

Summer 2019

# CE 611-850: Project Planning & Control

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CE 611 - Project Planning & Control  
Section:850

Summer 2019

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

**Professor Christopher Hanna:** Email: [jerseyengineer@gmail.com](mailto: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 Network Modeling and Analysis	1,16 2,3
Week #2 5/27 – 6/2	Duration in Scheduling, Time in Contract Provisions Project Progress Monitoring and Control Introduction to Computer Scheduling MS Project Basics	4,5 8,9
Week #3 6/3 – 6/9	Change Management, CPM in Claims, Dispute Management Resource Management	12 6
Week #4 6/10 - 6/16	Introduction to Project Accounting, Billing Methods, Project Cash Flow	7
Week #5 6/17 – 6/23	Earned Value	10
Week #6 6/24 – 6/30	<b>MIDTERM EXAM ON MOODLE</b>	
Week #7 7/1 – 7/7	MS Project Tutorial Part 2	

Week #8 7/8 – 7/14	Cost Schedule Integration and Productivity Analysis	11
Week #9 7/15 – 7/21	PERT and Probabilistic Scheduling -Advanced Scheduling Techniques Alternate Project Delivery Methods Risk Analysis	13,14,15
Week #10 7/22 – 7/28	Term Projects	
Week #11 7/29 – 8/4	Term Projects	
Week #12 8/5 – 8/11	<b>FINAL EXAMINATION ON MOODLE*</b> <b>PROJECT DUE</b>	

**Lectures for each lesson will be posted Sunday of each week. For example Lecture for Week #5 will be posted on 6/16. 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 6/23 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.