Pimpri Chinchwad Education Trust's

PIMPRI CHINCHWAD COLLEGE OF ENGINEERING

SECTOR NO. 26, PRADHIKARAN, NIGDI, PUNE 411044

An Autonomous Institute Approved by AICTE and Affiliated to SPPU, Pune

DEPARTMENT OF MECHANICAL ENGINEERING



Curriculum Structure and Syllabus of Minor in Entrepreneurship Development (Course 2020)



Effective from Academic Year 2023-24

(Updated with minor changes)

Institute Vision

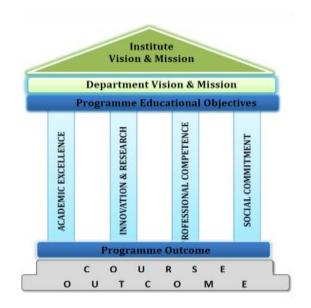
To be one of the top 100 Engineering Institutes of India in coming five years by offering exemplarily Ethical, Sustainable and Value Added Quality Education through a matching ecosystem for building successful careers.

Institute Mission

- 1. rving the needs of the society at large through establishment of a state-of-art Engineering Institue.
- 2. Imparting right Attitude, Skills, Knowledge for self-sustenance through Quality Education.
- 3. Creating globally Competent and Sensible Engineers, Researchers and Entrepreneurs with an ability to think and act independently in demanding situations.

Quality Policy

We at PCCOE are committed to impart Value Added Quality Education to satisfy the applicable requirements, needs and expectations of the Students and Stakeholders. We shall strive for academic excellence, professional competence and social commitment in fine blend with innovation and research. We shall achieve this by establishing and strengthening state-of- the-art Engineering and Management Institute through continual improvement in effective implementation of Quality Management System.



Preface

Looking at Global Scenario to enhance the employability skills and impart deep knowledge in emerging/ multidisciplinary areas, an additional avenue is provided to passionate learners through the Minor and Honors Degree Scheme in academic structure.

For **Minor degree** program, student has to earn additional 20 credits in multidisciplinary areas of other domains.

Objectives of Minor Degree:

- To impart knowledge in multidisciplinary areas.
- To provide effective yet flexible options for students to achieve basic to intermediate level competence in the multidisciplinary area.
- To enhance the employability skills through different combinations in the diverse fields of engineering.
- To provide an academic mechanism for fulfilling multidisciplinary demands of industries.
- To provide a strong foundation to students aiming to pursue research/ higher studies in an interdisciplinary field of study.

Preface of Minor in Entrepreneurship Development

Entrepreneurs now play a key role in driving our economy by enhancing employment opportunities, driving savings and per capita income, and generating additional revenue for the government. The Minor in Entrepreneurship Development is focuses on training individuals who are interested in commencing their venture and on encouraging innovation and evaluating the growth potential of an enterprise.

The main objective of this course is to develop entrepreneurial abilities by providing background information about support systems, skill sets, financial and risk covering institutions and other for building an enterprise so that future budding entrepreneurs can make right decisions for starting and running a venture. This minor program will cover the key principles of entrepreneurship alongside the concepts, strategies, and tools needed to succeed as a small business owner, franchisee, founder, or other entrepreneurial professional.

The Minor consists of courses 1. Introduction to Entrepreneurship, 2. Business Opportunity Identification, 3. Management & Entrepreneurship and 4. Start Up and New Venture Management and one Project / Internship in Entrepreneurship.

The courses and project are distributed in semester V to VIII. There is no need of any special prerequisites for opting this minor, however, it is preferred that the students should have basic understanding of Management concepts.

The students will develop their management skills and entrepreneurship skills needed to succeed in professional career. The minor course will also help students to identify entrepreneurial opportunities and also to understand the processes and practices in business and their applications.

