

Indian Institute of Technology Kanpur

Proposal for a New Course

1. **Course No:** ECO 7XX

2. **Course Title:** Economics and Business of Digital Technologies

3. **Per Week Lectures:** 3 (L), Tutorial: 0 (T), Laboratory: 0 (P), Additional Hours: 0

Credits: $(3 \times L + T + P + A)$: 9 credits

Duration of Course: Full Semester

4. **Proposing Department/IDP:** Economic Sciences

Other Departments/IDPs which may be interested in the proposed course: N/A

Other faculty members interested in teaching the proposed course: N/A

5. **Proposing Instructor(s):** Vimal Kumar

Course Description: This course aims to provide students with an interdisciplinary understanding of digital technologies through the lenses of economics, business, and public policy. It will equip students with the tools to analyze how digital technologies—especially platforms—create, capture, and regulate value in modern economies.

Objectives: By the end of the course, students will be able to:

- Understand and explain the economic logic behind digital technologies and platforms.
- Analyze strategic choices of digital businesses.
- Evaluate the social and policy implications of digital transformation.
- Design regulatory frameworks to address emerging challenges in digital markets.

A) Contents (*preferably in the form of 5 to 10 broad titles*):

S.No	Module Title	Key Topics	No. of Lectures
1	Digital Technologies	Overview of key digital technologies (AI, IoT, blockchain, cloud computing, big data); Enablers of digital transformation; Role of data as an economic resource.	4
2	Economic Foundations	Basic microeconomic principles (demand, supply, costs); Network effects; Economies of scale; Externalities;	10

		Information asymmetries in digital markets.	
3	Economics for Platforms and Other Digital Technologies	Two-sided markets; Platform pricing and competition; Winner-takes-all dynamics; Switching costs; Data as a strategic asset; Strategic behavior in digital environments.	10
4	Business Foundations	Business models in digital environments; Value chains and value networks; Digital entrepreneurship; Product-market fit and scaling.	4
5	Business of Platforms and Other Digital Technologies	Platform design and monetization strategies; Business models in AI/IoT/cloud; Ecosystems and complementors; Metrics for success in digital businesses.	6
6	Regulating Platforms and Other Digital Technologies	Antitrust and competition issues; Data privacy and ownership; Content moderation and misinformation; Algorithmic transparency and accountability; Regulatory responses in India and globally.	6

B) Pre-requisites, if any (*examples: a- PSO201A, or b- PSO201A or equivalent*): ECO 111 or ECO 211 or ECO 701

C) Short summary for including in the Courses of Study Booklet:

This course introduces students to the rapidly evolving field of Digital Economics, emphasizing how traditional economic principles adapt to and interact with emerging digital technologies and platforms. The course combines foundational theory with practical applications relevant to the digital marketplace, platform economy, data monetization, and regulatory frameworks.

6. Recommended books:

- Belleflamme, Paul and Martin Peitz (2022). The Economics of Platforms: Concepts and Strategy. Cambridge University Press.
- Levin, J. (2011). "The Economics of Internet Markets." NBER Working Paper No. 16852.
- Goldfarb, A. and Tucker, C. (2019). "Digital Economics." Journal of Economic Literature, 57(1): 3–43.
- Shapiro, Carl and Hal R. Varian. (1999). *Information Rules: A Strategic Guide to the Network Economy. Harvard Business School Press.
- Additional readings from academic journals, policy reports, and industry whitepapers will be provided during the course.

8. Any other remarks: N/A.

Dated: 11/04/25 Proposer: _____

Dated: _____ DUGC/DPGC Convener: _____

The course is approved / not approved

Chairman, SUGC/SPGC

Dated: _____