DEPARTMENT OF ECONOMICS – AMHERST COLLEGE

Student Handbook

© Amherst College Department of Economics
Amherst, MA 01002-5000
NB: Substantial effort has been made to ensure the accuracy and completeness of this Student Handbook. However, policies may change and there may be inadvertent errors or omissions. If you have questions about official department policies, you should always check in the College Catalog and talk to your advisor. Suggestions for improvement and additions to the Handbook are always welcome – just contact the department.
# Table of Contents

Welcome ......................................................................................................................................... 1  
Declaring an Economics Major ...................................................................................................... 2  
Announcement Regarding the Economics Major ........................................................................... 2  
Course of Study............................................................................................................................... 3  
Minimum Course Requirements ..................................................................................................... 3  
Introduction to Economics .............................................................................................................. 4  
The Core.......................................................................................................................................... 5  
Electives.......................................................................................................................................... 7  
Example Schedules for the Economics Major ................................................................................ 8  
Economics Classes at Other Institutions....................................................................................... 10  
Study Abroad ................................................................................................................................ 11  
The Economics Comprehensive Exam ............................................................................................ 12  
Economics Department Fellowships............................................................................................. 12  
Business is not Economics, and Vice Versa ................................................................................... 12  
Honors........................................................................................................................................... 13  
Studying Advice............................................................................................................................ 15  
After Amherst ............................................................................................................................... 17
WELCOME

When you declare your economics major, you join the community of students and faculty studying economics at Amherst. We think economics is an exciting subject, and we look forward to sharing our passion for it with you! We encourage you to talk with faculty and other students about economic theories and issues outside of class, around campus, and in office hours, and to broaden your engagement with economics beyond your classes.

As an economics major, you will be included in department events such as seminars, lunches, or guest speakers – keep an eye out for announcements from the department and join us to do economics! You will also be assigned an advisor; your advisor will assist you in planning your course of study both within economics and in the liberal arts more generally. But it is up to you to make the most of your economics major. Think about the academic and professional goals you wish to achieve, read up on the major requirements and course offerings, and plan ahead.

This Handbook is intended to serve as a resource in your academic planning. As professors and advisors, we are committed to supporting you as a student of economics and the liberal arts. We encourage you to take ownership of your own education. Be aware of both the opportunities and the requirements of the economics major, and seek out appropriate guidance as you engage in your studies and plan for your future.

This document will help you answer questions such as:

- Should I major in economics?
- How do economics majors usually schedule their courses over their time at Amherst?
- Which core theory course should I take first?
- Should I take the advanced core theory courses?
- When should I start taking upper-level electives?
- How do I get experience doing economic research?
- What if I want to study abroad?
- Can I get credit for business or accounting courses? (the short answer is no)
- What do economics majors do after Amherst?
- I’m thinking of going to graduate school in economics – what courses should I take? What else should I do?

Welcome to the Economics Department!
DECLARING AN ECONOMICS MAJOR

Choosing your major is a big decision. We encourage you to seek advice from your advisor and other professors. All students must declare a major by the end of their sophomore year. Note that if you are double-majoring you should still declare both majors as soon as your plans are definite. If you put it off, you miss out on the benefits of department advising and communications, and you may not be able to fulfill the major requirements. The economics major should be declared in sophomore year, or at the latest by the end of junior year.

You may declare an Economics major if you have received a grade of B or better in Economics 111. If you did not receive a B or better in Economics 111, you may declare the major if you have received a grade of B- or better in an economics elective numbered 200-290.

To declare the major, you should get the “declaration of major” form from the Registrar’s office, fill it out, and print out an Unofficial Transcript. Bring these two documents to the Academic Department Coordinator for Economics, Ms. Jeanne Reinle, in the Economics Department Office (Converse 306). Ms. Reinle will verify your eligibility to declare the major, process your declaration of major, and give you some important documents. Note that you do not need to get the signature of the Department Chair prior to bringing your forms to Ms. Reinle; if you are indeed eligible to declare the major, she will arrange the Department Chair’s approval. It is recommended that you do this at a time of the semester that is not particularly busy for advising and for the Registrar’s office (i.e., not during pre-registration or add-drop if you can avoid it.)

Of course, it is wise to take several economics courses before committing to the major. Most students will take Economics 111, a couple of electives, and a core theory class before they declare the major. You are also encouraged to consult with economics faculty about your choice of major or your academic plans in general.

ANNOUNCEMENT REGARDING THE ECONOMICS MAJOR

The following announcement is made in every economics course in every semester.

“The Faculty of the Department of Economics would like to remind all economics students of the following:

- Economics Student Handbook: The Handbook contains important information about the major. If you plan to major in economics, you should read the Handbook carefully.

- Major Declarations: If you plan to major in economics, you should declare the major as soon as you have made that decision. The economics major should be declared by the end of junior year (even for those who are double majoring!)

- The Core: The three core courses should be finished by the end of junior year, or by the end of the fall semester of senior year at the latest. Failure to do so jeopardizes your chances of graduating with an economics major.”
COURSE OF STUDY

The economics major consists of a total of nine full-semester courses in economics, including:

- An Introduction to Economics (111 or 111E)
- The core theory courses in Microeconomics (300/301), Macroeconomics (330/331), and Econometrics (360/361)
- At least five other courses in economics, usually electives numbered 200-290 or 400-490

There are also additional major requirements, which include:

- At least one of the electives must be an upper level elective (numbered 400-490)
- Mathematics 111 or equivalent is also required
- Honors students must take a total of ten economics courses

The Course Catalog contains additional important information. You should consult the Catalog and this Handbook regularly and seek guidance whenever you have a question.

