

Southern Polytechnic State University
Fall 2009 CM 3000 Computer Applications in Construction: 3 credits
Syllabus

Instructor: Hussein Abaza, Ph.D.
Office: H-341; 678-915-3719; ahussein@spsu.edu
Office Hours: M, W, 4:00 PM- 5:00 PM
T, Th, 2:00 PM – 3:00 PM

Course Time and Location:

8017	CM 3000 / 002 G1	M W	3:00PM - 3:50PM	H 324
9001	CM 3000 / 003 W1	T R	11:00AM - 11:50AM	H 320
9073	CM 3000 / 004 Z1	T R	5:00PM - 5:50PM	H 361
8018	CM 3000 / 052 1G	M W	4:00PM - 5:15PM	H 324
9009	CM 3000 / 053 1W	T R	1:30PM - 2:45PM	H 320
9074	CM 3000 / 054 1Z	T R	6:00PM - 7:15PM	H 361

Contact Information: ahussein@spsu.edu , Office Tel. 678-9153719, Cel. 252-4124035

Required Text: None

Other References:

- A Guide to Microsoft Office XP Professional – Lawrenceville Press 2002
- Handouts provided (in hard copy or in WebCt Vista)

Catalog Description

An introduction to commercial software used in the construction industry. Students learn to apply software applications relevant to the construction industry such as but not limited to MS Windows environment manipulations, Internet research tools, spreadsheets, word processing, visualization and presentation software, project management applications, and project scheduling software. The course takes place in a structured laboratory setting with practice sessions consisting of examples relevant to the operation of a construction company and project management in general.

Course assumptions:

It is assumed that students enrolled in CM 3000 have a basic working knowledge of the windows environment and some of the software programs included in the course (i.e. MS Office). The course will focus in application of the programs rather than on the basics of the software.

Course Learning Outcomes

Upon completion of this course, students will have the ability to:

- 1) Prepare Three Dimensional construction drawings by using BIM software (Revit)
- 2) Prepare Basic AutoCAD construction drawings
- 3) Prepare and deliver presentations
- 4) Prepare basic construction task schedules

The concepts learned during this course will help students as they prepare for the Capstone Project at the end of the Construction Curriculum by providing great facility with software that is critical to the successful completion of the project.

Grading Policy

Lab exercises*	70%
Exams (Midterm & Final)	20%
Participation	10%
Total	100%

Students must appeal any grade two days prior to the end of the semester in writing. Any grade appeal after the official posting of final grades will be limited to the Final Exam grade only. NO EXCEPTIONS.

*If homework were to be given, the points earned would become part of the Laboratory grade.

There will be no curve on this course only straight average.** The minimum cutoff for an A is 90%; for a B is 80%; for a C is 70%; and for a D is 60%. Anything below 60% is considered an F.

Class Policy

1. Students are expected to attend to **ALL lectures** as well as **ALL laboratory** sessions. It is expected that students will arrive to class **on time** and if expected to be absent from class, **prior notification** to the instructor **is required** (e-mails are accepted for this purpose using the WebCT system). Each student is expected to behave in a professional way and participating in an alert, prepared, and relevant manner. Disruptions to the class environment will not be tolerated.
2. Quizzes are closed book, closed notes .
3. Make-up quizzes **WILL NOT BE GIVEN** under any circumstance unless the student obtains an official excuse that is acceptable by the university.
4. Lab exercises must be completed and submitted in the allowed laboratory period unless otherwise indicated. **Laboratory exercises can not be made up for any reason.** Students must be present on the day the lab was assigned in order to receive a score for the lab exercise submitted.
5. The computer equipment provided in the laboratories is for lecture, lab exercise, and assignments only and no personal use is allowed during lecture and laboratory sessions. No inappropriate use of computers will be tolerated. Internet Web sites that are viewed must comply with university policies regarding appropriate content. Students who violate the university policy or class policy may be recommended for dismissal. **FOOD OR DRINKS ARE NOT ALLOWED IN THE LAB UNLESS THE GUIDELINES DISCUSSED IN CLASS ARE FOLLOWED.**
6. Grade revisions for assignments, projects, or any other grade received in the course are **limited to two (2) days after the work has been returned or the grade has been posted on WebCt Vista.**
7. Any request for grade revision must be made in writing (typed and formally written like a business letter) and delivered to the course instructor or to department personnel in person (**no email, no fax**) before the two (2) day deadline. After the two (2) day deadline, students waive their rights for appeals. The request for grade revision must include the name of the student, the lab exercise, assignment or quiz in question, description of the item in question, and the reasons for requesting the revision. Students must present their argument clearly and substantiate with evidence. The course instructor will evaluate the request and take appropriate action. Students must appeal any grade two days prior to the end of the semester as described above. Any grade appeal after the official posting of final grades will be limited to the Final Exam grade only. **NO EXCEPTIONS.**
8. The course instructor reserves the right to make exceptions as he deems appropriate. (if an exception is made for one student this does not mean that the same will be done for others)
9. Deadlines are to be met. In case there is a homework assignment no late work should be presented. If you turn in late work penalties apply (one day after 50% off, 2 days after 100% off). Plan ahead, beware of "Murphy". (Instructor is not responsible for malfunctioning computers, printers or software, or lost work)