Course Objectives:

This program aims to:

- To develop entrepreneurship awareness
- To inculcate an entrepreneurial mindset into the minds of young professionals
- To leverage managerial and leadership skills for founding, leading & managing Startups
- To learn & understand the processes and practices in business and their applications

Course Outcomes:

At the successful completion of this Minor program, students will be able to:

- Develop traits and factors influencing development of entrepreneurship as a profession
- Discover and practice skill sets required for successful Entrepreneurship
- Identify Business Opportunities and techniques for its management.
- Develop different skills for founding, leading & managing startups
- Make use of key concepts of management
- Discover different ways for new venture development

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LIST OF ABBREVIATIONS IN CURRICULUM STRUCTURE

Sr. No.	Abbreviation	Type of Course
1.	L	Lecture
2.	P	Practical
3.	T	Tutorial
4.	Н	Hours
5.	CR	Credits
6.	IE1	Internal Evaluation 1
7.	IE2	Internal Evaluation 2
8.	ETE	End Term Evaluation
9.	TW	Term Work
10.	OR	Oral
11.	PR	Practical
12.	PROJ	Project

CREDIT DISTRIBUTION: SEMESTER WISE

1 Lecture Hour = 1 Credit 2 Lab Hour = 1 Credit 1 Tutorial Hour = 1 Credit Seminar -1 Credit

Sr.	Course Title		Cı	redits/Sen	iester	
No.	Course Title	5	6	7	8	Total
1.	Introduction to Entrepreneurship	3	0	0	0	3
2.	Entrepreneurial skill development lab.	1	0	0	0	1
3.	Business Opportunity Identification and Management	0	4	0	0	4
4.	Business Presentation/Startup registration/Pre-incubation	0	1	0	0	1
5.	Start-up and New Venture Management	0	0	3	0	3
6.	Seminar/MOOC/Mini Project on Entrepreneurship	0	0	3	0	3
7.	Project/ Internship in Entrepreneurship	0	0	0	5	5
		4	5	6	5	20

Curriculum Structure Entrepreneurship Development Minor in Mechanical Engineering

Curriculum structure Minor In Entrepreneurship Development

Semes	Course	Course Name	,	Teac	hing	Schen	ne	Evaluation Scheme						
ter	Code	Course Name	L	P	Т	Н	CR	IE	MTE	ЕТЕ	PR	TW	OR	Total
V	MME5995	Introduction to Entrepreneurship	3	-	-	3	3	20	30	50	-	-	-	100
V	MME5996	Entrepreneurial skill development lab	-	2	-	2	1	-	-	-	-	25	25	50
VI	MME6995	Business Opportunity Identification and Management	4	-	-	4	4	20	30	50	-	-	-	100
VI	MME6996	Business Presentation/Startu p registration/ Pre- incubation	-	2	-	2	1	-	-	-	-	25	-	25
VII	MME7995	Start-up and New Venture Management	3	-	-	3	3	20	30	50	-	-	-	100
VII	MME7996	Seminar/MOOC & Mini Project on Entrepreneurship	1	6	-	6	3	1	-	1	1	50	25	75
VIII	MME8995	Project / Internship in Entrepreneurship	1	10	-	10	5	1	-	1	1	100	50	150
			10	20	0	30	20	60	90	150	0	200	100	600

Abbreviations are: L-Lecture, P-Practical, T-Tutorial, H- Hours, IE- Internal Evaluation, MTE-Mid Term Evaluation, ETE- End Term Evaluation, TW –Term work, PR-Mini Project / Major Project OR - Oral

$\begin{tabular}{ll} \textbf{Course Syllabus of} \\ \textbf{Semester-V} \\ \textbf{Minor in Entrepreneurship Development} \\ \end{tabular}$

Program:	B.	Tech Mechar	ineering (Minor) Semester: V								
Course: Introduction to Entrepreneurship Code: MME5995											
Teaching Scheme							Evaluation Scheme				
Lecture	Practica	Tutorial	Hours	Credit	IE	MTE	ETE	PR	TW	OR	Total
3	-	-	3	3	20 30 50 100						100

Prior knowledge of

a. No any Prior knowledge is essential

Course Objectives:

1. To develop entrepreneurship awareness & inculcate an entrepreneurial mindset into the minds of young professionals

Course Outcomes: At the end of the course, the students will be able to:

- 1. Understand the entrepreneurship, their problems and affecting factors.
- 2. Compare and analysis the types of entrepreneurships and decision process
- 3. Judging the importance and characters of women entrepreneurs.
- 4. Determine and compare various skills of successful entrepreneurs
- 5. Understand and relate the business organizations and business laws.
- 6. Examine essentials to avoid failure in Entrepreneurship.

