Equivalency For Electrical Engineering

For students entering with a Bachelor’s degree, the kernel requirements are generally met without difficulty over the standard period through appropriate course selections. On the other hand, students who enter with a Master’s degree must be prepared for the Preliminary Exam Part I within thirteen (13) months, and therefore must use “equivalent” courses from their Master’s degree to meet the kernel requirements. During which time they elect research oriented directed study in addition to their normal course load.

Because of the limited time available for preparation prior to the Preliminary Exam Part I (Qual Exam), students with a Master’s degree are unable to complete their kernel requirement through courses taken at Michigan. This was anticipated, with the expectation that such students have already acquired considerable background as part of their Master’s degree work.

We do not wish to make it unduly difficult for students who have done graduate work at another school to satisfy the kernel requirements. Nor do we want students to retake courses that they have already successfully completed elsewhere. Thus we speak of equivalency, which consists of the acceptance of courses completed previously as equivalent to courses in our kernels. Equivalency does not require the formal transfer of courses to the student’s transcript; rather, it is recognition that the student has reached a level of attainment comparable to that represented by the kernel course.

While equivalency is a necessity for students arriving with a Master’s degree, it can also benefit doctoral students who come with a Bachelor’s degree, whose background includes graduate level courses taken as an undergraduate.

**Requesting Equivalency**

A student wishing to request equivalency for course work prior to taking the Preliminary Exam I should petition the Graduate Program Chair in the first term of study. A long lead-time is necessary in case expected equivalency is not obtained and additional course work must be taken. Entering students should bring the requested equivalency material (see below) with them to Ann Arbor, and discuss equivalency with their Academic Advisor in their first meeting. Request for equivalency evaluation forms can be found in the Master and Ph.D. Requirements for the Electrical Engineering Graduate program or in the EE graduate office.

a. The course title, where and when elected, and grade earned
b. Number of weekly meetings, course duration
c. Course outline or syllabus
d. Catalog course description
e. Names of texts used; if the texts are not standard, a copy of the text itself
f. Lecture notes, homework problems, and tests
g. Any other material indicative of the coverage and level of the course

It is recognized that a student may not have all the above materials conveniently available. However, it is the responsibility of the student to present sufficiently convincing evidence to justify approval of his/her equivalency petition.
The following condition must always be satisfied:

The course(s) or parts of courses used for equivalency must be at an intellectual and content level commensurate with the corresponding courses in EECS at Michigan, and must be similar duration and intensity. The student must have earned a grade of B (or its equivalent) or higher in the courses proposed for equivalency.

In addition, the following guideline apply:

1. If a course taken elsewhere includes a least 60% of the kernel course material then equivalency is given.

2. If a combination of material from two or more courses taken elsewhere cover at least 75% of the kernel course material then equivalency is given.

3. If a course taken elsewhere does not match any kernel course but is judged to be suitable for the student’s major or minor area if it were offered at Michigan, then this course will reduce by one the number of kernel courses required to satisfy the Ph.D. kernel requirements.

4. Students entering with a Master’s degree must submit any petition for equivalency as part of the planning and counseling process at the beginning of their first term in the graduate program.

Courses not in the kernels and non-EECS courses such as math do not have to be considered for equivalency.