Technology Innovation

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Office Hours **Tuesday and Thursday from 2:00pm to 3:00pm 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:

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 responsability
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:

-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-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
7. Product Life Cycle Analysis
8. Project Review

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

GRADING ELEMENTS AND WEIGHTS:

Semester project	40% Refer to Project Description on Canvas
Semester Exam	40%. Exam date May 05,2022
Case Studies Analyses	20%. Cases assigned on Canvas