

ECONOMICS AT SWARTHMORE

DEPARTMENT HANDBOOK

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Considerable effort was expended to assure the accuracy and completeness of this handbook as of the date of its preparation. Nonetheless, it may contain inadvertent errors and omissions. Moreover, specific policies and procedures, course and seminar offerings, are subject to change over time. Correspondingly, the Economics Department is not bound by any of the statements made in this handbook. Suggestions for improvement are welcomed.

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ABOUT THE HANDBOOK

This *Handbook* attempts to answer many of the questions you may have about courses, requirements, and other aspects of the Swarthmore Economics program. Other questions can be answered through the Department office in Kohlberg Hall, Room 216 (ext. 8125) or by making an appointment with a member of the Economics faculty.

PLANNING A PROGRAM IN ECONOMICS

The courses in Economics have three main goals: 1) to provide insight into the processes and accompanying institutions through which productive activity is organized; 2) to develop a set of tools for analyzing Economic processes and institutions; and 3) to build a foundation for reaching informed judgments on issues of public policy.

ECON 1 or its equivalent is a prerequisite for all other work in the department. In addition, all majors in Economics must satisfy a theory requirement by taking ECON 011 (Intermediate Microeconomics) and ECON 021 (Intermediate Macroeconomics). They must also satisfy a statistics requirement. The statistics requirement is typically satisfied by taking ECON 031. It can alternatively be satisfied, however, by taking ECON 035 (which requires either ECON 031 or STAT 061 as prerequisite), by taking STAT 111 (which requires STAT 061), or by taking STAT 061 in combination with either STAT 011 or STAT 031. STAT 011 and STAT 031 alone are not sufficient.

In order to read the literature in Economics critically, a knowledge of elementary calculus is extremely useful. The department very strongly recommends that students take MATH 015 and either MATH 023 or 025 (Basic Calculus). MATH 027 (Linear Algebra), MATH 034 (Several Variable Calculus), and MATH 044 (Differential Equations) are valuable for those intending to focus on the more technical aspects of Economics. Students planning to attend graduate school in Economics should give serious thought to taking additional mathematics courses, including MATH 063 (Introduction to Real Analysis).

To graduate as a major, a student must:

- 1) Have at least eight credits in Economics
- 2) Meet the theory and statistics requirements. Note: Course students should take these courses before the second semester of their senior year to be prepared for the comprehensive examination. Note also that some seminars and courses have ECON 011, 021, and/or 031 as prerequisites.
- 3) In the senior year, pass the comprehensive examination (for course students) given early in the Spring semester or the honors examinations (for honors students) given at the end of the Spring semester.

Normally, any student planning to major in Economics, whether in the course or honors programs, applies for the major by submitting a sophomore paper in the Spring of the sophomore year. Except for students who have been granted advanced standing, applicants should have completed at least two Economics courses at Swarthmore. A student who will be away that semester should submit the paper before leaving at the end of the Fall semester. In the sophomore paper, students should state their reasons for wanting to major in Economics along with any associated considerations, and they should indicate the courses and seminars essential to their plan of study. Through the paper, students are pre-registered for seminars offered over the following two years; thus, students are strongly urged to select their seminars carefully. Moreover, if a student decides to change seminars, the department chair should be informed as soon as possible, since entry into oversubscribed seminars is first-come, first-served, with seniors in the honors program having absolute priority.

The Course Program:

Applicants should have an overall grade average of C or better; should have a grade of B or better in at least one Economics course; and should not have any D's or NC's in any Economics course. These conditions include the grade equivalent(s) for any course(s) taken Credit/No Credit or seminar(s) for which formal grades have not been recorded. [Note: Regarding the "grade of B or better" requirement, a B in a course taken elsewhere may not suffice. Students who expect to satisfy the requirement by course work done at other schools should consult the chair about grade equivalencies ahead of time. For example, an A- is typically required in the case of a course taken in summer school.] Students have one year from the date of their application to satisfy these requirements. Failure to do so within one year will mean rejection.

