ENG1101 - Engineering Analysis and Problem Solving
SYLLABUS Fall 2004

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Office - Dillman Hall, Rm 112
Phone - 487- 1965

Objectives:
To develop an appreciation for the engineering profession and its various disciplines
To develop proficiency in the use of computers to solve engineering problems
To introduce many of the fundamental engineering and design concepts
To improve communication skills, especially technical communication
To begin to understand ethics and its importance to the engineering profession

Schedules:
Section 08 - MTR 9:35-10:55, 14-208
Section 13 - MWR 2:05-3:25, 14-101

Office Hours:
T-R:11-11:30 M-W-R 3:30 - 4:00 -or- by an appointment.

Texts:

Materials:
Textbooks (see assigned reading, at least one per team) - bring to class
Lab Manual - bring to class
Mechanical Pencil, Eraser, & Engineering Paper (tablet of green, grid paper)

Attendance:
This class is largely about teamwork; team members are depending on everyone to attend class every day. Your absence will affect your team’s performance.

Exams:
Unexcused absences: Students who miss class without prior approval of their instructor will receive no credit on the missed in-class assignments.
University excused absences: Authorized absences must be approved by your instructor in advance of the absence, unless you have an emergency or illness. IT IS YOUR RESPONSIBILITY to see your instructor and make arrangements for make-up work (work that was assigned the day(s) you were absent). The only acceptable absence is that defined as “Excused Absence” in the MTU Student Handbook (www.mtu.edu/studenthandbook/). Also, if a student is absent from an exam due to illness, (s)he must contact the instructor prior to the start of the exam (via phone/email/voicemail). A doctor’s note will be required before a student will be allowed to make up an exam.

Assignments:
An appropriate format should be used if not specified. All homework assignments are due at the assigned time. NO LATE HOMEWORK WILL BE ACCEPTED, REGARDLESS OF THE REASON. (If a student is absent due to a university approved absence, his/her homework is still due on the assigned due date unless other arrangements have been made in advance.) Individual homework grades will be adjusted to compensate for your two lowest scores. No team homework grades will be dropped, however, your team homework grade may be adjusted based on peer evaluation feedback.

Collaboration:
Team assignments are intended to be a collaborative effort - with every team member contributing. We also encourage you to help each other out on your individual assignments by discussing problems and solution strategies; however, the work you submit for grading must be your own. Copying work (either hardcopy or files) is unacceptable. For example, we encourage you to collaborate on Mathcad assignments, but this means two of you are sitting side-by-side at two separate workstations, each creating his or her own document. - (see thirty minute sauna rule)

Engineering Explorations:
During weeks 3 & 4, students must sign-up on the web for at least three engineering explorations in at least three engineering disciplines. If you do not attend the explorations, your grade will be reduced (see grading section).

RATs/Quizzes:
Individual and team Readiness Assessment Tests (RATs) normally cover reading assignments and often occur before material is covered in class. RATs will be frequent, regular, and unannounced.
Exams: There will be two exams, one final exam, and one lab practical. All exams are cumulative. Exams can be integrated with material covered in cohorted subjects. Exams will be given during the evening at the following times and dates:

<table>
<thead>
<tr>
<th>Week</th>
<th>Exam</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Exam 1</td>
<td>10/12/04</td>
<td>6:00</td>
</tr>
<tr>
<td>11</td>
<td>Exam 2</td>
<td>11/09/04</td>
<td>6:00</td>
</tr>
<tr>
<td>14</td>
<td>Lab Practical</td>
<td>12/10/04</td>
<td>TBA</td>
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<tr>
<td></td>
<td>Final Exam</td>
<td>TBA</td>
<td>TBA</td>
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Grades:

<table>
<thead>
<tr>
<th>Item</th>
<th>Weight (%)</th>
<th>Grade</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Assignments</td>
<td>20</td>
<td>A</td>
<td>93-100</td>
</tr>
<tr>
<td>Team Assignments</td>
<td>10</td>
<td>AB</td>
<td>88-92</td>
</tr>
<tr>
<td>RATs &amp; Quizzes</td>
<td>5</td>
<td>B</td>
<td>83-87</td>
</tr>
<tr>
<td>Semester Design Project</td>
<td>15</td>
<td>BC</td>
<td>78-82</td>
</tr>
<tr>
<td>Lab Practical</td>
<td>5</td>
<td>C</td>
<td>70-77</td>
</tr>
<tr>
<td>2 Mid-term Exams</td>
<td>20</td>
<td>D</td>
<td>63-69</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25</td>
<td>F</td>
<td>&lt;63</td>
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<tr>
<td>Unattended Explorations</td>
<td>-10</td>
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Team Grades: The TEAM must ensure that all members of the team contribute to and understand the contents of team submissions. All team members who sign/initial a team RAT or assignment will receive credit for the team submission. A grade of zero will be assigned to any member not signing/initialing a team submission. Individual grades for team work may be adjusted based on peer evaluations.

Individual Grades: An individual not passing the individual portion of the class will not pass the class, regardless of their team grade and team evaluations.

Lab Practical: You must take the lab practical to pass the class.

Final Note - YOU are responsible for ALL reading REGARDLESS of if it was covered in class. Exam questions may come from This Engineering course, Physics, or Calculus. - Stay prepared - and be ready to create your future

MTU complies with all federal and state laws and regulations regarding discrimination, including the ADA act of 1990. If you have a disability and a need, a reasonable accommodation for equal access to educations or services can be made through the Dean of Students office (Gloria Melton 487-2212). For concerns regarding discrimination of any kind, please contact your advisor, department head, or affirmative actions office.