

GUJARAT TECHNOLOGICAL UNIVERSITY, AHMEDABAD, GUJARAT**COURSE CURRICULUM****COURSE TITLE: ENTREPRENEURSHIP AND INDUSTRIAL MANAGEMENT
(COURSE CODE: 3361101)**

Diploma Programme in which this course is offered	Semester in which offered
ELECTRONICS & COMMUNICATION ENGINEERING	Sixth

1. RATIONALE

This course deals with the concern areas of entrepreneurship and industrial management that has significant impact on current developing economy. The social expectations towards engineering professionals is certainly emerging as job creators and not as purely job seekers, especially with the thrust given to “Make in India” campaign. Hence this course focuses on the basic roles, skills and functions of entrepreneurship and industrial management, with special attention to managerial responsibility for effective and efficient achievement of goals. The course is directed to help students to enhance capabilities in the field of managing the given task as well as to understand peripheral influencing aspects. The content will certainly help students to think in a direction to establish an enterprise using fundamental know how.

2. COMPETENCY

The course content should be taught and implemented with the aim to develop required skills in the students so that they are able to acquire following competency:

- **Establish and maintain different types of small to medium enterprises.**
- **Use concepts of management, organization structure and dynamics effectively to achieve organizational goals.**

3. COURSE OUTCOMES (COs)

The theory should be taught and practical should be undertaken in such a manner that students are able to acquire required learning outcomes in cognitive, psychomotor and affective domains to demonstrate the following course outcomes:

- i. Select and develop a small or medium business idea
- ii. Select various institutions for finance and working for a particular idea application.
- iii. Make and Implement project proposals and reports to hunt for venture capital etc.
- iv. Develop managerial skills to achieve goals.
- v. Plan and implement projects applying management techniques.
- vi. Understand social responsibility as a modern management concept.

4. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P)	Examination Scheme				
				Theory Marks		Practical Marks		Total Marks
L	T	P	C	ESE	PA	ESE	PA	
4	0	0	4	70	30	00	00	100

Legends: L-Lecture; T – Tutorial/Teacher Guided Theory Practice; P - Practical; C – Credit, ESE - End Semester Examination; PA - Progressive Assessment.

5. COURSE CONTENT DETAILS

Unit	Major Learning Outcomes (in cognitive domain)	Topics and Sub-topics
UNIT-I The Nature of Entrepreneurship	1a. Appreciate the concept and need of entrepreneurship development. 1b. Develop qualities of entrepreneur. 1c. Discuss characteristics and functions of entrepreneur. 1d. Compare the concepts entrepreneur and intrapreneur. 1e. Present the role of entrepreneurship in economic development.	Basics of Entrepreneurship 1.1 Entrepreneurship - Definition and Meaning 1.2 Characteristics of Entrepreneurship / Traits of an Entrepreneur 1.3 Functions of Entrepreneurship - Job Creation, Innovation, Inspiration, Economic Development 1.4 Types of Entrepreneurship 1.5 Entrepreneurship and Intrapreneurship 1.6 Entrepreneurship Strategy
	1f. Develop the plan for creating and starting the venture.	The Business Plan: Creating and Starting the Venture 1.7 The Marketing Plan 1.8 The Financial Plan 1.9 Sources of Capital
	1g. Explain the legal issues related with enterprise 1h. Explain the supply chain management 1i. Describe the concept of Retail business. 1j. Discuss issues of FDI	Legal Issues for the Entrepreneur 1.10 IPR 1.11 Patents, Trademarks, Copyrights, Trade Secrets 1.12 Licensing 1.13 Product Safety and Liability 1.14 Insurance 1.15 Contracts 1.16 Advertising 1.17 Supply Chain Management 1.18 Retail & FDI
	1k. Explain types of	Industry Size & Current schemes

