PROGRAMME EDUCATIONAL OBJECTIVES:**

PEO1	To help the learners evaluate theories of entrepreneurship, innovation and recognise their role in the establishment and development of new enterprises and high growth businesses.
PEO2	To provide opportunities for entrepreneurial development & equip the learners with entrepreneurship skills that would help them to establish their ventures.
PEO3	To create awareness for successfully managing both technology and organisational innovation and familiarize the learners with ethical business practices.
PEO4	To prepare the learners for a variety of careers, to be team leaders and entrepreneurs in a technology-driven organisation, researchers, or academicians.
PEO5	To inculcate the spirit of social entrepreneurship and help the students in overcoming social and environmental problems profitably through business ventures.

**PROGRAMME OUTCOMES:**

PO1	Recognise organizational routines and competencies and how this shape the Organizational form.
PO2	Develop entrepreneurial & intrapreneurial skills for managing, finding & leading start-ups, and growing family businesses.
PO3	Create innovations by blending traditional and modern technology.
PO4	Learn multi-disciplinary knowledge via self-study, experiential learning, and peer learning.
PO5	Apply business knowledge effectively and efficiently at an individual or group level for generating need-based ideas for problem-solving.

**GRADUATE ATTRIBUTES:**

GA1	To create sustainable and diverse business ventures.
GA2	To think critically and make entrepreneurial decisions based on complex information.
GA3	To integrate functional knowledge and apply entrepreneurial skills for generating need-based ideas for problem-solving
GA4	To understand the complexities of business ethics in an entrepreneurial environment and act with integrity.
GA5	To efficiently utilize the resources for creating new enterprises that would benefit society.
GA6	To enhance their careers and their commitment to lifelong learning.
GA7	To analyse the economic, social and cultural impact of entrepreneurial ventures on society at large.
GA8	To be able to work effectively as a member and leader in teams.
GA9	To incorporate appropriate business practices including marketing management, human resource management and financial management into the setting up and management of business ventures.
GA10	To demonstrate competence in entrepreneurial, innovation and technological knowledge appropriate to the program.
GA11	To communicate their ideas effectively with the stakeholders and with society at large.
GA12	To understand their role and responsibilities towards society and nation as a whole.

**TEACHING-LEARNING METHOD:**

The teaching-learning processes shall be determined by the requirements of the course, the learning objectives, learning outcomes & the learner's context. However, the following methods of instruction shall be used: Case Studies, Situation Analysis, Live Projects, Field Work, Lecture Sessions, Class Discussions, Group / Individual Presentations, Group Exercises, MOOCs, Role-plays, Self-Learning Materials (SLMs), Self-study, Seminars, Simulations, Study Tours, Training Programmes, and Workshops.

## **Requirements for Completion of MTIEM Degree**

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1. The degree shall be of Two Years with Four (4) Semesters.
2. A student must complete a minimum of 60 credits for the award of MTIEM Degree from NIT Srinagar. The credit structure is as follows:  
Core : 26 credits  
Project/Seminar/ Internship : 16 credits  
Electives : 18 credits
3. A full-time student must take 12 to 18 credits in each semester.
4. A part time student must take 9 to 12 credits in each semester.
5. A student must complete a minimum of 4-week Internship after 3<sup>rd</sup> Semester at a reputed organisation/industry and submit a project work-based dissertation in 4<sup>th</sup> Semester.
6. Further, a student must sit for a comprehensive viva for the project work done in the 4<sup>th</sup> semester for the completion of the degree.
7. Evaluation will be as per institution guidelines.

## **Eligibility Criteria for Admission into MTIEM Program at NIT Srinagar**

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Eligibility for MTIEM Program:

- For Open Merit & OBC candidates, a graduate degree under 10+2+3 or 10+2+4 pattern in any discipline, securing at least 60% marks or 6.5 CGPA in aggregate, from a recognized university.
- For SC / ST/PWD candidates, there shall be a relaxation of 5% in the aggregate marks obtained i.e., 55% Marks or 6.0 CGPA at the graduate level.

The selection of the candidates for admission to the MTIEM programme shall be based on the institutional level test followed by Group Discussions & Personal Interview. The institutional level test shall be conducted on the following lines:

Number of sections	4 (Quantitative Techniques and Data Interpretation, Logical Reasoning, Language Comprehension, General Awareness)
Duration of exam	90 minutes
Number of questions	60
Total Marks	60
Number of answer choices	4
Marking scheme	1 mark for each correct answer with a negative marking of 0.25 per wrong answer.
Language of Script	English
Selection will be based on scores obtained in the written exam, Group Discussion & Personal Interview. The weightage to the written exam is 85% while for GD and PI is 15%.	

## Fee Structure

### DETAILS OF FEE STRUCTURE FOR M. Sc. TIED BATCH 2020 ONWARDS

**A. One Time Fee at the Time of Admission (Non-refundable)**

S. No	Particulars	Amount (in Rs.)
1	Admission Professing Fee	1,000
2	Syllabus / Prospectus / Identity Card Fee	300
3	Crest & Tie Charges	500
4	Alumni Association Membership Fee	500
5	Mess & Hostel Reserve Fund	1,000
	<b>Total (A)</b>	<b>Rs 3,300</b>

**B. One Time Fee at the Time of Admission (Re-fundable)**

S. No	Particulars	Amount (in Rs.)
1	Institute Cauton Money	2,000
2	Hostel & Mess Cauton Money	3,000
	<b>Total (B)</b>	<b>Rs. 5,000</b>

**C. Semester Institute Fee at the Time of Semester Registration**

S.No	Particulars	Amount (in Rs.)
1	Tuition Fee (Open/OBC/EWS / SC/ST/PwD students.)	37000
2	Library Fee	200
3	Laboratory Fee	200
4	Computer / Internet Fee	200
5	Industrial Training Fee / Visits Fee	200
6	Development Fee	500
7	Sports & Extra Curricular Activities etc	700
8	Students Welfare Fund	500
9	Group Insurance Fee	400
10	Examination Fee	400
	<b>Total of A</b>	<b>Rs.40,300/-</b>

## Seat Matrix

Category	Intake Capacity for MTIEM Programme
Open Merit (OM)	10
OM-PWD	1
OM-EWS	2
OBC	5
OBC-EWS	1
SC	4
ST	2
<b>Total</b>	<b>25</b>

## **List of Abbreviations**

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L	Lecture
T	Theory
P	Practical
MTE	Mid Term Examination
ETE	End Term Examination
CA	Continuous (Classroom) Assessment
GD	Group Discussion
PI	Personal Interview

## **Student Assessment Scheme**

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Each of the course/subject shall carry a maximum of 100 Marks which will be awarded on an Absolute-CGPA 10 Point Scale. The student shall be evaluated for the same as per the following Institutional policy:

- ETE: 60 Marks
- MTE: 30 Marks
- CA: 10 Marks

However, Internship Report will be evaluated based on a report from the organisation (30 marks) and evaluation on the report presented by the student (70 Marks). Similarly, Project dissertation will be evaluated as per institutional guidelines.

