

## INTRODUCTION TO INDUSTRIAL ENGINEERING SYLLABUS

<b>Course:</b>	<b>IENG 200</b>
<b>Semester:</b>	<b>Fall 2019</b>
<b>Number of Credit Hours:</b>	<b>1</b>
<b>Description:</b>	<b>An introduction to the basic principles of Industrial Engineering</b>
<b>Prerequisite:</b>	<b>Sophomore standing</b>
<b>Textbook:</b>	<b>IENG 200 Problems and Tests</b>
<b>Instructor:</b>	<b>Makenzie Keepers IMSE PhD Student Email – <a href="mailto:mk0004@mix.wvu.edu">mk0004@mix.wvu.edu</a> Office – ESB 305</b>
<b>Office Hours:</b>	<b>Fridays 2:00p-2:50p or by appointment</b>

### **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.
3. To help students understand the best career paths available to them as an IE.

### **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 career options that are available to an Industrial Engineer.

### **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 different career paths available to Industrial Engineers. (Outcome 6)

<b>Class Period</b>	<b>Date</b>	<b>Topic</b>
1	8/23/2019	Class organization, overview of Industrial Engineering
2	8/30/2019	Principles of Scientific Management / Fishbone Diagram
3	9/6/2019	Basic Industrial Engineering Principles
4	9/13/2019	Measurement Principles
5	9/20/2019	Visual Indicators
6	9/27/2019	Cost Measurement
7	10/4/2019	Mid Term Exam
8	10/18/2019	Capacity Analysis - I
9	10/25/2019	Capacity Analysis - II
10	11/1/2019	Breakeven Point Calculations
11	11/8/2019	Decision Trees
12	11/15/2019	Career Options for Industrial Engineers
13	11/22/2019	Problem Review Sessions
14	12/6/2019	Career Development Concepts
Final Exam	12/17/2019	Noon-1p (split block with IENG 220)

***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.

***Peer Advising***

There will be weekly assignments referring to your meetings with a senior peer adviser. These will be sent out via email. Each is worth 5 points. Total possible points = 60. Late submissions will not be graded.

***Career Planning***

You will be doing a series of assignments that will help you develop a career plan. 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
F	59 and below

## ***Class Attendance Policy***

1 percentage point will be deducted from the final average for each missed class beyond the first. You are allowed one missed class. Example: if your final average in the course is a 90 and you have missed one class, your actual final average will be a 90. If your final average is a 90 and you have missed three classes, your actual final average will be an 88.

## ***Communication***

The WVU MIX email system will be used for all communication. The students are responsible for checking their MIX email regularly for information regarding assignments, lecture information, and any other important course related information. Students may be asked to print out information from the attachment in their email and bring it to class. Not all material will be sent in electronic form. Some material only in the form of hard copies will be distributed in class.

## ***Academic Integrity Statement***

The integrity of the classes offered by any academic institution solidifies the foundation of its mission and cannot be sacrificed to expediency, ignorance, or blatant fraud. Therefore, instructors will enforce rigorous standards of academic integrity in all aspects and assignments of their courses. For the detailed policy of West Virginia University regarding the definitions of acts considered to fall under academic dishonesty and possible ensuing sanctions, please see the West Virginia University [Academic Standards Policy](http://catalog.wvu.edu/undergraduate/coursecredittermsclassification) (<http://catalog.wvu.edu/undergraduate/coursecredittermsclassification>). Should you have any questions about possibly improper research citations or references, or any other activity that may be interpreted as an attempt at academic dishonesty, please see your instructor before the assignment is due to discuss the matter.

## ***Academic Standards Policy, including Academic Dishonesty***

The WVU Catalog contains the full [Academic Standards Policy](#).

- [Resources for Faculty and Students for Reporting and Appealing Violations of Academic Standards](#)

## ***Adverse Weather Statement***

In the event of inclement or threatening weather, everyone should use his or her best judgment regarding travel to and from campus. Safety should be the main concern. If you cannot get to class because of adverse weather conditions, you should contact your instructor as soon as possible. Similarly, if your instructor(s) are unable to reach the class location, they will notify you of any cancellation or change as soon as possible,

using agreed upon methods to prevent students from embarking on any unnecessary travel. If you cannot get to class because of weather conditions, instructors will make allowances relative to required attendance policies, as well as any scheduled tests, quizzes, or other assessments. [adopted 9-8-2014]

### ***Attendance Policy***

The WVU Catalog contains the full [Attendance Policy](#).

