

Advanced Project Management QEM 545

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Course Objective

The course is designed to provide students with in-depth training and education of advanced project management knowledge and techniques. The course will prepare students to master advanced topics using MS Project software and project management tools.

Textbooks:

Microsoft Official Academic Course, Microsoft Project 2010, ISBN 978-0-470-63888-0

Course Format

<u>Activity</u>	<u>Points</u>	<u>Topic(s)</u>
1 Quizzes	160	Lessons 1 – 16
2 Lesson Exercises	160	Weekly Subject
3 Discussion Board	80	Weekly Subject
4 Competency & Proficiency Assessments	0	Weekly Subject
5 Microsoft Consolidated Schedule	<u>280</u>	Microsoft Project
Total	680	

Grading Policy

All quizzes and projects will be administered through the Desire 2 Learn (D2L) online platform.

Academic Conduct

Cheating on examinations, submitting work of other students as your own, or plagiarism in any form will result in penalties ranging from an **F** on the assignment to expulsion from the university, depending on the seriousness of the offense.

Grade Assignment

A: 680 - 612
B: 611 - 544
C: 543 - 476
D: 475 - 408

Software Resource

You will need to use MS Project 2010 in this class. The College of Engineering is now a member of the Microsoft Developer Network Academic Alliance (MSDNAA), also known as Dream Spark. This program allows faculty, staff and students to install Microsoft software products included in the MSDN Academic Alliance Subscription for instructional and non-commercial research use. The software may also be installed on personal computers for teaching, study and research at no cost. Faculty, staff and students in the College of Engineering are allowed to obtain one copy and one key for each software title as applicable for use within the licensing terms.

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The complete licensing terms can be found here: www.engr.siu.edu/MSDNAA

A list of available software can be found at <http://www.engr.siu.edu/MSDNAA.html>

Attendance

Students are expected to participate in class sessions each week. There is a, one week window of opportunity to complete requisite work. All assignments are due at 11:00 PM on the date specified below (Sat. nite). Plan ahead and work ahead because there will be no extended time allowed for make-up

Time Allocation

Week Ending	18-Jan	Lesson(s)	1	
Week Ending	25-Jan	Lesson(s)	2	
Week Ending	1-Feb	Lesson(s)	3	Choose tasks for semester project
Week Ending	8-Feb	Lesson(s)	4	
Week Ending	15-Feb	Lesson(s)	5	
Week Ending	22-Feb	Lesson(s)	6	
Week Ending	1-Mar	Lesson(s)	7 & 8	
Week Ending	8- Mar	Lesson(s)	9	
Week Ending	15-Mar	Lesson(s)		Semester Break
Week Ending	22-Mar	Lesson(s)	10	
Week Ending	29-Mar	Lesson(s)	11	
Week Ending	5-Apr	Lesson(s)	12	
Week Ending	12-Apr	Lesson(s)	13	
Week Ending	19-Apr	Lesson(s)	14	
Week Ending	26-Apr	Lesson(s)	15	
Week Ending	3-May	Lesson(s)	16	Semester project due

Instruction Method

Methods of instruction and learning include reading the textbook and Power Point presentations, completing lesson exercises, participating in class discussions, and a final project.

Be aware that as you proceed through your text that you are regularly required to retrieve your work from a previous lesson and expand upon it by applying the current lesson exercise(s). The text regularly refers to, "*follow your instructor's direction*" regarding where and how you save these. Your instructor is giving you the freedom to save these how you desire.

For ease of access during your study time, you will want to copy the practice files so you can follow the directions in the text for each exercise. By copying the practice files, you will be better able to learn the lessons rather than recreate each file yourself.

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Microsoft Project Companion Site

1. Open Internet Explorer
2. In Internet Explorer, go to the student companion site: www.wiley.com.
3. Search for your textbook title (Microsoft Project 2010) in the upper right corner.
4. On the Search Results page, locate your book and click, the Visit the **Companion Sites** link.
5. Select **Student Companion Site** from the pop-up box
6. In the left-hand column, under, *Browse By Resource*" select, **Student Data Files**.
7. Now select **Student Data Files** from the center of the screen.
8. In the File Download dialog box, select **Save** to save the data files to your external (ZIP drive) or a local drive.
9. In the Save As dialog box, select from the left-hand panel a local drive that you would like to save your files to; again, this should be an external drive or a local drive. Remember the drive name where you saved your files.

Quizzes

Quizzes are based on the stated learning objectives from each chapter. Quizzes will be a mix of ten M/C, T/F, Matching and Fill-in-the-blank style questions. Quizzes will be made available to students only after they have reviewed all of the chapter's material and submitted their Lesson Exercises.