MINIMUM COURSE REQUIREMENTS

Regular major:

- An Introduction to Economics (111 or 111E)*
- Three core theory courses (300/301, 330/331, 360/361)
- Five electives numbered 200-290 or 400-490,
  at least one of which must be an upper-level elective numbered 400-490.
- Mathematics 111†

Honors major:

- An Introduction to Economics (111 or 111E)*
- Three core theory courses (300/301, 330/331, 360/361)
- Four electives numbered 200-290 or 400-490,
  at least two of which must be upper-level electives numbered 400-490.
- Two thesis courses (498 and 499)
- Mathematics 111†

* Students testing out of Economics 111 must take one additional economics course to replace it.
† The advanced core courses require additional math courses; see the section on the core courses for more information.
INTRODUCTION TO ECONOMICS

Economics 111 is the starting point for the economics major. It provides an introduction to the basic tools essential for all areas of economics, as well as a survey of current economic issues and problems. Economics 111 is a requisite for all other courses in economics. After completing Economics 111 a student may enroll in any of a variety of applied courses. For the lower-level elective courses, numbered in the 200s, Economics 111 is the only economics prerequisite.

Students may be excused from the requirement of taking Economics 111 if they demonstrate an adequate understanding of basic economic principles. Four specific ways of being excused from the Economics 111 requirement are:

- Attaining a grade of 4 or 5 on both the macro and micro portion of the Advanced Placement Exam
- Passing a placement exam that is given by the department typically at the beginning of each semester
- Attaining a grade of 6 or 7 on the higher level International Baccalaureate in Economics
- Attaining a grade of A on the A levels

If a student is excused from the Economics 111 requirement and then becomes an economics major, he or she is still responsible for taking a total of 9 economics courses (or 10 if doing honors) to complete the economics major. That usually means taking at least six (rather than five) elective courses in addition to the three core theory courses.

If you have any questions about these policies, consult a member of the economics faculty.
THE CORE

There are three elements of the core theory of economics: microeconomics, macroeconomics, and econometrics. Microeconomics addresses the behavior of individuals and firms, developing theories to understand how these actors make decisions in a variety of market situations. Macroeconomics takes a more top-down approach, studying the behavior of the economy as a whole, through analysis of aggregate supply and demand, growth, inflation, and unemployment. Econometrics completes the economist’s basic toolbox, developing statistical and mathematical tools to test economic hypotheses using empirical data.

All majors must complete the sequence of core theory courses covering these three areas. These will indeed form the core of your study of economics.

Things to keep in mind about the core theory courses:

- You must complete Math 111 (Calculus) before taking any of the core classes.
- You must complete Econ 111 with a grade of B or better before taking any of the core classes. If your grade in Econ 111 was below a B, you must complete an economics elective with a grade of B- or better before taking any of the core classes.
- The core courses can be taken in any order, but it is recommended that a student take Economics 300/301 (Micro) or 330/331 (Macro) before enrolling in Economics 360/361 (Metrics).
- It is not advisable to take more than one of the core theory courses in a given semester.
- You should complete the core by the end of your junior year. There are two reasons for this. First, once you complete the core nearly all of the upper-level electives (400-level courses) will be open to you. Second, the economics comprehensive exam occurs in the first weeks of the spring semester of senior year and you need to have completed the core before that.
- A student who receives a grade of F in a core theory course must retake that core theory course. A student who receives a grade of D in a core theory course may not count that course towards the major and must take Econ 390 (a special topics course focusing on that area of core theory) and receive a grade of C- or better in that special topics course.
- You must take the core at Amherst College.
The Core Theory Courses
We offer two versions of each of these core theory courses: regular and advanced. Each student takes either the regular or the advanced of each subject (but not both regular and advanced). Hence, there are six core theory courses:

- Microeconomics
  - Econ 300: Microeconomic Theory
  - Econ 301: Advanced Microeconomic Theory
- Macroeconomics
  - Econ 330: Macroeconomic Theory
  - Econ 331: Advanced Macroeconomic Theory
- Econometrics
  - Econ 360: Econometrics
  - Econ 361: Advanced Econometrics

Regular Core Theory Courses
The regular versions of the core theory courses are offered in every semester. Each class generally has around 40-50 students and includes weekly or twice-weekly problem sets, occasional quizzes, and three or four exams. Mathematics 111 (Introduction to Calculus) is a prerequisite for all of the regular core theory classes.

Advanced Core Theory Courses
The advanced versions of the core theory courses are offered once per year, either in the fall or the spring. In recent years, advanced micro and advanced metrics have been offered in the fall and advanced macro in the spring, though this may change from year to year. These classes have more extensive mathematical prerequisites. The additional prerequisites (in addition to those listed above) are:

- For Advanced Microeconomics: Mathematics 121 (Intermediate Calculus) and Mathematics 211 (Multivariable Calculus) or equivalents
- For Advanced Macroeconomics: Mathematics 121 (Intermediate Calculus) or equivalent
- For Advanced Econometrics: Mathematics 211 (Multivariable Calculus), and Statistics 111 (Introduction to Statistics, previously Mathematics 130) or Statistics 135 (Introduction to Statistics via Modeling) or equivalents.

Each advanced core theory class generally has around 10-20 students and includes weekly or twice-weekly problem sets, quizzes, and three or four exams. These courses are recommended for students who are more mathematically-inclined, for those who are planning to do an honors thesis, and for those who are considering applying to economics Ph.D. programs after graduation.