<b>Master of Technology, Innovation and Entrepreneurial Management Course Structure</b>						
<b>Semester I</b>						
S. No.	Course Code	Course Title	L	T	P	Credits
1	MTIEM-101	Entrepreneurship: Theory and Practice	3	0	0	3
2	MTIEM-102	Design Thinking	3	0	0	3
3	MTIEM-103	Business Ethics & Corporate Governance	3	0	0	3
4	MTIEM-104	Workshop Technologies	0	0	2	1
5		Elective I	3	0	0	3
6		Elective II	3	0	0	3
<b>Semester II</b>						
7	MTIEM-201	Entrepreneurial Marketing	3	0	0	3
8	MTIEM-202	Innovation Management	3	0	0	3
9	MTIEM-203	Legal Framework for Entrepreneurship	3	0	0	3
10	MTIEM-204	Seminar	0	0	2	1
11		Elective I	3	0	0	3
12		Elective II	3	0	0	3
<b>Semester III</b>						
13	MTIEM-301	Start-up Formation and Scalability	3	0	0	3
14	MTIEM-302	Innovation and Start-up Policy Framework	3	0	0	3
15	MTIEM-303	Social Entrepreneurship	3	0	0	3
16	MTIEM-304	Data Analytics Lab	0	0	2	1
17	MTIEM-305	Project Dissertation – I/Brainstorming and Idea Challenge Workshop	0	0	6	3
18		Elective I	3	0	0	3
<b>Semester IV</b>						
19	MTIEM-401	Project Dissertation –II	0	0	20	10
20	MTIEM-402	Internship	0	0	4	2

### Elective Courses

S. No.	Course Code	Course Title	L	T	P	Credits
1.	MTIEM-105E	Basics of Accounting	3	0	0	3
2.	MTIEM-106E	Industrial Economics and Management	3	0	0	3
3.	MTIEM-107E	Business Communication	3	0	0	3
4.	MTIEM-205E	Human Resource Management & Organizational Behaviour	3	0	0	3
5.	MTIEM-206E	Business Mathematics and Statistics	3	0	0	3
6.	MTIEM-207E	Industrial Engineering	3	0	0	3
7.	MTIEM-306E	Technology Management	3	0	0	3
8.	MTIEM-307E	Entrepreneurial Finance	3	0	0	3



<b>Entrepreneurship-Theory and Practice</b>				
<b>Semester I</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Course Code: MTIEM-101</b>	3	0	0	3
<p><b>Course Objectives:</b></p> <p>COB 1: To explain the various concepts and emerging paradigms in the field of entrepreneurship.</p> <p>COB 2: To define entrepreneurship in light of various theories and models.</p> <p>COB 3: To illustrate the role of training in inculcating entrepreneurial acumen in students.</p> <p>COB 4: To explain the role of various governmental and non-governmental institutions in entrepreneurial development.</p>				
<p><b>Course Outcomes:</b></p> <p>At the end of the Course, Student will be able to:</p> <p>CO 1: Describe the meaning and concepts of entrepreneurship development</p> <p>CO 2: Explain entrepreneurship in light of various theories and models.</p> <p>CO 3: Apply the entrepreneurial knowledge in inculcating its acumen.</p> <p>CO 4: Illustrate the role of Institutional Support to Entrepreneurs and MSMEs in Indian context.</p>				

#### Unit- I

Entrepreneurship: Importance and growth, Characteristics of entrepreneurs, Ethical and social responsibilities of entrepreneurs, Challenges and opportunities of different forms of entrepreneurship, Entrepreneurial motivation.

#### Unit- II

Theories of entrepreneurship, Schumpeter's Theory of Innovation, Economic Theory of Entrepreneurship, Resource based, Opportunity based, psychological and Sociological theories of entrepreneurship

#### Unit-III

Designing Appropriate Training Programme to inculcate Entrepreneurial Spirit, Training for New and Existing Entrepreneurs, Feedback and Performance of Trainees, Training entrepreneurs for creative problem solving.

#### Unit-IV

Institutional Support to Entrepreneurship and MSMEs, Role of Government, Role of Financial Institutions-Commercial Banks, Entrepreneurial Development Institutes, Universities and other Educational Institutions offering Entrepreneurial Development Programme.

**Reference & Textbooks:**

1. Kumar, A. (2012). *Entrepreneurship: Creating and Leading an Entrepreneurial Organization*. Pearson Education India.
2. Rao, T., & Kuratko, D. (2012). *Entrepreneurship*, Cengage learning India.
3. Ramachandran, K. (2012). *Entrepreneurship Development*, McGraw Hill Education India.
4. Rajeev Roy (2020). *Entrepreneurship*, Oxford University Press India, Third Edition.

<b>Design Thinking</b>				
<b>Semester I</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Course Code: MTIEM-102</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>
<b>Course Objectives:</b>				
COB 1: To develop the understanding of design thinking and its importance.				
COB 2: To explain the concept of human centred design.				
COB 3: To develop an understanding of the process of design thinking.				
COB 4: To use the design into concept development.				
<b>Course Outcomes:</b>				
At the end of the Course, Student will be able to:				
CO 1: Analyse the need and significance of adopting a design thinking mind-set.				
CO 2: Identify the approach of human centred design for entrepreneurial objectives.				
CO 3: Use various design thinking models in creating innovations.				
CO 4: Demonstrate the capability of concept development and commercialization of ideas.				

**Unit – 1**

Design Thinking: Introduction Definitions and Meaning, Design Thinking as an Art and Science, Why and How of Design Thinking, Stages of Design Thinking, Entrepreneurship Design Thinking.

**Unit – II**

Human-Centered Design: Human Desirability, Technical Feasibility, Business Viability, Innovation as a Solution, Designing for growth- Visualization, Journey Mapping, Value Chain Analysis, Mind Mapping.

**Unit – III**

Design Thinking Process: Inspiration, Ideation & Implementation, Stanford Model of Design Thinking, Empathize, Define, Ideate, Prototype and Test, Double-diamond Model of Design Thinking.

**Unit – IV**

Concept Development & Commercialization: Concept Development, Basics and Process of Technology/Concept Transfer, Technology Acceptance, Challenges Faced during Adoption,

Commercialization of Technology/Concept.

**Reference & Textbooks:**

1. Brown, T., & Katz, B. (2019). *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation* (Vol. 20091). New York, NY: Harper Business.
2. Cross, N. (2011). *Design thinking: Understanding How Designers Think and Work*. Berg, Oxford.
3. Liedtka, J., & Ogilvie, T. (2011). *Designing for Growth: A Design Thinking Tool Kit for Managers*. Columbia University Press.
5. Mootee, I. (2013). *Design Thinking for Strategic Innovation: What They Can't Teach You at Business or Design School*, John Wiley & Sons.

