Description

This is a 1-hour graduate seminar designed to aid M.S. students in conducting their research and preparing and delivering their thesis document.

The main course objectives are:

- To learn what is involved in writing a thesis.
- To learn how to do research.
- To learn how to present research: orally and in writing.

Textbook, Readings

The class does not have an official textbook.
## Topics

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1.</td>
<td>September 24</td>
<td>Syllabus, introduction</td>
</tr>
<tr>
<td>2.</td>
<td>October 1</td>
<td>M.S. research and thesis</td>
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<tr>
<td>3.</td>
<td>October 8</td>
<td>Thesis Intro, design, implementation</td>
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<td>4.</td>
<td>October 15</td>
<td>Thesis Validation</td>
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<td>5.</td>
<td>October 22</td>
<td>Thesis critique (discussion)</td>
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<td>6.</td>
<td>October 29</td>
<td>Short Presentations, Validation</td>
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<td>7.</td>
<td>November 5</td>
<td>Related Work</td>
</tr>
<tr>
<td>8.</td>
<td>November 12</td>
<td>Thesis Presentation</td>
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<td>9.</td>
<td>November 19</td>
<td>Thesis Presentation</td>
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<tr>
<td>10.</td>
<td>December 3</td>
<td>Final Exam: Long Presentation</td>
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<td></td>
<td>December 10</td>
<td>(7:10-10:00am) Final Exam: Long Presentation</td>
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</tbody>
</table>

## Grading

Your grade will be determined by the quality of the following deliverables:

<table>
<thead>
<tr>
<th>No.</th>
<th>Assignment</th>
<th>Start Date</th>
<th>Due Date</th>
<th>% of course grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Thesis reading and critique</td>
<td>September 24</td>
<td>October 22</td>
<td>15%</td>
</tr>
<tr>
<td>2.</td>
<td>Research blurb/Thesis Intro</td>
<td>October 8</td>
<td>October 22</td>
<td>15%</td>
</tr>
<tr>
<td>3.</td>
<td>Experimental design</td>
<td>October 15</td>
<td>November 5</td>
<td>10%</td>
</tr>
<tr>
<td>4.</td>
<td>Related work</td>
<td>October 1</td>
<td>December 3</td>
<td>20%</td>
</tr>
<tr>
<td>5.</td>
<td>Short presentation</td>
<td>October 8</td>
<td>October 29</td>
<td>5%</td>
</tr>
<tr>
<td>6.</td>
<td>Long presentation</td>
<td>November 12</td>
<td>December 3, 10</td>
<td>30%</td>
</tr>
<tr>
<td>7.</td>
<td>Class participation</td>
<td></td>
<td></td>
<td>5%</td>
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</tbody>
</table>

## Course Policies

### Exams

We will use the final week of classes, and the Final Exams week slot associated with our class (Wednesday, December 10, 7:10-10:00am\(^1\)) to have the final course evaluation. Your final evaluation is a long presentation (Assignment 6), a 20 min. presentation of your thesis research topic.

### Assignments

The course involves three types of assignments: *reading assignments, writing assignments* and *oral presentations*.

### Reading Assignments

There will be two key reading assignments in the course:

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\(^1\)I’ll bring coffee and donuts.
Thesis reading and critique: you will select a number of M.S. thesis documents from past Cal Poly M.S. in Computer Science students. You will read these documents, and you will prepare and present your assessment/critique of them.

Relevant literature: you will be asked to prepare a bibliography of academic literature relevant to your thesis/research topic. You will then be asked to read a number of papers from your bibliography.

Writing Assignments
The course will have the following writing assignments:

Research Blurb/Thesis Intro: you will write a succinct introduction to your research area. This introduction should provide an overview of the broad research area within which you are conducting your thesis research and should motivate your specific thesis research. As such, this text can be viewed as a draft of your thesis introduction section.

Experimental design: you will come up with a validation framework for your thesis (creative part of the assignment) and present a short write-up describing it (writing part of the assignment). This can eventually become part of the Validation section of your thesis.

Background/Related work writeup: based on your bibliography of related work you will provide a succinct writeup detailing the background information relevant to your thesis research topic. This may later morph into Related Work or Background sections of your thesis.

