Revised: Fall 2016

EGR 120
Introduction to Engineering

Faculty Name: Diane Kees

Program Head: Dr. Richard Clark

Dean's Review:

Dean's Signature: _____ Date Reviewed: ___/___/_____

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Revised: Fall 2014

EGR 120
Introduction to Engineering

COURSE OUTLINE

Course Description:

Prerequisite: EGR 124. Introduces the engineering profession, professional concepts, ethics, and responsibility. Reviews hand calculators, number systems, and unit conversions. Introduces the personal computer and operating systems. Includes engineering problem solving techniques using computer software such as Inventor, MATLAB, Excel, and LabVIEW. Lecture 2 hours per week.

Semester Credits: 2 **Lecture Hours: 2 Lab/Recitation Hours: 0**

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EGR 120 - Introduction to Engineering

Course Outcomes

At the completion of this course, the student should be able to:

1. Develop a computer program using MATLAB.
2. Develop a computer program using LabVIEW.
3. Complete a technical laboratory for an engineering design project.

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Required Materials:

NONE

Textbooks:

1. Hands-On Introduction to LabVIEW for Scientists and Engineers, 2nd Edition
   John Essick
   3rd Edition
   ISBN: 9780190211899
   Publisher: Oxford University Press

2. Thinking Like an Engineer, 3rdd Edition
   Stephan, et al.
   ISBN-9780133808483
   Publisher: Pearson Prentice Hall

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Topical Description:

Week	Week of:		Topic	Chapter
1	Aug	25	MATLAB Intro	TLE 15
2	Sept	1	MATLAB	TLE 16
3		8	MATLAB	TLE 16
4		15	MATLAB	TLE 17
5		22	MATLAB	TLE 18
6		29	MATLAB	TLE 19
7	Oct	6	MATLAB Projects	Sound Project
8		13	MATLAB Projects	Photo Project
9		20	MATLAB Projects	Photo Project
10		27	Graphical Programming	LabVIEW 1
11	Nov	3	Graphical Programming	LabVIEW 2,3
12		10	Graphical Programming	LabVIEW 4,5
13		17	Graphical Programming	LabVIEW 6,7
		24	Project/Thanksgiving	Digital Thermo.
14	Dec	1	LabVIEW Project	Digital Thermo.
15		8	LabVIEW Project	Digital Thermo.
			Final Exam, Wed. 12/17	MATLAB/LabV

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Notes to Instructors

1. All instructors teaching this course will use the same textbooks.

2. Course content within this course may be covered at the instructor's discretion but with all topics being understood.

3. This course and its grades will be structured around several projects:

    a. MATLAB Projects (minimum of 2)
    b. LabVIEW Projects (minimum of 1)

4. At the end of the semester, all instructors will give the outcome assessment as it relates to the projects to the program head at the same time they prepare there student final grades.

5. A broad overview comprehensive final exam will be given for the two software programs.

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