Note;

Dates, grading allocations, and course format are subject to changes. The instructor will discuss any syllabus changes with the students during the class time, absent from a class will not constitute an excuse for not following the directions that was discussed in the class .The student must take notes of these changes. Students might appeal any changes to the syllabus in writing to the course instructor within 3 days after the students were notified of the change. All syllabus changes will be final at the end of the appeal period, and students must comply with these changes.

Course Management:

WebCT Vista will be used for managing this course. All communications (email) will be done using this system. Some course material will be available in the system. Electronic communication by any other means will not be

accepted. Allow **24 hrs** for a reply to your e-mail message (in some cases I will respond before, but this is not guaranteed). **E-mails that are received after 1:00pm on Fridays will be answered on the following Monday.**

CELL PHONE and PERSONAL DEVICE POLICY

The use of cell phones/PDAs/pagers during class will not be tolerated. Turn them OFF before entering class and they are to remain off until the class is completed. The classroom environment will be treated the same way as if this was a corporate meeting in a large conference room in which your boss was delivering a presentation. He/she would not tolerate their use and a “wise” young employee would probably shy away from their use in order to prevent their discharge from the firm as a result of their rudeness.

Use of cell phone/PDA/Pager/blackberry etc. during class will result in the dismissal of the student from that particular class and the receipt of a “zero” for that class’s particular assignment, exercise, exam, quiz, etc. The second use of the device during class will result in the withdrawal of the student from the class by the instructor. Withdrawal of the student by the instructor after the official “drop date” will result in the grade of a “WF” for the student.

The following Course Outline will be adapted and it is also subject to changes during the semester.

CM 3000 Course Outline

Week	Week of	Related Construction Management Function	Topics	Activities	Programs Used
1		Company Organization Pre-Bid Research – Part 1	Administrative Matters, Windows, Other Operating Systems, Web CT Access, and Computer use in Construction, Internet and search tools	Develop companies by selecting members and selecting company names	Windows, Internet Explorer, WebCT Vista, MS Word
2		Computer Skills	Microsoft Word	Computer assignment.	Microsoft Office
3		Computer Skills	AutoCAD 2010	CAD assignments	AutoCAD 2010
4		Computer Skills	AutoCAD 2010	Manage complex CAD files	AutoCAD 2010
5		estimating	MS Excel for Estimating and Cost Control, and Work Breakdown Structure Development	Prepare a basic estimate worksheet using the CSI divisions for earthwork and concrete Assuming contract has been awarded prepare the required spreadsheets for cost monitoring and control, introduction to WBS that will also be used in SureTrak	MS Excel and AutoCAD 2010
6		Estimating	Using CAD for Estimating	Prepare quantities takeoff from AutoCAD files	AutoCAD & Microsoft Excel
7		Computer Skills	Advanced CAD	Handle complex CAD files	AutoCAD
8			Exam 1 (AutoCAD)		
9					
10		BIM	3D modeling	Prepare a BIM model	Revit
11		BIM	3D modeling	Prepare a BIM model	Revit

12		BIM	Integrating AutoCAD with Revit	Import AutoCAD file to Revit and construct a BIM	Revit & AutoCAD
13		Scheduling	SureTrak 2 - Layout and WBS Lab Exercise - SureTrak	Organization of schedule using WBS.	SureTrak
14		Estimating	Timberline	Group Assignment Prep. Project Schedule	
15		Presentation	PowerPoint	Resource loading the schedule and processing of updates.	SureTrak
16			Presentations		
	Finals Week		FINAL EXAM		

Note: The outline is intended to represent the general format of class. The instructor reserves the right to make changes to better suit the needs of the class.