<b>Business Ethics &amp; Corporate Governance</b>				
<b>Semester I</b>	L	T	P	C
<b>Course Code: MTIEM-103</b>	3	0	0	3
<p><b>Course Objectives:</b></p> <p>COB 1: To demonstrate ethical dimensions of business decisions</p> <p>COB 2: To explain the various ethical theories to learners.</p> <p>COB 3: To develop an understanding of corporate social responsibility</p> <p>COB 4: To illustrate learners how to frame and institutionalize ethical business strategies.</p>				
<p><b>Course Outcomes:</b></p> <p>At the end of the Course, Student will be able to:</p> <p>CO 1: Explain the nature of ethics and ethical decision making.</p> <p>CO 2: Apply ethical theories and interpret their relevance to contemporary times.</p> <p>CO 3: Analyse the nature of corporation and importance of Corporate Social Responsibility.</p> <p>CO 4: Evaluate the process and efficacy of corporate governance with special reference to India.</p>				

Unit-I

Nature and Significance of Business Ethics, Ethical Dilemmas, Personal Ethics: Morality, Religion, Etiquette, Professional Code, Moral and Non-moral Standards, Ethical Relativism, Moral Development and Moral Reasoning, Ethical Decision-Making Model, Globalization and Business ethics.

Unit-II

Business Ethical Principles, Role and Types of Ethical Theories: Teleological, Deontological and Virtue, Kant's Ethics: Rights and Duties, Ethics of care-Virtue Ethics, Ethical Dimensions of Marketing, Human Resource, Production and Financial Decisions.

### Unit-III

Corporate Social Responsibility: Nature of Corporations, Corporation as Morally Responsible Agent, Nature and significance of Corporate Social Responsibility, Social Responsiveness and Social Performance, Corporate Philanthropy, Corporate Citizenship, Social Responsibility Model, Theories of CSR: Shareholders Theory, Stakeholders Theory and Social Contract Theory.

### Unit-IV

Corporate Governance: Nature and Significance, Theories of Corporate Governance: Property Rights Theory, Social Institution Theory and Agency Theory, Corporate Governance Failure: Corporate Scam, Whistle Blowing, Indian Corporate Governance: Role of Board of Directors, Auditors, and Shareholders, Corporate Ethics Programme, Social Audit-Corporate Performance, Balanced Score Card, Triple Bottom Line.

### Reference & Textbooks:

1. Velasquez M.G. (2017). *Business Ethics: Concepts and Cases*. Pearson Education Limited.
2. Shaw, W.H. (2016). *Business Ethics: A textbook with Cases*. Cengage Learning.
3. Fernando, A.C. (2012). *Business Ethics and Corporate Governance*. Pearson India.
4. Ghosh, B.N. (2012). *Business Ethics and Corporate Governance*. Tata-McGraw-Hill Education Private Limited.

Workshop Technologies				
Semester I	L	T	P	C
Course Code: MTIEM-104	0	0	2	1
<b>Course Objectives:</b> COB 1: To impart knowledge to students about the mechanism of prototyping and its use in entrepreneurial environment. COB 2: To familiarize with basic principles, tools and techniques of prototyping lab. COB 3: To make rapid prototypes in real life. COB 4: To expose students to different workshop technologies relating to Mechanical, Electronics, Information technology and Chemical engineering domains.				

**Course Outcomes:**

At the end of the Course, Student will be able to:

- CO 1: Identify and effectively apply different prototyping approaches to concept development and projects.
- CO 2: Use prototypes as a design methodology that is based on thinking through making, iteration, and critical reflection.
- CO 3: Make rapid prototypes in real life.
- CO 4: To expose students to different workshop technologies relating to Mechanical, Electronics, Information technology and Chemical engineering domains.

Explore the range of 3D printing and Prototyping technologies and their application in modern industrial, design, and creative fields.

Overview of 3D design and modelling techniques for modern Rapid Prototyping and Additive Manufacturing applications.

Prototyping technologies, base materials, and their applications. 3D modelling and design techniques for manufacturing and product development.

Hands on practice on various technologies/practices relating to Machine Shop, Sheet-Metal, Fitting, Welding, Smithy, Carpentry, Foundry, Rapid prototyping, Electronic fabrications.

*Note: This course would be taken jointly by IIED Centre, Institute workshop, Electronics and communication and Chemical Engineering Department. IIED Centre would facilitate the course and ensure that the students are exposed to best practices in vogue at national and global level.*

<b>Basics of Accounting</b>				
<b>Semester I</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Course Code: MTIEM-105E</b>	3	0	0	3
<p><b>Course Objectives:</b></p> <p>COB 1: To explain concepts, principles, and postulates of accounting and utilization for planning and decision making.</p> <p>COB 2: To illustrate tools and techniques of financial analysis and interpretation of financial statements.</p> <p>COB 3: To demonstrate tools and techniques in management planning and control systems.</p> <p>COB 4: To help students know about the various managerial decision-making techniques and their Use.</p>				
<p><b>Course Outcomes:</b></p> <p>At the end of the Course, Student will be able to:</p> <p>CO 1: Apply Accounting knowledge in the preparation of accounting statements.</p> <p>CO 2: Analyze financial statements for effective decision making.</p> <p>CO 3: Design strategies for monitoring and reducing the cost of final outputs.</p> <p>CO 4: Know about various managerial decision-making techniques and their use.</p>				

#### Unit-I

Financial Accounting: Need, development, and functions, Generally Accepted Accounting Principle (GAAP), Accounting Concepts & Conventions, Journalizing Transactions, Rules of Debit and Credit, Ledger, Accounting as an information system.

#### Unit-II

Preparation of Trial Balance, Preparation of Trading Account, Profit and Loss Account and Balance Sheet (with and without adjustments).

#### Unit-III

Management Accounting: Concept, Scope and Functions, Distinction between Financial Accounting, Cost Accounting and Management Accounting, Role and Responsibility of Management Accountant, Financial Statement Analysis: Comparative Financial Statements, Common Size Statements and Trend Analysis.

#### Unit-IV

Managerial Decision-Making Techniques, Ratio Analysis, Analysis of Liquidity, Leverage, Profitability and Activity Analysis, Marginal Costing and Standard Costing.

**Reference & Textbooks:**

1. Khan, M., and Jain, P. (2018). *Management Accounting*. Tata-McGraw-Hill Education Private Limited.
2. Maheshwari, S. N., and Maheshwari, S. K. (2017). *Advanced Accountancy Volume-I*. Vikas Publishing House.
3. Bhattacharyya, D. (2011). *Management Accounting*. Pearson Education India.
4. Godfrey, J., Hodgson, A., Tarca, A., Hamilton, J., & Holmen, S. (2010). *Accounting*. John Wiley & Sons, Inc.
5. Horngren, C. T., Sundem, G. L., Stratton, W. O., Burgstahler, D., and Schatzberg, J. (2015). *Introduction to Management Accounting*. Upper Saddle River, NJ: Pearson Prentice Hall.

