

IE 498 Senior design project 1 2(2,0,0)

Catalog Data	Senior students select a design project and apply learned tool and knowledge to design process, components, and/or system of the production system; Students develop work plan, identify the problem, formulate the problem through reviewing background and integrating knowledge; prepare for/or preliminary conducting of the experiments, Collect the field data, develop the mathematical model if applicable; and writing a report stating preliminary findings.
Prerequisite	Passing 128 Cr. Hr.
Co-requisites	
Level	9
Textbook Reference	
Learning objective	Prepares the senior students to carry a production design project for process, product, component, and/or system on the basis of the learned knowledge reflecting the department program objectives.
Learning Outcomes	<u>The student should be able to:</u> 1. Identify project problem and statement based on realistic needs and relative constraints. ABET outcomes (a, e) [LO1] 2. Review related data, knowledge and experiences from credible sources. ABET outcomes (a, e) [LO2] 3. Formulate problem covering methodology of integrating knowledge drawn from previous courses and information, addressing the realistic constraints, and generating possible alternative design options and solution. ABET outcomes (e) [LO3] 4. Develop design objectives and evaluation; it should cover design viability, evaluation criteria, and problem reformulation based on available data. [Ability to carry computational and/or experimentations of the design project and to interpret and make decision on design issues]. ABET outcomes (a, e) [LO4] 5. Plan Project effectively using project planning techniques to ensure proper project timing and budgeting. ABET outcomes (e) [LO5] 6. Communicate orally and in writing the project design details in technical report. ABET outcomes (a, g, k) [LO6] 7. Work effectively as member of team. ABET outcomes (d) [LO7]
Laboratory	Labs are used to develop the design project
Project work	Team meeting weekly/ bi-weekly; individual
Computer	Computer use covers project work
Usage	
Estimated	Engineering Design: 3 credit hour or 100%.
Category	
Content	
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Preparation	1/4/2009G, Revised 30/5/2012G
Date	