If you have any questions about these policies, consult a member of the economics faculty.
ECONOMICS at Amherst

Student Handbook

ELECTIVES

We offer many electives, covering a wide variety of topics in economics. Each major must take five or six of these courses. The offerings change from year to year depending on the interests of students and faculty.

Lower-Level Electives

The elective courses numbered in the 200s are colloquially called our “lower-level electives.” These courses require only Economics 111 as a prerequisite, and are most appropriate for students relatively early in their study of economics. They tend to be slightly larger lecture-based classes with 30 to 50 students in each.

Upper-Level Electives

The elective courses numbered in the 400s are colloquially called our “upper-level electives.” These courses require one or more of the core theory courses (300-level courses) as prerequisites. They are appropriate for students a bit further along in their study of economics, primarily (though not exclusively) juniors and seniors. They tend to be smaller seminar-style classes with fewer than 20 students in each. Classes will often require close reading of the current academic literature, the writing of papers of varying length, and empirical or theoretical exercises.

How Many Electives to Take

The typical economics major will need to take 5 elective courses to complete the major.* At least one of these must be an upper-level elective, but we encourage you to view that as a minimum rather than a maximum. Once you have mastered the core theory of the 300-level courses, it is satisfying to be able to apply that theory in more advanced study of topics in economics in the 400-level courses. To be eligible to enter the honors program, students must complete at least one upper-level elective before senior year. Furthermore, honors students must complete at least two upper-level electives prior to graduation.

If you have any questions about these policies, consult a member of the economics faculty.

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* In most circumstances, a student will take 5 economics electives. However, if a student has tested out of Economics 111, she or he will need to take 6 economics electives to complete the major. An honors student must take 10 economics courses (including Econ 498 and Econ 499), so she or he will take four of the usual electives plus these two thesis-related courses. If an honors student has tested out of Economics 111, she or he will need to take five of the usual electives plus the two thesis-related courses.
EXAMPLE SCHEDULES FOR THE ECONOMICS MAJOR

Below, we outline a few possible scenarios for the plan of study for an economics major. These are merely sketches – they are in no way prescriptive! We hope that they will give you a general idea of how the economics major might look so you can make the best possible plan for your own situation.

Some guiding principles you might like to keep in mind in designing your schedule:
- mix electives in with the core theory classes
- avoid taking more than two economics classes in any one semester
- move on to upper-level electives by junior year
- finish the core by the end of junior year

Starting in the First Year:

This is essentially the most basic version of the economics major. The 9 economics courses are spread evenly over the four years, electives are mixed in with core theory courses, and the student never takes more than two economics classes in any given semester.

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td><strong>First Year</strong></td>
<td></td>
</tr>
<tr>
<td>Econ 111</td>
<td>Elective</td>
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<tr>
<td>Math 111</td>
<td></td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
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<tr>
<td>Core Course (300/301, 330/331)</td>
<td>Core Course (300/301, 330/331)</td>
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<tr>
<td>Elective</td>
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<tr>
<td><strong>Junior</strong></td>
<td></td>
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<tr>
<td>Core Course (360/361)</td>
<td>Elective (possibly upper-level)</td>
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<tr>
<td>Elective (upper-level)</td>
<td></td>
</tr>
<tr>
<td><strong>Senior</strong></td>
<td></td>
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<tr>
<td>Elective (possibly upper-level)</td>
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</tbody>
</table>

Starting in the Second Year:

This is another relatively common version of the economics major, but it is a bit more compressed because the student does not take Economics 111 until sophomore year. The 9 courses are spread reasonably over the three remaining years, but there is a bit more pressure to get the core classes in quickly (without doubling up) in order to be ready for upper level electives and the comprehensive exam. The student still has electives mixed in with core theory courses, and never takes more than two economics classes in any given semester. This student is taking one additional math class, which is common.

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td><strong>First Year</strong></td>
<td>Math 111 (Intro to Calculus)</td>
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<tr>
<td><strong>Sophomore</strong></td>
<td></td>
</tr>
<tr>
<td>Econ 111</td>
<td>Core Course (300/301, 330/331)</td>
</tr>
<tr>
<td>Math 121 (Intermediate Calculus)</td>
<td>Elective</td>
</tr>
<tr>
<td><strong>Junior</strong></td>
<td></td>
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<tr>
<td>Core Course (300/301, 330/331)</td>
<td>Core Course (360/361)</td>
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<tr>
<td>Elective</td>
<td>Elective (possibly upper-level)</td>
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<tr>
<td><strong>Senior</strong></td>
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<tr>
<td>Elective (upper-level)</td>
<td>Elective (possibly upper-level)</td>
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</tbody>
</table>

Economics at Amherst

Student Handbook
Going abroad in Junior Year:

This schedule involves a student who studies abroad both semesters in her Junior year. (Of course many students go abroad for only one semester.) In most cases, students studying abroad will get credit for one economics elective while studying abroad. If the student plans ahead, he or she should not need to cram too many economics courses into senior year. However, the final core class is taken in senior year, which is a bit late and means that this student is not eligible to do an honors thesis. The student still has electives mixed in with core theory courses, and never takes more than two economics classes in any given semester.

