

ENTC 4060: Project Scheduling

Course Syllabus, Spring 2014

**Department of Engineering Technology, Surveying and Digital Media
East Tennessee State University**

Instructor's Info	Instructor	M. Moin Uddin, Ph.D., P.E.
	Office	203E Wilson Wallis
	Email	uddinm@etsu.edu
	Tel.	423 439 4164
Class Schedule	Online	
Course Description	A detailed study in planning, organizing, and controlling projects using critical path method; precedence networks; bar charts; monthly reports; and fast track scheduling. Computer software is used to schedule projects. Emphasis is placed on time, resources, and capital considerations for the project.	

Text Books and Software Requirement	No Textbook. Handouts will be supplied as needed
	Microsoft Project 2013

Course Objectives	Upon completion of the course the student will be able to: <ol style="list-style-type: none">1. Understand the principles of project management and the importance of project planning and scheduling2. Demonstrate the ability to develop a Critical Path Method (CPM) schedule, Gantt chart, arrow and node networks, and other simple schedules to accomplish project objectives3. Track, manage, update, and evaluate performance of a schedule4. Demonstrate proficiency in creating, displaying and managing the project schedule and costs in Microsoft Project 20135. Function effectively as a member or leader on a technical team and have a respect for professional and ethical issues in project planning and scheduling
--------------------------	---

Student Outcomes for the course will include, but not be limited to ABET student outcomes b, e, g, h, and k.

1. an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies;
2. an ability to function effectively as a member or leader on a technical team;
3. an ability to apply written, oral, and graphical communication in both technical and nontechnical environments; and an ability to identify and use appropriate technical literature;
4. an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity;
5. a commitment to quality, timeliness, and continuous improvement.

Tentative Course Schedule

Course Topics

- Introductory to Planning and Scheduling
- Checklist, Daily To-Do Lists, and Magnetic Scheduling Boards
- Bar Chart Schedules
- Arrow and Network Diagrams
- Work Breakdown Structure and Estimating Activity Duration
- CPM Scheduling
- Resource Allocation and Leveling
- Reports and Graphics
- Reviewing, Analyzing, and Updating a Schedule
- Earn Value
- Time in Contract Provisions
- The Impact of Scheduling Decisions on Productivity
- Microsoft Project 2013

Course Activities

- Video Lecture and Demonstration
- Discussion
- Problem Solving
- Group Project and Presentation

D2L

Please use D2L to check for course updates. Lecture slides, reading assignments, and course assignments will be posted on D2L. Grades will be posted as they are available.

AMMENDMENTS:

Occasionally this document has to be amended. You will be duly notified should changes become necessary.

Assessment and Grading Policy

Assignments (6)	100
Project	100
Midterm	100
Final (Comprehensive)	100
Active Learning (6)	100
Total (Points)	500

Grading Scale

“A” = 500 – 465; “A-” = 464 – 450
 “B+” = 449 – 435; “B” = 434 – 415; “B-” = 414 – 400
 “C+” = 399 – 385; “C” = 384 – 365; “C-” = 364 – 350
 “D+” = 349 – 335; “D” = 334 – 300; “F” <315

A = Exceptional work: conceptually appropriate, demonstrates strong creative thought, precisely executed, instructions followed to the letter, professional or near-professional quality work, and turned in on time.

B = Work executed with few errors, conceptually appropriate, demonstrates good creative thought, and turned in on time.

C = Average work, meets minimum requirements.

D = Below average work, “sloppy”, instructions not followed, and work shows a lack of understanding or a lack of application of material covered in class.

F = Failed to meet minimum requirements of the problem.

**Midterm and
Final Exam
Schedule**

Midterm: Due March 7th @ 5 PM
Final: Due May 9th @ 5 PM

Course Policies

Responsibilities:

It is the responsibility of the Instructor to present the lectures and assignments as clearly as possible and to help the students to understand the subject to the best of his ability. He must be fair in his dealings with the students.

It is the responsibility of the students to attend lectures regularly and make concerted effort to understand the subject. Students must ask questions when some material is not understood. Students are expected to participate fully in class discussions and to submit all homework assignments on time. The students must be fair in their dealings with their colleagues and the instructor.

Reading Assignments:

Students will complete the weekly reading assignments. **You are responsible for the announcements and materials covered. Please understand that the effort and time required for this course are significant.**

Questions:

If at any time you have any questions or concerns about the study materials or to clarify something, please upload those questions on D2L Discussion Board. I will try to respond to your questions within 24 hours.

