

# **Re-Engineering Management Systems**

**Fall 2018**

<b>Course</b>	IENG 220
<b>Semester</b>	Fall 2018
<b>Number of credit hours</b>	3
<b>Description</b>	Principles and techniques associated with system, job, and task re-engineering. Work measurement systems, work-flow analysis, and time study techniques. Introduction to factors influencing people and machines.
<b>Prerequisite</b>	Sophomore standing
<b>Course Material</b>	Instructional materials will be provided to support various topics covered.
<b>Instructor</b>	<b>Jack Byrd, Jr., PhD., PE</b> Professor, IMSE Department Email - <a href="mailto:jabyrd@mix.wvu.edu">jabyrd@mix.wvu.edu</a> Phone - 293-3612 x 1

**Carla Short**  
Assistant  
Email: [jabyrd@mix.wvu.edu](mailto:jabyrd@mix.wvu.edu)  
Phone: 293-3612 x 1

## **Course Goals**

1. To develop the student's ability to examine a work process and use Industrial Engineering principles to improve it.
2. To develop the student's ability to measure work activities and to use these measurements in business applications.
3. To design efficient work practices.
4. To develop student's ability to examine how best to integrate technology into work situations.

## **Student Learning Objectives**

Upon completing the course, the student will be able to

1. Analyze a work process and recommend improvements which are cost-effective.
2. Measure work effort and apply these measurements in a variety of applications
3. Use various Industrial Engineering principles in work practice design.

### ***Course Relationship to Program Educational Outcomes***

The course relates strongly to the following education outcomes

1. The course develops the student's ability to apply fundamental Industrial Engineering principles to the design of efficient work practices (outcome 1)
2. The laboratory in the course will develop an understanding of what it takes to work successfully in team environment (Outcome 4)
3. The instructional approach with its emphasis on learning concepts within the context of actual situations and the nature of the lab will help students learn how to shape solutions that are based on sound engineering principles as well as being applicable in practical environments (Outcome 3)

### ***Grading Elements, Weighting and Scale***

The grade in IENG 220 will be based upon the following grading elements:

- **Tests:** There will be two tests during the semester plus a final. Each of the tests will be worth 100 points. All tests will be open book, open notes. The final will cover the course content since the second hourly exam. The final will not be comprehensive.
- **Project:** There will be one project that ties together the content from this course. The project will be worth 100 points.
- **Homework:** There will be homework assigned after each class period. Each homework assignment will be worth 10 points. The lowest two homework grades will be dropped. There will be approximately 250 points for homework. If you don't make a serious effort at doing the homework, you will have no hope of passing the tests.

**Tests, Homeworks and Bonuses will be worth 75% of your grade.**

### ***Lab Reports***

Each lab report will be worth 25 points. In most cases, lab reports will be done as a team and the team will receive the same grade. At the end of the semester, team members will be asked to evaluate each other's performance. Based on this evaluation, there will be an individual component to the overall lab grade. There will be approximately 300 points for the lab grade.

The lab grade will be 25% of the final grade.

### ***Homework Policy***

You will have a graded homework assignment each class period. In most cases, the homework will be returned to you on the following schedule:

Day Homework is Due	Day Homework is Returned
Monday	Following Monday
Wednesday	Following Monday

Should you be unable to turn in homework on the date it is due, you can still turn in homework the next class period. You will need to keep up with the homework to do well in the class. After the homework is returned, you will not receive credit for late homework. Any late homework can be turned in the next class.

The lowest two homework grades will be dropped.

### ***In Class Bonuses***

I will frequently ask you to work on problems in class. Each of these will be worth up to 5 points.

**It is virtually impossible to get above a D in this class without consistent performance on the homework throughout the semester.**

### ***Professionalism***

This is the first course in your major. The workload in this class is what you can expect in future Industrial Engineering classes. Your assignments ask you to think like an Industrial engineer. You should also be developing the professionalism of an engineer. Should you find the workload to be too much, you need to work on your personal discipline and time management skills. Your professor will help you do this. If you are not willing to make the time commitment to do well in this course, you are unlikely to be successful in future classes in Industrial Engineering. If you do make the commitment to do well in this course, you will have developed a significant collection of skills which you will use for the rest of your life.

## **Class Attendance Policy**

Class attendance is mandatory. There will be a deduction of one percentage point from the final grade for each missed class after two missed classes.

## ***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: July 10, 2018**