Lesson Exercises

Designated by  in your textbook, the exercises allow you to practice the skills you learn in each lesson. One exercise from each lesson designated in D2L will be submitted via Drop Box for a grade. Submit exercises by the date specified in D2L. You instructor will award 0 - 10 points for each lesson exercise.

Discussion Board Participation

A Power Point presentation coincides with each lesson in the text. There is an entry for each week on the discussion board where you will find one question/statement that relates to the week's lesson. Read the textbook and the Power Point presentations, complete the exercises, and then join your peers in the discussion area to comment and discuss how you and your peers are applying the lesson information. Valuable insight and understanding will result from genuine, enthusiastic participation. The discussion topic each week is worth 5 points. You are expected to participate each week. Discussion board topics will close at 11:00 PM each Saturday.

Discussion Board Grading Rubric

- 3 .5 points – The student has answered only some of the question or did not address the question with an adequate level of articulation.
- 4.0 points – The student has answered the question(s) completely and provided a successful response.

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4.5 points – The student has answered the question(s) successfully and engaged other classmates in robust discussion on their responses.

5.0 points – The student has not only answered the question(s) and engaged others in discussion, but has provided insightful commentary and/or offered additional outside material to enhance the discussion.

A 0.5-point deduction will result for anyone who posts the bulk of the discussion posts on the last (day) of the lesson.

Competency and Proficiencies Assessments

In your textbook you will find two "Competency Assessment" exercises and two "Proficiency Assessment" exercises at the end of every lesson. You are to complete all four assessments for each lesson and submit via D2L Drop Box. The directions in the textbook tell you how to exit the assessment item. It might say, "Save and close" or "Leave open for next exercise"; regardless, you will submit the exercise at that point. Your instructor will use these to assess your progress. The assessments will not be graded, but failure to submit them will result in an incomplete for the course. All assessments for lessons 1 - 9 must be submitted before the mid- semester break. Assessments for Lessons 10 - 16 are due before the end of the semester.

Microsoft Consolidated Schedule (Semester Project)

At semester end, you are required to submit a, "Consolidated Project Schedule" consisting of three projects occurring simultaneously ". There is a sample project called, "Don Funk Music Video" used in nearly all of the exercises in your textbook. This project exemplifies a comprehensive single project schedule. Creating three comparable project schedules and consolidating them into one master project that shares resources is the goal for your semester project. Your single project schedule may not necessarily be as long as the "Don Funk Music Video" example. NOTE: This project is due at the end of the last regular week of the semester and you will need to work ahead to have it completed by that deadline.

You may choose your own projects or use any or all from the list below.

- A new major equipment installation w/ concrete floor configuration. Your crew, in addition to their regular duties will be working with the contractors.
- A building renovation of a working manufacturing operation. The renovation involves construction of a building extension and an upgrade of the electrical system, including new lighting.
- Automation of a production line. The line consists of automated delivery system installed last quarter making component parts available to be assembled, tested and placed in queue for pick-up by a forklift.
- Automation of 300,000 sq. ft. warehouse. The warehouse is attached to a production operation manufacturing household appliances and must remain operational during the upgrade.
- Reorganization of a receiving area to accommodate rail shipments. The railroad will handle the installation of the tracks. A building extension and new truck docks have to be readied in a six-month window.

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- Moving an operation with multiple manufacturing lines into a new building and making the necessary improvements to the old building, readying it for a new manufacturing line. Production will shut down on Wednesday at 11:00 PM for a four-day holiday and will resume on Monday morning at 7:00 AM.
- The design of a 6 Sigma project conducted at your workplace. Include the Charter Statement and the DMAIC process steps.
- Champion the implementation of ISO 9000 at your workplace. You have been instructed to schedule your certification audit in twelve months. Your team will still be responsible for their routine responsibilities.

Your project choices are to be approved by the instructor before the end of the third week of the semester.

You are encouraged to make an appointment with the instructor midway through the semester for a review of your semester project.

Your project is to be submitted during the last week of the semester utilizing the Drop Box in D2L.