	Detailed Syllabus	
Unit	Description	Duration (H)
1	Introduction to Entrepreneurship Meaning, Definition, and Concept of Enterprise, Entrepreneurship Development, Evolution of Entrepreneurship, Motivation theories- McClelland's Need Achievement Theory, Concepts of Entrepreneurship, Entrepreneur v/s Entrepreneur, Entrepreneur Vs. Manager, Role of Entrepreneurship in Economic Development, Factors Affecting Entrepreneurship, Problems of Entrepreneurship Case Study of Indian Entrepreneurs in the Pre-Independence and Post-Independence Era	8
2	The Entrepreneur: Why become entrepreneur, Types of Entrepreneur Concept of Social Enterprise and Social Entrepreneurship, Social Entrepreneurs, Rural Entrepreneurship, Family Business Entrepreneurship, The entrepreneurial decision process, Case Study of Entrepreneurship in Different Sectors	7
3	Women Entrepreneurs: Significance of women entrepreneurship, Factors contributing to women Entrepreneurship, Characteristics – Challenges faced by Women Entrepreneurs, Growth of Women Entrepreneurship, Achievements of Woman Entrepreneurs, Role Models of Woman Entrepreneurs. Case Study of First-Generation Women Entrepreneurs in India	7
4	Skills for Successful Entrepreneurs: Communication Skills, Creativity and Problem-solving, Innovation, Negotiation Skills, Risk management Case Study of Successful Entrepreneurs- Cases of Tata, Birlas, Kirloskar, and new generation entrepreneurs in India	8
5	Business Organizations and Business Laws: Types of Business Organizations -Sole Proprietorship, Joint Hindu Family Business, Partnership, Limited Liability Partnership (LLP), Corporate Governance, Franchising, Business Laws in India to Start Business	8
6	Concepts of Entrepreneurship Failure: Issues of Entrepreneurial failure, Reasons of Entrepreneurial Failure, Essentials to Avoid Failure in Entrepreneurship. Case Study of Failure in Entrepreneurship	7
	Total	45

Reference books:

- 1. Dynamics of Entrepreneurship Development Vasant Desai.
- 2. Entrepreneurship Development and small business management Poornima M. Charantimath
- 3. Dynamics of Entrepreneurship Development Vasant Desai.
- 4. Innovation and Entrepreneurship Peter F. Drucker
- 5. Kathleen R Allen, Launching New Ventures, An Entrepreneurial Approach, Cengage Learning, 2016.
- 6. Vijay Sathe, Corporate Entrepreneurship, Cambridge, 2009

Department of Mechanical Engineering

Program:	Program: B. Tech Mechanical Engineering (Minor)					Sen	Semester: V				
Course: Entrepreneurship Skill Development Lab.						Coc	le: MME	5996			
	Teaching Scheme				Evaluation Scheme						
Lecture	Lecture Practical Tutorial Hours Credi					MTE	ETE	PR	TW	OR	Total
-	2	-	2	1	-	-	-	-	25	25	50

Prior knowledge of

a. No any Prior knowledge is essential

Course Objectives:

1. To leverage skills for founding, leading & managing Startups Entrepreneur skills include various skill sets such as leadership, business management, time management, creative thinking and problem-solving. You can apply these skills in many job roles and industries.

Course Outcomes:

At the end of the course, students will be able to:

- 1. Understand the traits of the entrepreneurs and skill sets required for successful Entrepreneurship
- 2. Analyze and compare skills with the successful entrepreneurs
- 3. Develop leadership skill
- 4. Develop business management skill
- 5. Develop time management skill
- 6. Develop creative thinking and problem-solving skill

Activities/Assignments completion (Suggested but not limited to):

- 1. Interview with First Generation Entrepreneurs
- 2. Case Study of Successful Entrepreneurs
- 3. Alumni Talk on Entrepreneurship by Successful Entrepreneur (Alumni)
- 4. SWOC analysis of individuals
- 5. Study the leadership skill and
- 6. Role play as the leader through the program/Group Activity
- 7. Study business management skills
- 8. Demonstration of business management skills through activity/Presentation
- 9. Study time management skills
- 10. Analysis of individual timetables and practice time management with improved plans.
- 11. Activity on creative thinking for product/process improvement
- 12. Activity on social Problem-solving /Product improvement.