	<p>enterprise.</p> <p>1l. Identify various avenues of entrepreneurship.</p> <p>1m. Describe role of various central and state government agencies supporting MSME.</p>	<p>1.19 Micro, Small, Medium- Industry</p> <p>1.20 Registration Process</p> <p>1.21 State & National Level Support agencies for</p> <p>a) Information</p> <p>b) Finance</p> <p>c) Technology</p> <p>d) Training</p> <p>e) Quality control</p> <p>f) Marketing</p> <p>1.22 Current Promotional Schemes for new Enterprise</p>
	<p>1n. Describe concept of risk</p> <p>1o. Prepare a project report</p> <p>1p. Perform SWOT for risk management in a given proposal.</p>	<p>Proposals & risks</p> <p>1.23 7-M Resources</p> <p>1.24 Market Survey Concept</p> <p>1.25 Project Report Preparation (Feasibility, Cost Estimation, CVP Analysis, Detailed Project Report</p> <p>1.26 Concept of Risk and decision making</p> <p>1.27 Risk Management-SWOT etc</p>
<p>UNIT-II</p> <p>The importance of Entrepreneurship</p>	<p>2a. Define Innovation.</p> <p>2b. Explain the importance of innovation for entrepreneurship</p> <p>2c. Describe the innovation process.</p> <p>2d. Explain product life cycle and mortality curve</p>	<p>Entrepreneurship and Innovation</p> <p>2.1 The Innovation Concept</p> <p>2.2 Importance of Innovation for Entrepreneurship</p> <p>2.3 Source of Innovation for Opportunities</p> <p>2.4 The Innovation Process</p> <p>2.5 Product life cycle, new product development process, mortality curve</p> <p>2.6 Creativity and innovation in product modification/ development</p>
	<p>2e. Describe the role of entrepreneur in modern economy.</p>	<p>Entrepreneurship and Economic Development</p> <p>2.7 Role of Entrepreneurship in Modern Economy</p>
	<p>2f. Compare the managers with entrepreneurs.</p>	<p>Managers Vs Entrepreneurship</p> <p>2.8 Characteristic of Managers</p> <p>2.9 Characteristic of Entrepreneurs</p> <p>2.10 Similarities and differences between Managers and Entrepreneurs</p>
<p>UNIT-III</p> <p>Introduction to Management and Organization</p>	<p>3a. Explain the concept and differences between industry, commerce and business.</p> <p>3b. Describe various types of ownership in the organization.</p>	<p>Introduction</p> <p>3.1 Industry, Commerce and Business</p> <p>3.2 Types of ownership in the organization – Definition, Characteristics, Merits & Demerits</p> <p>3.3 Single ownership, Partnership</p> <p>3.4 Cooperative Organizations</p> <p>3.5 Joint Stock Companies</p> <p>3.6 Government owned</p>
	<p>3c. Distinguish management and</p>	<p>Management and Administration</p> <p>3.7 Differences between Management and</p>

	administration. 3d. Describe the role of management	Administration 3.8 Management as a science and as an art
	3e. Explain different types of leadership models.	Leadership Models 3.9 Different Leadership Models 3.10 Autocratic Leader 3.11 Democratic Leader 3.12 Free Rein Leader 3.13 Freelance Leader
UNIT-IV Functions of Management	4a. Analyze the nature and importance of planning. 4b. Discuss various types of planning. 4c. Describe types of plan. 4d. Explain basic steps in planning.	Function of Management: Planning 4.1 What is planning? Definition and Meaning 4.2 Types of Planning - Strategic Plan, Tactical Plan and Operation Plan 4.3 The Basic Steps in the Planning Process 4.4 Why Managers Plan? 4.5 Planning as a Function of Management 4.6 Emerging issues in Effective Planning
	4e. Discuss the nature and purpose of organizing. 4f. Describe the types of organizing. 4g. Explain basic steps in organizing process. 4h. Discuss emerging issues in effective planning and organizing.	Function of Management: Organizing 4.7 Organizing – Definition and Meaning 4.8 Types of Organizing 4.9 The Basic Steps in the Organizing Process 4.10 Organizing – Merits & Demerits 4.11 Emerging issues in Organizing
	4i. Explain the meaning and types of staffing. 4j. Describe the meaning of recruitment and selection	Function of Management: Staffing 4.12 Staffing – Definition and Meaning 4.13 Types of Staffing – Internal & External 4.14 The Basic Steps in the Staffing Process 4.15 Staffing – Merits & Demerits 4.16 Emerging issues in Staffing
	4k. Explain the meaning and nature of direction.	Function of Management: Directing (Leading) 4.17 Directing – Definition and Meaning 4.18 The Basic Steps in the directing Process 4.19 Directing – – Merits & Demerits 4.20 Emerging issues in Directing
	4l. Describe the meaning and essentials of controlling. 4m. Explain basic steps of establishing	Function of Management: Controlling 4.21 Controlling – Definition and Meaning 4.22 Types of Controlling 4.23 The Basic Steps in the Controlling