Microsoft Consolidated Schedule Semester Project

ITEM	Level 1	Level 2	Level 3
Document Cover	2 points Unprofessional	3 points Professional appearance, not in APA format	5 points APA format
Table of Contents	0 points Not included	3 points Not Justified and/or incomplete.	5 points Justified left and right and correctly linked to the actual page numbers.
Charter Statement	2 points Poorly worded, difficult to follow, few details	4 points Adequately explained, somewhat organized, some details	5 points Articulated, well organized with comprehensive details
Reports from your project as if presented to stakeholders			
	10 points	15 points	20 points
A <u>Resource Sheet View</u> for people, equipment materials and money. (fig. 2.1 pg. 29 of your text)	Less than 15 resources named and less than 2 resource types identified.	Less than 20 resources named and 2 or less resource types identified.	25 or more resources named and all resource types identified.
A phase or any portion of a Gantt Chart showing resources assigned (fig. 3-4 pg. 51 of your text)	Less than 15 resources named and less than 2 resource types identified.	Less than 20 resources named and 2 or less resource types identified.	25 or more resources named and all resource types identified.
A phase or any portion of a Gantt Chart showing critical path, non-critical tasks and slack (float) time (fig. 13-3 pg. 241 of your text)	Less than 10 critical and/or less than 5 non-critical tasks named and no slack identified or quantified.	Less than 20 critical and/or less than 10 non-critical tasks named and slack quantified.	20 or more critical and 10 or more non-critical tasks named and Slack quantified.

The instructor reserves the right to modify the syllabus anytime throughout the course.

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An Earned Value Table in the task sheet view (fig. 11-16 pg 215 in your text)	Less than 10 tasks included.	Less than 20 tasks included.	Twenty or more tasks included.
WBS codes and unique ID's in the task sheet view (fig. 14-1 pg. 259 in your text)	Includes 1 phase and/or 15 or less tasks.	Includes 1 or 2 phases and/or less than 20 tasks.	Includes 2 or more phases and 20 or more tasks.
A network Diagram view of any portion or a phase of your project using nodes to represent each task. (fig. 14-2 pg. 267 in your task)	Includes 15 or fewer tasks.	Includes less than 20 tasks.	Includes 20 or more tasks.
Consolidated Microsoft Master Project File	50 points A simple master project consisting of 3 projects; anyone of which has less than 10 tasks or a preponderance of Finish-to-Start (FS) tasks and/or utilizes less than 4 resources.	75 points A moderately complex master project schedule consisting of 3 projects; any one of which has less than twenty tasks but utilizes all 4 resource types, including a preponderance of Start-to-Start (SS) and Finish-to-Finish (FF) task relationships, extensive use of "Summary Tasks", "Milestones", "Phases", "Sharer Files" and "Resource Calendars".	100 points A complex master project schedule consisting of 3 projects each containing more than twenty tasks and the inclusion of all 4 resource types, utilizing a preponderance of Start-to-Start (SS) and Finish-to-Finish (FF) task relationships, extensive use of "Summary Tasks", "Milestones", "Phases", "Sharer Files" and "Resource Calendars".
Project Scenarios. Include Reports, custom views, memos and any other communication tools.			
	5 points	10 points	15 points
<i>As the Project Manager, what actions would you take when your budget is reduced by 15%?</i>	The use of 2 or fewer "Project" tools or views to communicate actions taken to comply with the mandated change and/or a memo with poorly thought out plans or actions.	The use of "Project" tools or views including, Resource Calendars, Resource Pools and reports and custom views to communicate the impact the changes have on budget, resources, critical path and other agreed upon KPI's., and/or a memo leaving him with questions regarding the actions implemented to comply with the change.	The effective use of "Project" tools or views including, Resource Calendars, Resource Pools and reports and custom views to communicate the impact the changes have on budget, resources, critical path and other agreed upon KPI's., and a detailed memo explaining actions implemented to comply with the change.
<i>As the Project Manager, how would you respond when you learn 10% of your workforce is out</i>	The use of 2 or fewer Project tools to communicate actions taken to comply with the	The effective use of Project tools including, Resource Calendars, Resource Pools and	The effective use of Project tools including, Resource Calendars, Resource Pools and

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<i>with the flu?</i>	mandated change and a memo with ill thought out plans or actions.	reports and custom views to communicate the impact the changes have on budget, resources, critical path and other agreed upon KPI's., with a memo leaving him with questions regarding the actions implemented to comply with the change.	reports and custom views to communicate the impact the changes have on budget, resources, critical path and other agreed upon KPI's., and a detailed memo explaining actions implemented to comply with the change.
<i>As the Project Manager, you learn time allocated for your Master Project has been cut by 15%. What actions do you take?</i>	The use of 2 or fewer Project tools to communicate actions taken to comply with the mandated change and a memo with ill thought out plans or actions.	The effective use of Project tools including, Resource Calendars, Resource Pools and reports and custom views to communicate the impact the changes have on budget, resources, critical path and other agreed upon KPI's., with a memo leaving him with questions regarding the actions implemented to comply with the change.	The effective use of Project tools including, Resource Calendars, Resource Pools and reports and custom views to communicate the impact the changes have on budget, resources, critical path and other agreed upon KPI's., and a detailed memo explaining actions implemented to comply with the change.