Course Syllabus of Semester – VI

Minor in Entrepreneurship Development

Program:	Program: B. Tech Mechanical Engineering (Minor)						Semester: VI				
Course:	Course: Business Opportunity Identification & Management							Code: MME6995			
Teaching Scheme						Eva	luation Sc	heme			
Lecture	Practical	Tutorial	Hours	Credit	IE	MTE	ETE	PR	TW	OR	Total
4	-	-	4	4	20	30	50	•	•	-	100

Prior knowledge of:

a. Introduction to Entrepreneurship is essential

Course Objectives:

1. To identify entrepreneurial opportunities & its management by understanding the processes and practices in business management.

Course Outcomes: At the end of the course, the students will be able to:

- 1. Understand & analyze the business opportunity identification techniques to determine business opportunity.
- 2. Select Intellectual Property Rights for business
- 3. Correlating the use of the different Government initiatives and different support organizations for supporting Entrepreneurship ideas.
- 4. Determining organizing structure, staffing, and marketing policies for business ideas.
- 5. Evaluate the attribute of interpersonal relationships and behavior for customer relationship management in his business.

	Detailed Syllabus	
Unit	Description	Duration (H)
1	Business Opportunity Identification & its Techniques: Concept of Business Opportunity, what is a business idea? How to generate Business Ideas? Business Opportunities Identification Process, Business Value Chain, different sections of the business value chain for potential opportunities, Business Opportunities in India, Different Business Models, Identifying the right Business Model Canvas, Opportunities in different industries / Sectors, Opportunities arising out of digitization	10
2	Startup Opportunities: Meaning of Startup, The Rise of the startup economy, Startup Policy, Startup Opportunities, Registration, and Legal Process of Startups, The Startup Ecosystem -Entrepreneurship in India. Intellectual Property Rights: Concept of Intellectual Property Rights, Role of IPR in Entrepreneurship, IP strategy for start-up and MSME Patent, Trademark, Copyright, Industrial Design Act	10
3	Government Initiatives: Role of Government in Promoting Entrepreneurship in India, Startup India, Atmanirbhar Bharat, Make in India, Assistance to an Entrepreneur, Industrial Park, Special Economic Zone, MSME Act, MSME policy in India, Financial assistance to MSME, Various Government schemes - PMEGP, CGTMSE, PMKVY, Mudra loan, Case studies of Startups	10
4	Role of Institutional Support: Agencies for Policy Formulation and Implementation: District Industries Centers (DIC), Small Industries Service Institute (SISI), Entrepreneurship Development Institute of India (EDII), National Institute of Entrepreneurship & Small Business Development (NIESBUD), Concept of Incubation, Role of Incubation Centers, Support from Incubation centers Role of Mentors, Role of consultancy organizations in promoting Entrepreneurs	10
5	Management: Meaning, Definition, Need, and Process of Management, Managerial levels/Hierarchy: Five Functions of Management, Managerial Skills. Organizing and staffing: Importance and Process of Organizing, Organizational structure, Staffing and its importance in the organization, Recruitment, Selection Process, Performance Appraisal. Marketing Management and Marketing Mix: Definition & Functions of Marketing- Scope of Marketing, Core concepts of marketing, Marketing Mix, 7P's & Product Life Cycle	10
6	Inter-Personal Relationship and Understanding Individual Behavior: Importance, Need for leadership in enterprise development, Characteristics of a good leader, Various styles of Leadership, Definition of Personality, the importance of personality in Performance, Ego State, Johari window-Transactional Analysis. Customer Relationship Management (CRM): What is CRM? Customer Life Cycle, Use of CRM in Business, Five steps consumer buyer decision process	10
	Total	60

Reference books:

- 1. The Principles of Scientific Management. New York and London, Harper & brothers
- 2. Entrepreneurship Development and small business management Poornima M. Charantimath
- 3. J.W. Weiss, (2014), Business Ethics, A Stakeholder and Issues Management Approach, 6th edition, Barrett-Koehler Publishers, Oakland, CA.
- 4. Covey, S. R. (2004). The 7 habits of highly effective people: Restoring the character ethic. New York: Free Press.