	control.	Process 4.24 Relationship between Planning and Controlling 4.25 Feedback
UNIT-V Social Responsibility and Managerial Ethics	5a.– Describe social responsibility and relate with economic performance. 5b. Explain the concept of greening of management.	Social Responsibility 5.1 What is Social Responsibility? 5.2 Social Responsibility and Economic Performance 5.3 The Greening of Management – Social Obligation, Social Responsiveness and Social Responsibility
	5b. Explain managerial ethics.	Managerial Ethics in Modern Times 5.4 Value Based Management 5.5 Managerial Ethics 5.6 Different NGOs 5.7 Social Responsibility and Ethics Issues in Today's World

6. SUGGESTED SPECIFICATION TABLE WITH HOURS and MARKS (Theory)

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total Marks
I	The Nature of Entrepreneurship	16	06	08	06	20
II	The Importance of Entrepreneurship	08	03	04	03	10
III	Introduction to Management and Organization	08	03	04	03	10
IV	Functions of Management	16	06	08	06	20
V	Social Responsibility and Managerial Ethics	08	03	04	03	10
	Total	56	16	16	24	70

Legends: R = Remember; U = Understand; A = Apply and above levels (Revised Bloom's taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

7. SUGGESTED LIST OF SELF EXERCISES/ TUTORIALS

-----Not applicable-----

8. SUGGESTED LIST OF STUDENT ACTIVITIES

Following is the list of proposed activities, students should prepare a portfolio of the completed activities for future use:

- i. Develop two products from household waste (attach photographs).
- ii. Download product development and innovative films from internet.
- iii. Prepare a collage for "Traits of successful entrepreneurs."

- iv. Invite entrepreneurs, industry officials, bankers for interaction. Interview at least four entrepreneurs or businessman and identify
- v. Charms of entrepreneurship and Traits of successful entrepreneurs
- vi. Identify your hobbies and interests and convert them into business idea.
- vii. Convert you project work into business.
- viii. Mock Business Model- Choose a product and design a unique selling proposition, brand name, logo, advertisement (print, radio, television), jingle, packing, packaging, label for it.
- ix. Develop your own website. Share your strengths and weakness on it. Declare your time bound goals and monitor them on the website.
- x. Choose any product/ advertisement and analyse its good and bad points/ cost sheet/ supply chain etc
- xi. Study schemes for entrepreneurship promotion of any bank.
- xii. Visit industrial exhibitions, trade fairs and observe nitty-gritty of business. Get news of Vibrant Gujarat Events. (Upcoming in Jan 2015)
- xiii. Open a savings account and build your own capital.
- xiv. Arrange a visit to a Mall and prepare report.
- xv. Organise industrial visit and suggest modifications for process improvement.
- xvi. Conduct a market survey for a project. Collect data on machinery specifications, price, output/hr, power consumption, manpower requirement, wages, raw material requirement, specification, price, competitor's product price, features, dealer commissions, marketing mix etc.
- xvii. Prepare a business plan and organize a business plan competition.
- xviii. Select a social cause, set objectives, plan and work for its accomplishment. Find details about Different NGOs.

9. SPECIAL INSTRUCTIONAL STRATEGIES (if any)

- i. Instructors should emphasise more on exemplery and deductive learning.
- ii. Students should learn to recognise, create, shape opportunities, and lead teams for providing economic-social value to society.
- iii. Business simulations should be used to enhance behavioural traits of successful intrapreneurs and entrepreneurs amongst students.
- iv. Emphasis should be on creating entrepreneurial society rather than only setting up of enterprise.
- v. They must be encouraged to surf on net and collect as much information as possible.
- vi. Each student should complete minimum ten activities from the suggested list. Minimum possible guidance should be given for the suggested activities.
- vii. Students should be promoted to use creative ideas, pool their own resources, finish their presentation, communication and team skills.
- viii. Alumni should be frequently invited for experience sharing, guiding and rewarding students.
- ix. Display must be arranged for models, collages, business plans and other contributions so that they motivate others.
- x. You may show video/animation film / presentation slides to demonstrate various management functions, traits of entrepreneur etc.
- xi. Arrange a visit to nearby venture capital firm.
- xii. Give 1 Mini project and 1 project report for future business to all the students.
- xiii. The following pedagogical tools will be used to teach this course:
 - a) Lectures and Discussions
 - b) Role Playing

