

Course Number: MSE 5000

Course Title: Intro to Engineering Management

Course Description:

An overview of the field of engineering management including, technical, management and integrated issues. Tools helpful throughout the program, such as research skills, will be introduced. The first course in the program.

Prerequisites: None.

Credit hours: 3

Learning Outcomes:

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

1. Utilize appropriate tools in decision-making.
2. Recognize traditional and modern organizational structures.
3. Identify correct financial and non-financial measures of success to control cost and schedule.
4. Apply planning concepts including forecasting and concurrent engineering.
5. Employ suitable skills for motivating and leading technical professionals.
6. Discuss product and technology life cycles from research of concept through obsolescence.

Indiana Tech
College of Professional Studies
MSE 5000 Introduction to Engineering Management
Online Course Syllabus Content

Instructor Information

Please see Professor Profile in the Blackboard instructional site.

Course Schedule

Please see Course Schedule in the Course Syllabus area of the Blackboard instructional site.

Online Course Policies

All of the online courses taken by students are required to follow the policies posted online at <https://online.indianatech.edu/tech-policies/policies/>. Please review the posted policies carefully. If you are unable to abide by the policies listed, please contact the Warrior Information Network (WIN) at 888.832.4742 and request to withdraw from this course.

Textbook

Babcock, D. & Morse, L. (2014). *Managing engineering and technology* (6th ed.). Upper Saddle River, NJ: Prentice Hall Publishing.

Suggested Reading

Corbett, T. (1998). *Throughput accounting: TOC's management accounting system*. Great Barrington, MA: North River Press.

Goldratt, E. M., & Fox, R. E. (1986). *The race*. Croton-on-Hudson, NY: North River Press.

Gorchels, L. (2000). *The product manager's handbook: The complete product management resource*. Lincolnwood, IL: NTC Business Books.

Heerkens, G. (2002). *Project management*. New York: McGraw-Hill.

Peters, T. J., & Waterman, R. H. (1982). *In search of excellence: Lessons from America's best-run companies*. New York: Harper & Row.

Smith, D. (2000). *The measurement nightmare: How the theory of constraints can resolve conflicting strategies, policies, and measures*. Boca Raton, FL: St. Lucie Press.

Grading Events & Grading Criteria

Unless otherwise specified, all assignments must be submitted via Blackboard.

Event	Points	Total
Course Preparation Quiz	5	5
Homework – Question set you create	6 @ 5 pts. each	30
Homework – Responses to question sets	5 @ 10 pts. each	50
PowerPoint Presentation	20	20
Literature Review	50	50
Exams	2 @ 25 pts. each	50
TOTAL		205

Grading Scale

Percentage Achieved	Grade	Percentage Achieved	Grade
90% or above	A	70% or above	C
80% or above	B	Below 70%	F

Weekly requirement:

Every week by the date specified in the schedule students are required to submit, via the Blackboard discussion tool, a typed list of two questions based upon the reading assignments. Questions should **not** represent basic fact-based questions or definitions presented in the readings but should represent higher order questions that allow deeper thought about course content. Sample questions might compare or contrast theories or perspectives.

Beginning week #2, students will select two questions from those posted from the previous week and develop thoughtful responses. (Students may select their own questions.) Each response is expected to be one or two paragraphs in length. Responses should refer to course literature and/or pertinent examples. After answering the two questions, you should reflect on the readings those questions came from and ask yourself: “What did the readings mean to me? (Use the techniques described in the reflective writing paper.) Submit your answers and reflection in the appropriate folder via Blackboard.

Literature Review Assignment:

Select a topic that represents a challenge for today’s Engineering Manager.
Possible topics include:

- Staying competitive while staying compliant
- Diversity in the engineering workforce
- Developing a strategic engineering plan in a quickly changing world

You will develop a literature review on your selected topic so be sure there is adequate information available.

Your literature review should demonstrate that you are knowledgeable about the information present in the public domain that relates to your topic. (Use credible sources.) Having more than one source that agrees on key points strengthens your review, however, omitting conflicting views from reputable sources hurts your position.

Additional information for developing a literature review is provided in attached documents

Your assignment should be prepared in a very careful and scholarly manner, following formal writing practices. In all cases where

Late Assignments

All assignments and required online activities are due according to the deadline listed in the course schedule. Granting deadline extension is the course instructor's autonomy.

Incompletes

If you are unable to complete the requirements for this course due to extenuating circumstances, an Incomplete grade (I) may be granted if you meet the general guidelines stated below. General Guidelines for submitting a course incomplete request:

- More than 50% of the course session has elapsed.
- The student has encountered an unexpected situation that is beyond his or her control.
- The student is ○ in good academic standing -- up-to-date on all of the course assignments and has at least an overall passing grade,
 - able to complete all of the remaining coursework within a session (5 weeks for a undergraduate course and 6 weeks for a graduate course) that immediately follows the session the student is currently enrolled, and
 - able to provide support documentations to substantiate the need for extra time should a session is not enough to complete the course requirements.

If an Incomplete is granted, the instructor will set a deadline for all work to be completed. **The deadline cannot go past one (1) session.** All incomplete grades are subject to approval by the designated university authority.

Course Related Communication

Online courses are conducted in an accelerated format. Timely communication is very important. When receiving emails from your classmates or instructor, please respond as soon as you can. Students are **REQUIRED** to use their Indiana Tech email account for all course related communication. The most direct, and effective, way to email your course instructor, and classmates, is by using the Send Email function from the Blackboard course site. When you use the Send Email function, you automatically receive a carbon copy of the email you sent. In the event when you need to substantiate your claim that you did email your classmates or instructor, you can show that carbon copy to the person(s) who requested it.

Please note that Blackboard only permits you to send email, it does not provide you with the check email function. All of the emails your classmates and instructor sent to you will be delivered to your Indiana Tech email account. You are strongly encouraged to check your Indiana Tech email account regularly, preferably several times a week, to minimize the likelihood of miscommunication.

The University policy requires each online course instructor to respond to a student's email within 24 hours. Unless there is an extraneous situation that prevents the instructor from following this rule, you can expect to hear from the instructor within 24 hours. If you don't receive a reply within 24 hours, please do not hesitate to follow up with another email or forward the carbon copy of the email you sent to OnlineSupport@IndianaTech.edu with a note "Please help. It's been 24 hours and I have not heard from my instructor" and the University support staff will act on your behalf to contact your course instructor.