

TMGT 352 - Principles of Cost Engineering COURSE SYLLABUS: Spring 2016

Instructor: Dr. Mohammed AlMansouri

Assistant Professor

Department of Engineering and Technology

Office Location:

Office Hours: (Tuesday & Thursday) 9:00am - Noon

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COURSE INFORMATION

Classroom: Online instructional site: eCollege

Course Text:

Skills & Knowledge of Cost Engineering,5th Edition Revised

Edited by Dr. Scott J. Amos, PE

AACE International (Association for the Advancement of Cost Engineering)

1256 Suncrest Towne Centre Dr. Morgantown, WV 26505-1876 USA

ISBN: 978-1466412552

2012 printing by CreateSpace

Course Description:

Cost engineering is concerned with the application of scientific principles and techniques to problems of cost estimating, cost control, business planning and management science, profitability analysis, project management, and planning and scheduling. Pre-requisite: ACCT 221

Student Learning Outcomes:

Upon Satisfactory completion of the course, students should be able to understand and apply several major areas of knowledge and skills in Cost Engineering (AACE International's Recommended Practice NO. 11R-88):

- 1. Element of Cost (Section 1)
- 2. Element of Analysis (Section 6 and 7)
- 3. Enabling Knowledge (Section 5)
- 4. Planning (section 2, 3, 5, and 7)
- 5. Plan Implementation (section 4)
- 6. Performance Measurement (section 4)
- 7. Performance Assessment (section 4)

COURSE REQUIREMENTS

Instructional / Methods / Activities Assessments

This is an online course which contains facilitated lectures and a series of assignments and assessments to assist students in achieving the course learning outcomes. Each week, students are required to complete the Activities and Assignments, including readings, quizzes, discussions, homework, and exams. A total of **1000 points** can be earned in this course

- 1. The course is expected to take a minimum of 96 hours or more to complete online. A minimum of six hours per week of effort will be required. The time that it takes to complete this course includes study of the textbook, internet and alternative reference research, eCollege activities and instruction, and completion of all assignments, quizzes, and exams.
- 2. The mid-term exam will cover the textbook Chapters 27&28 and Chapters 1 to 13. The final exam will cover Chapters 14 to 26 and Chapters 29 to 31. The mid-term and final exams will be multiple choice.
- 3. In addition to the reading assignments, quizzes, discussions, or homework will be given throughout the semester to assess the material/topics covered in associated course readings and/or course activities.
- 4. A grade of "0" will be assigned to late assignments, unless prior arrangements are worked out with the instructor. The instructor has the final decision on whether late work will be accepted. Late penalties will be assessed to any approved late work.

GRADING

The final course grade will be calculated based on the following:

Quizzes 150 points
Discussions/Homework 150 points
Application Paper 150 points
Mid-Term Exam 250 points
Final Exam 300 points
Total Points possible 1000 points

Grading Scale:

A = 900-1000 points

B = 800-899 points

C = 700-799 points

D = 600-699 points

F = < 600 points

TECHNOLOGY REQUIREMENTS

The following technology is recommended to be successful in this online course:

- Internet Access / Connection- high speed recommended (not dial-up) to be able to connect conveniently and regularly.
- Microsoft Word-Files placed in the assigned dropboxes in eCollege should be saved as .doc, docx or .rft files. Many students do not fully utilize the power within this document processing software. It can assist the user when they know how to use more of the functions. Even the use of the spelling and grammar checkers, page and section breaks, or the use of APA templates.

ACCESS AND NAVIGATION

This course will be facilitated using eCollege, the Learning Management System used by Texas A&M University-Commerce.

- To begin the course, go to https://leo.tamuc.edu/. You will need your Campus Wide Identification Number (CWID) to log into the course.
- If you have questions and/or problems, please contact Technology Services at 903-468-6000 or helpdesk@tamuc.edu.
- eCollege HelpDesk is available 24 hours a day, seven days a week.
 You may contact the eCollege Helpdesk at 1-866-656-5511 or helpdesk@online.tamuc.org or through the Online Chat by clicking on the "Live Support" tab within your eCollege course.

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement

The communication tools used in this course will be Email and eCollege Announcements. Students should communicate with the instructor through the course email tool or directly to the email address provided in this syllabus. The instructor will communicate with students via email through their myLeo email address. Students can expect to receive a response to emails within 48 hours after the email was sent to the instructor. In most cases, the response time will be shorter. Announcements will be posted in the course as needed to keep students informed of changes in schedule or points of clarification for the course. Students should check the announcements each time you enter the course

Virtual Office and Student Lounge

A virtual office and student lounge discussion forums are open for students to post questions related to the course. You are encouraged to post your questions there prior to contacting the instructor by other methods. Include a

subject line which cues the reader in to the nature of your question. If students have a similar question, the subject line prompts the readers that someone else already asked a similar question. The instructor will attempt to check the virtual office within 48 hours of any posting. Feel free to use the student lounge. Open discussions, sharing of ideas, answering each other's questions is highly encouraged.