- c) Assignments and Presentations
- d) Case Analysis
- e) Quiz on Management and Entrepreneurship

10. SUGGESTED LEARNING RESOURCES

[A] List of Books

Sl. No.	Title of Book	Author	Publication
1.	Entrepreneurship in Action	Coulter	PHI 2nd Edition
2.	Entrepreneurship Development	E. Gordon & K. Natarajan	Himalaya 2008
3.	Entrepreneurial Development	S S Khanka	S Chand & Co., New Delhi
4.	Entrepreneurship Development and Management	A. K. Singh	Jain Book Agency (JBA) publishes, New Delhi
5.	Small Scale Industries and Entrepreneurship	Vasant Desai	Himalaya 2008
6.	Entrepreneurship	Roy Rajeev	Oxford Latest Edition
7.	Industrial Engineering and Management	O.P.Khanna	Dhanpat Rai and Sons, Delhi
8.	Industrial Organization and Management	Tara Chand	Nem Chand and Brothers; Roorkee
9.	Industrial Management and Entrepreneurship	V. K. Sharma.	Scientific Publishers, New Delhi
10.	Project profile for reserved	Govt. of India.	Development commissioner SSI, Items VOL,I,II & III New Delhi.
11.	New project opportunities	Govt. of Gujarat	GITCO series - I, II and III.
12.	Small scale industry	Govt. of India.	Ministry of Industry Govt. of India Policy & Perceptive
13.	Import-Export Policy for SSI	Govt. of India.	Govt. of India.
14.	Dialogue with the Entrepreneur	Govt. of Gujarat	GSFC

[B] List of Software/Learning Websites:

- i. <https://www.e-elgar.co.uk/PDFs/WebCats/EntrepreneurshipUK.pdf>
- ii. Dabbawalas Case- <http://www.youtube.com/watch?v=N25inoCea24>
- iii. Barefoot College http://www.ted.com/talks/bunker_roy.html
- iv. Entrepreneurship Class XI, XII- CBSE, New Delhi
- v. The Art of the Executive Summary by Bill Reichert www.garage.com/resources/writingexecsum.shtml
- vi. Write a Business Plan – Essential Elements of a Good Business Plan

- www.sba.gov/smallbusinessplanner/plan/writeabusinessplan/SERV_ESSENTIAL.html
- vii. <http://www.entrepreneur.com>
 - viii. www.nabard.com
 - ix. <http://www.businessesforsale.com>
 - x. <http://www.youngentrepreneur.com>
 - xi. <http://www.ediindia.org>
 - xii. www.msme.gov.in
 - xiii. www.nimsme.org
 - xiv. www.smallb.in
 - xv. www.gujagro.org/pdf/guidelines.pdf
 - xvi. <http://www.entrepreneurship.org>
 - xvii. <http://www.loopnet.com>
 - xviii. My Own Business: A Course on How to Start Your Own Business – Sec. 1, 2, & 8
 - a. www.myownbusiness.org/course_list.html

[C] Some Films (To be seen on Sundays/holidays by students on their own, not to be shown in polytechnics in any case)

- i. Any Body Can Dance (2013)
- ii. Corporate (2006)
- iii. Do Duni Char (2010)
- iv. Guru (2007)
- v. Oh My God (2013)
- vi. Pirates of Silicon Valley (1999)
- vii. Pursuit of Happiness (2006)
- viii. Rocket Singh (2010)
- ix. Start-up.com (2001)
- x. The Social Network (2010)
- xi. Wall Street (1987)
- xii. Band Baja Barat (2010)

11. COURSE CURRICULUM DEVELOPMENT COMMITTEE

Faculty Members from Polytechnics

- **Prof. U.V. Buch**, Sr. Lecturer in EC, Government Polytechnic for Girls, Surat
- **Prof. Rajan Popat**, Sr. Lecturer in EC, Government Polytechnic, Rajkot
- **Dr. Vijay Pithadia**, Sr. Lecturer in EC, Government Polytechnic, Amreli

Coordinator and Faculty Members from NITTTR Bhopal

- **Prof. (Mrs.) Susan S. Mathew**, Associate Professor, Dept. of Electrical and Electronics Engineering.
- **Dr. Joshua Earnest**, Professor, Dept. of Electrical and Electronics Engineering.