

INTRODUCTION TO INDUSTRIAL ENGINEERING SYLLABUS

Course: *IENG 200*
Semester: *Spring 2015*
Number of Credit Hours: *1*
Description: *An introduction to the basic principles of Industrial Engineering*
Prerequisite: *Sophomore standing*
Textbook: *IENG 200 Problems and Tests*
Instructor: *Jack Byrd, Jr., PhD., PE*
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Course Goals

1. To introduce students to basic analysis approaches used in Industrial Engineering.
2. To introduce students to what it means to be a professional Industrial Engineer.

Student Learning Objectives

Upon completing the course, the student will be able to:

1. Use the principles of scientific management, working smarter and other principles of Industrial Engineering to analyze practical problems and make recommendations for improvement.
2. Use basic analysis tools of capacity analysis, break-even point analysis, and decision trees to solve Industrial Engineering problems.
3. Describe professional practices that are expected of an Industrial Engineer.
4. Develop a career plan

Course Contribution to Professional Component

Engineering Design – 100%

Course Relationship to Program Education Outcomes

The course relates strongly to the following program educational outcomes

1. The course introduces students to basic analytical tools that form the practice of Industrial Engineering. (Outcome 1)
2. The course introduces students to the principles of scientific management and related approaches to analyze type problems assigned to industrial engineers. (Outcome 2)

3. The course introduces students to basic concepts of professionalism, ethics, and career planning. (Outcome 6)

Class Period	Topic
1	Class organization, overview of Industrial Engineering
2	Principles of Scientific Management / Fishbone Diagram
3	Basic Industrial Engineering Principles
4	Measurement Principles
5	Visual Indicators
6	Cost Measurement
7	Mid Term Exam
8	Capacity Analysis - I
9	Capacity Analysis - II
10	Breakeven Point Calculations
11	Decision Trees
12	Career Options for Industrial Engineers
13	Professionalism and Ethics
14	Problem Review Sessions
15	Career Development Concepts

Grading Elements, Weighting and Scale:

Homework

There will be approximately 14 homework assignments graded during the semester. Each is worth 10 points. Total possible points = 140. The lowest homework grade will be dropped. Homework will be assigned each week. Any homework turned in more than one week late will not be graded.

Career Notebook:

You will be doing a series of assignments that will help you develop a career plan. These assignments will lead to the development of a career notebook. Total Possible Points = 50

Exams

There will be two exams, each worth 100 points. Total possible points = 200.

Grade Scale

A	90 and above
B	80 - 89
C	70 - 79
D	60 - 69

Class Attendance Policy:

1 percentage point will be deducted from the final average for each missed class. You are allowed one missed class.

Statement of Social Justice

West Virginia University is committed to social justice. I concur with that commitment. I expect to foster a nurturing learning environment that is based upon open communication, mutual respect and non-discrimination. Our University does not discriminate on the basis of race, sex, age, disability, veteran status, religion, sexual orientation, color or national origin. Any suggestions as to how to further such a positive and open environment in this class will be appreciated and given serious consideration.

If you are a person with a disability and anticipate needing any type of accommodation in order to participate in this, you must make appropriate arrangements through Disability Services (293-6700). They will identify the nature of the accommodation your disability requires.

Prepared by Jack Byrd, Jr., PhD., PE

Date: December 18, 2014