California State University, Sacramento  
Department of Computer Science  
CSc 209: Research Methodology  
Fall Semester 2017

Instructor: Dr. Cui Zhang

Office Hours: See instructor’s website from the department website.

Class Time & Location: T 7:00-7:50pm in RVR-2010

Email: zhangc@ecs.csus.edu

Prerequisites: Fully classified graduate standing, passing score on WPG (a exam for GWAR), completion of at least 12 units of 200-level CSC courses.

Course Catalog Description

Research methodology, problem formulation and problem solving. Orientation to the requirements for Master’s Thesis or Project. Representation on various research topics. Graded Credit/No Credit. 1 unit.

Course Objectives

This course to prepare students for conducting their Master’s Theses or Projects. The following are the course objectives:

- To provide students with the knowledge about the process and requirement for Master’s Thesis or Project;
- To familiarize students with faculty research interests and projects;
- To expose students to scientific research methodology, problem formulation and problem solving, technical writing, and professional ethics;
- To present students with the resources possible for conducting Master’s Thesis or Project.

Reference, Recommended and Reserved Book:

(http://www.justinzobel.com)

References and Recommended Reading Materials on Research Methodology:

- David Chapman (ED), How to Do Research in the MIT AI Lab  
(http://www.cs.indiana.edu/mit.research.how.to.html)
- John Chinnech, How to Organize Your Thesis  
(http://www.sce.carleton.ca/faculty/chinneck/thesis.html)
• Marie desJarlins, How to Be a Good Graduate Student/Advisor (http://www.cs.indiana.edu/how.2b/how.2b.html)
• David Patterson, How to Have a Bad Career in Research/Academia (http://www.cs.utah.edu/~lepreau/osdi94/keynote/abstract.html)

References and Recommended Reading Materials on Technical Writing:

• Mr. P. Brannan, System Support in the Graduate Lab (http://www.writing.eng.vt.edu/csw.html)
• Dan Berry, Handbook on Ambiguity for Computer Science and Software Engineering (http://se.uwaterloo.ca/~dberry/Handbook)
• Doug Comer, How to Write a Thesis (http://www.cs.purdue.edu/homes/dec/essay.dissertation.html)
• Joseph Levine, Writing and Presenting Your Thesis or Dissertation (http://www.learnerassociates.net/dissthes/)
• Joseph Levine, Guide for Writing a Research Proposal (http://www.learnerassociates.net/proposal/)
• John O’Donnell, Technical Writing for Computer Science (http://www.dcs.gla.ac.uk/jtod/)
• Jonathan Shewchuk, Three Sins of Authors in Computer Science and Math (http://www.cs.cmu.edu/~jrs/sins.html)
• Purdue’s Online Writing Lab (OWL) (http://owl.english.purdue.edu/)

References and Recommended Reading Materials on Professional Ethics and Plagiarism:

• On Being A Scientist: Responsible Conduct in Research (from National Academy of Sciences) (http://www.nap.edu/readingroom/books/obas/)
• Association of Computing Machinery Code of Ethics and Professional Conduct (http://www.acm.org/constitution/code.html)
• Association of Computing Machinery Policy and Procedures on Plagiarism (http://www.acm.org/pubs/plagiarism policy.html)
• Computer Society and ACM Approved Software Engineering Code of Ethics (http://www.computer.org/portal/cms_docs_computer/computer/content/code-of-ethics.pdf)
• University Library's Plagiarism Website (http://csus.libguides.com/plagiarism)

Grading Policy:

To receive Credit for this class, you must meet the following requirements:

• You complete and submit on time homework assignments given in class;
• You do not miss more than one class meeting;
• You complete the Indian University online certification test and submit the certificate on How to Recognize Plagiarism, the advanced level of test for master’s and doctoral students, **no later than Tuesday Oct. 3, the Tuesday of the sixth week**. The online test is available from [https://www.indiana.edu/~academy/firstPrinciples/certificationTests/index.html](https://www.indiana.edu/~academy/firstPrinciples/certificationTests/index.html)

**University Policies**

**Academic Honesty**

Students are expected to be familiar with the University’s Academic Honesty, Policy & Procedures. The policy on Academic Honesty and other information regarding student conduct can be accessed from the [University Policy Manual](http://www.csus.edu/umanual/). Please also visit the [University Library's Plagiarism Website](http://csus.libguides.com/plagiarism).

