**Program Learning Outcomes:**

1. **Engineering Knowledge:** An ability to apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
2. **Problem Analysis:** An ability to identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
3. **Design/Development of Solutions:** An ability to design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
4. **Investigation:** An ability to investigate complex engineering problems in a methodical way including literature survey, design and conduct of experiments, analysis and interpretation of experimental data, and synthesis of information to derive valid conclusions.
5. **Modern Tool Usage:** An ability to create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex engineering activities, with an understanding of the limitations.
6. **The Engineer and Society:** An ability to apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solution to complex engineering problems.
7. **Environment and Sustainability:** An ability to understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.
9. **Individual and Team Work:** An ability to work effectively, as an individual or in a team, on multifaceted and /or multidisciplinary settings.
10. **Communication:** An ability to communicate effectively, orally as well as in writing, on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project Management:** An ability to demonstrate management skills and apply engineering principles to one’s own work, as a member and/or leader in a team, to manage projects in a multidisciplinary environment.
12. **Lifelong Learning:** An ability to recognize importance of, and pursue lifelong learning in the broader context of innovation and technological developments.

**Course Information Sheet**

**A – Basic Information**

|  |  |  |
| --- | --- | --- |
| **Title:** Technopreneurship | | **Code:** HS353 |
| **Program:** Bachelor of Computer Science/ Software Engineering | **Semester:** Spring 2020 | **Credit Hours:** 3+0 (48 Hrs.)  **Lecture: 3.0**  **Practical:** 0.0 |
| **Knowledge Area**: Humanities and Social Sciences |  | |

**B – Professional Information**

1. **Course Objectives:**

Job market for engineers is down, existing engineering businesses are not expanding enough, therefore the need to get self-employed & self-reliant has never been so strong. Also, it is the social responsibility of the resourceful to create employment opportunities for others, i.e. create jobs for people who are job-less. One can do this by striving to become an entrepreneur. If there is an entrepreneur hiding inside you, if you have the potential, if you want to be your own boss then this is the course which will help you and gives you a platform to apply your engineering knowledge and skills to form a technology venture.

1. **Course Learning Outcomes (CLOs):**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CLO No.** | **CLO Description** | **Domain and Taxonomy level** (Cn/Pn/An) | **PLO mapped**  **(i to xii)** | **Level of emphasis of the PLO**  **(1=High; 2=Medium; 3=Low)** |
| 1 | Students will be able to define, identify and/or apply development of successful business ideas | Cognitive / C3 | PLO-12 | 1-High |
| 2 | Students will be able to define, identify and/or apply development of entrepreneurial Firm from an Idea. | Affective / A4 | PLO-3 | 1-High |
| 3 | Students will be able to define, identify and/or apply managment and growth of an entrepreneurial firm | Affective / A3 | PLO-11 | 2-Medium |

***\*Note:*** *C 🡪 Cognitive, P 🡪 Psychomotor, A 🡪 Affective domains and ‘n’ is the taxonomy level.*

*It is strongly suggested that one CLO should be mapped to one PLO and one domain only.*

1. **Syllabus and Books:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Week** | **Topic Covered** |  | **CLO** |
| 1 | CHAPTER 1 Introduction to Entrepreneurship |  | 1 |
| 2 | CHAPTER 2 Recognizing Opportunities and Generating Ideas |  | 1 |
| 3 | CHAPTER 3 Feasibility Analysis |  | 1 |
| 4 | CHAPTER 5 Industry and Competitor Analysis |  | 1 |
| 6 | CHAPTER 6 Developing an Effective Business Model |  | 1 |
| 7 | CHAPTER 7 Preparing the Proper Ethical and Legal Foundation 213 |  | 2 |
| 8 | Presentations of the Business Models |  | 2 |
|  | Mid Term |  |  |
| 9 | Reflection and Deficiency Identification |  | 2 |
| 10 | CHAPTER 8 Assessing a New Venture’s Financial Strength and Viability |  | 2 |
| 11 | CHAPTER 9 Building a New-Venture Team |  | 2 |
| 12 | CHAPTER 10 Getting Financing or Funding |  | 2 |
| 13 | CHAPTER 11 Unique Marketing Issues |  | 3 |
| 14 | CHAPTER 12 The Importance of Intellectual Property |  | 3 |
| 15 | CHAPTER 13 Preparing for and Evaluating the Challenges of Growth |  | 3 |
| 16 | CHAPTER 14 Strategies for Firm Growth |  | 3 |
|  | Final Exam |  |  |

**Recommended Books / Video Lectures:**

1. *Text Books*
   1. Entrepreneurship by Bruce R. Barringer and Duane Ireland (4th Edition)
   2. Effectuation Theory by Saras Saraswathy
   3. The Lean Startup by Eric Ries
   4. Startup Owner’s Manual –by Steve Blank & BlankDorf
   5. Business Model Generation by Alexander Osterwalder & Yves Pigneur
2. *Reference Books:*
   1. Paul Burns and Jim Dew Hurst: Small Business and Entrepreneurship (Latest edition)
   2. Peter F. Drucker: Innovation and Entrepreneurship Peter F. Drucker (Latest edition)
   3. P.N. Singh: Entrepreneurship for Economic Growth (Latest edition)
   4. John B. Miner: Entrepreneurial Success (Latest edition)
3. *Other Reading Resources:*
   1. Various articles from reputed magazines (Entrepreneur.com, HBR, Forbes, etc.) and success stories of entrepreneurs (local)
   2. TV shows related to Entrepreneurship on YouTube like “Idea Croron Ka” by NEO TV, and Shark Tank.
   3. Selected TED Talks
4. **Percentage of theoretical background, problems analysis and solution design**

|  |  |
| --- | --- |
| **Elements covered in the course** | **Percentage of full course coverage** |
| Theoretical background | 30% |
| Problem analysis | 20% |
| Solution design | 50% |

1. **Teaching and learning methods:**
   1. Lecture
   2. Class discussion
   3. Presentations
   4. Assignments & Startup Project
2. **Student Assessment Methods:**
   1. Quizzes
   2. Assignments / Presentation
   3. Exams (Theory)
3. **Assessment Schedule:**
   1. Quiz: throughout the semester
   2. Assignment: throughout the semester
   3. Exams
      1. Midterm Exam Week 9
      2. Final Theory Exam Week 18
4. **Weighting of Assessments:**

**Theory:**

1. Assignments / Quizzes / Project 20%
2. Midterm Examination 20%
3. Final Term Examination 60%

Total 100%

1. **Facilities required for teaching and learning**
2. Lab resources: PCs
3. Computer Usage: to conduct online quizzes
4. Software: Google Form / UIT Online Software