

Construction Management

PROJ_MGT 430

Course Objective/Description:

The objective of this course is to introduce the student to the strategies and tools practiced by the construction industry in the United States. Students work in teams of 5 (depending on class size) to plan and create deliverables tied to a fictitious request for proposal (RFP). Instructors will provide each team a unique site and a unique project criteria specific for that site. All assignments as well as the quarter project shall be tied to each team's specific site and project. Emphasis is on site assessment, following zoning and code requirements, positioning your building on the site, preparing a conceptual design, preparing a conceptual estimate, preparing a project schedule, preparing a general conditions estimate, preparing a site logistics plan, understanding risk management and contracts, quality control, project monitoring, project reporting, safety, quality, and cost control. The material covered and the strategies discussed are oriented for a mid-level construction professional. The course lectures often include examples of actual content used by the presenters from their construction careers. At the end of the quarter (week 9), teams will submit their response to the RFP and present their project to faculty in week 10. This class is team taught led by Cy Rangel. Collectively, this teaching team has over 70 years of relevant construction experience.

Following is an approximate lecture-by-lecture description of the course (lecture order may be modified as needed):

- Lecture 1:** Class orientation and overview. Introductions, Review of syllabus, grading policy, instructor expectations, and class rules. Overview of the Construction industry. Attendees will provide a brief description of their background and work experience.
- Lecture 2:** Team formation results, Site and project assignments by lottery. Review of each project.
- Lecture 3:** Site assessment, Zoning, FAR, Preconstruction
- Lecture 4:** RS Means, Conceptual design, Crux study, Parameter estimating
- Lecture 5:** Conceptual estimating
- Lecture 6:** Costs as a percentage of costs & Mark ups
- Lecture 7:** Roles of the project team, Project staffing
- Lecture 8:** General conditions
- Lecture 9:** Scheduling and project planning. Milestones. Peer reviews
- Lecture 10:** Project delivery methods
- Lecture 11:** AIA forms, Contracts and General Conditions
- Lecture 12:** Contracts continued, Pay application process, Cash flow
- Lecture 13:** Planning for zero defects - Quality and planning for zero injuries - Safety

- Lecture 14:** Risk management, Disputes, & Claims
- Lecture 15:** Jobsite Set up, Project phasing, & Site Logistics planning
- Lecture 16:** Presentation lottery, Project controls and reporting team progress, Bonds, Waivers, & Liens
- Lecture 17:** Lean construction, Bid Bonds
- Lecture 18:** Presentation and submittal considerations, Review of submittal rubric
- Lecture 19:** Team presentations
- Lecture 20:** Team presentations

Final Exam: There will be no final exam. Your final submittal and presentations are your final.

Text: No text is required for this course.

Software: None

Attendance: All students are expected to inform the instructor in writing **PRIOR** to missing class with a valid reason for missing class. Students missing two or more classes consecutively due to a sickness will require a physician's note documenting the sickness. Students missing more than 3 classes will drop one letter grade.

Grade Determination:

Attendance (20 sessions x 50 pts)	1000 pts
Weekly Assignments (9 x 100)	900 pts
Mid Quarter Peer Review	100 pts
RFP Submittal	300 pts
<u>RFP Presentation</u>	<u>200 pts</u>
Total	2500 pts

- 90% to 100% = A
- 80% to 89.9% = B
- 70% to 79.9% = C
- 60% to 69.9% = D
- 59.9% and below = F