Assignments and Exams:

- Students will complete the weekly reading assignments
- Assignments are due one week after the day they were assigned (**typically 11:59 PM Eastern Standard Time**)
- Students are expected to meet all deadlines for assignments, project, exams, etc. Check the dates and times due very carefully.
- **Late assignments cannot be accepted and will not be graded.** Late assignments will only be accepted in the case of a serious emergency or illness and a documented excuse will be required. Same policies apply for exams.
- **Assignments should be done in separate pages.** Students will proofread all messages, papers, exams, etc. carefully regarding spelling, grammar, punctuation, and content before sending. Homework that is not professional and legible will not be graded.
- Your assignments, papers, and exams should be typed, 1.5 spaced within paragraphs, double-spaced between paragraphs, and formatted according to APA (American Psychological Association) style. **The font size should be 12 point (Style is your choice, Times New Roman/ Arial is preferred).**
- **Each assignment must include a cover page that includes the following: Course number: Course name, Assignment number and topic, Your name, and the Date submitted**

- I will not be responsible for lost or misplaced assignments. I will also not be responsible for data loss on any digital storage media you submit to me, or for information that seemed to be lost in transit over the Internet. If you lose data due to a system malfunction, you should have a backup. I will not accept system failure as an excuse for a missing assignment.
- I reserve the right to assess your work and assign the final grade for each assignment and overall course grade. I also reserve the right to review & change the grade of any assignment at any time during the semester or within the timeframe after the course, as allowable by ETSU. Extra credit is not permitted in this course.

Class Discussion Board:

An online discussion board is available to discuss questions with your classmates and instructors. The discussion board will be used as the active learning hub. Please be familiar with the various features of the discussion board. Typical your instructor will create four threads for each module – first thread for general discussion on the reading materials and the remaining three threads will be dedicated for “Active Learning” activities. Obscene and other inappropriate messages, deemed inappropriate solely by the instructor, will result in dismissal from the class.

Internet Skills and Expectations:

- Each student is expected to have access to the Internet.
- Have a monitor capable of at least 800x600 resolution
The ETSU system requires a 5.0 browser (Internet Explorer, Mozilla, Safari) or better for best performance
- Have a valid email account - all ETSU students are assigned an email account.
- Skills needed to navigate a course web site: Familiarity with computers and an online environment are obvious skills needed to successfully use online course management tools. We recommend you have the following basic skills to be comfortable with navigating your course web site: Browsing the web, Entering URL's, Locating and opening files on your computer, Using drop down lists, and Entering text into web based forms.
- Students are responsible for technical problems that arise with their equipment. Neither I, nor the college, can offer technical help. If you experience severe technical problems, they must be documented and communicated to me immediately. Because of the possibility of an equipment problem, be absolutely sure to save **all** copies of work transmitted and **back up** your work on discs or other portable devices. Do **not** wait until the last minute to send assignments because of the above.

Software Requirements:

Specific software requirements for this course include...**Microsoft Word, Excel and Project.** **Word** will be your primary tool. **Excel** is used for creating tables and graphs. **Microsoft Project** is for learning computerized schedules and reports. Please send in your assignments in Microsoft Word document to me.

Academic Dishonesty Statement

ETSU Policy No. 3.13, October 1, 1979.
 All students in attendance at East Tennessee State University are expected to be honorable. Academic Misconduct will be subject to disciplinary action. Any act of dishonesty in academic work constitutes academic misconduct. This plagiarism, the changing or falsifying of any academic documents or materials, cheating, and the giving or receiving of unauthorized aid in test, examinations, or other assigned school work. Penalties for academic misconduct will vary with the seriousness of the offense and any may include, but not limited to: a grade of “F” on the work in question; a grade of "F" for the course; reprimand, probation, suspension, and expulsion. For a second academic offense the penalty is permanent expulsion.

Students with Disabilities

Any Student with disabilities or other special needs is invited to share his/her concerns with the instructor as soon as possible, preferably within the first week of class. Every effort will be made to accommodate the concerns. Contact ETSU Disability Services, 3rd Floor DP Culp Center, (423) 439-8346.

Mental Health

Students often have questions about mental health resources, whether for themselves or a friend or family member. There are many resources available on the ETSU Campus, including: ETSU Counseling Center (423) 439-4841; ETSU Behavioral Health & Wellness Clinic (423) 439-7777; ETSU Community Counseling Clinic: (423) 439-4187.

- If you or a friend are in immediate crisis, call 911.
- Available 24 hours per day is the National Suicide Prevention Lifeline:
 - 1-800-273-TALK (8255).

Week of January 20 to 24th – Module 01

A. Reading Materials (posted on D2L)

- Introduction to Project Scheduling
- Why Schedule?
- Checklist, Daily To-Do Lists, and Magnetic Scheduling Boards
- Video Demonstration of checklist using Excel

B. Active Learning Group:

For active learning the class list is divided into six teams in two groups.

