

# Projects

*CE 311K*  
*Introduction to Computer Methods*

## Project Purpose

- Enable you to
  - explore in-depth some aspect of Civil, Architectural, or Environmental Engineering of interest to **you**
- Provide experience in
  - use of computer methods to solve engineering problems
  - formulation, execution and presentation of an engineering investigation
  - team effort to produce a project, report and presentation that is informative to you and your classmates

## Project Steps

- Students - sign up for an area of interest
  - Architectural Engineering (ArE) – [www.caee.utexas.edu/areareasofpractice/index.cfm](http://www.caee.utexas.edu/areareasofpractice/index.cfm)
    - Structural Engineering
    - Building Energy and Environments
    - Construction Materials Engineering
  - Civil Engineering (CE) – [www.caee.utexas.edu/ceareasofpractice/index.cfm](http://www.caee.utexas.edu/ceareasofpractice/index.cfm)
    - Construction Engineering and Project Management (CEPM)
    - Environmental Engineering (ENV)
    - Geotechnical Engineering (GEO)
    - Materials: Mechanics and Construction (MAT)
    - Structures (STR)
    - Transportation (TRAN)
    - Water Resources Engineering (WR)

## Project Steps

- Instructor - prepares teams in areas of interest
- Teams
  - Select project topic in their area and prepare proposal
  - Proposal presentations (5 minutes in class)
  - Project presentations (15 minutes in class)
  - Send final report (< 20 pages)

## Proposals

- Teams select a project topic in their area
- Prepare a 1-page proposal (MS Word)
- Submit by email ([daene@aol.com](mailto:daene@aol.com))
- Specify
  - objective of your team's project
  - outline how your team plans to go about executing the project
- Present proposal in class
  - 5 minutes (max)
  - 2-3 powerpoint slides

## Project Presentations

- Present final project in class
- 15 minutes (max)
- 12-15 powerpoint slides
- Introduction
- Method(s)
- Results
- Conclusions

## Project Presentations

- Introduction
  - short statement of problem, its importance, and what report contains
- Method(s)
  - theory and method of how you solved your problem
- Results
  - example of running your program or solution to your problem
- Conclusions
  - what did you learn from the project, including an assessment of how effective you think your program or project is, and what could be done to extend or improve your project
- Rubric
  - Originality
  - Introduction
  - Technical Competence (method, results, assessment)
  - Overall quality of presentation or report (speaking, audience interest, language usage)

## Project Reports

- **Abstract:** 1 paragraph summary of project
- **Table of contents**
- **Introduction:** statement of problem, its importance, and what the report contains
- **Method:** how you implemented your project
- **Results:** example of program or solution
- **Conclusions:** what are the important things you learned from the project, assessment of effectiveness
- **References**
- **Appendices:** computer code, detailed data tables, etc.