<b>Industrial Economics and Management</b>				
<b>Semester I</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Course Code: MTIEM-106E</b>	3	0	0	3
<p><b>Course Objectives:</b></p> <p>COB 1: To create awareness of the various economic issues among the learners that they are expected to face as managers at the corporate level.</p> <p>COB 2: To explain the basic concepts, principles and definitions of management.</p> <p>COB 3: To correlate the basic concepts of economics with those of management for arriving at optimal business decisions.</p> <p>COB 4: To use Economic tools to explain the optimal allocation of resources within a firm.</p>				
<p><b>Course Outcomes:</b></p> <p>At the end of the Course, Student will be able to:</p> <p>CO 1: Describe and interpret economic concepts.</p> <p>CO 2: Demonstrate the importance of economic approaches and their applications in managerial decisions.</p> <p>CO 3: Identify and evaluate relevant management issues and information.</p> <p>CO 4: Create and evaluate possible solutions to management problems.</p>				

## Unit – I

General Foundations of Managerial Economics: Economic Approach, Circular Flow of Activity, Nature of the Firm, Objectives of Firms, Demand Analysis and Estimation, Individual, Market and Firm Demand, Determinants of Demand, Elasticity Measures and Business Decision Making, Demand Forecasting.

## Unit-II

Product Markets, Determination under Different Markets, Market Structure: Perfect Competition, Monopoly, Monopolistic Competition, Duopoly, Oligopoly, Pricing and Employment of Inputs under Different Market Structures, Price Discrimination, Degrees of Price Discrimination.

## Unit-III

Introduction to management: Definition, Functions, Process, Scope and Significance of Management, Nature of Management, Planning and Organizing Nature, Scope, Objective and Significance of Planning, Elements and Steps of Planning, Span of Control, Line and Staff Relationship, Authority, Delegation and Decentralization, Effective Organizing, Organizational Structures: Formal and Informal Organizations.

## Unit-IV

Directing Effective Directing, Supervision, Motivation, Different Theories of Motivation: Maslow, Herzberg, McClelland, Vroom, Porter and Lawler, Job Satisfaction, Concept of Leadership, Theories and Styles, Communication Process, Channels and Barriers, Effective Communication, Controlling and Coordinating, Elements of Managerial Control, Control Systems, Management Control Techniques, Effective Control Systems, Coordination Concept, Importance, Principles and Techniques of Coordination, Concept of Managerial Effectiveness.

### **Reference & Textbooks:**

1. Ahuja, H.L, (2011).*Managerial Economics*, S. Chand & Company Ltd, New Delhi.
2. Mithani, D.M, (2008).*Managerial Economics*, Himalaya Publishing House, Mumbai.
3. Koontz, H. and Donnel C., (2009).*Essentials of Management*, McGraw Hill, New Delhi.
4. Kumar, Rao, Chhalill, (2012).*Introduction to Management Science*, Cengage Publications, New Delhi.
5. Paul, Koushil, (2012).*Managerial Economics*, Cengage Learning, New Delhi,
6. Vanita Agarwal, (2013).*Managerial Economics*, Pearson, New Delhi.
7. Bhattacharyya, D.K, (2012). *Principles of Management-Text and Cases*, Pearson.
8. Tripathi, P.C, (2008).*Principles of Management*, Tata McGraw Hill, New Delhi



<b>Business Communication</b>				
<b>Semester I</b>	L	T	P	C
<b>Course Code: MTIEM-107E</b>	3	0	0	3
<b>Course Objectives:</b> COB 1: To develop good oral and written communication skills in students for their future jobs. COB 2: To enable effective usage of grammar, sentence structures and parts of speech so as to make students strong in communication. COB 3: To develop basic language skills. COB 4: To inculcate the correct usage of vocabulary.				
<b>Course Outcomes:</b> At the end of the Course, Student will be able to: CO 1: Identify the basic concepts and structures of oral and written communication. CO 2: Identify different types of organizational communication. CO 3: Generalize how to manage interpersonal communication. CO 4: Develop business writing skills.				

#### Unit-I

Role of Communication in Business: Objective of Communication, The Process of Human Communication, Media of Communication: Written Communication, Oral Communication, Visual Communication, Audio Visual Communication, Silence, Developing Listening Skills, Improving Non-verbal communication skills, Cross Cultural Communication, Problems and Challenges.

#### Unit-II

Managing Organization Communication: Formal and Informal Communication, Intrapersonal Communication, Models for Interpersonal Communication, Exchange Theory.

#### Unit-III

Managing Interpersonal Communication, Role of Emotion in Interpersonal Communication, Communication Styles, Barriers to Communication, and Gateways to Effective Interpersonal Communication.

#### Unit-IV

Business Writing Skills, Significance of Business Correspondence, Essentials of Effective Business Correspondence, Business Letter and Forms, Use of Technology in Business Communication, Report Writing: Meaning and Significance, Structure of Reports Negative, Persuasive and Special Reporting, Informal Report, Proposals.

#### **Reference & Textbooks:**

1. Nawal, M. (2012). *Business Communication*, Cengage Learning, New Delhi.
2. Rama, M. (2011). *Business Communication*, Oxford University Press, New Delhi.
3. Madhukar, R. (2012). *Business Communication*, Vikas Publishing House, New Delhi.
4. Quintanilla, K. & Shawn, T. (2012.). *Business and Professional Communication*, SAGE, New Delhi.

<b>Entrepreneurial Marketing</b>				
<b>Semester II</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Course Code: MTIEM-201</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>
<p><b>Course Objectives:</b></p> <p>COB 1: To explain the basic concepts of marketing to learners.</p> <p>COB 2: To explain the concepts of planning, designing and implementing marketing strategies in respect of pricing.</p> <p>COB 3: To illustrate the role of communication in achieving organisational goals.</p> <p>COB 4: To explain how to segment, target and position the product/service with respect to market.</p>				
<p><b>Course Outcomes:</b></p> <p>At the end of the Course, Student will be able to:</p> <p>CO 1: Interpret basic concepts of marketing and classify markets into segments</p> <p>CO 2: Apply different pricing strategies.</p> <p>CO 3: Analyze communication process and control activities in marketing.</p> <p>CO 4: Segment, target and position the product/service with respect to market.</p>				

#### Unit-I

Introduction to Marketing: Needs, Wants, Demands, Products, Exchange, Transactions, Concept of Market, Marketing and Marketing Mix, Product and Production Concept, Sales and Marketing Concept, Societal Marketing Concept, Indian Marketing Environment.

#### Unit-II

Market Segmentation and Targeting: Identification of Market Segments, Consumer and Institutional/corporate Clientele, Segmenting Consumer Markets: Segmentation Basis, Evaluation and Selection of Target Markets, Developing and Communicating a Positioning Strategy.

#### Unit-III

Pricing Strategy: Objectives of Pricing, Methods of Pricing, Selecting the Final Price, Adopting Price, Initiating the Price Cuts, Imitating Price Increases, Responding to Competitor's Price Changes.

#### Unit-IV

Marketing Communication: Communication Process, Communication Mix, Managing Advertising, Sales Promotion, Public relations and Direct Marketing, Sales force -Objectives of Sales force, Structure and Size, Sales force Compensation.

**Reference & Textbooks:**

1. Philip Kotler (2013). *Marketing Management: Analysis, Planning and Control*, Prentice Hall India, New Delhi.
2. Kerin, R., Hartley, S., & Rudelius, W. (2014). *Marketing*. McGraw-Hill.
3. Baker, M. (2012). *The Marketing Book*. Routledge.

