EE5970: Computer Engineering Seminar

Spring 2005

Lead Instructor: Dr. Tricia Chigan (cchigan@mtu.edu)

General Information: This course is required for all graduate students in the area of Computer Engineering, and consists of weekly seminars given by department faculty, graduate students, and external visitors.

Meetings: R13:05-13:55pm (EERC 229)
Office hours: MWF 1:00-2:00pm, or by appointment
Course Homepage: http://www.ee.mtu.edu/ee/faculty/cchigan/EE5970-Seminar/index.html
Course Mailing List: ee5970-l@mtu.edu

Prerequisites:
None. However, it is expected that students have a general understanding of Computer Engineering topics roughly equivalent to a Bachelor’s degree in Computer Engineering.

Textbook:
There is no prescribed textbook. Current topics will be presented by speakers and by articles selected from the technical literature. You are expected to come to class having read each of the reading assignments for the appropriate seminars. The reading list will be posted via the course webpage listed above, and failure to read the assigned material will result in a reduced grade.

Topics:
Covers topics of current interest in the Computer Engineering field, especially those topics of immediate research interest here at MTU. Specific topics vary from semester-to-semester. Tentative topics for this Spring are:

- Trends in RAM architectures and control (SDRAM, RDRAM, SRDRAM, etc), parallel computer architectures
- Trends in power-efficient embedded systems,
- Trends in networking, network security, intrusion tolerance, and wireless networking,
- Trends in reliability, safety, fault tolerance, and distributed systems,
- Trends in mobile robotics, distributed control, autonomous agents, and distributed intelligence,
- Special topics presented by guest speakers,
- Whatever else looks timely and interesting.

Evaluation/Grading: You are responsible for all material presented in class and/or in assigned reading. Contact me as soon as practicable if you have a legitimate reason for missing any work (e.g. illness or death in the family). The sooner the better! In most cases, some requirements can be modified or waived.

Components: There will be no formal written exams. Grades will be based on the following criteria, and weighted as listed in the table below.

1. Class participation: Attendance and participation are mandatory, unless a legitimate excuse is presented to and accepted by the lead instructor. Participation is not merely showing up and
occupying a seat. It means being alert, and prepared to discuss the topic of the day. A weekly summary of 100 words or so on each seminar presented by others should be sent to the instructor via email by 1:00pm of the following Monday.

2. **Finding Topics**: Each student will be asked to search the technical literature and find a short list of papers as candidates for the class discussions. The selected papers should possess high archival value, preferably tutorial/survey papers or well-acclaimed seminal papers. The topics should be of contemporary interests in the general area of Computer Engineering. You may use only scholarly publications intended for the academic and technical market. These include technical journals (e.g. *IEEE Transactions/ACM Journal*) or IEEE/ACM technical magazines (e.g. *IEEE Communications Magazine*). Avoid publications intended for the general public (e.g. *IEEE Spectrum* and *PC World*). Format your list in standard *IEEE citation style*.

3. **Leading Discussion**: During the term, each student will be asked to read a paper and lead a discussion of that paper during the regular class period. The discussion will consist of a short presentation (around 40 minutes) and a follow-up question-and-answer session. Papers shall be selected from a list published during the first few weeks of the term. Seminar topics must be approved by the lead instructor two weeks prior to the seminar. (Note: Some seminar talks will be arranged from faculty members, external visitors, and volunteering student speakers.)

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<tr>
<th>Component</th>
<th>Weight</th>
<th>Grading Criteria</th>
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<tbody>
<tr>
<td>1. Class Participation</td>
<td>55%</td>
<td>Participation and contribution in discussion (35%); weekly summary of each seminar (20%)</td>
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<td>2. Finding Topics</td>
<td>10%</td>
<td>Criteria listed in assignment 1</td>
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<td>3. Seminar Presentation</td>
<td>35%</td>
<td>Criteria listed in assignment 2</td>
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<td>Total</td>
<td>100%</td>
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**Curve:**

- 95 - 100 = A
- 90 - 94 = AB
- 85 - 89 = B
- 80 - 84 = BC
- 75 - 79 = C
- 70 - 74 = CD
- 65 - 69 = D

**Extra Credit**: assignments may be assigned to the entire class to stimulate and evaluate learning beyond the required material. Individual extra credit assignments for the purpose of propping up a bad grade will not be given, or accepted.

**Instructor’s Discretion**: may be used in extremely rare instances to raise (but not lower) a borderline final course grade. It will be used only when (in my opinion) a gross statistical aberration has occurred that is so unique and so blatantly obvious that there can be no questions regarding fairness or favoritism.

**Reference**: *IEEE Electronic Library; ACM Digital Library*