<table>
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<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td><strong>First Year</strong></td>
<td></td>
</tr>
<tr>
<td>Econ 111</td>
<td>Elective</td>
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<tr>
<td>Math 111</td>
<td></td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
<td></td>
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<tr>
<td>Core Course (300/301, 330/331)</td>
<td>Core Course (300/301, 330/331)</td>
</tr>
<tr>
<td>Math 121 (Intermediate Calculus)</td>
<td>Elective (possibly upper-level)</td>
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<tr>
<td><strong>Junior</strong></td>
<td></td>
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<tr>
<td>Elective credit while abroad</td>
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<tr>
<td><strong>Senior</strong></td>
<td></td>
</tr>
<tr>
<td>Core Course (360/361)</td>
<td>Elective (possibly upper-level)</td>
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<tr>
<td>Elective (upper-level)</td>
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</tbody>
</table>

Taking some of the advanced core theory courses and possibly doing a thesis:

This schedule includes some extra math and two of the advanced versions of the core classes. The extra math is necessary to do the advanced versions of the core classes (and is not a bad idea anyway!) Since the core courses and a couple of upper level electives are included by the end of junior year, the student is in a good position to do an honors thesis if he or she so chooses.

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td><strong>First Year</strong></td>
<td></td>
</tr>
<tr>
<td>Econ 111</td>
<td>Elective</td>
</tr>
<tr>
<td>Intermediate Calculus (Math 121)</td>
<td></td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
<td></td>
</tr>
<tr>
<td>Core Course (301)</td>
<td>Core Course (331)</td>
</tr>
<tr>
<td>Elective</td>
<td>Intro to Statistics (Stat 130 or 135)</td>
</tr>
<tr>
<td><strong>Junior</strong></td>
<td></td>
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<tr>
<td>Core Course (360)</td>
<td>Elective (upper-level)</td>
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<tr>
<td>Elective (upper-level)</td>
<td></td>
</tr>
<tr>
<td><strong>Senior</strong></td>
<td></td>
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<tr>
<td>Thesis Seminar (498)</td>
<td>Thesis (499)</td>
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<tr>
<td>Elective (upper-level)</td>
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</table>

Taking all advanced core theory courses, doing a thesis, and possibly going on to a Ph.D.:

This schedule includes all of the advanced versions of the core classes, several extra math classes that are recommended for those going on to a Ph.D., and additional upper level electives. The schedule develops a very strong foundation for the thesis and possible graduate study.

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<tr>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td><strong>First Year</strong></td>
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</tr>
<tr>
<td>Econ 111</td>
<td>Core Course (331)</td>
</tr>
<tr>
<td>Multivariable Calculus (Math 211)</td>
<td>Elective</td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
<td></td>
</tr>
<tr>
<td>Core Course (301)</td>
<td>Elective (possibly upper-level)</td>
</tr>
<tr>
<td>Elective</td>
<td>Linear Algebra (Math 272)</td>
</tr>
<tr>
<td><strong>Junior</strong></td>
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<tr>
<td>Core Course (361)</td>
<td>Elective (upper-level)</td>
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<tr>
<td>Elective (upper-level)</td>
<td>Analysis (Math 355)</td>
</tr>
<tr>
<td><strong>Senior</strong></td>
<td></td>
</tr>
<tr>
<td>Thesis Seminar (498)</td>
<td>Thesis (499)</td>
</tr>
<tr>
<td>Elective (upper-level)</td>
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</tbody>
</table>
ECONOMICS CLASSES AT OTHER INSTITUTIONS

Students often ask questions about the department’s policies regarding economics courses taken away from Amherst College. Here are the main points to keep in mind.

The following major requirements cannot be met with classes taken elsewhere:

- Economics 111
- Core theory classes
- Upper-level electives
- Thesis classes

The following classes may, under certain circumstances, be taken at another institution:

- Lower-level electives *

A class taken elsewhere will usually count towards the major if the class:

- is an economics class
- is taught by an economics department
- requires at least the equivalent of Economics 111 as a prerequisite
- does not duplicate a class you have taken or will take at Amherst

Students can take an economics elective at another campus in the five-college consortium or while studying abroad. We support this decision when a course truly offers an opportunity you cannot get at Amherst – either by covering a different area of economics or discussing the economy of the country in which you are studying abroad. However, we encourage you to make these choices carefully. It is rarely advisable to take more than one elective elsewhere (though there are exceptions). Keep in mind that our economics courses are designed for Amherst College students, and we cannot make the same statement about those taught elsewhere.

Re business courses: As discussed later, the economics department does not give elective credit for courses in accounting or business, even if they are taught in an economics department.

Re transfer students: Different policies apply to students transferring to Amherst from another college or university. Transfer students should work with the Dean of Students and the economics department to agree on appropriate credit for economics classes completed prior to coming to Amherst.

If you have any questions about these policies or a specific course you are considering, we encourage you to talk with your advisor. The next section provides more detail about how to get credit for an economics elective taken while studying abroad.

* Note that you can take an economics elective that is taught at a higher level elsewhere (for example requiring intermediate microeconomics as a prerequisite) and get credit for it as an economics elective. You will not, however, be able to count it towards your upper-level elective requirement. Only 400-level courses taught at Amherst can satisfy the upper-level elective requirement.
STUDY ABROAD

The department recognizes that spending a semester or year abroad makes educational sense for many students. We want to support students who make this choice. This section provides important information about how studying abroad fits in with the economics major.

- **The Decision to Study Abroad.** This is an important decision and you should by all means consult with your major advisor. But you should be aware that your advisor will likely not have information about specific countries and programs. The Study Abroad Office should be able to provide you with lots of helpful information.

- **Your Planned Course of Study.** You should consult with your major advisor about your planned course of study. If you have questions about a particular course, the appropriate procedure is to download the course description and syllabus (if possible) and send your advisor a copy of these materials before your appointment. If at all possible, you should resolve any questions or concerns before leaving Amherst.

