

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

1. **Subject Code:** TMI-101

Course Title: Tinkering and Mentoring

Part-A: Mentoring

2. **Contact Hours:** **L:** 2

T: 0

P: 0

3. **Examination Duration(Hrs.):** **Theory:** 0

Practical: 0

4. **Relative Weightage:** **CWS:** 50 **PRS:** 0 **MTE:** 0 **ETE:** 50 **PRE:** 0

5. **Credits:** 2

6. Semester: Autumn

7. Subject Area: TMI

8. **Pre-requisite:** Nil

9. **Objective:** To acquaint students with fundamental knowledge of entrepreneurship, its process, intellectual property rights, standardization and ethics.

10. Details of the Course:

S.No.	Contents	Contact Hours
1.	Entrepreneurship – Concept, Functions, Need and Myths; The Indian Scenario, Types of Entrepreneurs, Competencies and characteristics, Intrapreneur, Business Plan: purpose and elements, Execution of Business Plan, Incubation and sources of funding for startups, Case studies on successful and unsuccessful startups.	6
2.	Idea generation, Feasibility Study and opportunity assessment, Introduction to Minimum Viable Product, Product Market Fit, important Accounting & Financial terms related to startups, Pricing strategy, Start up Pivot, understanding of B2B, B2C.	4
3.	Introduction to Intellectual Property, Copyright and Related Rights, Trademarks, Geographical Indications, Industrial Design, Patents, Unfair Competition. IP Development - The WIPO Development Agenda, Technology Transfer, Introduction to Standard Essential Patents (SEPs)	6
4.	Understanding the needs of Self and Body, understanding values in a human-human relationship, understanding the harmony in nature, understanding existence as co-existence, ability to identify the scope and characteristics of people-friendly and eco-friendly production systems, technologies and management models, the responsibility of engineers.	5
5.	Introduction to Bureau of Indian Standards (BIS): Objectives, roles and functions of BIS; Bureau of Indian Standards Act: roles and functions of BIS; Purpose of standardization, marking and certification of articles and processes, Importance of Standards to industry, policy makers, trade, sustainability and innovation.	4
6.	Case discussion through expert lectures	3
Total		28

11. Suggested Books:

S.No.	Name of Authors/Book/Publisher	Year of Publication/Reprint
1.	Ries, Eric, The Lean Startup, Portfolio Penguin	2011
2.	Mellor , Robert, “Entrepreneurship for Everyone: A Student Textbook”, SAGE Publications Ltd	2009
3.	Gaur RR, Sangal R, Bagaria G P, A Foundation Course in Human Values and Professional Ethics, Excel Books	2010
4.	A World Built on Standards: A Textbook for Higher Education; Published by: Danish Standards Foundation	2015
5.	Tewari, Rupinder and Bhardwaj Mamta, Intellectual Property: A Primer for Academia, Punjab University, Chandigarh	2021
6.	SO/IEC Guide 59, BIS Standards Formulation Manual	2022