

Examination Policy for CE-Engineering Science Graduate Program

Ph.D. :

A. Prelim Exam:

Students should nominally take the prelim exam within the first yr.

1-day written exam will be administered once a year in May:

Format: 10 questions total - closed book

Choice of

- 3 questions on applied mathematics
e.g., *Advanced Engineering Mathematics* by Wylie
An Introduction to Applied Mathematics by Gilbert Strang
- 3 questions on general mechanics
e.g., *Continuum Mechanics* by Spencer/Chadwick
Introduction to the Mechanics of a Continuous Medium by Malvern
- 2 questions on numerical methods
e.g., *Fundamental of Engineering numerical analysis* by Parviz Moin
The Finite Element Methods: Linear Static and Dynamic Finite Element Analysis
by T. Hughes
- 2 questions on general engineering applications (solids, fluids, geomechanics, heat transfer, biomech, glaciology, chemistry, ...)

B. Comprehensive Oral Exam:

Format: Oral exam portion should have 2 parts:

- Part 1: general questions on STEM fundamentals and knowledge; readiness to do independent research
- Part 2: a thesis research proposal

C: Thesis defense

Format: Oral exam.

All established university and general departmental rules apply to degrees in the CE-Engineering Science graduate program.

2/28/2011