The University of Texas at Austin
Department of Civil, Architectural, and Environmental Engineering

CE 395 Q1 – Project Controls – Summer 2011

SYLLABUS

Unique No. #77163  TH 4:00 - 9:00  ECJ 5.416
Nine Week Session: June 2nd – July 26th (Exception June 8th will replace June 9th class)

INSTRUCTORS: Mr. Anthony Gonzales
Office Hours: TH 3:00 - 4:00 by appointment only.
114 West 7th Street, Suite 600, | 637-0845 (Office 2) | anthonyg@spirecg.com

TEACHING ASS’T: If Required
Office Hours: Th, F 9:00 – 12:00 or by appointment.
ECJ 5.402A | 471-8417 (office) |

WEB PAGE: You will find the online materials for this course at the Blackboard web site at:
https://courses.utexas.edu/webapps/portal/frameset.jsp.

Course Catalog Description
Proactively and forensically developing, managing, reviewing and analyzing construction bid estimates,
change orders, baseline, interim and as-built schedules before, during and after construction.

Suggested Prerequisites
Students are recommended to be knowledgeable in or have taken classes in cost estimating and project
controls.

Course Overview
Construction projects involve a great deal of time and capital, so effective construction project
management skills are required if the projects are to be completed within the established time line to meet
cost limitations and quality requirements. Staying cost effective and competitive means that project
managers must have core competencies in developing, controlling and analyzing construction costs and
schedules before, during and after construction. This course will provide the fundamentals of developing
and evaluating costs and schedules and analyzing cost overruns, delays and disruptions during and after
construction.

In-class lectures will comprise a relatively small portion of the course. Lectures will cover the material in
the textbooks and supplemental materials provided by the Instructor.

Teaching Approach/Philosophy
I am a proponent of the Socratic method and some non-traditional teaching/learning techniques. Long, dry
lectures generally cause both the student and professor to fall asleep. As such, you can expect that the
course will involve lots of interaction, as well as time for reflection (i.e., when both you and I don’t speak
and you think). As students have different learning styles and preferences, I generally mix things up over
the course of the semester/class. You can expect in-class problems, questions on the reading assignments,
chances to discuss with your neighbor, chances to ask questions (there are some stupid questions, but I
have yet to hear one in a classroom). I also like to motivate what I teach with personal involvement on
the part of the student. I like to tell stories, but I like to hear your stories as well. Feedback is encouraged.
Beyond the end-of-semester evaluation forms, I will ask for input along the way. Unsolicited feedback is always welcome provided it is constructive.

**Course Topics**
Listed below are the course topics/dates which are subject to change. A detailed course syllabus/schedule will be distributed to the class once details are finalized.

<table>
<thead>
<tr>
<th>Day</th>
<th>Lecture Topic(s)</th>
<th>Reading</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>6/2</td>
<td>• Student &amp; Teacher Introductions</td>
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<td>• Course Introduction</td>
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<td></td>
<td>• Project Controls Overview</td>
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<td>6/8</td>
<td>• Project Control Examples</td>
<td>O’Brien – Chapters 1 – 4</td>
<td>HW #1</td>
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<td>• Assignment of Project Teams &amp; Project Discussions</td>
<td>AACEI 10S-90</td>
<td>Due 6/16</td>
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<td></td>
<td>• The Schedule as a Useful Project Management Tool;</td>
<td>AACEI TCM - Ch7.2</td>
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<td>• Project Schedules as a Contract Document</td>
<td>AACEI 38R-06</td>
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<td>• Scheduling Specifications</td>
<td>AACEI 27R-03</td>
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<td></td>
<td>• Fundamentals of Construction Scheduling</td>
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<tr>
<td>6/16</td>
<td>• Types of schedules</td>
<td>O’Brien – Chapters 5 – 8, 18</td>
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<td>• Creating Activities, Durations &amp; Logic</td>
<td>AACEI 24R-03</td>
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<td>• Development of a Baseline Schedule</td>
<td>AACEI 48R-06</td>
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<td></td>
<td>• Updating and revising project schedules</td>
<td>O’Brien – Chapters 29, 30, 31</td>
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<tr>
<td>6/23</td>
<td>• Types of schedules</td>
<td>PMI Practice for Scheduling</td>
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<td></td>
<td>• Types of Cost Estimates</td>
<td>O’Brien – Ch 16 &amp; 17</td>
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<td>• Basis of Estimates</td>
<td>AACEI 17R-97</td>
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<td>• Developing &amp; Reviewing Bid Estimates</td>
<td>AACEI 31R-03</td>
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<td>• Creating Work Breakdown Structures</td>
<td>AACEI 34R-05</td>
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<td>6/30</td>
<td>• Delay Quantification Methods &amp; Techniques (Part I)</td>
<td>AACEI 29R-03</td>
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<td>• <strong>Guest Lecture</strong></td>
<td>AACEI 45R-08</td>
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<td>• Strategies to Mitigate Delay Claims</td>
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<td>• Review for Mid-Term Quiz</td>
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<td>7/7</td>
<td>• Delay Quantification Methods &amp; Techniques (Part II)</td>
<td>AACEI 52R-06</td>
<td>Mid-Term Presentations Mid-Term Reports Due</td>
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<td>• Mid-Term Quiz</td>
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<td>7/14</td>
<td>• Technical Validation of Baseline, Interim and As-Built Schedules</td>
<td>O’Brien – Chapters 28, 32</td>
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<td>• Practical Validation of Baseline, Interim and As-Built Schedules</td>
<td>AACEI TCM - Ch7.3</td>
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<td>• Change Order Reviews</td>
<td>AACEI 18R-97</td>
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Required Textbook