Technical Support

If at any time you experience technical problems (e.g., you can't log in to the course, you can't see certain material , etc), please contact the eCollege HelpDesk available 24 hours a day, seven days a week. You may contact the eCollege Helpdesk at 1-866-656-5511 or helpdesk@online.tamuc.org or through the Online Chat by clicking on the "Live Support" tab within your eCollege course.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures

Academic Dishonesty

Texas A&M University-Commerce will not allow plagiarism in any form. The students' course works should be their own. Plagiarism represents disregard for academic standards and is strictly against University policy. If you have a question regarding academic dishonesty and integrity, please talk to the instructor or refer to the Code of Student Conduct from Student Guide Handbook.

University Specific Procedures

Students with Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce Gee Library- Room 132 Phone (903) 886-5150 or (903) 886-5835 Fax (903) 468-8148 StudentDisabilityServices@tamuc.edu

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See *Code of Student Conduct from Student Guide Handbook*). Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: http://www.albion.com/netiquette/corerules.html

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

COURSE OUTLINE / CALENDAR

TMGT 352 Class Outline - Spring 2015			
WEEK	DATES	TOPICS	Reading
	Jan 19	First day of class	
Week 1	1/18-1/22	- Course Introduction	Course Syllabus
		- Navigate the Online Course	eCollege Student
		-Introduction	Orientation Tutorial
Week 2	1/25-1/29	3. Cost Elements	Chapters 1-3
	, ,	4. Pricing	
		5. Materials	
Week 3	2/1- 2/5	6. Labor	Chapters 4-6
	' '	7. Engineering	
		8. Equipment, Parts, and Tools	
Week 4	2/8-2/12	9. Economic Costs	Chapters 7-8
	_,	10. Activity-Based Cost Management	
Week 5	2/15-2/19	11. Estimating	Chapters 9-10
	_, _, _, _,	12. Process Product Manufacturing	
Week 6	2/22 - 2/26	13. Discrete product Manufacturing	Chapters 11-13
co.k o	2,22 2,20	Section 3- Planning and Scheduling	Chapters II IS
		14. Planning	
		15. Scheduling	
Week 7	2/29- 3/4	Section 4-Progress and Cost Control	Chapter 14-15
Week 7	2/23 3/4	16. Progress Measurement and Earned	Chapter 14 15
		Values	
		17. Earned Value for Variable Budgets	
Week 8	3/7-3/11	Mid-Term Exam	Chapters 1-15
WCCKO	Mar 14-18	- Spring Break- No classes	Chapters 1 15
Week 9			
Week 9			Chanters 16-17
Week 9	3/21-3/25	18. Tracking Cost and Schedule	Chapters 16-17
Week 9		18. Tracking Cost and Schedule Performance	Chapters 16-17
Week 9		18. Tracking Cost and Schedule Performance 19. Performance and Productivity	Chapters 16-17
	3/21-3/25	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management	
Week 9 Week 10		18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management	Chapters 16-17 Chapter 18-20
	3/21-3/25	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals	
	3/21-3/25	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure	
Week 10	3/21-3/25	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning	Chapter 18-20
	3/21-3/25	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning 23.Project Labor Cost Control	
Week 10	3/21-3/25	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning 23.Project Labor Cost Control 24. Leadership and Management of	Chapter 18-20
Week 10 Week 11	3/21-3/25 3/28-4/1 4/4-4/8	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning 23.Project Labor Cost Control 24. Leadership and Management of Project people	Chapter 18-20 Chapters 21-22
Week 10	3/21-3/25	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning 23.Project Labor Cost Control 24. Leadership and Management of Project people 25. Quality Management	Chapter 18-20
Week 10 Week 11 Week 12	3/21-3/25 3/28-4/1 4/4-4/8 4/11-4/15	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning 23.Project Labor Cost Control 24. Leadership and Management of Project people 25. Quality Management 26. Value Analysis	Chapter 18-20 Chapters 21-22 Chapters 23-24
Week 10 Week 11	3/21-3/25 3/28-4/1 4/4-4/8	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning 23.Project Labor Cost Control 24. Leadership and Management of Project people 25. Quality Management 26. Value Analysis 27. Contracting for Capital Projects	Chapter 18-20 Chapters 21-22
