



General Information

Course Instructor: Dr. Adeeba A. Raheem
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Phone: 915-747-6348
Office: Civil Engineering (A213)
Office hours (by appointment): Via Zoom/Teams
Course website: <https://blackboardlearn.utep.edu/>

Course Credits: 3

Prerequisites or Co-requisites

Bachelor's Degree in Engineering, Physical Sciences or Business, CE 5382 or Instructor approval

Course Description

In this course, students will be provided an understanding of planning, scheduling and monitoring of construction projects including development of critical path networks (CPM & PERT), Gantt charts and construction cost control and reporting practices. The Students will also learn how to use the software tools to accurately prepare and analyze the project schedule and to effectively communicate the schedule to the management team.

Course Introduction

The primary purpose of this course is to provide an understanding of the planning and scheduling process in construction.

Course Goals and Learning Outcomes

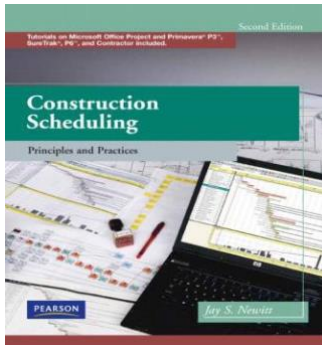
The goal of this course is to provide the students with the necessary skills to adequately schedule and control residential, commercial, industrial, manufacturing or engineering projects. At the end of this course, students will be able to

- Define schedule activities and assign reasonable durations to the activities
- Generate bar charts; critical path networks; including early start, late start, early finish, late finish, durations and float
- Identify the critical activities that affect the timely completion of the project
- Correlate resources and costs to the schedule
- Control and accurately report progress of the project

The students will also be introduced to the use of computer technology in the scheduling of construction projects and be required to schedule using computers and read computer printouts.

MATERIAL NEEDED

1. Textbook



Construction Scheduling: Principles and Practices, 2/E

Author: Jay S. Newitt

ISBN-10: 0135137829 • ISBN-13: 9780135137826

2. Computer Activities

The computer activities are primarily assignments using MS Project 2016 that is available for engineering students through Microsoft Azure at <https://azureforeducation.microsoft.com/devtools>. Students have to register with their UTEP email to setup your password. For any kind of technical help, please contact the Engineering Technology Center in the Engineering Bldg., Room E351 (Tel: (915) 747-5223; Email: etchelpdesk@utep.edu)

GRADING POLICY

Students will be responsible for weekly quizzes, class discussion/participation, assignments and exams. Grades will be determined based on the following criteria.

| Grade | Required Percentage of Available Points |
|--------------------|---|
| A (Outstanding) | 90 – 100 |
| B (Very Good) | 80 – 90 |
| C (Satisfactory) | 70 – 80 |
| D (Unsatisfactory) | 60 – 70 |
| F (Failure) | less than 60 |

Grading Scheme

Percentage weightage of each assignment category to the total grade is as follows:

| | Assignment Categories | | | | |
|-----------|-----------------------|-------------|----------------------|---------------|------------|
| | Quizzes | Assignments | Discussion questions | Final Project | Final exam |
| Weightage | 15% | 25% | 20% | 20% | 20% |

DELIVERABLE STANDARDS & EXPECTATIONS

1. Quizzes

There will be five quizzes throughout the semester based on the course material covered during the week(s) before the quiz. There will be **NO** make-up quiz allowed.

2. Assignments

The assignments will generally be posted with a due date after one week of the published date. The homework assignments are to be submitted using the assignment tool on Blackboard after scanning your work and converting it in .pdf format. **The assignments are to be prepared in a professional manner as if you were expecting to favorably impress a prospective owner or loaning institution.** There will be only **ONE** late submission allowed that is missed because of unforeseen circumstances.

3. Final Project

Students will be working on a project throughout the semester identifying work activities, estimating durations, levelling resources and producing and presenting reports. The students will have to submit final reports in a professional manner. Description and rubric for the final project will be provided during second week of the semester.

4. Discussion Questions

Each week students have to provide FIVE comments including their own answers to discussion questions posted on the discussion board online. The comments should add to the discussion by sharing your experience or adding information that is missing. The comments such as great...really good..I enjoyed it...All answers are good....I agree etc. will NOT be considered for grading purposes.

5. Final Exam

Final exam will be comprehensive consisting of MCQ's, Fill-in-the-blanks, short questions, problem-based questions and true/false. Please download the Respondus Lockdown Browser from the student services tab on Blackboard well-before taking the exam. Once set up is run, you can use the browser by clicking the program and log in using UTEP credentials in that browser. Please set this up as soon as possible and let us know if you have any problems. The final exam requires the use of a webcam, you'll be guided through a brief set of screens prior to the start of the exam. Detailed instructions regarding the final exam will be posted on Blackboard during the last week.

6. Course Feedback

Students are encouraged to provide feedback during the term to facilitate the positive learning environment. Students can send any suggestions/comments/concerns regarding the course/assignments structure or any related aspect. Instructor strongly believes in helping and listening to students during the semester when it affects them THE MOST. The link for the final course evaluation will be sent to the students during the final week of the semester.

