

## ECONOMICS GRADUATE ASSESSMENT REPORT

The goals of the Master's Program in Economics are:

1. To impart to students the skills necessary to apply macroeconomic theory to questions of public policy.
2. To impart to students the skills necessary to apply microeconomic theory to the resolution of applied problems in economics.
3. To impart to students the basic procedures for conducting applied economic research and to develop in students the ability to conduct and report quality economic research.

These goals were developed by the faculty of the Department of Economics and have not been modified. The three stated "student outcomes" for the assessment of the Master's Degree Program in Economics:

Students who successfully complete this program will be able to:

- Outcome 1:
- a) Interpret the stream of macroeconomic data not only on an annual and quarterly basis but also on a daily basis.
  - b) Use models of the business cycle, economic growth, inflation and unemployment to analyze macroeconomic issues.
  - c) evaluate the impacts of alternative monetary and fiscal policies on both national and international economies.
- Outcome 2:
- a) Understand the mechanism through which a given economy allocates its scarce resources. This understanding includes how agents make economic decisions, how various institutions affect the incentive structure, how individual actions interact to generate a market equilibrium and how the price system allocates resources.
  - b) Understand how an external event influences the choices and the equilibrium outcome.
  - c) Understand how the design of public policy and institutions can alter incentives for individuals and thus resource allocation.
  - d) Understand the concept of allocative efficiency.
- Outcome 3: Formulate and test economic hypotheses. This involves collecting and analyzing data, relating the data to the theory and choosing the appropriate statistical methodology. For example, when choosing the appropriate statistical methodology, the student should be able to decide whether least squares regression, simultaneous equation methods or discrete variable regression is the correct approach. Students should also have the ability to apply the appropriate statistical tools to determine statistical significance of the results.

These outcomes are the result of deliberations of the Economics Department faculty and have not been modified.

Our approach to measuring outcomes one and two is different from our approach to measuring outcome three. To determine the extent to which we are successful in achieving outcomes one and two, the department administers a pre-test and a post-test to our graduate students. The macroeconomics pre-test is administered prior to the students taking any graduate macro classes in the department. The micro pre-test is administered prior to the students taking the relevant graduate micro courses. The post-tests are administered at the completion of the respective courses. The results of both the pre and post tests are evaluated by a committee composed from the graduate faculty.

For the student to demonstrate an ability to satisfy outcome 3, he/she must complete a research project including a paper in Economics 625 (Econometrics). The paper is evaluated by the same committee from the graduate faculty that evaluates outcomes one and two.

### **Results as of the end of Spring 2006 Semester:**

'Pre' and 'Post' exams were administered to graduate students in ECN 643 (Advanced Macroeconomics) and ECN 635 (Competition and Strategy) for the years 2003 through 2006. 'Pre' and 'Post' exams were administered in ECN 633 (Advanced Microeconomics) for the years 2003 through 2005 only. Additionally, the Graduate Committee of the Economics Department reviewed papers that were submitted by graduate students to satisfy their requirements in ECN 625 (Econometrics). This was done in 2003, 2004, and 2005. A review of the papers submitted in ECN 625, Spring 2006, will take place during the Fall 2006 semester.

The results from the 'pre' and 'post' exams for ECN 643 in 2003 are:

- a) 6 students took the exams.
- b) The average score on the pre-test was 25%. The average score on the post-test was 72%. This represents an average increase of 47%. The minimum improvement was 20% and maximum was 65%.

In 2004, the results of the pre and post exam are:

- a) 7 students took the 'Pre' exam and 5 students took the 'Post' exam.
- b) The average score on the pre-test was 29%. The average score on the post-test was 57%. This represents an average increase of 28%. The minimum improvement was 10% and the maximum improvement was 50%.

In 2005, the results of the pre and post exams for ECN 643 are:

- a) 12 students took both exams.
- b) The average score on the pre-test was 38%. The post-test average score was 69%. This represents an average increase of 31%. The minimum improvement was 5% and the maximum was 55%.

In 2006, the results of the pre and post exams for ECN 643 are:

- a) 7 students took both exams.
- b) The average score on the pre-test was 41.4%. The post-test average score was 67.1%. This represents an average increase of 25.7%. The minimum improvement was 10% and the maximum was 40%.

Although the percentage improvement in 2006 shows a slight decrease from what it was in previous years, this may be the result of students in 2006 scoring significantly higher on the pre-test exam.

In ECN 635, five students took both the 'pre' and 'post' exams in 2003.

