

IME 4220 – ENGINEERING TEAMS: THEORY AND PRACTICE

Syllabus – Fall 2009

2007-2008 Catalog Data

Methods of understanding, planning and presenting a conference with oral and written components. Task groups will be used to explore creativity, controversy, power, and process in leadership situations.

Prerequisite Courses: Public Speaking (COM 104) or Report Writing (IME 316) and upper-class standing

Textbook: None

Course Coordinator and Instructor: Jerrie Fiala, Master Faculty Specialist

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Office hours: M/W: 4:20-4:50 p.m.; TR: 12:45-1:15 p.m. & 3:45-4:15 p.m.; by appointment

Course Learning Objectives¹ – By the end of the semester the student should be able to:

1. Identify / describe major components of group dynamics: group characteristics, power bases, leadership roles and styles, advantages and disadvantages of groups, conflict management, aptitude, thinking, and personality differences, active listening, nonverbal communication, and effective meeting guidelines. (f, g)
2. Apply the communication terms and theories explained in the text and lectures. (g)
3. Function as a member of a team while researching and presenting a group presentation on some current engineering topic, incorporating primary and secondary research. (d, g, h, j)
4. Utilize the on-line computer network through computer conferences and researching their semester group projects. (g, i)
5. Incorporate computerized word processing software when writing and editing their papers and finalizing their APA bibliographic reference list for the group project. (g, k)

¹ Letters in parentheses refer to ABET TAC Criterion 2 categories *a – k*.

Performance Criteria (Learning Outcomes)

Objective 1

- Discuss orally in class and via electronic discussion the key concepts of group dynamics presented in the text and during lectures and discussions. [1,3,5]
- Pass the midterm and final examinations, which contain by objective and essay questions, with a 70 % or better. [1,4,5]

Objective 2

- Write in-class and take-home essays that apply course concepts to the students' individual experiences in group-work. [1,2,5]
- Organize as a group and prepare a presentation on a topic that expands a course concept. [1,2,5]

Objective 3

- Organize as a group and prepare a presentation on a current engineering or technology topic. [2,3,4,5]
- Assess self and others as group members in terms of strengths and suggested improvements by describing the contributions in terms of roles, leadership, conflict management, personality preferences, and communication styles of group members. [1,2, 3]

Objective 4

- Use a computer network to access sources for the group presentation. [2]
- Communicate electronically to discuss class concepts. [3,5]

Objective 5

- Proofread and edit written communication using computerized word processing software. [2]
- Compose a reference list in APA format for the group presentation source material with the assistance of the *APA Manual* and web page. [3,4,5]

Topics and Schedule: The term *day* and *week* are synonymous for the summer sessions.

Week 01: Introduction to course and requirements; perception; personality tests; assign Group Project 1

Week 02: Group Project 1, group dynamics, basic terminology, definitions; assign Group Project 2

Week 03: Group verbal and nonverbal communication; listening;

Week 04: Group Project 2; MBTI introduction

Week 05: Paper 1 due; Group Project 2; MBTI results

Week 06: Group theories, types, goals, and roles; process education; assign Group Project 3

Week 07: Midterm; meetings; assign Group Project 4

Week 08: Paper 2 due: Group Project 3

Week 09: Leadership; selected public discussions; meetings; assign new teams

Week 10: Group decision-making / problem-solving (critical and creative) strategies; Six Hat Theory; IDEO.

Week 11: Conflict management in small groups; groupthink; course summation; course assessment

Week 12: Group Project 4

Week 13: Group Project 4

Week 14: SEDP; Wrap up

Professional Component

This course addresses ABET Criterion 4 (EAC) requirements for professional component as follows:

- a) College-level math, basic science: 0%
- b) Engineering topics (engineering design): 0%
- c) General education (communication, teamwork, professional development, ethics): 3 credits or 100%

Relationship to Program Educational Outcomes

This course provides significant support for the following IME program outcomes:

- (1) [Engineering and technology concepts in engineering, including the design process, problem-solving]
- (2) [Integration of state-of-the-art knowledge and practice into the curricula.]
- (3) [Professional development, communication skills, etc.]
- (4) [Awareness of professional responsibility and engineering ethics]

Class Policies:

Rule #1 Respect: Treat classmates and the instructor with RESPECT; see Schedule for details.

Rule #2 Attendance is required. For a class that meets once a week, one absence is allowed; after that, 10 points will be deducted for every additional absence. Students are expected to be on time and to attend the entire class; therefore, points may be deducted for those who are routinely or excessively late or for those who leave before the class has ended.

Rule #3 Late assignments are penalized, including weekends. If students are unable to attend class, they are expected to submit their assignments to the IME Office –F-232 Parkview – by the due date.

Plagiarism: Plagiarism in any of its forms is a very serious offense in academic circles and will not be tolerated. Students found guilty of plagiarism will fail the plagiarized assignment, may fail the course, and could be removed from the class and/or university. The IME department adheres to the university policy as

stated in the Undergraduate Catalog:

“You are responsible for making yourself aware of and understanding the policies and procedures in the Undergraduate and Graduate Catalogs that pertain to Academic Honesty. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. [The policies can be found at <http://catalog.wmich.edu> under Academic Policies, Student Rights and Responsibilities.] If there is reason to believe you have been involved in academic dishonesty, you will be referred to the Office of Student Conduct. You will be given the opportunity to review the charge(s). If you believe you are not responsible, you will have the opportunity for a hearing. You should consult with your instructor if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test.” In addition, instructors are encouraged to direct students to <http://osc.wmich.edu> and www.wmich.edu/registrar to access the Code of Honor and general academic policies on such issues as diversity, religious observance, student disabilities, etc.