- **Questions about Course Credit.** This is an area where you should not seek our advice except in rare circumstances. The economics department procedure for granting of elective credit for study abroad is exactly the same as the procedure we follow for students taking classes in the Five-College Consortium. Please refer to the previous section for the details about which courses may be taken elsewhere.

There is one complication that arises when determining course credit if the number of courses you take abroad to get a semester of Amherst College course credit differs from 4. You get a single Amherst economics elective credit for each 25% of your course load that is made up by economics electives. For example, suppose you need to take 5 courses abroad to get 4 Amherst course credits. In this case, if one of the 5 courses was an economics course taught in an economics department you would not receive an elective credit because that course would represent only 20% of your load. If you took 2 economics courses you would receive 1 elective credit; 3 economics course, 2 elective credits. In some cases a student might be given double credit for a course taken abroad. If you were to take 3 courses and one was an economics, double-credit course, you would receive 2 elective credits. If you were to take 4 courses and one was an economics, double-credit course, you would receive one elective credit.

We want you to make the most out of your time. You can help us by seeking advice on important issues about your decision to study abroad or what you will study while abroad. We believe that the vast majority of questions about credits is answered above. Of course, if your situation does not fit these rules, you should consult your academic advisor.

It may be helpful to know that, in general, economics majors who study abroad usually take one or two economics courses in order to receive one elective credit towards their major.
THE ECONOMICS COMPREHENSIVE EXAM

Every academic department administers some kind of comprehensive exam to its majors. In the economics department, this exam covers the material from Economics 111 and the core theory courses in macroeconomics, microeconomics, and econometrics.

The comprehensive exam usually takes place on the second Monday of the spring semester. All non-honors students graduating in May (second-semester seniors) must take the exam at that time, usually the last week of January or first week of February. In order to be able to do this, students should complete the core courses by the end of their sixth semester (junior spring), or, at the very latest, by the end of their seventh semester (senior fall).

Students will be contacted with details about the comprehensive exam several months before the exam. It is your responsibility to prepare appropriately.

Note for honors students: Students doing honors do not take the written comprehensive exam. For honors students, the various elements of the extensive thesis process – researching, writing, discussing, and defending – serve as the comprehensive exam.

Note for “E”-class students: All students graduating in January should take the exam the January/February one year before their graduation, as long as they have completed the core theory courses by that time.

ECONOMICS DEPARTMENT FELLOWSHIPS

The economics department offers a variety of fellowships to support student research. The fellowships provide modest financial support to enable juniors (and often sophomores) to pursue economic research projects during the summer at academic institutions, think-tanks, or policy groups. Majors will receive information about the competitive application process for these fellowships each spring.

BUSINESS IS NOT ECONOMICS, AND VICE VERSA

The department recognizes that many economics majors are interested in business or accounting. While it is true that the academic study of business often employs economic tools to investigate economic questions and that business courses may be useful in securing employment after graduation, it is important to remember that the study of economics is distinct from the study of business. Consequently, in keeping with the liberal arts mission, the economics department does not give economics elective credit for any business or accounting courses.*

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* The College may give college credit for courses which the Economics Department does not count as economics courses. Students should consult the Registrar’s Office to determine if a particular course will receive college credit.
HONORS

The honors project, or thesis, provides an opportunity for students to engage in independent research in economics. Each year, about ten seniors choose to pursue a thesis in economics, doing independent research on a topic of their choosing under the supervision of a faculty member. The final product – the thesis – follows the same form as a published research paper in economics.

Writing a thesis can be a fabulous intellectual experience. If you are thinking about doing this, you should talk with economics faculty to learn more about the process. Below, we provide information about how to prepare and what to expect.

Preparing for the Economics Thesis

First, there are a number of requirements you must satisfy to be eligible to write a thesis in economics. You must:

- Finish the core theory courses by the end of junior year
- Have an average grade of B+ (11.00) or higher in the core theory courses
- Take one upper-level economics elective before senior year
- Notify the department of your intention to do a thesis by May 1st of junior year
- Read up on your areas of interest in the summer before senior year
- Turn in a preliminary plan for your thesis by September 1st of senior year

Second, there are additional things you can do to lay a strong foundation for this capstone experience. You should:

- Discuss the thesis process with your academic advisor and professors in your junior year
- Take additional upper-level economics electives
- Take one or more of the advanced versions of the core theory courses
- Gain some experience doing economic research
- Read some past theses
- Attend the thesis presentations given throughout the year
- Attend departmental seminars and talks by guest speakers
- Read articles and books in the particular areas of economics that interest you
- Learn about the thesis process by talking with faculty and students and consulting the materials available online such as the thesis timeline
The Thesis Process

While the thesis itself “happens” almost entirely in the senior year, the process begins much earlier. A detailed timeline for the thesis process is available on the department website. Here are the essentials:

- Junior year: talk with peers and faculty, start investigating areas of economics that interest you, and begin the creative process of developing potential research questions. Take at least one upper-level elective in an area of economics that interests you.
- Summer before senior year: read in your areas of interest, and develop a research question (or several).
- Fall of senior year: enroll in the Departmental Honors Seminar, Economics 498. The seminar introduces you to current research in economics, supports you in developing your own project, and prepares you to undertake original research.
- Winter and Spring of senior year: enroll in the Senior Departmental Honors Project, Economics 499. Working closely with a faculty advisor, research your topic, and write an original paper fifty pages in length. Present your work to faculty and students.