**Reasonable Accommodation Policy**

If you have a disability and require accommodations, you need to provide disability documentation to Services for Students with Disabilities (SSWD). For more information please visit the [SSWD website](http://www.csus.edu/sswd/). They are located in Lassen Hall 1008 and can be contacted by phone at (916) 278-6955 (Voice) (916) 278-7239 (TDD only) or via email at sswd@csus.edu. Please discuss your accommodation needs with me after class or during my office hours early in the semester.

**Writing Assignment**

Write a report titled *What We have learned from CSc 209*. Hand-written report and arbitrary format are not acceptable. First of all, before the sixth week, you need to generate your file format/template for *What We have learned from CSc 209*. You are required to use the template provided by the Office of Graduate Studies ([http://www.csus.edu/gradstudies](http://www.csus.edu/gradstudies)) for MS theses and projects to set the format and include cover page, signature pages, abstract, table of contents, list of figures, list of tables, chapters and their sections, appendix, and references. For citations and references, you are required to follow the format specified by the [IEEE Editorial Style Style Manual 2016](https://www.ieee.org/documents/style_manual.pdf).

You are required to write one chapter with sections as a summary of one faculty presentation at CSc 209. The length of the summary must be three pages using the above mentioned university specified format. You will be informed in class which presentation to write a summary for, the detailed requirements, and the deadline for the writing assignment.

If you plan to enroll into CSc500/502 in the next semester, you are strongly encouraged to work out a preliminary MS thesis/project proposal this semester.
University Writing Center

For free, one-on-one help with writing in any class, visit the University Writing Center in Calaveras 128. The University Writing Center can help you at any stage in your reading and writing processes: coming up with a topic, developing and organizing a draft, understanding difficult texts, or developing strategies to become a better editor. To make an appointment or a series of appointments, visit the Writing Center or call 278-6356. For current Writing Center hours and more information, visit the Writing Center Website (www.csus.edu/writingcenter).

Tentative Course Schedule

Any adjustments to this tentative schedule, including faculty furlough days, will be announced in class in advance.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Instructor or Guest Speaker</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MS Thesis/Project Process and Completion Requirements</td>
<td>C. Zhang</td>
<td>RVR-2010</td>
</tr>
<tr>
<td>2</td>
<td>Research Methodology</td>
<td>C. Zhang</td>
<td>RVR-2010</td>
</tr>
<tr>
<td>3</td>
<td>Technical Writing for MS Theses/Projects</td>
<td>C. Zhang</td>
<td>RVR-2010</td>
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<tr>
<td>4</td>
<td>Library Resource and Support for Research</td>
<td>T. Dosu</td>
<td>Univ. Library RM 2024</td>
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<tr>
<td>5</td>
<td>Technical Writing for MS Theses/Projects</td>
<td>C. Zhang</td>
<td>RVR-2010</td>
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<tr>
<td>6-7</td>
<td>Professional Ethics, Plagiarism</td>
<td>C. Zhang</td>
<td>RVR-2010</td>
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<tr>
<td>8-14</td>
<td>Faculty Research Interests and Potential Topics for MS Theses or Projects</td>
<td>To be announced</td>
<td>RVR-2010</td>
</tr>
<tr>
<td>15</td>
<td>More on the Process, Requirements, and Technical Writing for MS Theses/Projects</td>
<td>C. Zhang</td>
<td>RVR-2010</td>
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The descriptions are subject to change at the discretion of the Instructor.