ENGR 411.001 ENGINEERING MANAGEMENT
COURSE SYLLABUS: FALL 2020

# INSTRUCTOR INFORMATION

**Instructor:** Dr. M. Yaqub, Ph.D., D.Eng., M.B.A.
Department of Engineering & Technology

**Online Office Hours:**
Tuesday 01:00 pm to 03:30 pm
Thursday 01:00 pm to 03:30 pm

**University Email Address:**
marty.yaqub@tamuc.edu

# COURSE INFORMATION

## *Materials – Textbooks, Readings, Supplementary Readings*

### *Textbook(s) Required*

Textbook Required: Project Management, The Managerial Process
Erik W. Larson and Clifford F Gray / 7th edition.
Publisher: McGrawHill Education
ISBN- 978-0-07-809659-4
Instructor will provide lecture slides/ handouts as references too.

## *Course Description*

Techniques relating to managing engineering activities; project management with Project Definition, Pert/CPM; engineer's transition into management; engineering managerial functions; risk management; productivity assessment/improvement; managing the quality function and communications. Prerequisites: Prerequisites: Senior classification.

## *Student Learning Outcomes* (Should be measurable; observable)

*Student Learning Outcomes*
Upon completion of this course, the student will be able to:
1. Practice the tools of project management such as WBS, R&R Matrix, CPM, PERT, and modern projects' crashing techniques,

2. Appraise the changing business climate and how the changes have impact Engineering management, augmented with risk management techniques,
3. Evaluate risk, cost, and schedule control and management of a project,
4. Assess the role of Project Management vs. Functional Management,
5. Engineering Ethics
6. Professional Responsibilities

# COURSE REQUIREMENTS

**Instructional Methods and Activities Assessments**
This course utilizes lectures and assignments to assist students in achieving the course learning outcomes. The assessment criteria for the stated student learning outcomes will include assignments, case studies, projects, midterm exam, and a final exam.

Problems will be assigned to support the instructional material (either in-class assignment or homework assignment). Students will have an ability to use the techniques, skills, and modern engineering management tools necessary for practice. Students will have an ability to communicate effectively through team projects, case studies and presentations assignments.
Grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

***Grading Rubric:***

| | |
|---|---|
| Exam-1 | 25% |
| Exam-2 | 25% |
| Team Project | 25% |
| Assignments | 15% |
| Case Studies | 10% |

# TECHNOLOGY REQUIREMENTS

The following technologies will be required for this class.

- - A scientific calculator for exams.
- - Microsoft Word, Excel, PowerPoint.
- - Microsoft Project Software

**LMS**
All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:
https://community.brightspace.com/s/article/Brightspace-Platform-Requirements

LMS Browser Support:
https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements:
https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements

# COURSE AND UNIVERSITY PROCEDURES/POLICIES

## *Course Specific Procedures/Policies*

1. One day late assignment is accepted with a 20% grade deduction; after this, no assignment will be accepted as the solutions will be posted online.
2. No make-up exams will be permitted unless official documentation is provided (e.g., death in the family, illness).
3. You will be expected to do all the readings throughout the semester.
4. There will be a group project.
5. There will be engineering ethics and professional responsibility case studies assignments.

### *Syllabus Change Policy*
The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

## *University Specific Procedures*

## *Student Conduct*
All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.
http://www.tamuc.edu/admissions/registrar/documents/studentGuidebook.pdf

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: Netiquette
http://www.albion.com/netiquette/corerules.html

## *Academic Integrity*

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf

Graduate Student Academic Dishonesty 13.99.99.R0.10

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf

## *ADA Statement*

### 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
Email: StudentDisabilityServices@tamuc.edu

Website: Office of Student Disability Resources and Services

http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/

## *Nondiscrimination Notice*

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.

## *Campus Concealed Carry Statement*

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who

have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.

Web url:
http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

# COURSE OUTLINE / CALENDAR

| Date | Week | Topics | Resources |
|---|---|---|---|
| 24-Aug | Week 1 | Project Management Overview | Lecture Notes<br>Conceptual Review Questions with Answers.<br>(Chapters 1,2) |
| 31-Aug | Week 2 | Organization Strategy and Project Selection | Lecture Notes<br>Conceptual Questions with Answers.<br>(Chapter-3) |
| 7-Sep | Week 3 | Defining and Developing a Project Plan<br>Projects' Costs | Lecture Notes<br>Conceptual Questions with Answers.<br>(Chapters 4, 5) |
| 14-Sep | Week 4 | Critical Path Method (CPM)<br>Managing Risk | Lecture Notes with Solved Examples<br>Conceptual Questions with Answers.<br>(Chapters 6, 7) |
| 21-Sep | Week 5 | Projects Assignment and Detailed Guidelines<br>***Assignment-1 September 15th, Due at 11:59 pm***<br>***Exam-1 Review*** | Handout<br>Practice Conceptual Exam-1<br>Questions with Answers |
| **28-Sep** | **Week 6** | **Exam-1, Tuesday, September 29th** | **Exam-1 will be available only on September 29th<br>11:00 AM to 12:00 PM** |
| 05-Oct | Week 7 | Being an Effective Project Manager<br><br>International Projects | Lecture Notes<br>(Chapter 10).<br>Lecture Notes<br>(Chapter 15).<br>Projects Management (two Videos) |
| 12-Oct | Week 8 | Program Evolution & Review Technique (PERT) | Lecture Notes with Solved Examples<br>(Chapter-7 Appendix) |
| 19-Oct | Week 9 | Project Schedule Reduction Techniques (Project Crashing)<br>***Assignment-2, October 13th, Due at 11:59 pm*** | Lecture Notes with Solved Examples<br>Conceptual Questions with Answers<br>(Chapter 09). |
| 26-Oct | Week 10 | Case Studies Assignment (Engineering Ethics and Professional Responsibilities)<br>***Assignment-3, October 20th, Due at 11:59 pm*** | 5 Videos<br>Practice Conceptual Exam-2<br>Questions with Answers |
| **02-Nov** | **WW-11** | **Exam-2, Tuesday, November 3rd, 2020** | **Exam-2 will be available only on November 3rd<br>11:00 AM to 12:00 PM** |
| 09-Nov | Week 12 | **Case Studies Due, Nov 10th, @ 11:59 pm** | Presentation & Report Final Version |
| 16-Nov | Week 13 | **Project Report Due, Nov. 17th, @ 11:59 pm** | Term Project Report Final Version |
| 07-Dec | Week 16 | **Project Presentation Dec 8th, @ 11:59 pm** | Project Presentation Final Version |