Department of Mechanical Engineering

Program:	B. Tech Mo	echanical Eı	ngineering	g (Minor)				Seme	emester: VI			
Course:	Business p	resentation/	Startup r	ı	Code: MME6996							
	Teacl	hing Scheme	e]	Evalua	ation Schem	ne		
Lecture	Lecture Practical Tutorial Hours Credit						ETE	PR	TW	OR	Total	
-	2	-	1	2	-	-	-	-	25	-	25	

Prior knowledge of:

- a. Introduction to Entrepreneurship,
- b. Business opportunity identification & management......are essential

Course Objectives:

1. To summarize the business idea and plan of the business in presentable form.

Course Outcomes: At the end of the course, the students will be able to:

- 1. Collect, analyze and interpret data for appropriate design process or product.
- 2. Prepare a business report/technical report with appropriate summarization of topic under study.
- 3. Present the neat report.
- 4. Deliver the key concept of business identification and management to conceptualize their business idea.

Detailed Syllabus

Contents:

Each student is expected to prepare presentation on business idea identification and management process OR Each student can opt for startup registration and pre-incubation activity

To prepare business plan/Startup registration/Preincubation after carrying any of the following Activities ut not limited, They will maintain the diary of the activities carried for completion of the tast.

- 1. Case Studies
- 2. Management Skill Enhancement Workshops
- 3. Participation and completion certificate of EAC/EDP/WEDP
- 4. Business Plan Presentations
- 5. Interaction with CAs, Bank Managers.
- 6. Participation in National Level competitions- Start-ups /hackathon / business plan / Business pitch event.
- 7. Participation in Government of India / Government of Maharashtra initiative related Startup activity.
- 8. Study Visits

Course Syllabus of Semester – VII Minor in Entrepreneurship Development

Program: B. Tech Mechanical Engineering (Minor)						Semester: VII					
Course: Start-up and New Venture Management						Code:	MME799	5			
Teaching Scheme							Evalu	ation S	Scheme		
Lecture	Lecture Practical Tutorial Hours Credit					MTE	ETE	PR	TW	OR	Total
3	-	-	3	3	20	30	50	-	-	-	100

Prior knowledge of

- Introduction to Entrepreneurship,
- Business Opportunity Identification & Management......are essential

Course Objectives:

1. To understand process of startup and business development with financial and venture management

Course Outcomes: At the end of course, student will be able to:

- 1. Assess Business plan, business pitch as an entrepreneurial tool
- 2. Make use of concepts of Business Management
- 3. Identify Financial Support System for Business Management
- 4. Select Market Survey techniques for business
- Discover different ways for new venture development

Unit	Detailed Syllabus Description	Duration (H)
1	Business Plan The Business plan as an entrepreneurial tool, Elements of Business Plan, Market Analysis, Technical Analysis, Financial Analysis, Economic Analysis, SWOT analysis, Internal and External Environment Analysis	8
2	Business Management Business model for venture, Value Proposition, Customer Segments, Channels and Partners, Revenue Model and Streams, Key Resources, Manage a Team, Concept of Costs, Profits, and Losses, Project Manager, Project Life Cycle,	6
3	The Financial Road Map: Financial Support System: Forms of Financial support, Long-term and Short-term financial support, Sources of Financial support, Planning/Budgeting, Developing a financial roadmap, How to budget for startup success, sources of funding, Informal capital—Friends & Family, MPDA, SFURTI. Crowd funding, Venture capital, Private Equity, Financing Mix, Role of Commercial Banks - SIDBI, NABARD, EXIM Bank and Other Agencies; Institutional Assistance for Small Enterprises	8
4	Market Survey and Research: What is a market survey? Process of conducting a market survey, Primary and secondary sources of information, Market survey tools, Preparation of schedule, Techniques of data collection, Questionnaire	8
5	New Venture Development: Enterprise growth, expansion & diversification, New venture Expansion Strategies and Issues, Features and evaluation of joint ventures, acquisitions, merges, franchising. Public issues, rights issues, bonus issues and stock splits, Critical risk contingencies of the proposal	8
6	Business Pitch: The Business Pitch, preparing for your investor presentation, Elements of the perfect investment pitch, How to Deliver an investor pitch to a panel of investors	7
D - C	Total	45

Reference books:

- 1. Entrepreneurship: New Venture Creation David H. Holt
- 2. Entrepreneurship Development New Venture Creation Satish Taneja, S.L.Gupta

- Project management K. Nagarajan.
 Kathleen R Allen, Launching New Ventures, An Entrepreneurial Approach, CengageLearning, 2016.
 Anjan Raichaudhuri, Managing New Ventures Concepts and Cases, Prentice Hall International, 2010.
- 6. Steven Fisher, Ja-nae' Duane, The Startup Equation -A Visual Guidebook for Building Your Startup, Indian Edition, Mc Graw Hill Education India Pvt. Ltd, 2016.
- Donald F Kuratko, Jeffrey S. Hornsby, New Venture Management: The Entrepreneur's Road Map, 2e, Routledge, 2017.