- a) The mean score on the pre-test was 31% while the mean score on the post-test was 87%. Thus, the average gain in scores was 56%. The minimum improvement was 46% and the maximum improvement was 67%.

In 2004, the results for ECN 635 are:

- a) 7 students took the 'Pre' exam and 6 students took the 'Post' exam.
- b) The mean score on the pre-test was 52%. The mean score on the post-test was 75%. The average gain in score was 23%. The minimum improvement was 4% and maximum improvement was 42%.

The 2005 results for ECN 635 are:

- a) 11 students took the exams.
- b) The mean score on the pre-test was 39%. The mean score on the post-test was 82%. The average gain in score was 43%. The minimum improvement was 21% and maximum improvement was 66%.

The 2006 results for ECN 635 are:

- a) 7 students took both the pre and post exams.
- b) The mean score on the pre-test was 48.8%. The mean score on the post-test was 85%. The average gain in score was 36.2%. The minimum improvement was 20.8% and the maximum improvement was 54.1%.

The results for 2005 are comparable to earlier year results.

The 'Pre' and 'Post' exams for ECN 633 were administered for the years 2003 through 2005 only. The results for 2003 are:

- a) 10 students took the pre-exam and 9 students took the post-exam.
- b) The mean score on the pre-exam was 42% while the mean score on the post-exam was 60%. The average gain in scores was 18%. The minimum gain was -4% and the maximum gain was 41%.

The 2004 results for ECN 633 are:

- a) 12 students took the exams.
- b) The mean score on the pre-exam was 45%. The mean score on the post-exam was 49%. The minimum gain was -4% and the maximum gain was 23%.

The 2005 results for ECN 633 are:

- a) 8 students took the exams.
- b) The mean score on the pre-exam was 49.6%. The mean score on the post-exam was 55.6%. The minimum gain was -3.7% while the maximum gain was 18.6%.

The results are comparable to what they were in 2004.

The committee was pleased with the improvement that students showed in ECN 643 and ECN 635. The results from ECN 633, however, were disappointing, especially the 2004 and 2005 results. An investigation by the committee determined that the results of the 2004 post-exam were contaminated by the instructor when he inadvertently told the class that the results on the exam would not count toward their grade. However, this was not the case in 2005.

In 2003, members of the Graduate Committee reviewed papers submitted by graduate students in ECN 625. There was general agreement among committee members that students did not relate the theories learned in their economics courses to the issue of hypothesis testing. One remedy proposed by the committee was that students in ECN 625 should be required to hand in an outline of their paper prior to approval of a topic. This suggestion was implemented in 2004.

In 2004, the committee reviewed the papers submitted by MA students in ECN 625. There was considerable improvement. Committee members unanimously agreed that each of the papers contained a hypothesis which was tested using appropriate economic techniques.

In 2005, the committee reviewed 9 papers submitted by graduate students as part of their class assignment in ECN 625. Committee members unanimously agreed that the 2005 papers were not only an improvement over the papers submitted in 2003 but also over the papers submitted in 2004. Thus we are seeing steady progress in this area.

In summary, the committee was satisfied with the improvement of the test scores between the pre and post exams in ECN 643 and ECN 635. However, the results from ECN 633 were somewhat disappointing. It was the consensus of the committee to investigate the lack of improvement between the pre and post exams in this class. Finally the committee was satisfied with the steady improvement in the quality of papers between 2003 and 2005.

#### Additional Outcome Assessment.

The Graduate Assessment Committee this past year instituted an additional means of assessing students learning and satisfaction. The Committee developed a survey to administer to graduating MA students prior to their exit from the university. This survey was implemented for the first time in Summer 2005.

A total of nine graduating students were surveyed. Five were entering the job market and four were either continuing in a Ph.D. program or were first entering the job market and then continuing in an advanced graduate or professional school.

We asked students what additional preparation would have helped them navigate the program. The consensus (5 students) was that they should have had additional math training. Two students said additional economics training.

As an open-ended question, we asked what changes they would make in our MA program. There was a consensus that the MA students did not like taking courses with undergraduates. This is a problem that exists in three of our graduate courses.

The second problem mentioned by a minority of students was the simultaneous offering of Math Econ and Advanced Microeconomics. This is an issue we were aware of but have no remedy at the moment.

The majority of students said that the most useful course in the program was Econometrics while the majority felt that the most interesting course in the program was Competition and Strategy.

With regard to their overall experience in the MA program, the majority reported a very positive experience. Several mentioned the difficulty of both working and going to school at night.