Week 10 Week 11 Week 12 Week 13	3/21-3/25 3/28-4/1 4/4-4/8 4/11-4/15 4/18-4/22	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning 23.Project Labor Cost Control 24. Leadership and Management of Project people 25. Quality Management 26. Value Analysis 27. Contracting for Capital Projects 28. Strategic Asset Management	Chapter 18-20 Chapters 21-22 Chapters 23-24 Chapters 25-26
Week 10 Week 11 Week 12	3/21-3/25 3/28-4/1 4/4-4/8 4/11-4/15	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning 23.Project Labor Cost Control 24. Leadership and Management of Project people 25. Quality Management 26. Value Analysis 27. Contracting for Capital Projects 28. Strategic Asset Management 1. Basic Engineering Economics	Chapter 18-20 Chapters 21-22 Chapters 23-24
Week 10 Week 11 Week 12 Week 13 Week 14	3/21-3/25 3/28-4/1 4/4-4/8 4/11-4/15 4/18-4/22 4/25-4/29	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning 23.Project Labor Cost Control 24. Leadership and Management of Project people 25. Quality Management 26. Value Analysis 27. Contracting for Capital Projects 28. Strategic Asset Management 1. Basic Engineering Economics 2. Applied Engineering Economics	Chapter 18-20 Chapters 21-22 Chapters 23-24 Chapters 25-26 Chapters 27-28
Week 10 Week 11 Week 12 Week 13	3/21-3/25 3/28-4/1 4/4-4/8 4/11-4/15 4/18-4/22	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning 23.Project Labor Cost Control 24. Leadership and Management of Project people 25. Quality Management 26. Value Analysis 27. Contracting for Capital Projects 28. Strategic Asset Management 1. Basic Engineering Economics 2. Applied Engineering Economics Section 7- Statistics, Probability & Risk	Chapter 18-20 Chapters 21-22 Chapters 23-24 Chapters 25-26
Week 11 Week 12 Week 13 Week 14	3/21-3/25 3/28-4/1 4/4-4/8 4/11-4/15 4/18-4/22 4/25-4/29	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning 23.Project Labor Cost Control 24. Leadership and Management of Project people 25. Quality Management 26. Value Analysis 27. Contracting for Capital Projects 28. Strategic Asset Management 1. Basic Engineering Economics 2. Applied Engineering Economics Section 7- Statistics, Probability & Risk 29. Statistics & Probability	Chapter 18-20 Chapters 21-22 Chapters 23-24 Chapters 25-26 Chapters 27-28
Week 11 Week 12 Week 13 Week 14	3/21-3/25 3/28-4/1 4/4-4/8 4/11-4/15 4/18-4/22 4/25-4/29	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning 23.Project Labor Cost Control 24. Leadership and Management of Project people 25. Quality Management 26. Value Analysis 27. Contracting for Capital Projects 28. Strategic Asset Management 1. Basic Engineering Economics 2. Applied Engineering Economics Section 7- Statistics, Probability & Risk 29. Statistics & Probability 30. Basic Concepts in Descriptive	Chapter 18-20 Chapters 21-22 Chapters 23-24 Chapters 25-26 Chapters 27-28
Week 11 Week 12 Week 13 Week 14	3/21-3/25 3/28-4/1 4/4-4/8 4/11-4/15 4/18-4/22 4/25-4/29	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning 23.Project Labor Cost Control 24. Leadership and Management of Project people 25. Quality Management 26. Value Analysis 27. Contracting for Capital Projects 28. Strategic Asset Management 1. Basic Engineering Economics 2. Applied Engineering Economics Section 7- Statistics, Probability & Risk 29. Statistics & Probability 30. Basic Concepts in Descriptive Statistics	Chapter 18-20 Chapters 21-22 Chapters 23-24 Chapters 25-26 Chapters 27-28
Week 10 Week 11 Week 12 Week 13 Week 14	3/21-3/25 3/28-4/1 4/4-4/8 4/11-4/15 4/18-4/22 4/25-4/29	18. Tracking Cost and Schedule Performance 19. Performance and Productivity Management Section 5-Project Management 20. Project Management Fundamentals 21. Project Organization Structure 22. Project Planning 23.Project Labor Cost Control 24. Leadership and Management of Project people 25. Quality Management 26. Value Analysis 27. Contracting for Capital Projects 28. Strategic Asset Management 1. Basic Engineering Economics 2. Applied Engineering Economics Section 7- Statistics, Probability & Risk 29. Statistics & Probability 30. Basic Concepts in Descriptive	Chapter 18-20 Chapters 21-22 Chapters 23-24 Chapters 25-26 Chapters 27-28