

IME 4220 – ENGINEERING TEAMS: THEORY AND PRACTICE

Syllabus – Spring 2008

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: Barker, Wahlers, & Watson, K. W. (2001). *Groups in Process* (6th ed.), Boston: Allyn and Bacon.

Course Coordinator and Instructor: Jerrie Fiala, Master Faculty Specialist

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Office hours: M/W: 1:50-2:50 p.m., TR 11:15-11:45 p.m., and 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 to complete multiple projects; the major project incorporates primary and secondary research to prepare a group presentation on a current engineering topic. (d, g, h, j)
4. Utilize the on-line computer network for conferences and research for the semester group projects. (g, i)
5. Incorporate computerized word processing software to write and edit papers and the APA bibliographic reference list for the group projects. (g, k)

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 lecture discussions. [1, 3]
- Pass the midterm and final examinations, which contain by objective and essay questions, with a 70 % or better. [4]

Objective 2

- Write essays that apply course concepts to the students' individual experiences in group-work. [1]
- Organize a team presentation on a topic that expands a course concept. [2]

Objective 3

- Organize group presentations including one on a current engineering or technology topic. [2]
- Write essays describing the roles, conflicts, personality differences, and communication styles of team members, analyze personality based on test results, and critique senior engineering design projects. [1]

Objective 4

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

Objective 5

- Proofread and edit papers with the assistance of 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]

Topics and Schedule

Week 01: Course introduction, goals, overview, definitions, personality testing

Week 02: Group Project 1(introduction) presentations and assessments, introduction to group studies

Week 03: Group theories, goals, and roles, selected private discussions, MBTI personality testing

Week 04: Test 1, MBTI personality testing, meetings and public discussions

Week 05: MBTI personality testing results; leadership

Week 06: Group Project 2 (group dynamics / educate) presentations and assessments

Week 07: Group verbal communication

Week 08: Group nonverbal communication; Test 2

Week 09: Group Project 3 (action / instructional) presentations and assessments

Week 10: Group problem-solving strategies (Dewey, De Bono, IDEO); listening

Week 11: Conflict management, groupthink, and ethics

Week 12: Group Project 4 (engineering topic) presentations

Week 13: Group Project 4 (engineering topic) presentations

Week 14: Attend Senior Design Projects Conference, summation

Week 15: Final Exam

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 others: Treat classmates and the instructor with RESPECT.

Rule #2 Attend class. For a fall or spring class that meets twice a week, 5 points will be deducted for every absence after two absences. For a summer class that meets twice a week, 10 points will be deducted for every absence after the first absence. Students are expected to be on time and to attend the entire class; therefore, points may be deducted for those who are more than 15 minutes late or for those who leave before the class has ended.

Rule #3 Expect penalties for late assignments of 10 percent per day late, including weekends. If students are unable to attend class, they are expected to let the instructor know via email and to submit any assignments that are due to the IME Office –F-232 Parkview.

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, could 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 www.wmich.edu/catalog 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 me if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test.

Prepared by: Jerrie L. Fiala

Date: 03 January 2008