

ETM 5351
Managing Technical Projects
Course Syllabus

Instructor

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Course Description

This course explores the basic processes and tools required to manage technical projects. Covered material includes staffing and managing the project, developing project plans and schedule, pricing and estimating work, project control, risk management, and contracts and procurement.

Course Objectives

- Provide an understanding of basic tools and processes used to manage technical projects.
- Understand how to use the tools in actual applications.
- Impart examples and experiences from a variety of real projects and perspectives.
- Impart an understanding of project management as a profession.

Text

The following books are required for the course:

- Kerzner, H. (2013). Project Management, a Systems Approach to Planning, Scheduling, and Controlling. 11th Edition. Hoboken, NJ: John Wiley & Sons, Inc.
- Goldratt, E.M. (1997) Critical Chain. Great Barrington, ME: The North River Press

Supplemental articles will also be provided throughout the semester as required.

Communication

The best way to reach is me via the email address provided and we can set up a time for a phone call as required. You are also welcome to call my cell phone at any time and I will try to make myself available or return your call when I am free. I currently hold a full time position in industry with excessive travel, so it may take me some time to get back with you. Consequently, I highly recommend you proactively send me you questions and concerns via email.

Please check the course website frequently. This is the best way to get out a message to everyone, so I use the course home page to post messages of general interest to the class. I will also post messages for assignment due dates, when I have returned the graded assignments, and other important notices.

Academic Integrity

Using the work of another person without attributing the source correctly is plagiarism. Be careful about using quotes or graphics or ideas you have read in a book without providing the reference. This includes copying information or graphics from slides from OSU classes. The reference needs to be associated with the text so it is clear what is original work and what is work from others being used to support your arguments. Plagiarism is against OSU policy and could lead to failure of a course or even dismissal from the university. The OSU writing center has a good presentation on plagiarism, what it is, and how to avoid it. The following excerpt is from the OSU web site <http://academicintegrity.okstate.edu/ai-violation.htm>. You are encouraged to read the entire document for more information on OSU's policy.

Plagiarism: Presenting the written, published or creative work of another as the student's own work. Whenever the student uses wording, arguments, data, design, etc., belonging to someone else in a paper, report, oral presentation, or other assignment, the student must make this fact explicitly clear by correctly citing the appropriate references or sources. The student must fully indicate the extent to which any part or parts of the project are attributed to others. The student must also provide citations for paraphrased materials. The following are examples of plagiarism:

Copying another student's assignment, computer program or examination with or without permission from the author.

Copying another student's computer program and changing only minor items such as logic, variable names, or labels.

Copying or paraphrasing material from an Internet or written source without proper citation.

Copying words and then changing them a little, even if the student gives the source.

Verbatim copying without using quotation marks, even if the source is cited.

Expressing in the student's own words someone else's ideas without giving proper credit.

If you do not know how to correctly attribute references in a paper, consider investing in a good style guide. They are readily available through the OSU library, book stores, and the internet. I use APA, but you can use whatever you prefer.

Grading Policy

Grading will be as follows:

20% = Class participation (2 points for each substantive response)

40% = Assignment 1

40% = Assignment 2

Note the class participation grade: The discussion forum will be the vehicle for determining class participation. Participation means reading the discussion posts of your fellow students **and** responding

with your own thoughts and ideas timely. I will post questions to get the discussion going, but feel free to post your own questions and more importantly, talk among yourselves. I will read every discussion post and respond to many of them, but don't wait on me. This is your class and your opportunity to gain insight, experience, and learn from each other. You are all in the working world in different industries with differing depths and breadths of experience, so our discussions can be as lively and as interesting as you make them. Class participation is 10% of your grade, so if you don't participate you will not likely earn an A for the class.

Letter grades will be determined as follows:

A = 90 – 100
B = 80 – 89
C = 70 – 79
D = 60 – 69
<60 = F

All assignments are to be submitted by 11:59 p.m. of the due date unless prior arrangements have been made with the professor for late delivery. **A letter grade will be deducted for every week the assignment is late without prior permission.**

Note: A paper that is submitted late ***without prior approval*** along with a note apologizing for being late is still late and the grade will be reduced accordingly. I request that when you ask for more time to submit an assignment, please accompany the request with a suggested new submittal date. You know your schedule better than I do, so it will be faster if you tell me the reason for the delay and suggest a new date. Then I can simply approve it rather than entering into a negotiation.