Team “Ask” in each group will prepare three questions as a team and place those in the discussion board’s Team “Ask” section. Your instructor will include two more questions. Your questions should be focused on concepts, problems or short answer questions based on the reading materials for that particular week. Ask challenging and critical thinking related questions. Team “Ask” questions will be due Tuesday by 5 PM EST.

Team “Solve” in each group will work in as a team and answer all five questions and place them in the discussion board’s Team “Solve” section as a team. Team “Solve” answers will be due Thursday by 5 PM EST.

Team “Evaluate and Synthesis” in each group will work as a team and evaluate the answers and then place them in the discussion board’s “Evaluate and Synthesis” section. Team “Evaluate and Synthesis” works will be due Friday by 5 PM.

Group	Team “Ask”	Team “Solve”	Team “ Evaluate and Synthesis”
1	Goyeau, Katherine; Henry, Eric; Lunsford, Joshua; Maniaci, Joshua	Brown, William; Gross, Michael; Wright, Justin; Barrett, Nova	Cole, Lauren; Holland, Dustin; Baker, Leon; Lockhart, Ryan
2	Abdelnour, Jessica; Smith, Hobert; Burleson, Preston; Thomas, Michael	Drumm, Jake; Hensley, Robert; Ragsdale, Eric; Barton, Amy; White, Wesley	Cannon, Matthew; Jackson, Austin; Jones, Jonathan; Thompson, Cora

C. Course Project

Select a project which is consist of 30 to 50 activities and require people of different skills and expertise, materials and equipment. The project may be a design and development project, a construction project, an event organization, publication etc. The project duration should be limited to 3~6 months.

Project deliverables:

- Project Proposal is due Feb 13th
- Manual Preparation of the Schedule using CPM is due April 4th
- Preparation of the Schedule Using Microsoft Project 2013 is due April 30th

Group Formation

Group 1	Brown, William; Cole, Lauren; Lunsford, Joshua; Smith, Hobert; Thomas, Michael
Group 2	Goyeau, Katherine; Henry, Eric; Wright, Justin; Hensley, Robert; Thompson, Cora
Group 3	Gross, Michael; Jones, Jonathan; Burleson, Preston; Ragsdale, Eric; Barton, Amy
Group 4	Holland, Dustin; Abdelnour, Jessica; Drumm, Jake; Jackson, Austin; Lockhart, Ryan
Group 5	Baker, Leon; Barrett, Nova; Cannon, Matthew; Maniaci, Joshua; White, Wesley

Each report will accompany a PowerPoint Presentation. Guidelines and formatting instructions of the paper and presentation can be found on the D2L under Course Project module. Upload report and PowerPoint on D2L by due date. Presentation can be done by two ways:

1. Record your PowerPoint Presentation as a group and upload it on to D2L. or
2. Use Skype and Present your report live. You need to set up time of the presentation with the instructor.

2. Week of January 27 to 31st - Module 02

A. Reading Materials (posted on D2L)

- Gantt (Bar) Chart
- Video Demonstration on Creating Bar Charts with Microsoft Excel

B. Assignment 01 on Gantt Chart due January 31st by 11:59 PM EST

3. Week of February 3 to 7th – Module 03

A. Reading Materials (posted on D2L)

- Basic Networks – Activity on Arrow Network
- Basic Networks – Activity on Node Network

B. Active Learning

Group	Team “Ask”	Team “Solve”	Team “ Evaluate and Synthesis”
1	Cole, Lauren; Holland, Dustin; Baker, Leon; Lockhart, Ryan	Goyeau, Katherine; Henry, Eric; Lunsford, Joshua; Maniaci, Joshua	Brown, William; Gross, Michael; Wright, Justin; Barrett, Nova
2	Cannon, Matthew; Jackson, Austin; Jones, Jonathan; Thompson, Cora	Abdelnour, Jessica; Smith, Hobert; Burleson, Preston; Thomas, Michael	Drumm, Jake; Hensley, Robert; Ragsdale, Eric; Barton, Amy; White, Wesley

C. Assignment 02 on Arrow and Node Network due February 7th by 11:59 PM EST

4. Week of February 10 to 14th

Project Proposal Presentation and Report Due

Prepare a recorded presentation or Schedule a time with your instructor to present your proposal live via Skype. Upload the recorded presentation, PowerPoint Slides and the report on D2L.