Program:	B. Tech Mechanical Engineering (Minor)						Sem	Semester: VII					
Course:	Seminar/MOOC & Mini Project in Entrepreneurship							Code: MME7996					
	Teacl	hing Schen	ne		Evaluation Scheme								
Lecture	Practical	Tutorial	Hours	Credit	IE	MTE	ETE	PR	TW	OR	Total		
-	6		3	6	-	-	-	-	50	25	75		

Course Objectives:

- 1. To learn & understand the processes and practices in business and their applications
- 2. To leverage managerial & leadership skills for founding, leading & managing startups

Course Outcomes:

At the end of course, student will be able to:

- 1. Decide processes and practices in business and their applications
- 2. Develop different skills for founding, leading & managing startups

Activities (Suggested but not limited to):

- 1. Case Studies
- 2. Role Plays
- 3. Achievement Motivation Trainings
- 4. Management Skill Enhancement Workshops
- 5. Participation and completion certificate of EAC/EDP/WEDP
- 6. Business Presentations

Expected to present and submit Mini Project using concepts of following topics:

- 1. Management
- 2. Organizing and staffing
- 3. Marketing Management
- 4. Marketing Mix
- 5. Inter Personal Relationship and Understanding Individual Behavior
- 6. Customer Relationship Management (CRM)

Mini Project submissions should be based on concepts learned during theory sessions of this subject.

Mini Project (Suggested but not limited to):

- 1. Market Survey for MSME
- 2. Survey to improve Customer Relationship
- 3. Development of New Product /Prototype
- 4. Business Presentations with scope
- 5. Use of Marketing Mix for developing business strategy
- 6. Interview and Analysis of MSME

Course Syllabus of Semester – VIII Minor in Entrepreneurship Development

Program:	B. Tech Mechanical Engineering (Minor)						Semester: VIII					
Course:	Project / Internship in Entrepreneurship						Code: MME8995					
Teaching Scheme					Evaluation Scheme							
Lecture	Practical	Tutorial	Hours	Credit	IE	MTE	ETE	PR	TW	OR	Total	
-	10	-	-	5	-	-	-	-	100	50	150	

Prior knowledge of

- a. Introduction to Entrepreneurship,
- b. Business Opportunity Identification,
- c. Start up and new venture Management......are essential

Course Objectives:

- 1. To learn & understand the processes and practices in business and their applications
- 2. To leverage managerial & leadership skills for founding, leading & managing startups
- 3. To create successful Entrepreneurs

Course Outcomes: At the end of the course, the student will be able to:

- 1. Decide processes and practices in business and their applications
- 2. Develop different skills for founding, leading & managing startups
- 3. Discover entrepreneurial opportunities

Description

Project / Internship is an integral part of the curriculum, which will give sound knowledge in how to build and run very own enterprise.

Following activities (but not limited to) can be considered:

Internship in Entrepreneurship:

Internship in MSME /company/Business with following purposes:

- 1. Analysis for cost effectiveness
- 2. Market Survey
- 3. Survey for Customer relationship
- 4. Branding Activity
- 5. Trademark registration
- 6. Assistance for improving business activities

Project in Entrepreneurship:

- 1. Registration of Own Startups
- 2. Registration Enrollment of Business at Incubation Centre
- 3. Market Survey for MSME with scope
- 4. Participation in National / International Level competitions- Start-ups Business plan / Business pitch event.
- 5. Starting small business with legal documents like Shop Act, PAN card, GSTIN, Udyam Registration etc.
- 6. Receiving grand /Funds for own business activity from Government or any other supporting Agency
- 7. Seed funding.
- 8. Development of New Product /Prototype with business plan