

ISE 200: Introduction to Computers and Industrial Engineering

Winter 2008

Course: ISE 200 – Introduction to Computers and I. E. – 4 credit hours

Call number: 04136

Catalog Description: Introduces the major skills that Industrial Engineers are responsible for in practice, including engineering economy, methods of analysis, and system design. The applications and important features of office software, especially spreadsheets, are explained, with examples related to the IE skills that are discussed.

Sessions: Monday-Tuesday-Wednesday-Thursday @ 12:10-1:00, 102 Stocker

Instructor: Dale Masel *masel@ohio.edu*
273 Stocker Center, 593-1541
AIM *dtmasel*

Office Hours:

Monday-Wednesday 9:00-10:00 am

Tuesday-Thursday 2:00-3:00 pm

Detailed schedule available at <http://imse.ent.ohiou.edu/>

Textbook: A textbook will not be used for this course. Handouts will be provided for reading and for computer assignments. A three-ring binder is recommended (1½ inches, minimum), to keep the handouts organized.

Course Objectives:

This course will introduce the basics of several different skills that are commonly used by industrial and systems engineers. In addition, the course will demonstrate how common software tools can be applied to solve these problems. These tools will include word processing, spreadsheets, and databases.

Course Prerequisite Skills:

There are no prerequisite courses for ISE 200. However, students entering ISE 200 are expected to be able to perform basic algebra.

Course Outcomes:

1. Define the field of Industrial Engineering
2. Explain the significance of the IE program topics to the process of designing and analyzing complex systems
 - Work Measurement
 - Facilities Design
 - Material Handling
 - Probability and Statistics
 - Operations Planning
 - Quality Control
 - Engineering Economy
 - Operations Research
 - Simulation
 - Project Management
3. Utilize common office software to analyze and present information

Computer Usage:

Microsoft Excel, Word, PowerPoint, and Access will be used for formatting, organizing, retrieving, analyzing and presenting information. Assignments will be submitted via Blackboard.

Grading Policy:

Assignments:

| | |
|--|------|
| • Homework assignments (approx. 2 per week)..... | 50% |
| • Midterm (closed book) in class on Tuesday, February 12..... | 25% |
| • The final exam (closed book) will be Monday, March 17 at 12:20 pm..... | 25% |
| | 100% |

| | | | | | | | |
|-----------------------|-----------|------------|-----------|-----------|-----------|---|----------|
| <u>Grading Scale:</u> | A | 94% - 100% | A- | 90% - 93% | | | |
| B+ | 87% - 89% | B | 84% - 86% | B- | 80% - 83% | | |
| C+ | 77% - 79% | C | 74% - 76% | C- | 70% - 73% | | |
| D+ | 67% - 69% | D | 64% - 66% | D- | 60% - 63% | F | 0% - 59% |

Attendance Policy:

Attendance will not be taken for lecture classes, but students are expected to be present for all class periods. Make-up tests will only be given in exceptional cases if prior arrangements are made.

Academic Misconduct:

Cheating will not be tolerated. One of the purposes of homework assignments is for me to evaluate your ability to perform the skill(s) being covered by the assignment. If you copy from an online source or from another person, then I am evaluating how good the source you copied from was, not how well you can do the work. While I encourage you to ask questions of your classmates and talk about the results of your work, I expect what you turn in is your own work.

If you copy from another person, plagiarize, turn in someone else's work as your own, or otherwise fail to maintain a high standard of academic honesty, you will receive a 0 on the assignment and the case will be referred to the Ohio University Judiciaries.

Tentative Schedule:

| Week | Week of | Days | Monday/Wednesday | Tuesday/Thursday |
|------|---------|------|----------------------------|----------------------------------|
| 1 | Jan. 7 | M-T | Intro to Course | Intro to ISE |
| | | W-Th | Technical Writing | Word: Styles and Features |
| 2 | Jan. 14 | M-T | Systems Approach | Visio: IDEF0 |
| | | W-Th | Work Design | Excel: Formulas and Functions |
| 3 | Jan. 21 | M-T | NO CLASS | Engineering Economy |
| | | W-Th | Probability & Statistics | Excel: Econ and Stats Functions |
| 4 | Jan. 28 | M-T | Qual. Ctrl/Design of Expts | Excel: Charts |
| | | W-Th | Inventory & Mfg Control | Excel: Lookups |
| 5 | Feb. 4 | M-T | Operations Research | Linear Programming |
| | | W-Th | Excel: Solver | Project Management |
| 6 | Feb. 11 | M-T | Visio: Gantt Charts | EXAM (Closed-book) |
| | | W-Th | Simulation | Excel: Conditional Statements |
| 7 | Feb. 18 | M-T | Facility Layout | Excel: Conditional Formatting |
| | | W-Th | Material Handling | Excel: Adv. Formulas & Functions |
| 8 | Feb. 25 | M-T | Databases | Access: Writing Queries |
| | | W-Th | Information Systems | Access: Reports & Forms |
| 9 | Mar. 3 | M-T | Human Factors | PowerPoint |
| | | W-Th | ISE in Service Industry | Visio: Flow Charts |
| 10 | Mar. 10 | M-T | Lean Manufacturing | Six Sigma |
| | | W-Th | Ethics | Ethics |