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Learning Objectives:

Upon completion of the course, students should know and understand the following:

1. Lesson 1 - Project Basics

- 1.1 Start Microsoft Project
- 1.2 Create a Project Schedule
- 1.3 Define Project Calendars
- 1.4 Enter Tasks and Task Details
- 1.5 Organize Tasks into Phases
- 1.6 Link Tasks
- 1.7 Document Tasks
- 1.8 Review the Project Schedule's Duration

2. Lesson 2 - Establishing Resources

- 2.1 Establish people resources
- 2.2 Establish equipment resources
- 2.3 Establish material resources
- 2.4 Establish cost resources
- 2.5 Establish resource pay rates
- 2.6 Adjust resource working times
- 2.7 Add resource notes

3. Lesson 3 - Resource and Task Assignments (Fundamentals)

- 3.1 Assign work resources to tasks
- 3.2 Add more resource assignments to tasks
- 3.3 Assign material resources to tasks
- 3.4 Assign cost resources to tasks

4. Lesson 4 - Refining Your Project Schedule

- 4.1 Apply a task calendar to an individual task
- 4.2 Change task types
- 4.3 Split a task
- 4.4 Establish recurring tasks
- 4.5 Apply task constraints
- 4.6 Review the project's critical path
- 4.7 View resource allocations over time

5. Lesson 5 Fine-Tuning Tasks

- 5.1 Manage task constraints and dependencies
- 5.2 Set deadline dates
- 5.3 Establish task priorities
- 5.4 Establish a manually scheduled task

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6. Lesson 6 - Fine Tuning Resources

- 6.1 Enter material resource consumption rates
- 6.2 Enter costs per use for resources
- 6.3 Assign multiple pay rates for a resource
- 6.4 Apply different cost rates to assignments
- 6.5 Specify resource availability at different times
- 6.6 Resolve resource over allocations manually
- 6.7 Level over allocated resources

7. Lesson 7 - Project Information: Sorting, Grouping, and Filtering

- 7.1 Sort data
- 7.2 Group data
- 7.3 Filter data

8. Lesson 8 - Project Schedule Formatting (Fundamentals)

- 8.1 Format a Gantt Chart
- 8.2 Draw in a Gantt Chart
- 8.3 Change text appearance in a view
- 8.4 Create and edit tables
- 8.5 Create custom views

9. Lesson 9 - Customizing and Printing Project Information

- 9.1 Customize and Print a View
- 9.2 Customize and Print Reports

10. Lesson 10 - Project Scheduling Tracking (Fundamentals)

- 10.1 Establish a project baseline
- 10.2 Track a project as scheduled
- 10.3 Enter the completion percentage for a task
- 10.4 Identify over budget tasks and resources
- 10.5 Identify time and schedule problems

11. Lesson 11 - Advanced Project Schedule Tracking

- 11.1 Record actual start, finish, and duration values of tasks
- 11.2 Adjust remaining work or duration of tasks
- 11.3 Reschedule uncompleted work
- 11.4 Save an interim plan
- 11.5 Compare baseline, interim, and actual plans
- 11.6 Report project status
- 11.7 Evaluate performance with earned value analysis

12. Lesson 12 - Integrating Microsoft Project with Other Programs

- 12.1 Use a GIF image to display project information
- 12.2 Use the Timeline view to display project information
- 12.3 Save project information in other file formats

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13. Lesson 13 - Project Schedule Optimization

- 13.1 Make time and date adjustments
- 13.2 View the project's critical path
- 13.3 Delay the start of assignments
- 13.4 Apply contours to assignments
- 13.5 Optimize the project schedule

14. Lesson 14 - Advanced Project Scheduling Format

- 14.1 Customize the calendar view
- 14.2 Use Task IDs and WBS codes
- 14.3 Format the Network Diagram
- 14.4 Create and print a visual report

15. Lesson 15 - Managing Multiple Projects

- 15.1 Manage consolidated projects
- 15.2 Create dependencies between projects

16. Lesson 16 - Working with Resource Pools

- 16.1 Develop a resource pool
- 16.2 View assignment details in a resource pool
- 16.3 Revise assignments in a sharer file
- 16.4 Update resource information for a resource in a resource pool
- 16.5 Update working time for all sharer files via the resource pool
- 16.6 Add new files to a resource pool
- 16.7 Revise a sharer file and update a resource pool

Emergency Procedures

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on BERT's website at www.bert.siu.edu, Each Department of Safety's website www.dps.siu.edu (disaster drop down) and in Emergency Response Guideline pamphlet. Know how to respond to each type of emergency.

Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. **It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency.** The Building Emergency Response Team will assist your instructor in evacuating the building or sheltering with the facility.