EIND 371

Introduction to Computer Integrated Manufacturing

Fall 2013

Instructor: Durward Sobek, 318 Roberts Hall, 994-7140
dsobek@ie.montana.edu

Class: MW 3:10 - 4:00, 209 Roberts Hall

Laboratory:
Section 2: R 8:00 – 9:50, 115 EPS
Section 3: R 10:00 - 11:50, 115 EPS
Section 4: R 1:10 - 3:00, 115 EPS (closed)
Section 5: R 3:10 – 5:00, 115 EPS

Course Web: Desire2Learn: [https://ecat.montana.edu/](https://ecat.montana.edu/)
http://www.coe.montana.edu/ie/sobek/ime371

Office Hours: Tu 11:00-12:00, F 1:00-2:00, or by appointment

Lab Instructors:
Greg Merchant, 115 EPS, 994-7272, gmerchant@ie.montana.edu
Mike Edens, 410 Roberts Hall, 994-2633, medens@coe.montana.edu

Teaching Asst:
Faisal Chowdhury, ROBH 417,
nazifaisal.chowdhury@msu.montana.edu

Required Text:

Reference Text:

Catalog Description:
3 credits (lec 2, lab 1) -- Introduces core concepts of computer controlled manufacturing systems and their applications. Topics include fundamentals of automation, programmable logic controllers, numerical control, industrial robotics, material handling and storage, and flexible manufacturing systems. Laboratories require students to apply course concepts in solving simulated industrial problems, and implement hardware-software solutions to meet stated objectives.
Pre- and Co-Requisites:
PREREQUISITE: ETME 215.

Objectives:

- Introduce students to fundamental concepts related to modern computer integrated manufacturing technology;
- Give students hands-on experience implementing several core technologies to achieve a specific objective; and
- Sharpen critical thinking and problem-solving skills through implementation and validation of their proposed solutions to open-ended problems.

Rules:
2. Be an active learner — Participate. Ask questions. Engage the material.
3. Be honest — Do your own work. Give credit where it is due. Tell the truth.
4. Hand homework and lab reports in on time.
5. Have fun!

Laboratory:

- The laboratory is a critical component to this course. It is intended to reinforce the understanding gained in lecture, the homework, and the reading through hands-on application. It will also challenge you to deeper, more concrete thinking and problem-solving.
- Do all assigned preparatory work prior to coming to lab. Use lab time to implement and debug your programs.
- Perform lab work during your lab section. Laboratory attendance is required to receive credit for any lab. Do not switch lab sections without prior approval.
- Generally speaking, you will work with a lab partner. Plan on changing lab partners periodically throughout the semester.
- Do not copy other people’s work (including your lab partner’s work). This violates Rule #3 above.
- Lab reports, when required, will be graded on grammar, organization, and clarity in addition to content. We will return graded reports as soon as possible.
Examinations:
- The midterm exam will likely be held in the evening in order to remove the time element. Exact date, time and location are to be determined.
- The final exam will be held 8:00-9:50 a.m. on Thursday, December 12 in 209 Roberts Hall. The exam will cover material since the midterm exam, unless class performance on the midterm exam is sub-par, making further review and examination necessary.
- Examinations will cover the respective units’ learning objectives, and are generally closed book and notes.

Grading:
- Grades will be determined by each student’s percentage score, according to the following weights:
  - 30% midterm exam
  - 30% final exam
  - 30% laboratory
  - 10% participation
- Each student will receive a letter grade based on his/her cumulative percentage score according to the scale below.
- If the average class grade is substantially below B-, grades will be adjusted upwards such that the class average is roughly 75% and letter grade assignments made accordingly. Otherwise, no adjustments will be made.

<table>
<thead>
<tr>
<th>GRADE</th>
<th>QUALITY</th>
<th>POINTS</th>
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</thead>
<tbody>
<tr>
<td>A’s</td>
<td>Excellent</td>
<td>A+: 94+</td>
</tr>
<tr>
<td>B’s</td>
<td>Good</td>
<td>B+: 84</td>
</tr>
<tr>
<td>C’s</td>
<td>Average</td>
<td>C+: 74</td>
</tr>
<tr>
<td>D’s, F</td>
<td>Below Expectations</td>
<td>D+: 64</td>
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Course Listserv:
An email listserv has been automatically created for this class. Since I will periodically post messages to the listserv (such as clarifications on assignments), all students should check their MSU gmail accounts at least every 2-3 days.

If you’d like to add another email address to the listserv (perhaps one that you check more regularly), add yourself by following these instructions:

1. Send a message to sympa@sympa.montana.edu from the address you want to subscribe to the list.
2. Enter `subscribe EIND371001 firstname lastname` into the subject field of the message (replacing firstname and lastname with your real name).

3. Leave the message body blank.

A message will be sent to this address confirming your subscription to the list.

**Policies:**

- Homework and lab assignments are due at the start of class on the assigned due date. I do not accept late work. Exceptions may be granted for extenuating circumstances at my discretion.

- There will be no make-up exams unless you notify me before exam day. Exceptions may be granted for extenuating circumstances.

- The final exam will be held at the time set by the registrar’s office. The final is mandatory, and you must take it during the scheduled time. By University policy, the only exception allowed is if 3 or more exams are scheduled for the same day. In this case, you may petition to take one of the exams early.

- I expect each student to make full effort to attend every class. If you miss class, you are still responsible to get assignments in on time and for knowing the material covered in class that day. If you know you will miss class, try to see me beforehand.

- If you have a documented disability for which you are or may be requesting special accommodation, please contact Disabled Student Services as soon as possible, and discuss your specific situation with the instructor.

- Students who were (re)admitted to MSU for fall 2005 or later are subject to the University’s minimum competency requirement. According to the policy, a grade of C-or better is required for any course needed to complete a major, minor, or certificate program and for all core requirements.

- All records related to this course are confidential and will not be shared with anyone, including parents, without a signed, written release. Before giving such authorization, you should understand the purpose of the release, to whom, and for how long the information is authorized for release.

- Chronic tardiness is unprofessional and unacceptable, and may result in you being asked to leave class. The same holds for disruptive or disrespectful behavior.

- Lying, cheating, plagiarism, or any other form of dishonesty will not be tolerated. Students who engage in such behavior will be subject to University sanctions, even for a first offense. Students should be familiar with MSU Student Conduct Guidelines, particularly sections 300, 400, and 600 (see: http://www2.montana.edu/policy/student_conduct/student_conduct_code.htm).