Course Syllabus

Instructor: Dr. José A. Faria

Office hours: By appointment.
Office location: EC-2951
Office phone: 305-348-3541

Course location and time: EC 1107. Tuesdays and Thursdays 5:40 pm – 8:20 pm

Course description
Understanding the scope of work and related cost is perhaps the most fundamental knowledge required to start any activity. This course provides a theoretical framework to define the scope of work, schedule and cost, the student is exposed to the different methods used to identify and measure the cost elements as the first step to build a cost estimate. After the basics of cost estimation and understood, the student learns how to control costs of ongoing projects. Finally, this knowledge is applied in a course project in which the student has the opportunity to prepare a cost estimate, and identify control mechanisms using the concepts learned in class and critique the estimates prepared by other students.

Objectives
It is expected that each student learns:
- basic concepts of cost estimation,
- different types of costs and their differences,
- methods used to estimate costs,
- how to gather information, compile and use a cost estimate,
- importance of having a credible, supportable, usable, accurate, achievable, competitive, complete and realistic cost estimate,
- how to work with others, critique an estimate and provide insight on how to prepare one,
- how to control cost during the different project life cycle phases
- learn basic project management techniques and their relationship to cost estimation
- understand principles and techniques of budgeting and cost control

Text
- Main course text:
- Optional supplementary:
- Helpful
  R.S Means Building Construction Cost Data, 2000 or later
  R.S. Means Assemblies Cost Data, 2000 or later
- Recommended Software:
  COCOMO – Estimation and planning of software activities
  Expert Choice – Expert Choice Inc. Decision making software
Microsoft Project, Microsoft Office (Excel and PowerPoint) – Microsoft Corp. Scheduling software
OpenWorkbench – Free scheduling software by Computer Associates’ Clarity Division, BSO.
WBS Pro – Critical Tools. WBS Construction software

References:

DoD. Work Breakdown Structure. MIL-HDBK-881A. 2005
R.S. Means Company Inc. Assemblies Cost Data, 2000

Grading guideline

• Homework and in-class participation 15% - Homework will be assigned according to the calendar and it is due at the beginning of the lecture.
• Midterm 25% - In class examination open book, open notes covers cost estimation
• Final 30% - In class examination open book, open notes covers all course material.
• Project 30% - Written report with intermediate deliverables.
A letter grade (will be assigned according to the points accumulated by the student during the semester.

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<td>87 - 89:</td>
<td>B+</td>
<td>77 - 79:</td>
<td>C+</td>
<td>67 - 69:</td>
<td>D+</td>
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<td>A</td>
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<td>&lt;= 59:</td>
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<td>80 - 82:</td>
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<td>70 - 72:</td>
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Bring a calculator to the exams! No laptop computers or wireless devices are allowed during the exams. No communications are allowed between students during the exams. No exchanging of tools, papers, books, pencils, pens or any other material is allowed during the exams. The exam dates, homework assignments, presentations and reports are due on the date specified in the course calendar, these dates are fixed and non-negotiable. There will be no makeup exams, please check your calendar and report to the instructor any conflicts as soon as you become aware of them. The student must submit all course assignments on time to receive credit, late assignments will not be accepted unless exceptional circumstances occur. Exceptional circumstances including severe weather alert when recognized by the University, will be considered on a case by case basis. Business or leisure travel does not constitute exceptional circumstances. In the event of travel the student should take any necessary measures to submit deliverables electronically. Students with special needs should contact the instructor to discuss specific cases.

Course Policies
Casual discussion of course project and homework assignments is allowed and encouraged. However, each student should prepare the deliverables independently unless authorized to work in a team.
Florida International University has a Code of Academic Integrity, this Code sets standards for academic integrity for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity please visit http://w3.fiu.edu/enc/Academic%20Misconduct.htm
Class attendance is highly recommended but not required.

Students with disabilities who may need special accommodations should register with the Office of Disabilities Services, telephone (305) 348-3852. In addition they are encouraged to contact the instructor so that arrangements can be made to accommodate their needs. The Department of Construction Management adheres to the University’s policy concerning religious holidays. Any student will be excused from attendance in order to observe a religious holiday for their faith. If an examination or presentation is scheduled on that date, an alternate date will be provided. Students are expected to inform the faculty, ahead of time, of such holidays.

Links of Interest
AACE International: The Association for the Advancement of Cost Engineering
http://www.aacei.org

COCOMO Cost estimation for software development
http://sunset.usc.edu/research/COCOMOII/index.html

Cost of a cost estimate for NASA
http://www1.jsc.nasa.gov/bu2/CECM.html

Department of Defense: Work Breakdown Structures Handbook
MIL-HDBK-881A, 30 JULY 2005
**Expert choice’s web site**: Developers of software to solve the Analytical Hierarchy Process
The application times out in 15 days
[www.expertchoice.com](http://www.expertchoice.com)

**Free scheduling software**

**Interesting article about hackers** From Washington Post Feb 18th
[http://www.washingtonpost.com/wp-dyn/content/article/2006/02/14/AR2006021401342.html](http://www.washingtonpost.com/wp-dyn/content/article/2006/02/14/AR2006021401342.html)

**NASA Cost Estimating Web Site**
[http://www1.jsc.nasa.gov/bu2/](http://www1.jsc.nasa.gov/bu2/)

**Palisade’s web site**: Developers of @Risk and @Risk for Projects simulation programs
Free trial use for up to 10 days after installation. Student version available for purchase good for 12 months

**Probability and Statistics in Aerospace Engineering**

**Project Management Institute**
[www.pmi.org](http://www.pmi.org)

**UMD weather alerts** : Notes about closing and delays on campus due to weather
[http://www.umd.edu/umnews/alert.html](http://www.umd.edu/umnews/alert.html)

**WBS Pro**
[http://www.criticaltools.com/wbsmain.htm](http://www.criticaltools.com/wbsmain.htm)

**WinEstimator, Inc.**