

Course No: MET 4670
Course Name: Senior Project
Credits: 3 semester credits, (0 – 0 – 6)
Semester: Spring 2008
Section: L 02
Day / Time: Design Review

Instructor: Mark A. Johnson
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Office Hours: M, W 10-12 F, 10-11

Textbook: None required

Prerequisites: MET 4460 & Senior Standing

Additional Materials/References: There may be additional reading, homework, etc. distributed via email or on reference in the library. Even though it is not listed on the syllabus, it is your responsibility to make sure that you review the material.

Course Description: Completion and evaluation of design projects using computer-aided engineering methods, physical models, and/or prototypes. Evaluation and design optimization methods for efficient and cost-effective designs. Oral/written report.

Course Objectives: After completing this course, you should be able to:

- Utilize engineering fundamentals and key principals integrating them it a team centered senior design project.
- Build on MET 4460 Product Design and Development to build/implement your course work.
- Apply the tools you have learned during your education to real-life problems.
- Understand the importance of teamwork and how it impacts product/process outcomes.

Class Sessions:

No formal class is conducted however it is the team members responsibility to establish formal design reviews with your advisor **weekly**.

Skills Utilized

You will be using many different skills in this course. There are several prerequisites prior to taking this course, which serve as the foundation for topics covered. It is important to have completed the prerequisites prior to taking this course. You will use the following skills:

- Problem solving skills
- Critical thinking skills
- Analytical skills
- Resourcefulness and motivated

Course Evaluation: Grades will be based on the following:

• Weekly Status Report	50%	Individual
• Oral Presentation	10%	Individual
• Written Report (Final)	20%	Team
• Senior Project Expo/Poster	10%	Team
• Participation/Peer & Self Review	10%	Individual

Weekly Status Reports:

Weekly reports will consist of bullet point narrative indicating individual member contribution to the project. This narrative should represent 9 hours of work per week for each team member. The report should follow the template provided. A portfolio will be maintained and used during the weekly design review with your advisor. This portfolio will include the materials prepared during MET 4460 Product Design & Development.

All course material can be found on WebCT/Blackboard

MET 4670 Senior Design Syllabus	Peer and Self Evaluation Forms
Oral Presentation Scoring Rubric	Technical Report Format & Scoring Rubric
MUB Expo Requirements (Last Years)	Example Status Report

Grading Scale:

A	93% and above (Excellent, with 4.0 grade points per credit)
AB	88-92 (Very good, with 3.5 grade points per credit)
B	82-87% (Good, with 3.0 grade points per credit)
BC	76-81% (Above average, with 2.5 points per credit)
C	70-75% (Average, with 2.0 points per credit)
CD	65-69% (Below average, with 1.5 points per credit)
D	60-64% (Inferior, with 1.0 points per credit)
F	59% and below (Failure, with 0.0 points per credit)
I	Incomplete; given only when a student is unable to complete a segment of the course because of circumstances beyond the student's control. It must be made up by the close of the next four quarters in residence or the incomplete grade becomes a failure. A grade of incomplete maybe given only when approved in writing by the department chair. Incomplete grades at graduation are considered (F) grades in computing the final grade

Homework:

No homework assignments other than deliverables indicated in course evaluation will be given.

Hour Examinations:

There are no examinations

Cheating or Plagiarism:

Proper professional and ethical behavior is expected of all students in this class. If cheating is suspected the Dean of Students will be notified and standard MTU policies will be followed.

Student Expectations:

The most important expectation is to participate as a productive team member of your group. To be successful in this course you must meet the following expectations.

- Attend every meeting with your advisor and team meetings outside the advisor scheduled meeting.
- Complete deliverables on time (Absolutely no slips on the time line)
- Participate as a team member (No riders)
- Be prepared for discussions with the advisor.
- Present professional reports and presentations.
- Use recommended software and word processing for required assignments and reports.

This class is designed for you to participate in the learning experience not just observe your team members and go through the motions.

If you are not involved in team meetings it's hard to participate and expect a successful outcome. If you have an extreme situation, which prevents you from attending meetings, please document the circumstance and provide the written notice to the advisor. Universities excused absences include documented plant trips and other university related business. Please provide **written notice of absence in advance** of missed meetings.

Time Management

This course is one of several courses you are required to complete for your degree. It is always helpful to have an idea of the time requirements associated with a particular course. It is estimated that you will need to spend approximately, on average, 2-3 hours per credit hour or **6-9 hours a week** to make progress.

Notice:

If you have any special needs because of personal circumstances, please feel free to meet with me in the beginning of the semester or as soon as possible. MTU complies with all federal and state laws and regulations regarding discrimination, including the Americans with Disability Act of 1990 (ADA). If you have a disability and need reasonable accommodation for equal access to education or services at MTU, Associate Dean of Students at 487-2212. For other concerns about discrimination, you may contact your advisor, department head, or the Affirmative Action Office at 487-3310. Web

Key Dates for Deliverables:

Week 1

Contact Advisor, review timeline, set up meeting time and dates

Week 2

Status Report/Design Review

Week 3

Status Report/Design Review

Week 4

Winter Carnival (February 7&8)

Week 5

Status Report/Design Review

Week 6

Status Report/Design Review

Week 7

Status Report/Design Review

Week 8

Spring Break March 9 - 15

Week 9

Status Report/Design Review

Week 10

Status Report/Design Review

Week 11

Status Report/Design Review

Week 12

Status Report/Design Review
Poster Review Due

Week 13

Status Report/Design Review
Senior Design Expo

Week 14

Final Written Report Due