Technology Innovation

PREPARED BY: Dr. Nouredine Boubekri
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OFFICE: Department of Engineering Technology-Discovery Park
F115P :Tues and Thurs From 3:00-4:00pm

COURSE NUMBER, TITLE, CREDIT HOURS:

MSET 5060, 3 credit hours

DESCRIPTION:

COURSE LEARNING OBJECTIVES:
1-Demonstrate an understanding of processes, techniques, involved in generating screening and bringing to fruition ideas when innovating
2-Demonstrate an understanding of planning, financial, organizational, legal, and commercialization processes involved in technology innovation
3-Demonstrate an understanding od social impacts of Technology innovation

COURSE LEARNING OUTCOMES
The course demonstrates that graduates have:
d. an ability to function on multidisciplinary teams.
e. an ability to identify, formulate and solve engineering problems.
f. an understanding of professional and ethical responsibility.
g. an ability to communicate effectively.
i. a recognition of the need for, and an ability to engage in life-long learning.
j. a knowledge of contemporary issues

PREREQUISITES: Graduate Standing

TEXTBOOKS:
-Softbound handbook provided in class
-Reference reading: New Products Management by C. Merle Crawford/C. Anthony Di Benedetto (Library Reference Section)

CASE STUDIES
Distributed in class

COURSE OUTLINE:

This course outline is the core of what is to be covered in the course. Research Material may be added as appropriate by the course instructor.
1. Introduction to Innovation and Innovation Technology-Strategic Planning
2. Processes of Technology Innovation-Ideas Generation and Screening
3. Planning and Organizing for Technology Innovation
4. Financial and capacity planning
5. Commercialization of innovation
6. Technology Innovation and Society- Societal and Legal Aspects

Semester projects are prepared and presented in class following professionally accepted standards.

**LIBRARY USAGE:**

Students are encouraged to use library resources to conduct their research semester projects; hence all software support available through UNT library system.

**GRADING ELEMENTS AND WEIGHTS:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Mini semester project (2)</td>
<td>20%</td>
</tr>
<tr>
<td>Semester Exams (1)</td>
<td>40%</td>
</tr>
<tr>
<td>Case Studies Analyses</td>
<td>15%</td>
</tr>
<tr>
<td>Attendance</td>
<td>5%</td>
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**PROJECT REQUIREMENTS**

**Mini project 1**

Research Projects in select areas
- Select a disruptive technology
- Establish the impetus (reasons) for developing this technology
- Describe the innovation(s) involved at each stage of the development process.

**Mini project 2**

- Describe the organizational structure that you would establish
- Describe the economic, societal impact and potential legal aspects resulting from the development and implementation of this technology
- Address future developments of this technology

This is a semester project. It is to be performed in groups of 2 students.
Each project requires a report and presentation in class (scheduled to be determined)