Grading

- 5 Homework Assignments from the text. Note that these will involve the use of the codes provided, which are written in Fortran 90. A detailed knowledge of this language is not required, but you will need to be able to run the associated Makefiles and execute/manipulate the code. Tentative assign/due dates are: 2/4-2/23; 2/25-3/18; 3/23-4/6; 4/8-4/20; 4/22-5/4.

Goals: The purpose of the course is to understand the mathematics of hp-adaptive finite element methods for solving boundary value problems.

Outcomes: Via the completion of assignments covering both theory and programming students will demonstrate an understanding of

i. Convergence analysis for coercive and noncoercive boundary value problems.

ii. Implementation on $h$-refined meshes.

iii. A-posteriori error estimates and adaptivity.

Course Outline

I am planning to cover as much of the material as time allows in Chapters 1-14 and 17-19 of the text.
Policies

Homework Assignments: Homework assignments are due by 4pm on the due date. Collaboration with other students is encouraged, but each student is responsible for writing their own assignment and running their own codes. Copied homework will not be credited.

Disability Accommodations: Students needing academic accommodations for a disability must first contact Ms. Rebecca Marin, Coordinator, Services for Students with Disabilities (214-768-4557) to verify the disability and establish eligibility for accommodations. They should then schedule an appointment with the professor to make appropriate arrangements.

Religious Observance: Religiously observant students wishing to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence.

Excused Absences for University Extracurricular Activities: Students participating in an officially sanctioned, scheduled University extracurricular activity should be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up the work.

Academic Dishonesty: Students are expected to abide by the Honor Code.