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# CIS 400 Senior Design Fall 2011

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# Goals and Objectives

- Defining a project
  - Conducting Research
  - Presenting your ideas and results
  - Producing and Executing a work plan
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# Course Schedule CIS 400

## ■ Project Proposal

- 4-5 pages (~25% of grade)
- Due by Tuesday Oct 13 by 5 pm
  - Electronic form – PDF to blackboard **AND** hardcopy signed by your advisor
  - Must be in LaTeX
    - Introduction to Latex, 4:30 pm, Thursday, Sept 15, Towne 315
- Proposal Meetings: Oct 20-27

## ■ Progress Presentation and Report

- 8-10 pages (~75% of grade)
- Report Due by Thursday, Dec 8 by 5 pm
- Progress Presentation: Dec 6, 8, 12-14

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# CIS 400 in-class meetings (tentative)

- Introduction to Latex, 4:30 pm, Thursday, Sept 15, Towne 315
  - Library/Research resource info session, Tuesday, Sept 20
  - Presentation tips session, TBD
  - Project presentations, Dec 6, 8, 12-14
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# Tentative Course Schedule

## CIS 401

- Project progress presentations (in March)
  - Final report
  - Poster presentation (in April)
  - Judgment Day, Monday, April 23
    - End of semester demo and poster presentation
    - Prizes awarded to outstanding projects
      - Panel of external judges
  - Top 3 goes to SEAS competition
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# To Do Fall Semester

- Select a topic
  - Select a team of 2-4 members
  - Find a faculty advisor
  - Turn in Project Proposal by Oct 13
  - Meet with me for Project Review
  - Attend **mandatory** information resources session (date TBA)
  - Turn in Project Progress Report by Dec 8
  - Meet with me for Project Presentation and Review
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# Course Mechanics

- Office hours:
    - 4:30-5:30 pm Mon, 2-3 pm Thr, and also by email appointment
  - Advisor-signed project proposals handed in Levine 311 to Ms. Brittany Binler and also submit non-signed version to CIS400 Bb
  - Sign up schedule proposal review meetings
  - TAs: Alex Roederer, Andrew West
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# Course Web Page

- [www.seas.upenn.edu/~cis400](http://www.seas.upenn.edu/~cis400)
  - Includes some project suggestions and links to past project descriptions
  - Other helpful information:
    - [http://www.seas.upenn.edu/~cse400/CSE400\\_2010\\_2011/CIS400\\_prop\\_spec.pdf](http://www.seas.upenn.edu/~cse400/CSE400_2010_2011/CIS400_prop_spec.pdf)
    - [http://www.seas.upenn.edu/~cse400/CSE400\\_2010\\_2011/CIS400\\_write\\_guide.pdf](http://www.seas.upenn.edu/~cse400/CSE400_2010_2011/CIS400_write_guide.pdf)
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# Characteristics of a good project

- The problem is interesting, non-trivial
  - You are aware of prior work and can explain why your project is better/different
  - You have a clear idea of what your end result will be
  - You understand what's required in terms of skills, personnel, equipment, tools, and time
  - Grading rubric available online
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# Project Proposal Format

- ***Title***
    - ***Project Name, participants, faculty advisor***
  - ***Abstract***
    - ***1-2 paragraph description of the project including a clear description of what your software system will eventually do***
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# ***Project Proposal Format***

- ***Introduction***
  - ***Related Work (1 – 2 pages)***
    - ***Summarize related research, products and systems***
    - ***Explain why the proposed system is better/different from what already exists***
    - ***Multiple information sources:***
      - ***Patents, Textbooks, Scholarly articles, tech reports, web sites***
  - ***Proposed Work (2 pages approx)***
    - ***Explain how your system will work***
    - ***Provide a block diagram of major components if applicable***
    - ***Explain the principal technical challenges***
    - ***Evaluation Criteria***
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# ***Project Proposal Format***

## ■ ***Milestones/Timetable***

- ***List the major tasks that you will need to perform and when you expect to do them***
- ***Must indicate tangible deliverables to be demonstrated at the end of fall and spring semesters***
- ***Resources Required (if needed)***
  - ***Which computers will you use, what hardware and software tools are required what new textbooks and reference material***

## ■ ***References***

- ***List the articles, textbooks, web sites, etc. that you cited in the body of your project proposal***

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# Project Progress Report

- Similar format to Project Proposal but Technical approach section will be expanded
  - Description of work done to date
  - Results of prototype implementation
  - Detailed plan for work to be done next semester
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# Grading Considerations

- Is it clear what the project is about?
- Have you done sufficient research to identify related projects, products and relevant resources?
- Do you have a plausible technical approach and a clear idea of the challenges?
- Do you have a clear idea of what it will take to get the project done, time, equipment tools personnel etc.?
- Is the project innovative?

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# Plagiarism Policy

- All reports and code turned in are expected to be original work.
    - If and when in question, ask the instructor
  - Refer to the web site for a detailed plagiarism policy
    - <http://www.vpul.upenn.edu/osl/acadint.html>
  - Violations of the policy will be viewed as a serious breach of Academic Ethics and may result in a trip to the OSC
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# CS Research at Penn



- **Graphics** (Badler, Gallier)
- **Computational linguistics** (Joshi, Marcus, Nenkova, Liberman)
- **Robotics/vision** (Daniilidis, Gallier, Mintz, Shi, Taskar, Koditshek, Kumar, Pemantle, Rubin)
- **Algorithms and Complexity Theory** (Alur, Guha, Kannan, Kearns, Khanna, Roth)
- **Computer Architecture** (Martin, DeHon)
- **Databases** (Davidson, Guha, Khanna, Ives, Loo, Pierce, Tannen, Weinstein)
- **Embedded Systems** (Alur, Lee, Sokolsky, Pappas, Mangharam)
- **Machine Learning** (Kearns, Taskar, Ungar)
- **Networks** (Loo, Smith, Guerin)
- **Programming Languages** (Pierce, Weirich, Zdancewic)
- **Security, Privacy, Trust Management** (Blaze, Lee, Smith, Sokolsky, Zdancewic)