

ENGINEERING ENTREPRENEURSHIP (THEORY) MT-402

Pre-requisite: None

Credit Hours: 02

Contact Hours: 32

RECOMMENDED BOOKS

Entrepreneurship. Successfully launching new ventures, by Barringer, B. & Ireland, R., Fourth Edition (2012), Pearson.

REFERENCE BOOKS

- New Venture Creation. Entrepreneurship for the 21st century. A Pacific Rim Perspective, Timmons, J.A. et al, (2011), McGraw-Hill.
- Entrepreneurship for Engineers by Kenji Uchino

OBJECTIVE OF COURSE

Engineering Entrepreneurship introduces engineering students to the concepts and practices of technology entrepreneurial thinking and entrepreneurship. Using lectures, case studies, business plans, and student presentations, the course teaches life skills in entrepreneurial thought and action that students can utilize in starting technology companies or executing R&D projects in large companies.

S.NO	CLO/PLOS MAPPING	DOMAIN	PLO
01	Explore the entrepreneurial mindset and culture that has been developing in companies of all sizes and industries.	C1	8
02	Examine the entrepreneurial process from the generation of creative ideas to exploring feasibility to creation of an enterprise for implementation of the ideas.	C1	8
03	Create and present a business plan for a technology idea.	C2	8
04	Provide the background, tools, and life skills to participate in the entrepreneurial process within a large company, in a new venture, or as an investor.	C3	8

COURSE CONTENTS

Introduction

- History.
- Evolution of entrepreneurship.

- The entrepreneurial mindset.

Why Become an Entrepreneur?

- Common Myths about Entrepreneurs.
- Characteristics of Successful Entrepreneurs.
- Importance of entrepreneurship.
- The Entrepreneurial Process.

Developing Successful Business Ideas

- Recognizing opportunity and generating ideas,
- Identifying and Recognizing Opportunities,
- Finding Gaps in the Marketplace,
- Techniques for Generating Ideas,
- Encouraging and Protecting New Ideas

How to Commercialize Your Invention in the Real World

- Three creativities (Technological Creativity, Product Planning Creativity, Marketing Creativity)

Feasibility Analysis

- Product/Service Feasibility
- Market Feasibility
- Target Market/Industrial Feasibility
- Financial Feasibility

Writing a business plan

- Business plan,
- Reasons for Writing a Business Plan
- Guidelines for Writing a Business Plan
- Outline of the Business Plan
- Presenting The Business Plan To Investors

Industry and Competitor Analysis

- Industry Analysis
- The Five Forces Model
- Industry Types and the Opportunities They Offer
- Competitor Analysis: Identifying Competitors
- Sources of Competitive Intelligence

Moving from an Idea to an Entrepreneurial Firm

- Preparing the proper ethical and legal foundation Legal Aspects of Entrepreneurship
- Initial Ethical and Legal Issues Facing A New Firm
- Obtaining Business Licenses and Permits
- Choosing a form of business organization

Building A New Venture Team

- Creating a New-Venture Team
- Rounding Out the Team: The Role of Professional Advisers

Getting Financing Or Funding

- The Importance Of Getting Financing Or Funding

Corporate Capital and Funds—How to Find Financial Resources:

- Debt and Equity—Financial Resources at the Start-Up Stage
- Research Funds—How to Write a Successful Proposal

Managing and Growing an Entrepreneurial Firm

- Unique Marketing Issues
- Selecting a Market and Establishing A Position
- Branding
- The 4ps of Marketing for New Ventures
- Sales Process and Related Issues

The Importance of Intellectual Property

- The Importance of Intellectual Property
- Patents
- Trademark
- Copyrights
- Trade Secrets
- Conducting an Intellectual Property Audit

Preparing for and Evaluating the Challenges of Growth

- Preparing for growth, Reasons for Growth, Managing Growth.
- Growth Strategies: Franchising