<b>Innovation Management</b>				
<b>Semester II</b>	L	T	P	C
<b>Course Code: MTIEM-202</b>	3	0	0	3
<p><b>Course Objectives:</b></p> <p>COB 1: To introduce and explore innovation management concept, Product innovation and development management.</p> <p>COB 2: To explain how to build competitiveness through innovation.</p> <p>COB 3: To help students learn the innovation process, generate new ideas and evaluate them.</p> <p>COB 4: To help students use tools to develop sustainable innovation and manage innovation project portfolio</p>				
<p><b>Course Outcomes:</b></p> <p>At the end of the Course, Student will be able to:</p> <p>CO 1: Identify and evaluate the key factors to manage the market uncertainty.</p> <p>CO 2: Use innovation to develop competitiveness.</p> <p>CO 3: Recognize different ways of generating and managing innovation using alliances, open innovation.</p> <p>CO 4: Use tools to develop sustainable innovation and manage innovation project portfolio.</p>				

**Unit-I**

Introduction to Innovation, Types of Innovation, Models of Innovation, Innovation Process Managed Innovation, Innovation Diffusion Theory, Managing Innovation within Firms-Managing Uncertainty, Managing Project Portfolio.

**Unit-II**

Innovative Organizations- Management Tools for Innovation, Innovation and Operations, Management Design principles, Manufacturing Principles of Innovation.

**Unit-III**

Innovation radar- 360 Innovation, Supply Chain Innovation, Triggers of Innovation-Innovation Tools, Managing IP- Development of IP Strategy.

#### Unit-IV

Introduction to Patents, How to Evaluate and use Patents- “Freedom to Use” concept, How to handle Confidential Information, New approach to R&D Organizations and Innovation, Managing R&D Project Portfolio.

#### Reference & Textbooks:

1. Maital, S., & Seshadri, D. V. R. (2012). *Innovation management: Strategies, Concepts and Tools for Growth and Profit*. SAGE Publications India.
2. Dodgson, M., Gann, D. M., & Phillips, N. (Eds.). (2013). *The Oxford handbook of innovation management*. OUP Oxford.
3. Goffin, K., & Mitchell, R. (2016). *Innovation Management: Effective Strategy and Implementation*. Macmillan International Higher Education.
4. O'Sullivan, D., & Dooley, L. (2008). *Applying Innovation*. SAGE publications.
5. Tushman, M. L., & Moore, W. L. (2008). *Readings in the Management of Innovation*. Ballinger Publishing Co/Harper & Row Publishers.

Legal Framework for Entrepreneurship				
Semester II	L	T	P	C
Course Code: MTIEM-203	3	0	0	3
<b>Course Objectives:</b> COB 1: To develop the understanding of Industrial Policy and legal framework for Entrepreneurs. COB 2: To recognise the need for and importance of Consumer Protection. COB 3: To explain the legal aspects of corporate environment. COB 4: To develop the basic understanding related with Intellectual Property Rights.				
<b>Course Outcomes:</b> At the end of the Course, Student will be able to: CO 1: Outline the key practices in the Industrial Policy and its legal framework. CO 2: Analyse the importance of Consumer Protection among Entrepreneurs. CO 3: Develop the understanding for Corporate Environment and concerned Legalities. CO 4: Illustrate the concept of Intellectual Property Rights and its legalities.				

#### Unit – I

Industrial Policy – Introduction to Business Laws, Types of Business Firms, Key Provisions of Companies Act, 2013- Formation and Incorporation of a Company, Memorandum, Articles & Registration, Role of SEBI, Importance of Audit and Role of Auditors, Board of Directors, Sick Companies and their revival, Winding up of a Company.

Unit –II

Consumer Protection – Key Provisions of Consumer Protection Act, 1986- Consumer vs. Customer, Consumer Rights- Right to Safety, Right to be Informed, Right to Choose, Right to be Heard, Right to Redressal, Right to Consumer Education, Right to a Healthy Environment, Complaint, Defects vs. Deficiency, Consumer Redressal- District Forum, State Commission & National Commission.

Unit – III

Corporate Environment & Legalities – Corporate Accountability, Corporate Social Responsibility, Policy Statement for Abatement of Pollution, Environmental Audit, Corporate Social Audit.

Unit – IV

Intellectual Property Legalities – Trade Related Intellectual Property Rights (TRIPs), Literary & Artistic works and Industrial Property, National IPR Policy (DPIIT/DIPP), Patent and Patenting Process, Copyright, Trademarks vs. Trade Secrets, Industrial Design, GI, EMR.

**Reference &Textbooks:**

1. Miller, R. L. (2021). *Business Law Today, Comprehensive*. Cengage learning.
2. Neeraj Kumar. (2005). *Business Legislation*. Himalaya Publishing House
3. MC Kuchhal& V Kuchhal. (2015). *Business Legislation for Management*. Vikas Publishers
4. Taxmann’s (2011). *Business Law Manual*. Taxman Publications

<b>Seminar</b>				
<b>Semester II</b>	L	T	P	C
<b>Course Code: MTIEM-204</b>	0	0	2	1

<b>Human Resource Management &amp; Organizational Behaviour</b>				
<b>Semester II</b>	L	T	P	C
<b>Course Code: MTIEM-205E</b>	3	0	0	3
<p><b>Course Objectives:</b></p> <p>COB 1: To acquaint students with a broad perspective on themes and issues of Human Resource Management.</p> <p>COB 2: To appraise the students with the relevance and application of HRM &amp; HRD practices</p> <p>COB 3: To explain the influence of diversity, attitudes, personality, values and perception on individual behaviour in organizations.</p> <p>COB 4: To enable students to analyse group behaviour in organizations, including communication, leadership, power and politics, conflict, and negotiations.</p>				
<p><b>Course Outcomes:</b></p> <p>At the end of the Course, Students will be able to:</p> <p>CO 1: Interpret the evolution and emerging trends of HRM.</p> <p>CO 2: Apply HRM &amp; HRD practices.</p> <p>CO 3: Analyze individual human behaviour in the workplace and the factors which influence it.</p> <p>CO 4: Evaluate the factors that influence group behaviour such as group cohesiveness, communication,</p>				

#### UNIT – I

HRM: Significance, Definition and Functions, Evolution of HRM, Aligning HR strategy with organizational strategy, HRM at global perspective, Challenges– Cross-cultural problems, Emerging trends in HRM.

#### UNIT – II

HR Planning – Demand and Supply forecasting, Recruitment and Selection-Sources of recruitment, Tests and Interview techniques, Training and Development– Methods and Techniques, Training evaluation, Job Analysis- Job description and Specifications, HRD concepts.

#### Unit- III

Organizational Behaviour– Nature and Scope, Organizational Behaviour models – Framework, Individual Behaviour, Individual Similarities and Differences, Personality – Types, Factors influencing personality, Theories of Personality, Perception– Importance, Process of Perception, Factors influencing perception, Attribution Theory & Applications.

