General Information

Course Instructor: Dr. Adeeba A. Raheem  
Email: aaraheem@utep.edu  
Phone: 915-747-6348  
Office: Civil Engineering (A213)  
On-campus office hours:  
    Monday: 1.00pm-3.00pm  
    Friday: 1.00pm-3.00pm  
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 bar 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

2. Computer Activities

The computer activities are primarily assignments using MS Project 2013/2016 that is available for engineering students through the Microsoft Imagine at http://e5.onthehub.com/d.ashx?s=pvytm3tcni. 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.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Required Percentage of Available Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Outstanding)</td>
<td>90 – 100</td>
</tr>
<tr>
<td>B (Very Good)</td>
<td>80 – 90</td>
</tr>
<tr>
<td>C (Satisfactory)</td>
<td>70 – 80</td>
</tr>
<tr>
<td>D (Unsatisfactory)</td>
<td>60 – 70</td>
</tr>
<tr>
<td>F (Failure)</td>
<td>less than 60</td>
</tr>
</tbody>
</table>

Grading Scheme

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

<table>
<thead>
<tr>
<th>Assignment Categories</th>
<th>Quizzes</th>
<th>Assignments</th>
<th>Discussion questions</th>
<th>Final Project</th>
<th>Final exam</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weightage</td>
<td>15%</td>
<td>25%</td>
<td>15%</td>
<td>20%</td>
<td>20%</td>
<td>5%</td>
</tr>
</tbody>
</table>
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. Graduate students have to work on a synthesis paper/case study during the semester that should be submitted by the sixth week of the semester.

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 bb LMS option 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 (5% of the final grade) will be sent to the students during the final week of the semester. After completing the evaluation, students have to send a screenshot to get the associated grade.**

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 2013.** Engineering students can get the access by going to [http://etc.utep.edu/software/msdn.htm](http://etc.utep.edu/software/msdn.htm)
- **Acrobat Reader.** You can get the program by going to [http://www.adobe.com](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](http://www.adobe.com) and then clicking on "Get Adobe Flash Player". Follow instructions to install the player.
的重要提醒

课程安排变更

作为课程教师，我保留调整课程大纲或改变作业的权力。我将确保给你足够的时间使你有足够的时间调整。

学术不端声明

学术不端行为是被禁止的，并被视为违背了UTEP的《手册》中的《操作程序》。它包含，但不局限于，作弊、剽窃和共谋。作弊可能涉及抄袭或使用未授权的材料，包括考试或其他研究项目中的数据。剽窃是在故意或无意中使用别人的话或别人作品。共谋涉及合作，另一个人承诺任何学术不端行为。任何学术不端行为由UTEP学生被认为是不可接受的，将不被容忍。违反将被视为严肃的，并将被转给学生事务办公室。学生可能被停学或开除。

学术不端行为是违法的。它对大学来说是一个严重的攻击。作弊、剽窃和不端行为是大学教育和研究的严重行为。它会侵蚀大学的教育和研究的公平和正义。如果UTEP学生理解并接受学术诚信的话，他们将愿意承担个人责任。材料（书面或非书面）必须代表学生自己的努力。任何学术不端行为由UTEP学生被认为是不可接受的，将不被容忍。违反将被转给学生事务办公室。学生可能被停学或开除。

安全任务

本课程可能利用第三方软件来自动检测剽窃。

版权通知

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残疾人学生声明

在504号法令和美国残疾人法案(ADA)中，如果学生需要特殊需要，则需要联系残疾学生服务，然后他们可以联系学院。如果该条件可能影响你成功完成课程，你被鼓励与教师和/or学院的残疾人学生服务联系。你可以拨打(915) 747-5148了解有关美国残疾人法令(ADA)和权利的信息。你也可以访问DSSO网站在www.utep.edu/dsso或DSSO办公室在108东校联建。
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*

<table>
<thead>
<tr>
<th>Week*</th>
<th>Topics</th>
<th>Readings</th>
<th>Deliverables</th>
</tr>
</thead>
</table>
| 1     | • 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     | • 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 1,  
Discussion 2 |
| 3     | • Determining activity durations  
       • Lags  
       • PERT | Text Chapters 7,9  
PowerPoint 3 | Assignment 3, Quiz 2,  
Discussion 3 |
| 4     | • Analyzing schedule  
       • Creating bar charts | Text Chapter 11,12  
PowerPoint 4 | Assignment 4, Quiz 3,  
Discussion 4 |
| 5     | • Linear scheduling  
       • Updating the schedule | Text Chapter 13,14  
PowerPoint 5 | Assignment 5, Quiz 4,  
Discussion 5 |
| 6     | • Resource balancing | Text Chapter 15  
PowerPoint 6 | Assignment 6, Quiz 5,  
Discussion 6  
Graduate paper due |
| 7     | • Project control techniques (Cost and schedule)  
       • Managing project team  
       • Other scheduling techniques | Text Chapter 16,17,18  
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