Students who wish to apply for a double major must submit a copy of their sophomore paper to both departments.

Course majors should note that the Comprehensive Examination is given in January or February of each year and covers the theory and statistics requirements. The exam is given only once a year and students must take it at Swarthmore College. All students will take the examination in their senior year. The only exception is for students who are graduating early; those students can take the comprehensive exam in the spring semester prior to their final semester at Swarthmore.

The Honors Program:

Applicants for an honors major should have satisfied all of the requirements for an Economics course major and, in addition, should have a straight B or better grade average in Economics courses. This condition includes the grade equivalent(s) for any course(s) taken Credit/No Credit.

Honors minors must also have a straight B average in Economics courses and must satisfy all the prerequisites for their seminar.

Typically, a student who wants to major in the honors program first applies for the program through the sophomore paper. In the sophomore paper, the student should indicate the intention to apply for the honors program and should list all preparations that s/he plans to take as part of that program. The student would usually take at least one preparation in the junior year. Approval of a student's honors program must be granted by the department. Changes of major and/or honors status can be made at any time by picking up forms and instructions in the Registrar's office.

Honors majors in Economics must take 3 preparations, and honors minors must take 1 preparation. All preparations in Economics consist of 2 credits. Most preparations involve taking a 2 credit seminar, but some preparations may combine a course and a 1 credit seminar. A complete list of preparations, with their prerequisites, appears below.

Examiners will determine a student's Honors performance in an individual preparation based on a 3 hour written exam, the seminar paper that they receive, and an oral exam.

Honors Preparations:

ECON 101 Advanced Microeconomics (2 credits)

Prerequisite: ECON 011 and multivariable calculus (MATH 033, 034 or 035)

ECON 102 Advanced Macroeconomics (2 credits)

Prerequisite: ECON 011 and ECON 021,

And multivariable calculus (MATH 033, 034 or 035, or MATH 023 with permission of the instructor)

Recommended: MATH 043 or 044.

ECON 122 Financial Economics (2 credits)

Prerequisite: ECON 011, ECON 031 or ECON 035, and MATH 023 or higher calculus.

ECON 135 Advanced Econometrics (1 credit) and ECON 035 Econometrics (1 credit)

Prerequisite: ECON 035 and linear algebra (Math 027, 028, or 028S)

ECON 141 Public Finance (2 credits)

Prerequisite: ECON 011; Recommended: ECON 021.

ECON 145 The Labor Economics of Inequality in America (2 credits)

Prerequisite: ECON 011 and ECON 031.

ECON 151 International Economics (2 credits)

Prerequisite: ECON 011 and ECON 021.

ECON 161 Industrial Organization and Public Policy (2 credits)

Prerequisite: ECON 011.

ECON 165 Behavioral Economics (2 credits)

Prerequisite: ECON 011 and ECON 031.

ECON 171 Labor and Social Economics (2 credits)

Recommended: ECON 011.

ECON 181 Economic Development (2 credits)

Prerequisite: ECON 011 and ECON 021; ECON 031 or equivalent recommended.

Concentrations and Interdisciplinary Majors Including Economics

Certain Economics courses can be counted toward programs in Black Studies, Asian Studies, Environmental Studies, Peace and Conflict Studies, Public Policy and Women's Studies (see the course descriptions in the College Bulletin). Students should consult the College Bulletin or the handbook for their chosen program or major to select appropriate courses in Economics.

Economics majors pursuing secondary teaching certification in the social sciences complete the Economics Department's requirements and take at least six semesters of other social sciences. All students seeking social science certification are required to take two courses in history, one of which must be American history. A social science course focusing on Third World or non-Western subject matter is also required. Consult the Education Department or the College Bulletin for additional information.