5. Week of February 17 to 21st – Module 04

A. Reading Materials (posted on D2L)

- Introduction to CPM Scheduling
 - Work Breakdown Structure (WBS)
 - Determining Durations
-

6. Week of February 24 to 28th

A. Reading Materials (posted on D2L)

- Calculating Start and Finish Dates –Forward Pass and Backward Pass

- Calculating Critical Path and Calculating Floats

B. Active Learning

Group	Team “Ask”	Team “Solve”	Team “ Evaluate and Synthesis”
1	Brown, William; Gross, Michael; Wright, Justin; Barrett, Nova	Cole, Lauren; Holland, Dustin; Baker, Leon; Lockhart, Ryan	Goyeau, Katherine; Henry, Eric; Lunsford, Joshua; Maniaci, Joshua
2	Drumm, Jake; Hensley, Robert; Ragsdale, Eric; Barton, Amy; White, Wesley	Cannon, Matthew; Jackson, Austin; Jones, Jonathan; Thompson, Cora	Abdelnour, Jessica; Smith, Hobert; Burleson, Preston; Thomas, Michael

C. Assignment 03 on CPM calculation due February 28th by 11:59 PM EST

7. Week of March 3 to 7th

Midterm Exam Due March 7th by 5 PM

8. Week of March 10 to 14th

Spring Break

9. Week of March 17 to 21st

A. Reading Materials (posted on D2L)

- Lags in CPM
- Reviewing and Analyzing the Schedule
- Updating Schedule
- Project Monitoring and Control

B. Active Learning

Group	Team “Ask”	Team “Solve”	Team “ Evaluate and Synthesis”
1	Goyeau, Katherine; Henry, Eric; Lunsford, Joshua; Maniaci, Joshua	Brown, William; Gross, Michael; Wright, Justin; Barrett, Nova	Cole, Lauren; Holland, Dustin; Baker, Leon; Lockhart, Ryan
2	Abdelnour, Jessica; Smith, Hobert; Burleson, Preston; Thomas, Michael	Drumm, Jake; Hensley, Robert; Ragsdale, Eric; Barton, Amy; White, Wesley	Cannon, Matthew; Jackson, Austin; Jones, Jonathan; Thompson, Cora

C. **Assignment 04** on CPM with lags due March 21st by 11:59 PM EST

10. Week of March 24 to 28th

A. **Reading Materials (posted on D2L)**

- Earn Value: A Means for Integrating Costs and Schedule

B. **Active Learning**

Group	Team “Ask”	Team “Solve”	Team “ Evaluate and Synthesis”
1	Cole, Lauren; Holland, Dustin; Baker, Leon; Lockhart, Ryan	Goyeau, Katherine; Henry, Eric; Lunsford, Joshua; Maniaci, Joshua	Brown, William; Gross, Michael; Wright, Justin; Barrett, Nova
2	Cannon, Matthew; Jackson, Austin; Jones, Jonathan; Thompson, Cora	Abdelnour, Jessica; Smith, Hobert; Burleson, Preston; Thomas, Michael	Drumm, Jake; Hensley, Robert; Ragsdale, Eric; Barton, Amy; White, Wesley

C. **Assignment 05** on CPM with lags due March 28th by 11:59 PM EST

11. Week of March 31 to April 4th

Manual Preparation of the Schedule and Presentation Due

Prepare a recorded presentation or Schedule a time with your instructor to present your manual preparation of schedule live via Skype. Upload the recorded presentation, PowerPoint Slides and the report on D2L.

12. Week of April 7to 11th

A. **Reading Materials (posted on D2L)**

- Microsoft Project 2013 – Chapter 2 to 4 & Ch. 9 and 10

B. **Assignment 06 Part I** Microsoft Project due April 11th by 11:59 PM EST

13. Week of April 14 to 18th

A. **Reading Materials (posted on D2L)**

- Microsoft Project 2013 – Chapter 5, 6, and 11

B. Active Learning

Group	Team “Ask”	Team “Solve”	Team “ Evaluate and Synthesis”
1	Brown, William; Gross, Michael; Wright, Justin; Barrett, Nova	Cole, Lauren; Holland, Dustin; Baker, Leon; Lockhart, Ryan	Goyeau, Katherine; Henry, Eric; Lunsford, Joshua; Maniaci, Joshua
2	Drumm, Jake; Hensley, Robert; Ragsdale, Eric; Barton, Amy; White, Wesley	Cannon, Matthew; Jackson, Austin; Jones, Jonathan; Thompson, Cora	Abdelnour, Jessica; Smith, Hobert; Burleson, Preston; Thomas, Michael

C. Assignment 06 Part II Microsoft Project April 18th by 11:59 PM EST

14. Week of April 21 to 25th

A. Reading Materials (posted on D2L)

- Microsoft Project 2013 – Chapter 7, 8, 14, and 15

B. Assignment 06 Part III Microsoft Project April 25th by 11:59 PM EST

15. Week of April 28 to May 2nd

Project Final Presentation and Report Due

Prepare a recorded presentation or Schedule a time with your instructor to present your complete project live via Skype. Upload the recorded presentation, PowerPoint Slides and the report on D2L.

16. Week of May 5 to 9th

Final Exam Due May 9th by 5 PM

I am here to HELP. Just Ask – Enjoy and Learn!