TECHNOLOGY REQUIREMENTS

You will need the following software on your computer to efficiently work in this course. In some cases your computer may already have some of these programs installed.

- MS Project 2016/2019. Engineering students can get the access by going to Microsoft Azure at <https://azureforeducation.microsoft.com/devtools>
- Acrobat Reader. You can get the program by going to <http://www.adobe.com> and then clicking on the icon on the center of the screen which says "Get Adobe Reader". Follow instructions to install the reader.
- Adobe Flash Player. You can get the player by going to <http://www.adobe.com> and then clicking on "Get Adobe Flash Player". Follow instructions to install the player.
- Apple QuickTime Player. You can get this player by going to <http://www.apple.com>. Once there, click on

- "Downloads" tab on the top of the page and then click on QuickTime "Download" and follow instructions.
- Microsoft Office. I recommend buying this if you do not have any word processing software or presentation software. As students, you can generally buy this whole package for about \$15 at <https://utep.onthehub.com>., far less than the store price of approximately \$400.
 - Microsoft Silverlight. You can download/update this add-on by going to <http://www.microsoft.com/silverlight/>. This will allow you to view embedded PowerPoint Presentations and PDF files embedded in the course lessons.

IMPORTANT REMINDERS

Course Schedule Changes

As course instructor, I reserve the right to adjust the course syllabus or change assignments as needed. I will make sure to give you plenty of notice prior to any changes.

Academic Dishonesty Statement

Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another person's as one's own. And, collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. Violations will be taken seriously and will be referred to the Dean of Students Office for possible disciplinary action. Students may be suspended or expelled from UTEP for such actions.

Academic dishonesty is an assault upon the basic integrity and meaning of a University. Cheating, plagiarism, and collusion in dishonest activities are serious acts which erode the University's educational and research roles and cheapen the learning experience not only for the perpetrators, but also for the entire community. It is expected that UTEP students will understand and subscribe to the ideal of academic integrity and that they will be willing to bear individual responsibility for their work. Materials (written or otherwise) submitted to fulfill academic requirements must represent a student's own efforts. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. Violations will be referred to the Dean of Students Office for possible disciplinary action. Students may be suspended or expelled from UTEP for such actions.

Notice of Safe Assign

This course may utilize third party software that has the ability to automatically detect plagiarism on documents submitted for grading.

Copyright Notice

Many of the materials that are posted within this course are protected by copyright law. These materials are only for the use of students enrolled in this course and only for the purpose of this course. They may not be further retained or disseminated.

Disabled Student Statement

In Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990, if a student needs an accommodation then the Office of Disabled Student Services located at UTEP need to be contacted. If you have a condition, which may affect your ability to perform successfully in this course, you are encouraged to discuss this in confidence with the instructor and/or the director of the Disabled Student Services. You may call (915) 747-5148 for general information about the American with Disabilities Act (ADA) and the rights that you have as a UTEP student with a disability. You also can visit the DSSO website at www.utep.edu/dsso or the DSSO office in Room 108 East Union Building. Individuals with disabilities have the right to equal access and opportunity. It is the student's responsibility to contact the

instructor and The Disabled Student Services Office at The University of Texas at El Paso.

Technical Assistance

The University of Texas at El Paso offers complete technical information and help desk support at:
<http://at.utep.edu/techsupport/>.

COURSE SCHEDULE*

| Week* | Topics | Readings | Deliverables |
|-----------|--|--------------------------------------|---|
| 1 | <ul style="list-style-type: none"> Importance of scheduling and scheduling systems Bar chart schedules Introduction to MS project software | Text Chapters 2,3,4 PowerPoint 1 | Assignment 1 Discussion 1 |
| 2 | <ul style="list-style-type: none"> CPM scheduling Early and Late Start & Finish calculations Float or slack time calculations Network logic diagrams | Text Chapters 5,6 PowerPoint 2 | Assignment 2, Quiz 2, Discussion 2 |
| 3 | <ul style="list-style-type: none"> Determining activity durations Lags PERT | Text Chapters 7,9 PowerPoint 3 | Assignment 3, Quiz 2, Discussion 3 |
| 4 | <ul style="list-style-type: none"> Analyzing schedule Creating bar charts | Text Chapter11,12 PowerPoint 4 | Assignment 4, Quiz 3, Discussion 4 |
| 5 | <ul style="list-style-type: none"> Linear scheduling Updating the schedule | Text Chapter13,14 PowerPoint 5 | Assignment 5, Quiz 4, Discussion 5 |
| 6 | <ul style="list-style-type: none"> Resource balancing | Text Chapter 15 PowerPoint 6 | Assignment 6, Quiz 5, Discussion 6 |
| 7 | <ul style="list-style-type: none"> Project control techniques (Cost and schedule) Managing project team Other scheduling techniques | Text Chapter16,17,18 PowerPoint 7 | Assignment 7 Discussion 7 Final project reports due |
| Final day | | | Final Exam |

* Instructor reserves the right to adjust the course schedule as needed