#### Unit- IV

Group structure – Formation, Groups in organizations, Influence, Group dynamics, Group decision making techniques, Team building, Conflicts– Levels of Conflicts, Resolving Conflicts, Conflict Management Styles, The Johari window, Leadership styles – Theories, Leaders Vs Managers, Power - Sources of Power- Power and Politics

**Reference & Textbooks:**

1. Dessler G. (2017). *Human Resource Management*. Pearson Higher education.
2. Aswathappa, K. (2013). *Human Resource and Personnel Management*. Tata-McGraw-Hill Education Private Limited.
3. Robins, S.P, Judge, T.R & Vohra, N. (2019). *Organizational Behavior*. Pearson India.
4. Luthans, F. (2011). *Organisational Behavior: An Evidence –based Approach*. McGraw-Hill Irwin.

<b>Business Mathematics and Statistics</b>				
<b>Semester II</b>	L	T	P	C
<b>Course Code: MTIEM-206E</b>	3	0	0	3
<b>Course Objectives:</b> COB 1: To develop an understanding about set theory and functions application in business context. COB 2: To familiarise with basic concepts in differentiation and integration in business perspective. COB 3: To analyse the descriptive and inferential statistical tools and their application in business. COB 4: To apply the theory of probability to understand and solve the business problems.				
<b>Course Outcomes:</b> At the end of the Course, Student will be able to: CO 1: Apply basic mathematical concepts such as sets, functions for business application CO 2: Extend the concepts of differential calculus as an application in revenue and cost functions of business CO 3: Apply the basic tools of statistics such as correlation and regression for studying relationship between variables CO 4: Solve business problems by using the concepts of probability theory and theoretical				

**UNIT-I**

Sets-Description of sets, Operations on Sets, Venn diagrams, Cartesian product of two sets, Applications of Set Theory, Functions and its Types, Permutations, Combinations and their Application in Business.

**UNIT-II**

Differential Calculus- Derivative at a point and its Geometrical Interpretation, Fundamental rules of Differentiation- Differentiation of Composite Functions, Differentiation of Implicit Function, Logarithmic Differentiation, Maxima and Minima Applications for determining Sales Revenue, Profits and Cost in Business Situations.

### Unit-III

Fundamentals of Statistics- Meaning and definition of statistics, Descriptive and Inferential statistics, Measures of Central Tendency- Mean, Median, Mode, Measure of Dispersion, Range, Quartile Deviation, Mean Deviation, Variance, Standard Deviation and Co-Efficient of Variance, Simple And Partial Correlations- Pearson and Spearman's Correlation, Simple and Multiple Regression analysis.

### Unit-IV

Basic concepts of Probability- Basic results on Probability, Conditional Probability, Baye's theorem and its Applications, Elementary Characteristics and Simple Situation Applications of Discrete and Continuous, Probability Distribution, Binomial, Poisson and Normal probability Distribution.

### Reference &Textbooks:

1. Harshbarger & Reynolds (2013). *Mathematical application in Management, Life and Social Science*, 10<sup>th</sup> Edition, Cengage Learning, Boston, USA.
2. Seema. S (2018). *Statistics for Business and Economics* 2<sup>nd</sup> Edition, Wiley India (P) Ltd, New Delhi.
3. Sancheti, D.C., A.M. Malhotra & V.K. Kapoor (2010). *Business Mathematics*, S. Chand & Sons, New Delhi
4. Sujata S. & Sreyashi G (2018) *Business Mathematics*, 1<sup>st</sup> Edition Oxford University Press, New Delhi.

<b>Industrial Engineering</b>				
<b>Semester II</b>	L	T	P	C
<b>Course Code: MTIEM-207E</b>	3	0	0	3
<b>Course Objectives:</b> COB 1: To familiarise with the basic concepts of organization and industrial engineering tools. COB 2: To describe the application of network techniques in project planning and scheduling. COB 3: To analyse the Quality Management concepts in solving business problems. COB 4: To explain supply chain and inventory management concepts to learners.				



**Course Outcomes:**

At the end of the Course, Student will be able to:

CO 1: Demonstrate the understanding of the industrial engineering that could be successfully used for improving the quality of managerial decisions.

CO 2: Identify and manage business problems in order to perform project planning, scheduling and monitoring activities.

CO 3: Demonstrate the ability to use statistical quality control and process control techniques for effective designing of Industrial Quality Monitoring Systems.

CO 4: Demonstrate the ability to apply the inventory management tools in manufacturing set up.

**Unit- I**

Introduction to Industrial Engineering and Decision Sciences, Brief Introduction to Various Industrial Engineering Techniques, Principles of Organization and Organization Structure

**Unit- II**

Introduction to Project Planning and Scheduling, Project Life Cycle, Work Breakdown Structure, CPM & PERT- Project Crashing, Resource Allocation Problems, Project Monitoring Techniques.

**Unit -III**

Inspection and Quality Control- Concept and Definition of Quality, Concepts of Inspection and Quality Control, Objectives of Inspection- Function of Inspection and Their Types, Concept of Statistical Quality Control (SQC), Process Variation, Sampling Inspection, Concepts and Types of Control Charts, Acceptance Sampling, Application of Control Charts and Sampling Plans.

**Unit- IV**

Supply Chain Management and Inventory Control, Integrated Materials Management and Their Components, Functions and Objectives of Material Management, Introduction and Concepts of Inventory Management, Purchase Model with Instantaneous Replenishment and without Shortage, Manufacturing Model without Shortages, Purchase Model with Shortages, Manufacturing Model with Shortages, Probabilistic Inventory Concepts with Lead Time, Selective Inventory Management- ABC, FSN, VED Analysis.

**Reference &Textbooks:**

1. Stevenson, W. (2021). *Operations Management* 12<sup>th</sup> Edition Tata McGraw Hill, New Delhi.
2. Heizer, J. & Render, B. (2018). *Operations Management*, 11<sup>th</sup> Edition, Pearson India Pvt Ltd, New Delhi
3. Dan Reid R & Nada R. Sanders (2013). *Operations Management –An integrated Approach*, Wiley, New Delhi.
3. Pannerselvam, R. (2012). *Production and Operations Management*, 3<sup>rd</sup> Edition, PHI Learning Pvt.

Ltd New Delhi

4. Chary S. N. (2019). *Production and Operations Management*, 6<sup>th</sup> Edition, Tata McGraw Hill, New Delhi.
5. Everett, E.A., Ronald J. E. (2001). *Production and Operations Management*, Prentice Hall of India, 5th edition, New Delhi.
6. Aswathappa K & Shridhara K (2012). *Production and Operations Management*, University Press, New Delhi
7. Ajay KG (2012), *Production and Operations Management*, Tata McGraw Hill, New Delhi.

