**Subject Description Form**

*Please read the notes at the end of the table carefully before completing the form.*

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| **Subject Code** | ISE549 | |
| **Subject Title** | Management of Innovation and Technology | |
| **Credit Value** | 3 | |
| **Level** | 5 | |
| **Pre-requisite / Co-requisite/ Exclusion** | None | |
| **Objectives** | 1. To develop the understanding of the range, scope, and complexity of the innovation systems and the technology incorporated (i.e. organizational innovation system, industrial, and regional etc)  2. To develop insight on the issues and challenges in managing innovation (systems), in the innovation process  3. To identify the critical skills required for managing the innovation process  4. To offer some practice in defining and working out strategic management problems related to technological innovation and corporate entrepreneurship. | |
| **Intended Learning Outcomes** | Upon completion of the subject, students will be able: *Category A relates to: Professional/Academic knowledge and skills, and Category B: Attributes for all-roundedness.*  a. To be able to identify practical innovation system/practices for companies (i.e. organizational, and regional)  b. To be able to perform situational analysis of company’s innovation strategies  c. To formulate strategies applicable to high-technology venture capital projects  d. To be able to implement and manage the innovation projects as a team | |
| **Subject Synopsis/ Indicative Syllabus** | 1. Importance of Technology and Innovation in Economic and Social Development   Risks and rewards of technological innovation; role of government policy in promoting technology and innovation; role of firm-level strategy in the global market   1. Innovation Types and factors affecting   Understanding on factors affecting innovation adoption; Diverse types of innovations; the heterogeneous impact of diverse innovations on firm performance   1. Organizational Learning as approach to drive innovations   Understanding how firms apply knowledge management and learning to maintain their advantage, why some firms are faster than others in creating new innovations and responding to change.   1. Importance of Technological Evolution   Lessons regarding the evolution of technology; the main concept of competition changes in accordance with the technological evolution   1. Technology Adoption   Understanding on differences between early vs. late adoption and its performance heterogeneity   1. Firm Boundary Decisions   Understanding on firm boundary; the impact of firm boundary decisions on performance; key reasons that firms change their boundaries; relationship between firm boundary decision and firm capability; relationship between firm boundary decision and inductry structure | |
| **Teaching/Learning Methodology** | This subject is offered via weekly classes. A mixture of lectures, tutorial exercises, and case studies will be used to deliver the various topics in this subject. Some of the topics will be covered in a problem-based format where this enhances the learning objectives. Case discussion and project activities will take place against a background of conceptual materials that are acquired through selected readings and brief lectures pertaining to the theme of each session. | |
| **Assessment Methods in Alignment with Intended Learning Outcomes** | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Specific assessment methods/tasks | % weighting | Intended subject learning outcomes to be assessed (Please tick as appropriate) | | | | | | | a | b | c | d |  |  | | 1. Assignment (Individual) | 30% | √ | √ | √ | √ |  |  | | 2. Project proposal (Group) | 10% | √ | √ | √ |  |  |  | | 3. Test | 25% | √ | √ | √ | √ |  |  | | 4. Project Report (Group) | 20% | √ | √ | √ |  |  |  | | 5. Project presentations | 15% | √ | √ | √ | √ |  |  | | Total | 100 % |  | | | | | |   Assessment comprises of an assignment, a group project with individual and group components, contributions in class and in online discusisons. | |
| **Student Study Effort Required** | Class contact: |  |
| * Lectures | 15 Hrs. |
| * Seminar/Case Studies | 24 Hrs. |
| Other student study effort: |  |
| * Preparation for seminar/case studies | 28 Hrs. |
| * Preparation for project presentation and report writing | 70 Hrs. |
| Total student study effort | 120 Hrs. |
| **Reading List and References** | |  | | --- | | 1. Melissa A. Schilling, Strategic Management of Technological Innovation, 6th edition, McGraw Hill, New York, 2020. 2. Burgelman, Robert, Clayton Christensen and Steven Wheelwright, Strategic Management of Technology and Innovation, McGraw-Hill/Irwin (ISBN: 0-07-253695­0), latest edition. 3. Tushman, Michael and Philip Anderson, Managing Strategic Innovation and Change, Oxford Press, latest edition. 4. Allen, Thomas J., Managing the Flow of Technology, MIT Press, Cambridge, Massacusetts, latest edition   More readings will be provided during the course delivery. | | |