Oral Presentation Assignments
You will formally deliver two presentations in this course:

Short presentation: A short (up to 5 mins) presentation describing the essence of your thesis research in terms accessible to your peers.

Long(er) presentation: A longer (15-20 mins) presentation describing your thesis research in more technical terms. This may serve as a prototype of your eventual thesis presentation.

Other Assignments
There may be other assignments in the course:

- M.S. Defense attendance. If any M.S. defenses are scheduled this quarter, we will attend them (ideally, I’d want everyone to attend 1-2 defenses).
• **Peer reviews.** Some class activities may involve peer reviews of material produced by others (e.g., past theses) or by other students in the course (e.g., their wiki submissions).

These activities will count under the "Course Participation" line from the grading procedures table above.

**Web Page**

Class web page can be found at

http://www.csc.calpoly.edu/~dekhtyar/590-Fall2014

Through this page you will be able to access all class handouts including homeworks, project information, reading materials and lecture notes (should the latter be written).

**Wiki**

The course used to have a long-standing wiki that allowed you to see the work of previous students in the class (specifically - their critique of M.S. theses).

Due to changes in the department’s account login procedures, the dept. wiki system has become unsupportable and had to be retired. Previous courses used PolyLearn to allow a wiki-like interaction. However, PolyLearn has challenges associated with persisting content from year to year.

In the upcoming weeks, I will make an effort to create a permanent (or, at least a medium-term) solution that allows us to

- Have a wiki-like environment that supports all current and future CSC 590 students as content creators.
- Deploy our legacy archive of student reviews of M.S. theses (at least).

Options considered will include Github, a third-party wiki, Piazza, a local CMS deployment, a third-party CMS.

**Academic Integrity**

**University Policies**

Cal Poly’s Academic Integrity policies are found at

http://www.academicprograms.calpoly.edu/academicpolicies/Cheating.htm

In particular, these policies define *cheating* as (684.1)

“...obtaining or attempting to obtain, or aiding another to obtain credit for work, or any improvement in evaluation of performance, by any dishonest or deceptive means. Cheating includes, but is not limited to: lying; copying from another’s test or examination; discussion
of answers or questions on an examination or test, unless such discus-
sion is specifically authorized by the instructor; taking or receiving
copies of an exam without the permission of the instructor; using or
displaying notes, "cheat sheets," or other information devices inap-
propriate to the prescribed test conditions; allowing someone other
than the officially enrolled student to represent same.”

Plagiarism, per University policies is defined as (684.3)

“... the act of using the ideas or work of another person or persons
as if they were one’s own without giving proper credit to the source.
Such an act is not plagiarism if it is ascertained that the ideas were
arrived through independent reasoning or logic or where the thought
or idea is common knowledge. Acknowledgement of an original au-
thor or source must be made through appropriate references; i.e.,
quotation marks, footnotes, or commentary.”

University policies state (684.2): “Cheating requires an “F” course grade and
further attendance in the course is prohibited.” (appeal process is also outlined,
see the web site above for details.). Plagiarism, per university policies (684.4)
can be treated as a form of cheating, although a level of discretion is given to
the instructor, allowing the instructor to determine the causes of plagiarism and
effect other means of remedy. It is the obligation of the instructor to inform the
student that a penalty is being assessed in such cases.

Course Policies
First, all traditional warnings concerning cheating apply in this course. In par-
ticular, solicitation of help from people not involved in the course and submission
of materials/code etc., not developed by you are absolutely prohibited. Any
outside materials used in preparation of homeworks, reports, project assign-
ments must be properly documented. For example, you must properly cite all
papers you refer to, all web resources used in preparation. You must also note
any open source, off-the-shelf, etc., software or code fragments that you have
incorporated in your solution. If you have questions concerning allowable use of
such materials, please consult me in advance.

For example, if an assignment is to design and implement an XML parser,
you are supposed to build one from scratch and not use any available parser
code (which is plentiful). On the other hand, if you want to use an open-source
library, or some code developed by one of the team members prior to the course
as part of a project solution, this may qualify as allowable use, if the code is
used in support of the main tasks of the project.