Additional Matters

Economics Before Swarthmore: The Economics Department offers a one-semester Introduction to Economics course (ECON 001) that is the prerequisite for all further study in Economics.

The Department does not give credit for work done in economics in secondary schools and it does not give credit for Advanced Placement exams. All students planning to study economics are required to begin with ECON 001 unless granted a waiver by the Department. To receive a waiver, students must have a score of 5 on the Microeconomics *and* Macroeconomics AP exams (or a 6 or 7 on the Economics Higher Level Exam of the International Baccalaureate). This waiver does not count as a course credit. Students who receive the waiver cannot enroll in ECON 011 or 021 before taking at least one other economics course.

Work done at a college or university while attending secondary school is eligible for credit subject to the Chairperson's normal discretion in giving credit for such work, but only if the work is credited on an official college or university transcript. With respect to satisfying the prerequisite requirements for other economics courses: either semester of a two-semester introductory course alone counts as the equivalent of ECON 001 but if only one of two introductory semesters is taken, the material covered in the other half must be accessed by auditing (subject to the instructor's approval) the relevant parts of ECON 001 or by taking the appropriate intermediate theory course (ECON 011 or ECON 021).

Schedule of Offerings: An indicative calendar of course and seminar offerings is available in the Dept. Office. Students should consult with the department Administrative Assistant before finalizing their sophomore papers to see if any subsequent changes have been made in the calendar. Updates to the calendar can also be found on the Department's web page under *Academic Program*.

Ranking for entry into seminars: Entry into oversubscribed seminars is first-come, first-served for students in the **honors** program, with any places remaining being allocated on the basis of first-come, first-served for students in the course program.

Recommended course sequence: Take ECON 001 in the freshman year. Take ECON 011, 021, and 031 in the sophomore and junior years and certainly before the beginning of the senior year. For students contemplating graduate study in Economics, take one or more of: ECON 101, ECON 102, and ECON 135, as well as the Mathematics & Statistics courses discussed at the beginning of this document.

Double major in Economics and Engineering: Double majors may count Operations Research (cross-listed as ECON 032 and ENGR 057) against both majors. It will appear as ENGR 057 on the student's transcript if it is taken to satisfy engineering or both requirements.

Semester or year away: The Economics Department will facilitate study abroad or elsewhere in the United States. Correspondingly, it has designed a major that can, without difficulty, be completed in no more than four semesters. Moreover, the department is quite liberal in approving transfer credits for courses offered by Economics departments elsewhere (see below). Students should, however, be aware of the following considerations: to graduate with an Economics major from Swarthmore, a student must have taken at least two Economics courses at Swarthmore and must pass the department's comprehensive exam.

Transferring Economics credits: Problems transferring credit typically arise in connection with courses offered in programs abroad that are labeled as Economics though they are in fact courses in law, history, or political science; the department does not accept such credits as being within the domain of Economics. It is usually sufficient for partial credit transfer if the course is taught by a qualified economist and is largely analytical in content, as are nearly all courses in Economics departments in American colleges and universities. Students must consult the department chair before taking a non-Swarthmore course for credit. In turn, when formally requesting a credit transfer, students should always bring evidence -- syllabus, papers, and examinations -- concerning the content of the course. [Students contemplating a semester in Grenoble should be aware that the problems noted here often arise in the case of "Economics" courses offered under the auspices of the Grenoble program.]

Transferring credit for introductory Economics: Subject to the department's approval, students may transfer credit for introductory Economics taken at other colleges or universities, whether taken in the context of a one or a two semester introductory course.

Transferring credits for business courses: Students can only apply one course in Accounting toward their 8 course requirement in Economics. Business courses taken at the University of Pennsylvania or other universities beyond this can not be counted toward the eight courses required for an Economics major. They can be included as part of the 32 courses required for graduation. Students, however, can receive credit for no more than two such courses. The only exception to this rule is for students who take the equivalent of ECON 033 (Accounting) at another school; the course is not counted against the two allowed credits, and can be counted as part of the 8 credits needed for the Economics major. No credit is given for night school classes at Wharton.