Course Schedule

A course schedule will be attached. In order to maximize learning, students are expected to read the assigned material before the lecture. Although this schedule may be revised, any changes will be announced in advance. Otherwise, students may assume that the topic listed will be covered on the assigned date.

Course Notes/Handouts

Course notes and "handouts" can be accessed using the Blackboard course portal at [http://courses.utexas.edu/](http://courses.utexas.edu/). Lecture notes will be posted to the system by no later than 6 pm of the evening prior to the lecture. Students may bring hard copies of the lecture and/or laptop computers to class.

Semester Project

Students will be placed in teams to develop a cost estimate and schedule for a representative project. Updating and management of the cost estimates and schedules may be required. Teams will summarize and present their findings periodically. Additional information pertaining to the semester project will be distributed and discussed as the course progresses. Students will be graded as a team and individually by the instructors and group members.

Mid-Term Quiz

The mid-term quiz will focus on fundamental terminology and processes discussed in class.

Participation and Attendance

Students are expected to attend class regularly and to not be tardy to class. Excused absences should be requested in advance. In addition, as this is a graduate course in a professional program, students are expected to actively and frequently participate in class discussions, and to ask questions in class.

Grading

The final course grade will be calculated based on the following components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tr>
<td>Attendance &amp; Participation</td>
<td>10%</td>
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<tr>
<td>Homework</td>
<td>10%</td>
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<tr>
<td>Mid-Term Quiz</td>
<td>20%</td>
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Final Exam 20%
Project 40%
100%

Project Breakdown
Mid-Term Findings
  Report 15%
  Presentation 5%
Final Findings
  Report 10%
  Presentation 10%

Letter grades will be assigned as follows:
A:  A 4.0
    A- 3.67
B:  B+ 3.33
    B  3.0
    B- 2.67
C:  C+ 2.33
    C  2.0
    C- 1.67
D:  D+ 1.33
    D  1.0
    D- 0.67
F:  F  0.0

Course/Instructor Evaluation Plan
Each student will be given the opportunity to evaluate the course using the standard course/instructor evaluation form (MEC form) during the last week of classes. Feedback from students will also be requested throughout the semester.

Policies

Homework, Reports & Presentations:
1. Homework, reports and presentations are due at the beginning of the class period on the due date assigned. Each group will provide one electronic and two hardcopy set of documents.
2. Work will NOT be accepted for credit or graded if late.
3. All work must be legible, well-organized and prepared in a professional format to receive full credit.

Exams/Quizzes:
No make-up exams or quizzes will be given, unless extremely unusual circumstances prevail and can be documented and justified to the satisfaction of the instructor. An example would be hospitalization.

Office Hours:
Students are encouraged to make use of Instructor and/or Teaching Assistant office hours as needed. I encourage students to come see me to address any questions or concerns about the course material or other issues. I have an open door policy – if my office door is open, I will see students without an appointment. If I am busy, I will schedule a convenient time for both of us. Students should schedule meetings during office hours in advance. Feel free to email or call me to schedule an appointment. Please keep these two general principles in mind: (1) make sure you have read the material and attempted the work prior to seeking assistance, and (2) it is better to ask for help earlier than later.

**College of Engineering drop policy:**
*To be determined*

**Scholastic Dishonesty Policy:**
Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. For further information, visit the Student Judicial Services web site http://deanofstudents.utexas.edu/sjs/.

**Academic Accommodations:**
The University of Texas at Austin provides, upon request, appropriate academic adjustments for qualified students with disabilities. Any student with a documented disability (physical or cognitive) who requires academic accommodations should contact the Services for Students with Disabilities area of the Office of the Dean of Students at 471-6259 as soon as possible to request an official letter outlining authorized accommodations. For more information, contact that Office or TTY at 471-4641, or the College of Engineering Director of Students with Disabilities at 471-4321.

**Class Web sites and student privacy:**
Web-based, password-protected class sites will be associated with all academic courses taught at the University. Syllabi, handouts, assignments and other resources are types of information that may be available within these sites. Site activities could include exchanging e-mail, engaging in class discussions and chats, and exchanging files. In addition, electronic class rosters will be a component of the sites. Students who do not want their names included in these electronic class rosters must restrict their directory information in the Office of the Registrar, Main Building, Room 1. For information on restricting directory information, see the Undergraduate Catalog or go to: http://www.utexas.edu/student/registrar/catalogs/ug04-06/index.html.