<b>Start-up Formation and Scalability</b>				
<b>Semester III</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Course Code: MTIEM-301</b>	3	0	0	3
<b>Course Objectives:</b> COB 1: To explain the concepts and principles of start-ups. COB 2: To familiarize the student with legal, financial and other requirements for new ventures. COB 3: To make students aware of the elements of successful ventures, what is involved in doing a \ Start-up and the entrepreneurial process. COB4: To help the student in identifying and evaluating opportunities for creating a business, and to better understand its principal issues on a human, technical, commercial, environmental and financial level.				
<b>Course Outcomes:</b> At the end of the Course, Student will be able to: CO 1: Explain the various start-up opportunities CO 2: Analyse the legal and other requirements for new ventures CO 3: Examine the financial Issues of start-ups. CO 4: Measure the sustainability and growth of start-ups and exit strategies.				

#### Unit- I

Start-Up Ecosystem-General presentation about start-up development phases (from formation to validation to scaling), Key Terminology: Idea and Innovation, Entrepreneurship and Start-Ups, Innovation mega trends- Why start-ups? Start-up as a category, Understanding and Mapping Start-Up Ecosystem.

#### Unit- II

Start-Up Project Planning and Analysis- Focus on Formation Phase, Preparing for the Journey: what things to focus on and why? Value of Ideas and how to innovate more Systematically,

Building BIG Visions. Measuring Potential, Success and Failure Factors, Mission, Vision and Strategy, Funding Options and Strategies for Start-Up Projects.

Unit- III

Start-Up Execution at the Incubation Centre- Focus on product/service build and validation phase, Defining a Product and MVP, Defining Initial Business Model, Customer Development and Future Prioritisation, Validation Matrix-Methods and Tools.

Unit- IV

Start-up project scalability report-Focus on scaling phase, Building the most crucial phase for getting a real and scalable business, what things to focus on and why? Business planning- Go to Market Strategies, Born global and Internationalisation, Scaling Matrix (KPIs) - Recruiting, Building Processes, Funding Option, Working with Big Companies.

**Reference &Textbooks:**

1. Kothari, V., (2016) *Guide to Start-ups*, Taxmann publishers.
2. Foss, J.N and Saebi, T. (2015), *Business Model Innovation: The Organizational Dimension*, OUP Press
3. Allen, K. R, (2015), *Launching New Ventures, An Entrepreneurial Approach*, South-Western College Publishing.
4. Sathe, V. (2003), *Corporate Entrepreneurship*, Cambridge University Press.
5. Kuratko, D. F, Hornsby, J. S, (2017), *New Venture Management: The Entrepreneurs Road*, Routledge

<b>Innovation and Start-up Policy Framework</b>				
<b>Semester III</b>	L	T	P	C
<b>Course Code: MTIEM-302</b>	3	0	0	3
<p><b>Course Objectives:</b></p> <p>COB 1: To explain the framework of policies to promote innovation and start-ups in India.</p> <p>COB 2: To discuss how to make use of the policy framework for the growth of the firms.</p> <p>COB 3: To describe the link between economic development, innovation, entrepreneurship and public policy framework</p> <p>COB 4: To apply the knowledge in writing a business plan document that meets professional standards.</p>				

**Course Outcomes:**

At the end of the Course, Student will be able to:

CO 1: Explain the overall framework of innovation and start-ups in the country.

CO 2: Recognise how to use various schemes and policies for innovation in Indian context.

CO 3: Illustrate the link between economic development, innovation, entrepreneurship and public policy framework

CO 4: Write a business plan document that meets professional standards.

**UNIT- 1**

Discipline of Innovation-Changing Contours of Innovation in Indian context, Creating an Innovation Ecosystem, Basic concept of Start-Ups (Types, Characteristics).

**UNIT- II**

Start-up landscape of India-Start-up India, India Inclusive Innovation Fund, Atal Innovation Mission, Incubators and Accelerators, Make in India, Lean start-up Methodology

**UNIT- III**

Innovation landscape of India-Innovation hubs in India, Innovation hubs across the world- Some lessons for India, Drivers and obstacles of Innovation in India, Start-up and Innovation funding options in India

**UNIT- IV**

Importance of a Business Plan for the entrepreneurs and others, Questions before starting, Guidelines for writing a plan, Outline of the plan, Why business plans fail, New formats of business plans.

**Reference & Textbooks:**

1. Drucker, P. (2014). *Innovation and Entrepreneurship: Practice and Principles*. Routledge United Kingdom.
2. Ries, E. (2011). *Lean Start-up*. Currency, Crown Business.
3. Bruce R. Barringer, R. Duane Ireland (2010) *Entrepreneurship: Successfully Launching New Ventures*, Prentice Hall entrepreneurship series, Pearson/Prentice Hall New York. Sixth Edition.
4. McKeever, M. (2016). *HowTo Write a Business Plan*. Nolo. 13<sup>th</sup> edition.
5. Ford, B. R., Bornstein, J. M., & Pruitt, P. T. (2007). *The Ernst & Young Business Plan Guide*. John Wiley & Sons.

<b>Social Entrepreneurship</b>				
<b>Semester III</b>	L	T	P	C
<b>Course Code: MTIEM-303</b>	3	0	0	3
<p><b>Course Objectives:</b></p> <p>CO 1: To explain the basic concepts and changing contours of social entrepreneurship.</p> <p>CO 2: To identify the challenges faced by social entrepreneurial enterprises and how to overcome them.</p> <p>CO 3: To demonstrate the role of social entrepreneurship in creating innovative responses to critical needs in global and Indian contexts especially bottom of pyramid.</p> <p>CO 4: To prepare students personally and professionally for creating social entrepreneurial ventures.</p>				
<p><b>Course Outcomes:</b></p> <p>At the end of the Course, Student will be able to:</p> <p>COB 1: Describe the various characteristics and changing contours of social entrepreneurship.</p> <p>COB 2: Identify challenges faced by social entrepreneurial enterprises and how to overcome them.</p> <p>COB 3: Illustrate how social entrepreneurship can be used in creating innovative responses to critical needs in global and Indian contexts especially bottom of pyramid</p> <p>COB 4: Create and manage a social entrepreneurial venture.</p>				

#### UNIT- I

Basics of Social Entrepreneurship-Global Movement and Pioneers, Differentiating Social Entrepreneurship from Others, Need for Social Entrepreneurship, Problem and Opportunity in Social Entrepreneurship.

#### UNIT- II

Social entrepreneurial ventures based on Social and Environmental issues, Financing considerations in Social Entrepreneurship, Attracting and Retaining Talent in Social Entrepreneurial Ventures, Strategies for Making Your Social Enterprise Stand Out, Success factors of Social Enterprises.

#### UNIT- III

Inspiring change-makers-Ben & Jerry's, TOMS, Goonj, Sulabh International, Conserve India, Super 30, Grameen Bank.

#### UNIT- IV

Strategic Innovation at the base of the Pyramid- Principles for BOP Innovation, Barriers in reaching to BOP market, Social Enterprise Business Plan.

#### **Reference &Textbooks:**

1. Kummitha, R.K.R. (2016). *Social Entrepreneurship: Working Towards Greater Inclusiveness*. SAGE Publishing, Tokyo. 1<sup>st</sup> Edition.
2. Bansal, R. (2011). *I have a dream: Inspiring Stories of 20 Social Entrepreneurs*. Westland India.

