Technology Innovation

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Office Hours **Monday and Wednesday from 1:30pm to 2:30pm by appointment**

COURSE NUMBER, TITLE, CREDIT HOURS:

MSET 5060, 3 credit hours

DESCRIPTION:

Innovation Technologies. Topics include: Understanding Innovation, Processes of Technology Innovation, Techniques of Technology Innovation , Planning for Innovation, Using Innovation Technology, Engineering Technologies Cases analyses.

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
4-Demonstrate an understanding of project planning

COURSE LEARNING OUTCOMES

The course demonstrates that graduates have:
an ability to function on multidisciplinary teams.
an ability to identify, formulate and solve engineering problems.
an understanding of professional and ethical responsability
an ability to communicate effectively.
a knowledge of contemporary issues

PREREQUISITES: Graduate Standing

TEXTBOOKS:

-Notes provided on canvas including case studies
-Reference materials (Technical articles from the web)

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-Concept Generation
3. Processes of Technology Innovation -Concepts Screening
4. Planning and Organizing for Technology Innovation
5. Financial planning
6. Capacity planning
7. Commercialization of innovation
8. Technology Innovation and Society- Societal and Legal Aspects
9. Product Life Cycle Analysis
10. Project Review

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

GRADING ELEMENTS AND WEIGHTS:

Semester project	30% Refer to Project Description on Canvas
Semester Exam	30%. Exam date December 07 ,2022
Topic litterature review report and power point	20% Due November 23
Case Studies Analyses by team	20%. Cases assigned on Canvas