

Course Syllabus – CNST 4385

Field Operations for Capital Projects

Course Description:

This course provides the opportunity to integrate skills and knowledge taught in the program. It provides an exercise in which the students experience the crucial CM activities that take place from the time a contract is awarded until the contract is closed out in a capital project environment.

Course Prerequisites:

CNST 4335 Capital Projects Development

Textbook:

Construction Project Management, Gould & Joyce Prentice Hall (book not required)

Course Learning Outcomes:

Upon the completion of the course students will demonstrate the ability to:

1. Integrate the knowledge learned in estimating, scheduling, computer applications, construction accounting, and other courses to develop a comprehensive project plan
2. Implement project controls systems and perform data collection and analysis
3. Integrate the above into a comprehensive Project Controls & Execution Plan

In addition to the learning objectives above, this course emphasizes Ethics, Safety, and Oral/Written Communication.

Student Learning Outcomes:

- 1 Create written communications appropriate to the construction discipline
- 2 Create oral presentations appropriate to the construction discipline
- 4 Create construction project cost estimates
- 5 Create construction project schedules
- 7 Analyze construction documents for planning and management of construction processes
- 10 Apply electronic-based technology to manage the construction process
- 13 Understand construction risk management
- 14 Understand construction accounting and cost control
- 16 Understand construction project control processes

Course and Student Learning Outcome Mapping:

Student Learning Outcome	Course Learning Outcomes
1	3
2	3
4	1
5	1
7	1
10	1
13	1
14	2
16	2

Student Learning Assessment and Assessment Target:

Assessment	SLO#1	SLO#2	SLO#3	SLO#4	SLO#5	SLO#7	SLO#10	SLO#13	SLO#14	SLO#16
Support (S)	X	X	X	X	X	X	X	X		X
Assess (A)									X	

Grading

Quizzes & Case Studies	20%
Midterm (EVM)	20%
Interim Team Presentations (2 @ 10% each)	20%
Individual participation in Team Presentations	10%
Teamwork Ranking by Teammates	10%
Final Presentation Ranking by Review Panel	20%

Grading Scale

The instructor reserves the right to adjust letter grades, based on individual attendance and class participation if numerical grade warrants such consideration. Letter grades for the course will be assigned approximately as follows:

Letter Grade	Score
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	<60%

Class Schedule:

Week#	Topics
1	Class Introductions (All), FCPA Assignment, Semester Project Overview Construction Contracts and Subcontracting (FCPA Research)
2	EPC Project Controls Student's Submit FCPA Research
3	Planning/Scheduling
4	Fluor Design Competition Info Session
5	Fluor Design Competition Info Session AWP / WFP Intro & 10a IWP
6	Fluor Design Competition Info Session AWP / WFP 10b SMART PLANT CONSTRUCTION (SPC)
7	Fluor Design Competition Info Session AWP Module 11 AWP Exam
8	Fluor Design Competition Session 5 Q&A Time on Tools Presentation (approx 1 hour) CII Next Generation
9	INEIGHT PROJECT MANAGEMENT SYSTEMS TRAINING Fluor Design Comp Proposals Due NLT 1159 PM
10	Cost Engineering/Earned Value Management Mid-Term (EVM)
11	Student Project Presentations (start)
12	Student Project Presentations (cont'd)
13	Craft Workforce Development
14	Industrial Estimating
15	Holiday

16	Final Exam Student Project Presentations (cont'd)
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Instructor's Expectations:

I expect you to prepare for this course by reviewing the class notes and to review on your own the materials covered in the course modules. I want to focus your efforts on expanding and applying your knowledge to develop a project execution plan. As in the construction industry, much of your work will be team dependent. You are expected to showcase the knowledge you have gained by effective team presentations and classroom participation.

Students are expected to expand their knowledge gained in earlier classes by integrating and applying that knowledge into a comprehensive Project Plan.

Students should review the class notes and review the textbook assigned sections prior to class time. In addition, teamwork is essential to performing well in this class. Effective teamwork demonstrated via interim & final presentations are an essential requirement of this class.

Midterm / Quizzes:

There will be 1 Midterm (closed book, no notes, individual participation only) & 4 quizzes (open book & notes, individual participation only) given during the semester to measure the students' progress of current course material. Missing a scheduled Midterm or Quiz without prior notice & approval by the Instructor will result in a grade of "zero" being assigned. Approval for missing will be at the sole discretion of the Instructor.

Case Studies:

Case Studies will be distributed at random class meetings. Case studies should be evaluated by each team. A team will be chosen at random during the following class meeting. The chosen team will be responsible for presenting a synopsis of the case study and defending their position of the subject matter. Teams not presenting will be responsible for providing a competing or supporting position.

Team Presentations:

Group Presentations: Teams, at selected classes, will present on either of 2 topics. Team presentation selection process will be random so each team should be prepared to present at each presentation time slot unless other arrangements are made in advance.

Presentation teams will be evaluated on material prepared, thoroughness and how well they present & handle the Questions / Answers (Q/A) portion of the presentation.

Observing individuals will be evaluated on how well they participate during the Q/A session.

Students with disabilities:

University of Houston 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 Center for Students with Disabilities (713/743-5400) for more assistance.

Course / Instructor Evaluation:

A course/instructor evaluation will be conducted during this semester. Any suggestions you have on improving the course are welcome throughout the semester.

Phones and other Electronic Devices:

Phones and other Electronic Devices are not to be heard. Make sure you silence these devices during class. Any device that emits noise during class is a distraction and is inappropriate for the classroom. Talking / texting on your phone during class is not allowed. It is not considerate to your fellow classmates who have paid for the course. All electronic devices must be turned off and out of sight during exams and quizzes.

Students may be asked to leave for the day if this behavior persists. Academic evaluations during classes missed under these criteria will be counted as zero.

Changes in the Syllabus:

The instructor reserves the right to make changes to the syllabus. Changes will be announced in class.