Some Considerations

Major requirements for students doing honors: as discussed above, honors students must take 10 economics courses (including Econ 498 and Econ 499). The minimum set of economics courses for an economics major doing honors is thus: Econ 111, 3 core courses, 2 lower-level electives numbered 200–290, 2 upper-level electives numbered 400–490, and the 2 thesis-related courses 498 and 499. Note that, while the thesis classes do count towards the major, they do not count as upper-level electives. Also note that many honors students take additional upper-level electives beyond those required, and most take some or all of the advanced versions of the core classes.

Note for “E”-class students: because of the scheduling of Economics 498 and 499, students in “E” classes (graduating in January rather than May) do the honors sequence on the same schedule as those graduating in May: they take Economics 498 in the Fall semester (their 6th semester) and Economics 499 in the Spring semester (their 7th semester).
STUDYING ADVICE

There are many valuable approaches to studying economics, and we encourage you to build on your past experiences and work to develop new strengths. In this section, we provide some general advice that may be helpful to you as you take economics courses at Amherst. All of this is meant to be helpful, but in no way prescriptive!

Keep in mind that there are many resources available to you as you study:

- Office hours with the professor
- Help sessions or TA sessions
- The Quantitative Center
- Dean of Students office – individual tutors for those at risk of failing
- Study Groups

Some general advice about good studying habits:

- Schedule your time carefully.
- Studying is a full-contact endeavor! Do problem sets, ask yourself questions, and engage actively with the material. It is not a spectator sport.
- Read actively. Try to ask yourself questions as you read, jot a few notes in the margin, stop to explain the concepts and put them in context. Just keep yourself engaged and thinking as you read.
- Read ahead. You will get more out of your classes.
- Think ahead. Don’t try to do problem sets at the last minute, or write a paper in two hours. Take some time with it. Enjoy it, and learn from it. Pause briefly to try to get the larger picture.
- Read your returned work carefully, look at the places where you may have faltered, help yourself understand them and ask the professor, TA, etc. for help. These are learning experiences – use them as such.
- Get study partners, and talk about the class material. It can be incredibly helpful. Explain things to each other.
- Talk to professors, ask questions. It is great to see students do the problem set or reading, mark down questions that are unclear to them, and come to talk to the professor about it. Students who do this do well in their classes, whatever their comfort level with the material.
- Be flexible. There are so many resources available – if one doesn’t work just try out another! Do not get discouraged, something will work, and there are many people on campus interested in helping.
Some advice about the particular demands of studying economics:

- **Keep up.** Especially in courses with weekly problem sets, make sure you keep up. Do not fall behind! It makes things much worse. Organize your time so that you can stay on schedule.

- **Analytical material.** Economics professors often assign problem sets or practical exercises to help students learn analytical material. Realize that these problem sets are absolutely essential to the course. They may only count for a small fraction of the grade, but it is a mistake to use that as an excuse to allocate little time to them. Doing problem sets, assimilating the material, asking for help with the problems, talking to others about them – these are the heart of learning economics. This is particularly true of the core theory courses.

- **Read actively.** A good strategy is to go through a chapter and try to explain any figure, table, or equation to yourself – the theory behind it, its implications, any assumptions, what it really means, how it relates to problems, etc. Explain it aloud. Work with a partner to explain it to each other. It is amazing how something can seem obvious when you just read through it, but then be very confusing when you have to explain it to yourself or someone else. Figures presented in economics courses usually embody more than one insight. Scrutinize them! If you see a pattern in the economic analysis, don’t just memorize it – investigate why and how it happens.

- **Build on your past work.** When an assignment is returned to you, take some time to look at it carefully with the solutions, and learn from the experience. Even write down suggestions for your own future work. These will help focus your studying later on.

- **Prepare early and thoroughly for exams.** Review the material, making review notes if that is useful. Write out key definitions and concepts, and know them. Draw figures, and understand them. Explain the material to yourself. Then try to do problems, possibly categorizing them into types. You can do new problems from the book or review materials, or just re-do problem set problems. Understand the types of problems, the approach, what purpose they serve. Think about the issues, just play around with the ideas and become comfortable with them. Ask for help with any questions that come up in your studying. If there is a pre-exam help session, you can go to it even if you don’t have questions, just to hear the discussion generated by others’ questions. When you think you’re close to ready, take an old exam for practice (do this under exam conditions), and use that as another learning experience.

- **Pursue multiple modes of understanding.** Economic ideas can often be understood mathematically, intuitively, or graphically – try to cultivate all three modes.
AFTER AMHERST

Amherst College economics majors go on to do a great variety of things in their professional lives. Our majors have applied what they have learned to become leaders of industry, key public policy figures, and academic pioneers. Even more varied than the professional fulfillment enjoyed by our majors are the paths they have taken toward such endeavors.

Many students choose to work for a few years before going on to further graduate work in business, economics, or policy. Others pursue a fellowship in another country or go straight into a graduate program. We have asked some alumni to relate their After Amherst experience.*

Majors leaning toward an eventual career in business may consider an associate position with a management consulting firm. Such positions are for two to three years, after which students often continue on to graduate studies or a private sector position with greater responsibility.

Jennifer Rybak ’11, a senior associate for management consulting firm Bain & Company, writes

“Consulting was interesting to me because you get to work on a variety of business problems in many industries - 8 industries so far! Econ at Amherst was helpful because it gives you the foundation to understand the fundamental problems that businesses face today and then apply that understanding to new industries and companies. The liberal arts intersection helps you to ask the right questions and think outside the traditional business or finance major mindset. Having the economics background really helps ground you in understanding what makes sense and what doesn't when you're looking into new clients.”

