PROJECT SCHEDULING W/ LAB
CET 2021 (formerly CET 2022)

Class Hours: 2.0  Credit Hours: 3.0
Laboratory Hours: 2.0  Revised: Spring 05

Catalog Course Description:

This course covers methods used in planning, organizing and controlling construction projects. It includes the use of bar charts and critical path diagrams. Software is used to create project schedules. Emphasis is placed on time, resources and capital considerations for the project.

Entry Level Standards:

Students entering this course should have a general familiarity with construction methods, materials, and terminology. A basic familiarity with cost estimating will also be expected. This basic understanding may come from previous curriculum courses or from field experience. Math skills should be sufficient to allow manipulation of simple algebraic equations. Communication skills should be sufficient for the comprehension and presentation of technical data.

Prerequisites:

Second-year status or consent of instructor

Textbook(s) and Other Course Materials:

Text:
Marchman, David A.  *Scheduling with SureTrak*. Delmar

Other:
- Scientific Calculator
- Paper - Pencil
- Data storage media

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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</table>
| 1    | Lecture: Introduction to scheduling  
|      | Lab: Introduction |
| 2    | Lecture: Rough Diagram Preparation  
|      | Lab: Arrow Diagraming Techniques |
| 3    | Lecture: Schedule Calculations  
|      | Lab: Arrow Diagraming Techniques |
| 4    | Lecture: Bar Chart Creation  
|      | Lab: Start a Semester project |
| 5    | Lecture: Bar Chart Format  
|      | Lab: Adding Layouts, Column Formats, and Organizing |
| 6    | Lecture: Resources |
Lab: Adding Resource Requirements and Leveling Resources

7 Lecture: Costs; EXAM 1
   Lab: Adding Costs to the Semester Project

8 Lecture: Bar Chart hard Copy Prints
   Lab: Formatting and Printing Reports

9 Lecture: Pert Diagram
   Lab: Using Pert Charts

10 Lecture: List Reports
    Lab: Preparing List Reports

11 Lecture: Updating the Schedule
   Lab: Update the Semester Project Schedule

12 Lecture: Tracking Resources
   Lab: Update Resources for the Semester Project

13 Lecture: Tracking Costs
   Lab: Update Costs for the Semester Project

14 Lecture: Conveying and Presenting Schedules, Reports, Plots and Prints
   Lab: Prepare a Comprehensive Report of the Semester Project

15 FINAL EXAM

II. Course Objectives*:

A. Enumerate project phases and determine schedule information needed.  A, C, I, J
B. Define activities and establish relationships.  A, C, I, J
C. Establish and track progress, budgets, expenditures and resources.  A, C, I, J
D. Prepare Gantt and PERT charts.  A, C, I, J
E. Demonstrate a proficiency in the use of industry standard software.  A, C, I, J
F. Present written and oral reports using charts, tables and diagrams.  A, C, G, I, J
G. Demonstrate self initiative to complete all assignments on time.  E

*Letters after course objectives reference CET Program Outcomes (as required by ABET).

III. Instructional Processes*:

Students will:

1. Actively listen to class lectures and participate in class activities that develop and reinforce comprehension of the theories, concepts, principles and applications of distance measurement using surveying instruments.  Communication Outcome, Technological Literacy Outcome, Active Learning Strategies

2. Work individually and in teams to complete lab assignments related to the theories, concepts and principles covered in the lecture portion of the course.  Communication Outcome, Technological Literacy Outcome, Active Learning Strategies

3. Use Project Management, WordPerfect/Word or other appropriate software to generate written home work assignments.  Communication Outcome, Technological Literacy Outcome, Mathematics Outcome, Active Learning Strategies
IV. Expectations for Student Performance*

Upon successful completion of this course, the student should be able to:

1. Demonstrate proficiency in one or more project scheduling software applications. D
2. Explain the principles of construction project management. A
3. Define project management scheduling terms. A
4. Demonstrate the ability to develop a construction schedule. A & B
5. Establish activity relationships. B
6. Track and manage a construction schedule. C
7. Evaluate and update a construction schedule. C
8. Create PERT and gantt chart. D
9. Establish and manage budgets and subprojects. C
10. Create reports and charts of schedules. F
11. Convey a schedule through reports and charts of schedules. F

*Letters after performance expectations reference the course objectives listed above.

V. Evaluation:

A. Testing Procedures:

Two examinations are scheduled. Students may make up one exam due to absences preferably before the exam is scheduled but no later than one week after the exam is given. Examinations will be given approximately as scheduled and will be announced at least one week in advance. (70%).

B. Laboratory Expectations:

**Quizzes:**
Quizzes may be given by the instructor. Most quizzes will be unscheduled and randomly given. They cover the previous sessions material or the reading assignment for that day. There is no make-up or extra credit given for quizzes missed. (10%)

**Written Assignments:**
Students may be required to hand in answers to select questions at the end of each chapter or other appropriate homework at the instructor's discretion. All written assignments must be handed in on 8 x 11 engineering notepad, typing paper, or forms provided by your instructor. Students are encouraged to use word processing to generate their reports. All written assignments will be assessed a 10% penalty for each school day it is late. All student work submitted for evaluation may be retained by the instructor. (10%)

C. Field Work:

N/A

D. Other Evaluation Methods:

Ten percent of the grade will be based upon a subjective evaluation of attendance, classroom
participation, laboratory work and attitude.

E. Grading Scale:

Final grades will be computed from the grades obtained on homework, quizzes and examinations as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Quizzes &amp; Homework</td>
<td>15%</td>
</tr>
<tr>
<td>Semester Project</td>
<td>35%</td>
</tr>
<tr>
<td>Examinations</td>
<td>50%</td>
</tr>
</tbody>
</table>

Grades are based on the following:

- 90 - 100    A
- 86 - 89     B+
- 80 - 85     B
- 76 - 79     C+
- 70 - 75     C
- 60 - 69     D
- Below 59     F

VI. Policies:

A. Attendance Policy:

Pellissippi State Technical Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course (Pellissippi State Catalog). Individual departments/programs/disciplines, with the approval of the vice president of Academic and Student Affairs, may have requirements that are more stringent. It is the student's responsibility to attend every scheduled class activity on time. Students are responsible to get assignments missed and to make-up any work missed during an absence.

B. Academic and Classroom Misconduct:

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices: Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments. In addition to other possible disciplinary sanctions that may be imposed as a result of academic misconduct, the instructor has the authority to assign either (1) an F or zero for the assignment or (2) an F for the course.

C. Accommodations for disabilities:

If you need accommodation because of a disability, if you have emergency medical information to share, or if you need special arrangements in case the building must be evacuated, please inform the instructor immediately. Privately after class or in the instructor's office.

To request accommodations students must register with Services for Students with Disabilities: Goins 127 or 131, Phone: (865) 539-7153 or (865) 694-6751 Voice/TDD.