DEPARTMENT FACULTY AND STAFF

Amanda Bayer; Ph.D., Yale University; Associate Professor
Microeconomics, Game Theory, Labor Markets and Discrimination

Erin Todd Bronchetti, Ph.D., Northwestern University, Assistant Professor
Public Finance, Labor Economics

John P. Caskey; Ph.D., Stanford University; Professor
Financial Economics, Urban Economics

Thomas Dee, Ph.D., University of Maryland, Associate Professor
Public Finance, Economics of Health and Education

Stephen S. Golub; Ph.D., Yale University; Professor
International Economics and Economic Development

Robinson G. Hollister, Jr.; Ph.D., Stanford University; Professor
Econometrics, Labor and Social Economics, Health Economics

David Huffman, Ph.D., University of California, Berkeley, Assistant Professor
Experimental Economics, Labor Economics, Behavioral Economics

Philip Jefferson; Ph.D., University of Virginia; Professor
Macroeconomics, Monetary Economics, Econometrics

Mark Kuperberg; Ph.D., M.I.T.; Professor
Macroeconomics, Public Finance, Law and Economics

Ellen Magenheimer; Ph.D., University of Maryland; Professor
Industrial Organization, Family Policy, Health Economics

Stephen O'Connell; Ph.D., M.I.T.; Professor
Macroeconomics, International Trade, Economic Development

Frederic L. Pryor; Ph.D., Yale University; Senior Research Scholar
Comparative Economic Systems, International Economics

Larry Westphal; Ph.D., Harvard University; Professor
Applied Economic Theory, Economic Development, International Economics
Environmental Economics

Nancy Carroll; Administrative Assistant

APPENDIX A: COURSES AND SEMINARS

REGULAR COURSE OFFERINGS

The course offerings focus on many different Economic issues from quite different perspectives. A balanced program in Economics should contain one or several courses from the following categories:

I. First-Year Seminars

ECON 002 Greed

II. Analytic Courses (Theory)

ECON 001: Intro to Economics

ECON 011: Intermediate Microeconomics

ECON 012: Games and Strategies

ECON 021: Intermediate Macroeconomics

ECON 067: Experimental Economics

III. Mathematical and Statistical Tools

ECON 031: Statistics for Economists

ECON 032: Operations Research

ECON 035: Econometrics

ECON 037: Computational Economics

IV. Courses Focusing on the Domestic Economy

ECON 005: Savage Inaccuracies: The Facts of Education in America

ECON 022: Financial Economics

ECON 041: Public Finance

ECON 042: Law and Economics

ECON 044: Urban Economics

ECON 063: Public Policies in Practice: Establishing What Works and for Whom

ECON 073: Race, Ethnicity, and Gender in Economics

ECON 075: Health Economics

ECON 076: Environmental Economics

V. Courses Focusing on Industry and Business

ECON 033: Accounting

ECON 061: Industrial Organization

VI. Internationally Oriented Courses

ECON 051: The International Economy

ECON 081: Economic Development

ECON 082: Political Economy of Africa

ECON 083: Asian Economies

SEMINAR DESCRIPTIONS

The seminar selection is more limited than the course offerings. It contains the following areas:

I. Analytical Tools (Theory)

- ECON 101: Advanced Microeconomics
- ECON 102: Advanced Macroeconomics
- ECON 165: Behavioral Economics

II. Mathematical and Statistical Tools

- ECON 135: Advanced Econometrics

III. Seminars focusing on the Domestic Economy

- ECON 122: Financial Economics
- ECON 141: Public Finance
- ECON 145: Labor Economics of Inequality in America
- ECON 161: Industrial Organization and Public Policy
- ECON 171: Labor and Social Economics

IV. Internationally Oriented Seminars

- ECON 151: International Economics
- ECON 181: Economic Development