Jennifer Rybak ’11
(Senior Associate, Bain & Company)

Claire Morrison ’08, former associate with Parthenon Group and current MBA student, writes

“More than just a subject I studied in school, economics is a philosophy that continues to influence how I see the world. The economist's ability to impose structure on a vague, undefined problem and find unexpected insights was a skill that helped me immensely as a management consultant. And even though I can't remember how to solve all the equations in my economics thesis, the experience of creating a completely new thought gave me enough confidence to pursue what really matters to me in my career. I have enough conviction in my own ideas to start taking some unexpected steps like working on the business side of a hydroponic tomato farm or in product innovation for a pet food company, and that's a really liberating feeling.”

Claire Morrison ’08
(Stanford MBA expected ’13)

Banking and finance are also of interest to many students. Leading firms actively recruit at Amherst; and the Career Center, located on the first floor of College Hall, provides valuable resources for students interested in such careers. The department provides some support for students seeking a financial job: many of our electives cover issues relevant to business/finance, and the department has occasionally offered a non-credit course in accounting during interterm.

Michael Smith ’84, who followed two years as an associate with McKinsey with a prominent career at Goldman Sachs, writes

“Almost 30 years later, including two years at McKinsey, an MBA at Stanford University and 23 years at Goldman Sachs, the concepts and foundations of advanced micro and macro economics

* These alumni accounts have been edited for brevity.
Econometrics as taught to Amherst undergraduates remain highly relevant and topical. Also memorable and high caliber were various electives in Econometrics, Money and Banking, Labor Economics, to name a few, which provided me with exposure to the workings of the global markets and the economy. These classes provided powerful tools for research and analysis and, most importantly, a way of thinking about decision-making and problem-solving.

It turned out that there was a silver lining to the period that is now called the "Great Recession." It rekindled the seminal debate in economics, dormant with the experience of the “Great Moderation” replacing the memory of the “Great Depression.” During the last few years, returning to the classroom at Amherst and talking to my economics professors about these issues brought my education full circle and made me realize again the gift of an Amherst education. Pursuing a Liberal Arts education, especially at Amherst, and particularly a choice of Major should not be driven by a desire to develop tools for the working world. In the end, what matters is focusing on the pursuit of knowledge in an area about which you are passionate.”

Michael Smith ‘84
(Goldman Sachs)

Economic consulting is another popular option for students who are leaning toward an eventual career in academics or public policy. Two recent graduates currently working as analysts for leading economic consulting firms are Mingzi Shao ’11 and Jeff Tucker ’10E.

“Much of my current work as a Research Analyst involves applying economic concepts to real-world litigation cases. For example, I often help construct damages models that require conceptualizing a "but for world" in which a firm's alleged illegal actions did not occur, in order to contrast that against what actually happened - the "actual world.” Constructing such a "but for" world requires an understanding of the incentives and opportunity costs facing the players in the industry. Sometimes a particular damages calculation will require running various regressions in order to estimate the negative impact of the firm's actions on consumers and competitors.”

Mingzi Shao ’11
(Research Analyst, Brattle Group)

“Since graduating from Amherst, I've worked at an economic consulting firm specializing in antitrust economics. I've assisted with extensive data analysis, background research, and report writing, all skills I had developed in my economics coursework and thesis at Amherst. My Amherst coursework gave me both the theoretical framework and computational skills to hit the ground running at my first job after college. Thanks to that, I've had the opportunity to work on the review process for mergers valued as much as billions of dollars, in industries as diverse as television, soft drinks, hospitals, and several others.”

Jeff Tucker ’10E
(Research Analyst, Compass-Lexecon)

For Samuel Grausz ’09, his two years as an analyst led to a career in environmental policy.

“After Amherst, I spent two years working for a consulting firm doing quantitative analysis of energy and environment policies for major energy companies. I transitioned from there to a D.C. think tank doing similar analyses but for an academic and policy audience. When I first started out doing just quantitative analysis, skills and intuition I learned during Amherst set me apart and enabled me to work on more interesting and challenging research. As I moved toward more qualitative analysis, my thoughts and ideas continued to draw from my Amherst education. I don't think there is any better preparation for a career in policy than a training in economics.

Samuel Grausz ’09
(Resources for the Future and Climate Advisers)
For Aditya Bhave '06, his two years as an analyst led to graduate studies in economics.

"After graduating from Amherst as an economics and mathematics major, I worked for two years at an economic consulting firm. I provided data analysis and research for economic submissions on behalf of Microsoft, in its litigation in the European Union and the United States. I then joined the economics Ph.D. program at the University of Chicago. I am currently a fifth year student in this program. The quantitative tools I picked up at Amherst in advanced economics and mathematics courses have proved useful in my graduate coursework and research. The reading and writing skills that were emphasized at Amherst have also held me in good stead."

Aditya Bhave '06
(University of Chicago Ph.D. student)

In addition to consulting firms, policy institutes and government agencies also hire economics majors as analysts. Jack Liebersohn '09 writes

"I graduated from Amherst knowing that I liked economics, but not sure how I wanted to go about pursuing my interest. I began by running surveys in rural India for Innovations for Poverty Action, a development research institute. I followed up with work as a research assistant at the Federal Reserve Board in Washington, DC. My experience there focused my interests on financial research and the role of financial intermediation in the broader economy. I just started a PhD program in finance at MIT. My time in the economics department at Amherst gave me the tools I needed to talk about economics and think rigorously about the world."

