

Southeast Missouri State University

Department of Industrial and Engineering Technology Course No. CM260
Title of Course: Computation Methods and Tools for Revision _____
Construction Managers New Spring 2013

I. Catalog Description and Credit Hours of Course:

Study of computational methods and tools used by construction managers. Students will work with Excel, Word, manual calculation methods and computer programming techniques to further their understanding of how computers and calculations are used by Construction Managers.
3 credit hours.

II. Prerequisite (s): None

III. Purposes or Objectives of the Course:

- A. Gain understanding of fundamental calculation methods to determine quantity takeoffs.
- B. Gain familiarity with general computers and computer network systems.
- C. Gain understanding of Word and Excel as applied to construction management activities.
- D. Gain introductory understanding of computer programs and computer programming techniques.

IV. Student Learning Outcomes:

- A. Students will be able to use the necessary calculations and tools to determine quantity takeoffs.
- B. Students will be able to demonstrate general computing and software skills to solve technical construction management and design problems.
- C. Students will be able to effectively use Excel and other tools for construction management activities.

V. Expectations of Students:

A. Attendance:

- 1. Students are expected to attend all classes.
- 2. Class attendance will be taken each class. If an attendance sheet is used it will be your responsibility to sign the attendance sheet.
- 3. Attendance is not required; however material may be discussed in class that is not covered in the textbook, and may show up on subsequent quizzes or tests. It will be your responsibility to obtain any missed material.
- 4. A student not present for class during the entire initial week of a scheduled course may be removed from the course roster unless the student notifies the instructor by the end of the first week of an intention to attend the class. Questions regarding the removal process should be directed to the Registrar. Reference: <http://www.semo.edu/bulletin/pdf/2006Bulletin.pdf>.

B. Assignments:

- 1. Students are expected read assigned materials. The majority of reading assignments will come from the textbook and handouts. Homework assignments will be from the textbook, worksheets, web site or handouts.
- 2. Students should anticipate a reading and/or assignments every class. Assignments will be listed on the website, typically the before class.
- 3. There will be a midterm test and a final exam, also during the semester we will have several in-class quizzes (or in-class assignments). Some quizzes will be announced, others will not.

4. Students are expected to complete all assignments. An absence does not relieve the student of the responsibility to complete all assignments. If an absence is associated with a university-sanctioned activity, or other legitimate reason, and the instructor is given prior notice, the instructor will provide an opportunity for assignment make-up. However, it is the instructor's decision to provide, or not to provide, make-up work related to absences for any other reason. Students who miss class, excused or unexcused, are expected to check the website for assignments. Arrangements should be made to turn in assignments on-time for missed classes.
5. Unless stated otherwise, assignments will be due at the end of class. Assignments that are turned in late are subject to a thirty percent (30%) deduction. Assignments later than two weeks are not accepted unless student has received prior approval from instructor.
6. All assignments should include your name, course number and date due.
7. Tests and quizzes may contain material covered in class, even if it is not in the text, and material in the text, even if it is not covered in class.
8. If you miss an in-class assignment, 5 point assignment, quiz or test and the absence is not excused you will receive 0 credit for the assignment. For an excused absence you must have a doctor's note, funeral notice or letter from coach or teacher for official school function.
9. Scores for assignments will be posted as soon as possible in the Gradebook on the Course Website. Grades for assignments turned in late will take longer to be placed in Gradebook.
10. Student work will be completed in accordance with Code of Student Conduct (<http://www6.semo.edu/judaffairs/code.html>). The Undergraduate Bulletin defines academic dishonesty as "...those acts which would deceive, cheat, or defraud so as to promote one's scholastic record...", and states that "violations of academic honesty represent a serious breach of discipline and may be considered grounds for disciplinary action, including dismissal from the university". Students who plagiarize or copy others' work will be subject to disciplinary action as addressed in the code and including, but not limited to failure of that assignment. Additional information may be reviewed in the Undergraduate Bulletin: <http://www.semo.edu/bulletin/pdf/2006Bulletin.pdf>.

C. Class Participation and Demeanor:

1. As a common courtesy to fellow students and the instructor, students should arrive before class starts and stay for the duration of class, unless prior arrangements have been made.
2. Student class participation is encouraged. Questions may be asked at any time, unless other directions are given.
3. Cellular phones and other electronic devices shall not be used during lectures. Phones are to be turned off or silenced and put away during lecture so as not to distract the student and disrupt the class. During lab time step outside of class to use your phone. If student is expecting an important call, notify instructor before class.
4. No food or drink in classrooms with computers; food and drink may be prohibited in other classrooms if the privilege is abused (e.g. trash is not properly disposed).
5. No tobacco use of any kind in the classroom. Violators will be asked to leave class.
6. A casual classroom demeanor by the instructor does not mean that sub-standard or non-professional work is acceptable. Students should maintain a climate of respect and civility. Harassment and unacceptable conduct will not be tolerated and may be subject to action by Judicial Affairs.

VI. Course Content or Outline: (4 contact hours per week)

- A. Week 1 – Computer Hardware and other computational devices;
Week 2 – Computer operating systems and batch files
Week 3 – Computer Networks and Server Installation
Week 4 – Quantity Takeoffs
Week 5 – Quantity Takeoffs
Week 6 – Quantity Takeoffs
Week 7 – Using Word in Construction Management Applications
Week 8 – Using Excel in Construction Management Applications
Week 9 – Using Excel in Construction Management Applications
Week 10 – Basic Programming Constructs and overview of languages
Week 11 – Conditional Looping
Week 12 – Programming Constructs
Week 13 – Advanced Excel and Introduce Macros
Week 14 – Research various software used by Construction Managers
Week 15 – Macro Programming in either Excel or Revit
- B. Tentative topics will be shown on the Class Content page of the Course Website and revised periodically to reflect updates or actual scheduling.
- C. Instructor reserves the right to change the content and/or sequencing of the materials presented and will notify students of any changes.

VII. Textbook(s) and/or Other Required Materials or Equipment:

- A. Course Textbook:
- B. A USB Flash drive to save work.
- C. Headphones for MP3 player or similar type device.
- D. Scientific Calculator.

VIII. Basis for Student Evaluations

- A. The common criteria for evaluation of drafting performances are: Accuracy, Speed, and Neatness. All work is to be kept in a portfolio, USB drive and student server for review.

In-class assignments and quizzes.....	15%
Assignments	50%
Exams and Final	35%
Total	100%

- B. Grading Scale:
 - A = 100 - 90%
 - B = 98 – 80%
 - C = 79 – 70%
 - D = 69 – 60%
- C. Gradebook will reflect a grade based on assignments that are done to date