



CE 611 - Project Planning & Control Summer 2018

Text: Hinze, Jimmie, Construction Planning & Scheduling, 4th Edition.
ISBN-13: 978-0132473989

Professor: Christopher Hanna:
Email: jerseyengineer@gmail.com, website: <http://njit2.mrooms.net>

Prerequisite CE 610

Instructor's Office Hours: I am available by email listed above. If there is a need to have office hours, I can schedule one on campus. Please feel free to email me, and I will do my best to return a prompt reply.

Week Beginning	Topic	Reading Assignment (Chap No.)
Week #1 5/20 – 5/26	Class Introduction/ Project Planning and Control Principles Arrow Diagrams	1,16
Week #2 5/27 – 6/2	Network Modeling and Analysis	2,3
Week #3 6/3 – 6/9	Duration in Scheduling, Time in Contract Provisions	4,5
Week #4 6/10 - 6/16	Introduction to Computer Scheduling MS Project Basics	9
Week #5 6/17 – 6/23	Change Management, CPM in Claims, Dispute Management	12
Week #6 6/24 – 6/30	Resource Management	6
Week #7 7/1 – 7/7	MIDTERM EXAM ON MOODLE	

Week #8 7/8 – 7/14	Introduction to Project Accounting, Billing Methods, Project Cash Flow Project Progress Monitoring and Control	7,8
Week #9 7/15 – 7/21	Earned Value	10
Week #10 7/22 – 7/28	Cost Schedule Integration and Productivity Analysis	11
Week #11 7/29 – 8/4	PERT and Probabilistic Scheduling -Advanced Scheduling Techniques	13,14,15
Week #12 8/5 – 8/11	FINAL EXAMINATION ON MOODLE* PROJECT DUE	

Lectures for each lesson will be posted Sunday of each week. For example Lecture for Week #5 will be posted on 6/17. Homework will be assigned on the same day.

Homework is due on Sunday at 11:59 PM of the next week. For example, Week 5 homework will be due on 6/24 at 11:59 PM.

A Term Project will be announced towards the second half of the semester. This will require access to MS Project 2016. All students must use MS Project on a PC, not a Mac.

COURSE DESCRIPTION AND OBJECTIVES:

Management tools as related to construction projects are analyzed and applied to individual projects. Emphasis is on network scheduling techniques, time-cost analysis, resource allocation and leveling, cost estimating, bidding strategy, and risk analysis. The course is divided in two key modules: Project Planning, which focuses on the development of financial and operational plans and schedules, and Project Control, which emphasizes performance measurement and control, real-time updating of project plans, control metrics and analysis.

LEARNING OUTCOMES:

Using the cases and background materials, and methodologies covered, you should be able to:

- Plan a construction project and develop realistic and efficient schedules.
- Allocate Resources and adjust usage based on time and cost constraints.
- Set up a project control environment and system.
- Understand the link between estimating and cost control systems
- Understand project performance measurement, productivity and risk analysis.
- Learn operations management, industrial systems and management science techniques applications to construction planning, scheduling and control
- Apply the range of management methods to realistic construction company and project cases.

Basis of Grading:

Class Participation 5%

Homework /Quizzes = 10%;

Midterm = 25%

Report = 30%,

Final Exam = 30%

Homework/ Quizzes:

Homework will be assigned each Sunday night to be turned in by Saturday at midnight. Please submit homework in Moodle under each assignment. **Late assignments will not be accepted.** No notice quizzes may be given about assigned homework.

Report:

The project this semester will consist of a construction project that I will be selecting for you. The report itself shall consist of a Microsoft Project schedule along with a technical paper detailing how you're schedule is more efficient than the sample given. More details will be sent during the semester.

Midterm and Final Exam:

Will be done in Moodle and you will have 2 hours since you begin the exam, make sure your computer is fully charged and you are able to do it without interruptions, extra time will not be allowed.

Honor Code: Students are advised that the NJIT Honor Code will be upheld in this course, and any violations will be brought to the immediate attention of the Dean of Students.

OTHER REQUIREMENTS:

Students are required to have access to a computer at least once a week and the installation of software on it.

The course requires the adoption of a computerized project planning and control system. The MS project system and MS Office are provided by NJIT free of charge, they are both required for this class!

Syllabus is subject to changes due to the class format.