### ***Campus Safety Statement***

The WVU Police are committed to creating and maintaining a safe learning environment for all students, faculty, and staff. Part of this mission includes educating the campus community on how to respond to potential campus threats, such as the threat of an active shooter on campus or other suspicious behaviors. Fortunately, WVU Police offer training - both online and in-person - on how to handle a variety of campus safety scenarios. All students are encouraged to visit the [WVU Police](#)(<https://police.wvu.edu/>) webpage, in particular the content under the [Active Shooter](#)(<https://police.wvu.edu/training>) training program. Students are also encouraged to report any suspicious behaviors on campus using the [Report a Threat](#) (<https://police.wvu.edu/emergency-management/threat-assessment>) portion of the webpage. Additional materials on campus safety prepared by WVU Police, including special safety tips and training, will also be provided on our eCampus page. [adopted 10-2-17]

### ***Inclusivity Statement***

The West Virginia University community is committed to creating and fostering a positive learning and working environment based on open communication, mutual respect, and inclusion.

If you are a person with a disability and anticipate needing any type of accommodation in order to participate in your classes, please advise your instructors and make appropriate arrangements with [the Office of Accessibility Services](#).

(<https://accessibilityservices.wvu.edu/>)

More information is available at the [Division of Diversity, Equity, and Inclusion](#) (<https://diversity.wvu.edu/>) as well. [adopted 2-11-2013]

### ***Incomplete Policy***

The WVU Catalog contains the full [Incomplete Policy](#).

### ***Sale of Course Material Statement***

All course materials, including lectures, class notes, quizzes, exams, handouts, presentations, and other course materials provided to students for their courses are protected intellectual property. As such, the unauthorized purchase or sale of these materials may result in disciplinary sanctions under the [Student Conduct Code](#). (<https://studentconduct.wvu.edu/policies-and-procedures>) [adopted 5-11-2015]

### ***Sexual Misconduct Statement***

West Virginia University does not tolerate sexual misconduct, including harassment, stalking, sexual assault, sexual exploitation, or relationship violence [[BOG Rule 1.6](#)]. It is important for you to know that there are resources available if you or someone you know needs assistance. You may speak to a member of university administration, faculty, or staff; keep in mind that they have an obligation to report the incident to the [Title IX Coordinator](#). (<https://titleix.wvu.edu/staff>)

If you want to speak to someone who is permitted to keep your disclosure confidential, please seek assistance from the [Carruth Center](#), 304-293-9355 or 304-293-4431 (24-hour hotline), and locally within the community at the [Rape and Domestic Violence Information Center](#) (RDVIC), 304-292-5100 or 304-292-4431 (24-hour hotline).

For students at WVU-Beckley, contact the [Women's Resource Center](#) at 304-255-1585 (toll free at 1-888-825-7836) or [REACH](#) at 304-340-3676. For students at WVU-Keyser, contact the WVU-Keyser [Psychological Services Office](#) at 304-788-6976, and locally in Keyser, the [Family Crisis Center](#), 304-788-6061 or 1-800-698-1240 (24-hour hotline).

For more information, please consult [WVU's Title IX Office](#) (<https://titleix.wvu.edu/confidential-resources>).

### ***Student Evaluation of Instruction Statement***

Effective teaching is a primary mission of West Virginia University. Student evaluation of instruction provides the university and the instructor with feedback about your experiences in the course for review and course improvement. Your participation in the evaluation of course instruction is both strongly encouraged and highly valued. Results are strictly confidential, anonymous, and not available to the instructor until after final grades are released by Admissions and Records. Information about how you can complete this evaluation will be provided by your instructor. [adopted 4-14-2008]

***Prepared by Makenzie Keepers***

***Date: August 13, 2019***