

# Fall 2017

## EMGT 6837: Engineering Management Capstone Project

### UPDATE

**Due to Hurricane Harvey, the due day of the first assignment has been postponed to 9/11. All learning materials (including voice-record powerpoint files) are available to enrolled students on the blackboard.**

### Course Information

Course Number & Section: 6837-02 (online)

### Textbook Information

No textbook required.

### Instructor Information

Professor: Xiaojun (Gene) Shan, Ph.D.

Bio: Dr. Shan received his PhD in Industrial and Systems Engineering from University at Buffalo, State University of New York and has published more than 10 papers in top journals. His research interests include healthcare delivery systems, energy systems, and risk management against natural and man-made disasters.

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Office Phone: 281-283-3814

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Office hours:

- 2:00 – 4:00 PM on Wednesday and Thursday;
- Others by appointment.
- Office hours are always by appointment. The email is the preferred method of communication for this class – I am trying to be very responsive. When you leave a voice message, you should be sure to leave your name, the class name and section number as well as the return phone number.

### Course Description

The objective of this capstone course is to provide students with the opportunity to summarize their learning during the course of Engineering Management program, and to apply the skills and knowledge obtained for real life problems. Students are expected to show the capabilities in problem formulation, solution process, and presentation. Students need to provide written paper and oral presentations based on self-selected topics. Besides the final paper, students may work as a group for team assignments and independently for individual assignments.

***Prerequisite:*** At least 24semester-credits and approval from the program

### Course Objectives

Major Learning Outcomes:

Upon completion of this course, students will be able to:

- Understand an engineer's role as manager and engineering management functions.
- Develop the engineering problem formulation capability.
- Develop the capability to apply engineering management skills and knowledge to the problem formulated.
- Develop the problem solving capability within limited time and scope.
- Develop the team based performance capability.

### **Course Format**

This course is taken 100% online and the materials were designed for your self-study under my guidance. The course format includes several individual and/or group works for presentation and discussion.

### **Student Responsibilities**

#### *Time Commitment:*

This is a 3-credit course conducted over 16 weeks. In order to meet accreditation standards, on average, students should expect to spend between 12 to 15 hours per week on course activities and assignments. Spending less time would be insufficient for success in this course.

#### *Academic Honesty:*

The University of Houston-Clear Lake has a "0" tolerance policy for academic dishonesty and if the student is in violation an "F" the course will be apply. Please refer to the [11.4 ACADEMIC HONESTY POLICY](#) in the Faculty Handbook.

#### *Dropping Course:*

Students may drop a course through the registration process and may receive a refund during the first week of classes. After the first week, students need to notify the instructor and then withdraw from the course as faculty will not drop or withdraw from a course for students. Please refer to the academic calendar for the exact dates and also review the withdrawal policy <https://www.uhcl.edu/academics/resources/academic-calendar/>

#### *Counseling Services:*

Counseling assistance will be available on Tuesday and Thursdays by appointment

#### *Technical Assistance:*

Help Desk Hours -

Monday through Thursday 8 A.M. to 10:30 P.M.

Friday 8 A.M. to 5 P.M.

Saturday 8 A.M. to 5 P.M.

Sunday Closed

Email: [supportcenter@uhcl.edu](mailto:supportcenter@uhcl.edu)

Phone: (281) 283-2828

From Student and Educational Services-Students with Disabilities:

If you wish to receive special accommodations as a student with a documented disability, please make an appointment with the Disability Services at ext 2626 or Students service building Room 1301

Attendance and Feedback

I expect you to login to Blackboard at least two times per week. I am going to provide my feedback to you within 48 hours. Allow about 7 days for any assignment grading.

Course Progress:

Considering the diverse course format and intensity, it is strongly recommended that you are to complete all readings required prior to the class.

Late Assignment and Make-up Exam Policy:

No late assignment will be accepted, and there is no make-up exam allowed.

Incomplete Policy:

Incomplete grades may be given at the discretion of the instructor to students who fail to complete necessary work for final evaluation. When assigning the Incomplete grades (“I”), instructors should provide students with an outline of the work to be accomplished before the “I” can be converted to a final mark and should specify a deadline; the outline constitutes an agreement between the instructor and the student. Students are encouraged to read the “Incomplete policy” at [11.3 Grading Procedures in the Faculty Handbook](#).

**Grading Policy**

Your final grade will be determined by the following components:

Individual Assignments -----	(35%)
Team Assignment -----	(30%)
Research Paper -----	(25%)
Class Participation -----	(10%)

Individual Assignments

Note that the pairing option is available for individual assignments where you work with your partner and receive the same grade based on an instructor’s approval. The individual assignment is a small project-like assignment that needs to be finished within one or two weeks.

Team Assignment

Some assignments will require team level efforts. Here we and your team mates will work together. After the team assignment, team member evaluation is usually conducted.

Research Paper

Each student must prepare a formal 20-30 page paper on a topic of his or her choice related to any engineering management discipline including quality management,

supply chain management, logistics, operations management, project management, negotiation, technology management and other areas. Specific topics must be approved by me in advance. Your paper will be evaluated based on the following criteria:

- Quality and depth of content including research methodology. (60 points)
- Organization of the report. (10 points)
- Overall format: following Decision Sciences Institute paper requirement. Please refer to word file of “2017-DSI-Annual-Meeting\_FINAL-Full-Paper-Submission-TEMPLATE (1)” on the blackboard; e.g., title, abstract, appropriate labels on figures and tables, etc. (10 points)
- Correct grammar and evidence of proofreading. (10 points)
- Variety and documentation of references used. (10 points)

#### Research Progress Presentation

- Submit your research proposal *by the end of week 3* with the topic and problem statements.
- Do your research proposal presentation during week 6 with
  - Problem Statements
  - Significance of the problems
  - Brief history of previous work in the field
  - Proposed Approaches to solve the problems
  - Expected results
- The final Report should include the following items but not limited to
  - Title
  - Abstract
  - Introduction/problem statements
  - Importance and any justification of the problem
  - Detailed problem analysis
  - Literature review (e.g., Any previous approach to solve the problems)
  - Methodology
  - Results
  - Discussion
  - Conclusion
  - Further Research
  - References
  - More than 15 research papers as references

This paper should include any quantitative and/or qualitative research components. Simple summary of existing papers or essay will not be accepted unless it does have a new perspective. Additionally, all submission should be done through the “SafeAssign” to prevent the plagiarism. All papers with a matching rate of 40% or higher will be considered as a potentially plagiarized paper, which will result in the course failure.

Class Participation

I am going to use your team member evaluation and other performance such as the class attendance and on-time submission rate, etc. to evaluate your class participation.

Grading Scale and guidelines:

A 93-100%	A- 88-92.99%	
B+ 86-87.99%	B 83-85.99%	B- 80-82.99%
C+ 77-79.99%	C 73-76.99%	C- 70-72.99%
F < 59%		