1<sup>st</sup> Edition.

3. Bornstein, D. & Davis, S. (2010). *Social Entrepreneurship: What Everyone Needs to Know?* Oxford University Press, New York. 1<sup>st</sup> Edition.

<b>Data Analytics Lab</b>				
<b>Semester III</b>	L	T	P	C
<b>Course Code: MTIEM-304</b>	0	0	2	1

Introduction to Data Science, Data Collection and Data Pre-Processing, Data Cleaning, Data Reduction

Exploratory Data Analytics, Descriptive Statistics, Mean, Standard Deviation, Skewness and Kurtosis

Correlation Statistics – ANOVA.

Simple and Multiple Regression

<b>Project Dissertation I/ Brainstorming and Idea Challenge Workshop</b>				
<b>Semester III</b>	L	T	P	C
<b>Course Code: MTIEM-305</b>	0	0	6	3

<b>Technology Management</b>				
<b>Semester III</b>	L	T	P	C
<b>Course Code: MTIEM-306E</b>	3	0	0	3
<b>Course Objectives:</b>				
COB 1: To make students understand the role of technology and its management in present day business world.				
COB 2: To know about the reasons that prompt companies to change technologies in their work places.				
COB 3: To help them know about the various governmental regulations regarding technology in Indian context.				
COB 4: To make them aware of the various issues associated with technology, its adoption and diffusion.				

**Course Outcomes:**

At the end of the Course, Student will be able to:

CO 1: Know about the role of technology and its management in present day business world.

CO 2: Articulate the reasons that prompt companies to change technologies in their workplaces.

CO 3: Know about the various governmental regulations regarding technology in Indian context.

CO 4: Examine various issues associated with technology, its adoption and diffusion.

**UNIT- I**

Introduction to Technology Management- Concept and Meaning of Technology and Technology Management, Evolution and Growth of Technology, Role and Significance of Technology Management, Impact of Technology on Society and Business, Technology and competition, Key Issues in Managing Technological Innovation, Forms of Technology- Process Technology, Product Technology

**UNIT- II**

Technology Acquisition- Technology Acquisition, Alternatives for Acquiring New Technologies, Reasons Compelling a Company for Obtaining a New Technology, Management of Acquired Technology, Measures of Scale and Mechanisms for Acquiring Technologies, Economy of Scale or Scale economy, Levels of Scale, Measurement of Scale, Factors Affecting the Choice of Scale

**UNIT- III**

Technology Adoption, Diffusion, and Absorption- Technology Adoption, Diffusion of Technology, Perspectives of Innovation Diffusion Process, Activities Necessary for Diffusion Process, Technology Absorption- Role of Technology Absorption, Benefits of Technology Absorption, Constraints in Technology Absorption, Technology Package and Technological Dependence, Indian Experience in Technology Absorption Efforts, Issues Involved in the Management of Technology Absorption and Government Initiatives

**UNIT- IV**

Social Issues in Technology Management- Social Issues, Technological Change and Industrial Relations, Implementation of Rationalization and Automation in India, Impact of Technological Change, Technology Assessment and Environmental Impact Analysis- Environmental Impact Analysis Process, Guidelines on the Scope of EIA, Issues in Preparation of EIA report, Elements of the Environmental Problem.

**Reference &Textbooks:**

1. Rastogi, P. N. (2009). *Management of Technology and Innovation: Competing Through Technological Excellence*. SAGE Publications India.
2. Harrison, N., & Samson, D. (2002). *Technology Management: Text and International cases*.

McGraw Hill.

3. Çetindamar, D., Phaal, R., & Probert, D. (2016). *Technology Management: Activities and Tools*.

Macmillan International Higher Education.

4. Turban, E., Pollard, C., & Wood, G. (2018). *Information Technology for Management: On-demand Strategies for Performance, Growth and Sustainability*. John Wiley & Sons.

<b>Entrepreneurial Finance</b>				
<b>Semester III</b>	L	T	P	C
<b>Course Code: MTIEM-307E</b>	3	0	0	3
<p><b>Course Objectives:</b></p> <p>COB 1: To describe the mechanism of securing entrepreneurial finance and its use</p> <p>COB 2: To familiarize with basic principles, tools and techniques of financial management.</p> <p>COB 3: To help students understand and use tools for entrepreneurial venture valuation</p> <p>COB 4: To help students know about the various sources and types of financing for their business venture.</p>				
<p><b>Course Outcomes:</b></p> <p>At the end of the Course, Student will be able to:</p> <p>CO 1: Develop an understanding of the most economic and profitable source of finance for the business</p> <p>CO 2: Interpret financial and Investment decisions in entrepreneurial organizations.</p> <p>CO 3: Recognise how to secure financing for the growing venture.</p> <p>CO 4: Know about the various sources and types of financing for their business venture.</p>				

#### Unit-I

Entrepreneurial Finance- Meaning, Significance and Role, Principles of Entrepreneurial Finance, Financing a New Venture- Seed, Start-up, First-Round Financing Sources- Financial Bootstrapping and Business Angel Funding, Second-Round Financing, Mezzanine Financing, Liquidity-Stage Financing, Seasoned Financing.

#### Unit-II

Introduction to Time Value of Money (TVM)- Application of TVM to Valuing Ventures, Valuing Early-Stage Ventures- Calculating Venture Worth, Vested Interests in Value for Investor and Entrepreneur, Basic Mechanics of Valuation- Present Value Concept, Required Versus Surplus Cash, Just-in-Time Equity Valuation, Accounting versus Equity Valuation.

#### Unit-III

Introduction to Capital Structure- Capital Structure of Professional Venture, Professional Venture



Investing Cycle, Determining (Next) Fund Objectives and Policies, Organizing the New Fund- Soliciting Investments in the New Fund, Distributing Cash and Securities Proceeds, Other Financing Alternatives-Facilitators, Consultants, and Intermediaries.

Unit-IV

Project Evaluation Techniques, Planning an Exit Strategy-Valuing the Enterprise for Exit, Systematic Liquidation, Outright Sale- Family Members, Managers, Employee and Outside Buyers, Going Public, Investment Banking, Other Costs in Issuing Securities, Post-IPO Trading, Contemplating and Preparing for the IPO Process

**Reference &Textbooks:**

1. Leach, J. C., & Melicher, R. W. (2020). *Entrepreneurial Finance*, Cengage Learning. USA.
2. Van Horne, J. C., & Wachowicz, J. M. (2005). *Fundamentals of Financial Management*. Pearson Education.
3. Da Rin, M., & Hellmann, T. (2020). *Fundamentals of Entrepreneurial Finance*. Oxford University Press.
4. Smith, J. K., Smith, R. L., & Bliss, R. T. (2020). *Entrepreneurial Finance*. Stanford University Press.
5. Chandra, P. *Financial Management-Theory and practice*. Tata McGraw Hill

<b>Project Dissertation II</b>				
<b>Semester IV</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Course Code: MTIEM-401</b>	0	0	20	10

<b>Internship</b>				
<b>Semester IV</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Course Code: MTIEM-402</b>	0	0	4	2