Jack Liebersohn '09
/MIT Ph.D. student

Some majors choose to apply to graduate programs in their senior year. Students considering this option should seek out their academic advisors as early as possible. Anoop Menon '07 and Bartosz Mackowiak '96 both pursued an economics Ph.D. immediately after Amherst. A strong mathematical background is important for such a path but so is a broad liberal arts education.

"I am currently a doctoral candidate in Strategy at the Harvard Business School. My research explores how a deeper understanding of human cognitive processes can help us better understand and perhaps improve strategic decision making, and strategy making more generally. My Economics courses at Amherst, along with my Psychology coursework there, were what sparked my interest in this area, one that I have been pursuing ever since. They also gave me a solid foundation from which I could explore this interest in greater detail at the doctoral level."

Anoop Menon '07
(Harvard Ph.D. expected ’13)

"Many courses I took at Amherst prepared me for graduate study in economics and subsequent work as an economic researcher. I am thinking of the courses I took in economics and math. I am also thinking of courses I took in history and social sciences other than economics. To do well in economics, one needs not only a solid background in math but also a broad knowledge of history and of how political decisions are made. So my advice to aspiring economists at Amherst is: take advantage of everything Amherst has to offer, by taking classes in economics and math steadily but also by doing coursework in a variety of other fields."

Bartosz Mackowiak ‘96
(Yale Ph.D. ’02, currently European Central Bank)
Some majors who pursue graduate studies will go on to become professors. Others may work for government, policy, or research organizations. Daniel Cooper ’01, senior research economist with the Federal Reserve Bank of Boston, writes

“The major at Amherst helped me begin to understand the links between the real economy and the monetary, fiscal and banking sectors. This knowledge served me well first as a research assistant at the Federal Reserve Board of Governors and now as a Ph.D economist at the Federal Reserve Bank of Boston. Understanding how various sectors and economic shocks influence the real economy---especially potential spillover effects of problems or advances in one sector onto the others---is important when thinking about and crafting economic policy recommendations.”

Daniel Cooper ’01
(Michigan Ph.D. ’09, currently FRB-Boston)

Sarah Bloom Raskin ’83, one of seven Governors of the Federal Reserve Board tasked with managing U.S. monetary policy, writes

“My Amherst friends tell me that I knew I wanted to be on the Federal Reserve Board after taking Monetary Macroeconomics and after writing my thesis on intermediate targeting in monetary policy. I don’t quite remember it that way. What I do remember is being uncommonly thrilled that there existed an evolving and imperfect framework for analyzing and undertaking the conduct of monetary policy and that the interpretation of this framework mattered for the state of growth in the economy. After Amherst, I pursued my interest in monetary policy, but from the perspective of law and financial regulation. Little did I realize at the time that these other perspectives and the experiences they presented would deepen my understanding of the role of the central bank. Now I understand that it was the professors and courses in the Amherst Economics Department that prompted this broader set of inquiries and experiences. In addition to the substance of my courses in economics, there was a tone to them all of critical open-minded analysis. Indeed, it is that tone and the rigor and breadth of the questions raised by the professors in the Department that I find has infused the analytical, pragmatic and human spirit that I currently attempt to bring in addressing the challenges in our nation’s economy.

Sarah Bloom Raskin ’83
(Harvard J.D. ’86, currently Federal Reserve Board)

Economics is also useful for academia outside of economics. Former Editor-in-Chief of The Amherst Student and current law professor Michael Abramowicz ’94 writes

“I decided that I wanted to become an academic when working on my senior thesis in economics. I had never worked on such a challenging project and decided that I wanted my job to be one of constant intellectual challenge. My thesis topic of central bank independence stimulated an interest in the functioning of governmental institutions that ultimately led me to graduate training in law. As a law professor, I never leave my economics training far behind. An ultimate lesson of economics is that one should be rigorous in evaluating alternative courses of action, and this is a lesson that has influenced all academic fields and modern thought more generally.”

Michael Abramowicz ’94
(Yale J.D. ’98, currently George Washington University)
While many of our majors do pursue paths related to banking, consulting, law, or academia, numerous others work in the non-profit or policy realms.

Josh Stanton ’08, Associate Director of the Center of Global Judaism at Hebrew College, writes

“I, for one, think that it’s completely rational to work for non-profit pay with a degree that prepared me for investment banking. I initially dreamt of becoming a high-rolling banker. But after some reflection, I came to realize that what I cared about most were the causes I fancifully sought to contribute to as a banker. They centered on my religion, Judaism, and my dedication to Jewish culture (and food!), peoplehood, and belief.

I am in my final year of rabbinical school, looking to lead a congregation in the coming years. Quite honestly, I could not have imagined how well my economics major would serve me as a (future) rabbi. At the end of the day, congregations and other religious institutions are non-profit organizations – sacred ones, but non-profits nonetheless. Being (somewhat) more effective at strategic planning, resource allocation, budgeting, investment of capital, and market analysis makes a world of difference. As the Associate Director of the Center for Global Judaism at Hebrew College and recent founder of several non-profit ventures to improve inter-religious relations, I cannot but suspect that my economics major undergirds all that I do.”

Josh Stanton ‘08
(Rabbinical Student, Hebrew Union College)

These accounts are but a small sample. There are hundreds more alumni out in the world doing different things, in different ways, for different reasons. In the same way that choosing to attend Amherst College did not close your opportunities but rather expanded them, choosing to major in economics opens up many different paths to professional fulfillment.
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