
ECONOMICS OF INNOVATION AND TECHNOLOGICAL CHANGE

IE University

Professor: **VARUN GUPTA**

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Academic year: 23-24

Degree course: THIRD

Semester: 1^o

Category: COMPULSORY

Number of credits: 3.0

Language: English

PREREQUISITES

None.

SUBJECT DESCRIPTION

This course focuses on a major nexus of issues surrounding technological transformation, including how and why innovation happens, what regulations and other factors foster or discourage innovation, how technologies develop and adapt, and how they affect business activities. We gain an understanding of the relevant economic theories as they relate to the issues we examine by using real-world case studies and practical exercises as a jumping-off point. The students will also have opportunity to work on joint mini project and evolve it as they pass through various lecture sessions.

OBJECTIVES AND SKILLS

METHODOLOGY

Teaching methodology	Weighting	Estimated time a student should dedicate to prepare for and participate in
Lectures	0.0 %	0 hours
Discussions	0.0 %	0 hours
Exercises	0.0 %	0 hours
Group work	0.0 %	0 hours
Other individual studying	0.0 %	0 hours
TOTAL	0.0 %	75 hours

PROGRAM

SESSION 1 (LIVE IN-PERSON)

Conceptual framework.

Session 1: Key concepts: innovation, science, technology, R&D, transfer, creativity

SESSION 2 (LIVE IN-PERSON)

Conceptual framework continued.

Session 2: Inputs and outputs of innovation: key characteristics

SESSION 3 (LIVE IN-PERSON)

Economic and business environment for innovation.

Session 3. Innovation agents and stakeholders, clustering and Porter's diamond, role of universities

SESSION 4 (LIVE IN-PERSON)

Economic and business environment for innovation.

Session 4. Innovation ecosystems and open innovation. Market and systemic failures. Innovation policies.

SESSION 5 (LIVE IN-PERSON)

New innovation trends: service, user, public, social innovation.

Session 5. Service Innovation, user innovation and role of knowledge-intensive business services

SESSION 6 (LIVE IN-PERSON)

New innovation trends: service, user, public, social innovation.

Session 6. Public innovation and social innovation

SESSION 7 (LIVE IN-PERSON)

Technology process, business strategies and new technological developments

Session 7: Technology process, generation of idea, internal business management. Technological business strategies: competitive, hierarchical, resources, dynamics technology portfolio

SESSION 8 (LIVE IN-PERSON)

Technology process, business strategies and new technological developments

Session 8: New technological developments: big data, block chain, AI

SESSION 9 (LIVE IN-PERSON)

Acquisitions of technology and organization

Session 9 Acquisition of technology: internal vs external, purchases, alliances, franchising, Joint Ventures

SESSION 10 (LIVE IN-PERSON)

Acquisitions of technology and organization

Session 10 Innovation management, organization changes, R&D department, management for developing new innovation projects

SESSION 11 (LIVE IN-PERSON)

Entrepreneurship and start-ups

Session 11. Entrepreneurship, VC, business angels, and other funding ways for innovation

SESSION 12 (LIVE IN-PERSON)

Entrepreneurship and start-ups

Session 12. The economics and business of start-ups

SESSION 13 (LIVE IN-PERSON)

IPR

Session 13. Key concepts of IPR, Real cases of IPR in global markets.

SESSION 14 (LIVE IN-PERSON)

Session 14. Policies for IPR and key issues and debates at stakes

SESSION 15 (LIVE IN-PERSON)

Teaching cases, Hands-ons with technologies.

EVALUATION CRITERIA

Final individual exam (50%)

Team joint paper (35%)

Individual participation in class (15%)

The instructions about the Joint paper will be shared in 1st session.

Criteria	Percentage	Comments
Final Exam	50 %	
Final Exam	0 %	
Final Exam	0 %	

PROFESSOR BIO

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OTHER INFORMATION