Grading Guidelines and Expectations

Class assignments, readings and video viewing should all be completed before attempting to complete the assignments. The assignments are designed to correspond to the lectures if you watch them based on the schedule of lectures. Even though this is not a thesis program, it is graduate school, which is about broadening your knowledge and understanding of engineering management. Consequently, the expectation for success goes beyond simply reading the textbook and returning a report; it includes acquiring knowledge through thoughtful reflection and research for the assignments. The major difference between undergraduate and graduate education is the amount of critical thinking that is expected. In other words, take the information presented in class, think about what it means based on personal or professional experience, and determine how best to apply it to your current or future role as a professional, manager and/or executive. Thoroughly describe this in the paper and use outside references to support your arguments. The extent to which this is done ultimately determines the grade. The following guidelines are used for grading:

- A paper that shows the course material has been covered; i.e. the videos have been watched and the books have been read and understood, earns a C. This is satisfactory work.
- In addition to the basic expectation for satisfactory work, a paper that shows the lessons and ideas have been integrated with personal experience and a deeper knowledge and understanding has been gained earns a B. This is above average work.
- In addition to the expectations for above average work, a paper that shows the course material has been integrated with personal and/or professional experience and the author has developed original or critical thinking about the topic earns an A. This is exemplary work.

It is expected that all ideas or theories presented in papers be of academic or scholarly quality. It is fine to have opinion or share experience, in fact, that is expected; however, be sure to state “in my experience” and then explain why that is relevant to the discussion. A general statement such as “people don’t like change” without either a reference or explanation based on your own experience is inappropriate in a scholarly exercise. The expectation is that you will submit a paper based on research and your sources will be referenced. Although I enjoy reading your opinions, that is not the entire point of each assignment. The assignments are designed to encourage you to think about the aspects of engineering and technology management pertinent to this course that you may encounter in your own careers and, in combination with reading the works of others, develop your own philosophy or operating paradigm, then show how this all comes together. Refer to the section titled “What is Meant by Scholarly Work?” for more information on the definition, and expectation for scholarly work.

Submitting and Returning Assignments

Assignments # 1, 2, 3, and the Final Exam – Send your assignments to the e-mail address listed above using the following file convention as a Word Document: YourLastName–ETM5341–Assignment #.doc
For example: Sobanski–ETM5341–Assignment#1.doc

Assignments should be submitted as a single Microsoft Word document. Graphics, tables, or spreadsheets need to be incorporated into the Word document since I may not have the same software packages as all of you and may not be able to open an attachment.

Comments and the grade will be noted in the document using the “Review” feature of Word. No changes will be made to the original document. Assignments are usually returned a few days after the due date. All assignments are deleted from my computer when final grades are submitted to the University.

Assignments will be returned to your OSU e-mail account. A message will be posted to the course website home page when assignments have been returned. If you do not receive it back, let me know immediately. If you receive an incorrect attachment; i.e. another student’s file, please return it unopened immediately and the error will be corrected.

Specific assignment due dates and instructions for each assignment will be posted on the course website.

Course Outline for Reference

Week 1	October 30	Lectures
	Introduction	1+
	Project Management Overview	
	Project Management History & Background	
Week 2	November 6	
	Managing The Project	2+
	Planning	
Week 3	November 13	
	Network Scheduling	3+
	Pricing and Estimating	
	Assignment #1 – Gems of Wisdom Goldratt Critical Chain	Due 11/13
Week 4	November 20	
	Project Control	4+
	Risk Management	
Week 5	November 27	
	Contracts and Procurement	5+
	Conclusion and Close Out	
	Assignment #2 – State of the Art in Project Management	Due 11/27
+ Lectures supplemented with video and/or articles		

What is Meant by Scholarly Work?

One of the primary differences between undergraduate and graduate education is that graduate students are expected to start the journey toward critical thinking. If you pursue a doctorate in the future, the expectation is that you take an additional step toward independent thought and original research. One of the goals of this course is to not just impart knowledge in a subject, but to encourage you to think for yourselves and go beyond what the subject matter provides; more or less develop your own philosophy, method to apply the tools, think systemically, etc. These are lofty goals, certainly, but not at all unreasonable or unreachable for a group of educated, highly intelligent, and professionally experienced students. Therefore, assignments should include some research of your own that incorporates other authors or researchers' work into the argument, analysis, and/or conclusion of your papers. It is relatively easy to get journal articles from the internet or OSU library. Use enough references to support your opinions, hypotheses, and analyses, and to illustrate that you looked deeper and thought critically about the topic than mere reporting on the subject. Five to ten references for the papers assigned for this class is reasonable.

For those of you new to graduate school, the following approach may be helpful for developing successful scholarly work. Using this approach is not mandatory. If you already have a proven method for writing papers that works for you, then stay with it.

Steps for Constructing and Defending a Scholarly Argument

1. Thoroughly read the assignment and spend a little time thinking about your approach. What do you want to say about it? What is your opinion on the subject? What do you want to prove or disprove? What point do you want to make?
2. Form a hypothesis on what you want to prove or argue.
3. Look for journal articles or books that help prove your point. They can be selected to provide more background information, to offer an alternate point of view, to introduce another tool or method of making the decision, or to support your hypothesis or argument.
4. Incorporate the reference material into your paper in the analysis of the problem, the conclusion, or even the introduction if it is providing more background for discussing the problem.

