**Subject Description Form**

|  |  |
| --- | --- |
| **Subject Code** | ISE5002 |
| **Subject Title** | Field Study of Technology Organizations |
| **Credit Value** | 3 |
| **Level** | 5 |
| **Pre-requisite/Co-requisite/Exclusion** | Students must have completed any two of the following four subjects: ISE542 Managing Knowledge, ISE549 Management of Innovation and Technology, ISE559 Technology Audit and Assessment, and ISE5001 Technology Transfer and Commercialization. |
| **Objectives** | This subject will provide students with the opportunity to1. Study and conduct real case studies of technology organizations in China, Taiwan or overseas, which is participating in the field study;
2. Perform a competitive benchmark evaluation and put into practice some of the key concepts and frameworks that they have learnt in two of the four subjects, namely, ISE542, ISE549, ISE559, and ISE5001;
3. Understand the implementation issues of proposed solutions to specific technological problems in organizations.
 |
|  **Intended Learning Outcomes** | Upon completion of the subject, students will be able to1. Conduct a technology portfolio analysis;
2. Identify the technology gaps in an organization;
3. Devise a road map for solutions to specific problems facing technology organizations;
4. Integrate technology into a company’s business strategy.
 |
| **Subject Synopsis/ Indicative Syllabus** | * 1. Review of Basic Concepts Important to the Field Trips

Technology and economic performance; science and technology infrastructure; industrial research and development; technology development and geographical considerations; technology and education/training; government’s roles in IP and technology commercialization.* 1. Technology Field Trip Study

Observations of and reporting of study visits to technology organizations in China, Taiwan or overseas. * 1. Problem-Solving Skills

Observations and reporting; mapping solutions.  |
| **Teaching/Learning Methodology**  | This subject includes lectures, case studies, and experiential learning based on best practices. The students are required to formulate a study plan to focus on achieving the goal of the field trip. Desktop research is required to gather information about the organization to be visited, its competitors, and the markets concerned. Through direct observation and interviews with organizational members, students have the opportunity to conduct real-life studies of technological issues facing companies and put into practice the knowledge that they have gained in other subjects offered in this programme. These activities allow students to achieve the learning outcomes of the subject. This subject is offered in block mode format. Two lectures are arranged by (i) local government officials or distinguished industrial association member or (ii) a partner university, to cover relevant innovation strategy topics related to the industries of the location to be visited.  |
| **Assessment Methods in Alignment with Intended Learning Outcomes** |

|  |  |  |
| --- | --- | --- |
| Specific assessment methods/tasks  | % weighting | Intended subject learning outcomes to be assessed  |
| a | b | c | d |  |  |
| 1. Individual write-up of background knowledge  | 10% | ✓ | ✓ | ✓ | ✓ |  |  |
| 2. Individual research report | 40% | ✓ | ✓ | ✓ | ✓ |  |  |
| 3. Individual reflective journal | 10% |  |  |  | ✓ |  |  |
| 4. Oral presentation | 10% | ✓ | ✓ | ✓ | ✓ |  |  |
| 5. Group study plan & project report | 30% | ✓ | ✓ | ✓ | ✓ |  |  |
| Total  | 100% |  |

Reports and presentation are used to assess the knowledge acquired by the students and their ability to apply such knowledge to achieve the learning outcomes of the subject. |
| **Student Study Effort Expected**  | Class contact: |  |
| * Lectures
 | 6 Hrs. |
| * Tutorials/Seminars/Case studies
 | 12 Hrs. |
| * Site visits
 | 21 Hrs. |
| Other student study effort: |  |
| * Preparation for visits and information gathering
 | 20 Hrs. |
| * Preparation for the project presentation and report writing
 | 63 Hrs. |
| Total student study effort  | 122 Hrs. |
| **Reading List and References** | There is no recommended textbook for this subject. A number of books and journals include materials of some relevance to this subject as referenced in ISE542, ISE549, ISE559, and ISE5001. The web-based material includes numerous references to online journal articles and websites that provide an abundance of relevant, detailed, and current information supporting the content. Potential readings include, but are not limited to:1. Robert Grant, 2013, *Contemporary Strategy Analysis*, 8th edition, John Wiley & Sons, UK
2. Melissa Schilling, 2012, *Strategic Management of Technological Innovation*, 4th edition, McGraw-Hill, New York
3. Burgelman, Christensen, and Wheelwright, 2008 *Strategic Management of Technology and Innovation*, 5th edition, McGraw-Hill, New York
4. Angelis, Diana 2002, *An Optimal Model for R&D Valuation*, Int. J of Technology management, Vo. 24, No. 1, pp. 44-56
5. Barrel, Ray, Geoff Mason and Mary O’Mahony 2000, *Productivity, Innovation and Economic Performance,* Cambridge University Press
6. Gregory, M.J., D.R. Probert and D.R. Cowell 1996, *Auditing Technology Management Processes,* Int. J. of Technology management, Vo. 12, No. 3, pp. 3-6-319
7. Phaal, R., C.J.P. Farrukh and D.R. Probert 2001, *Technology Management Process Assessment: A Case Study,* Int. J. of Operations & Production Management, Vol. 21, No. 8, pp. 1116-1132
8. New Venture Tools at: <http://www.newventuretools.net>
9. Lester, Richard 1998, *The Productive Edge – How U.S. Industries are Pointing the Way to a New Era of Economic Growth*, Norton, New York
 |