

Finite Element Method 4613b

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Last updated: December 17, 2008

General:

- Textbook: Finite Elements by David J. Henwood and Javier Bonet. Required.
- Classes: Mon, Wed, Thu 08:30-09:30, Middlesex College, room MC17.
- Office hours: Office hours: Monday, Wednesday 9:30pm-10:30pm
- E-mail: You **MUST** have AM4613b in the title. Otherwise your mail will not be read.
- Prerequisites: AM 2813b

Contents:

We will cover the basics of the Finite Element Method (FEM). FEM is a very powerful and general method, and we will focus on the general aspects and the background of the method. After gaining the necessary theoretical background during the first half of the course, in the second half we put the ideas and concepts into practise and study the methods from the computational point of view. This second half will contain a good amount of programming, and it is essential that the students have a good background in C, C++, Java, Fortran or comparable. The course also contains a project work which is of computational nature.

Evaluation:

There will no final or a midterm. Instead, there will three in-class exams (extended quizzes), homework problems, and a project work. The following grading scheme will be used:

- In class-exams: 15% each
- Homework problems: 35%
- Final project: 20%
- Make-up exam: Only with instructors permit and has to be arranged at least one week before the scheduled exam. For students with extraordinary personal or family circumstances, it is the student's responsibility to contact the instructor **WITHIN ONE WEEK** of the missed exam. Documentation will be required to prove the reason for absence (the faculty has an illness/compassionate absence form that you should use in such a case & medical doctors's provide also provide a proof if requested).