Expected Outcome 1: Competence in core subjects


Assessment Method 1: Oral exams

Assessment Method Description

The exam consists of 5 parts – each covering one of the following core subjects: Thermodynamics, Crystallography, Kinetics, Mechanical Properties and Physics of Solids. For each subject, the student is given a list of 4-5 questions. The student has 30 minutes to prepare a response and then 30 minutes to answer the questions to 2 faculty members. This is repeated 5x (i.e. for each subject). At the end of the day the faculty meets, reports the results and decides on the outcome for each students.

The Oral Exam is taken by both master’s and Ph.D. students, but the criteria for passing is higher for Ph.D. students.

Findings

Pass rate for Oral Exam is 83% (5/6 in Fall 2012)

How did you use findings for improvement?

The student performance and associated discussions are considered both by individual faculty in modifying their courses from year to year and broader discussion of the curriculum.

Additional Comments
Expected Outcome 2: Experimental / Computational Methods

The ability to lead and direct original experimental and/or theoretical investigations and to effectively communicate the results of these investigations.

Assessment Method 1: Presentation assessments

Assessment Method Description
Forms for evaluation of oral and written presentations

Findings
The student performance and associated discussions are considered both by individual faculty in modifying their courses from year to year and broader discussion of the curriculum.

How did you use findings for improvement?
No changes

Expected Outcome 3: Integration

The ability to apply the basic principles of materials engineering to specialized areas of materials engineering and/or to integrate these principles with other scientific and engineering disciplines

Assessment Method 1: Written exam

Assessment Method Description The written exam has two parts: Morning and Afternoon. In each part, the students chooses to answer 4 questions out of a total of 8-10. The questions in the morning are in the core subject areas (i.e. the same as for the Oral Exam). The questions in the afternoon cover multiple topics and thus require integration of the multiple topics. The individual questions are graded by the faculty member that wrote the questions.

Findings
Pass rate for Written Exam is 100% (3/3 in Fall 2012 and 5/5 in Spring
2013).

**How did you use findings for improvement?**

The student performance and associated discussions are considered both by individual faculty in modifying their courses from year to year and broader discussion of the curriculum.

**Additional Comments**

**Expected Outcome 4: Specialization**

The specialized technical expertise necessary for success in a career in research and/or education

**Assessment Method 1:** Seminar / proposal

**Assessment Method Description**
Each student must present seminar and proposal for Ph.D project

**Findings**
No issues identified

**How did you use findings for improvement?**

The student performance and associated discussions are considered both by individual faculty in modifying their courses from year to year and broader discussion of the curriculum.