Economics

FACULTY

*Year of initial appointment at Binghamton

Basmann, Robert L., Professor, PhD, 1955, Iowa State University: Statistics, econometrics. (1988)*

Bischoff, Charles W., Professor, PhD, 1968, Massachusetts Institute of Technology: Macroeconomics, fixed investment, monetary and fiscal policy, econometrics. (1977)


Carlip, Alfred B., Professor Emeritus, PhD, 1959, Columbia University: Microeconomic theory, industrial organization and public control. (1960)


Clark, Clifford D., University Professor Emeritus and President Emeritus, PhD, 1953, University of Chicago: Public finance, economic growth. (1973)

Cohn, Stanley H., Professor Emeritus, PhD, 1952, University of Chicago: Soviet economics, economic systems, social accounting. (1966)

Cowling, Thomas G., Professor and Director of Graduate Studies, PhD, 1970, University of California at Berkeley: Microeconomic theory, public regulation, econometrics. (1969)

Freedman, Ora, Adjunct Assistant Professor, PhD, 1991, State University of New York at Binghamton: Urban economics, environmental economics. (1991)

Greene, Kenneth V., Professor, PhD, 1968, University of Virginia: Public economics, urban public finance, law and economics, microeconomics. (1968)

Jones, Barry E., Assistant Professor, PhD, 1999, Washington University: Macroeconomics, monetary economics. (1999)

Kang, In-bong, Assistant Professor, PhD, 1994, University of Rochester: Macroeconomics, econometrics, international economics. (1995)

Kern, Clifford R., Associate Professor and Director of Undergraduate Studies, PhD, 1974, Harvard University: Urban economics, housing economics, economics of transportation. (1971)

Khanna, Neha, Assistant Professor, PhD, 1998, Cornell University: Environmental economics. (1998)

Kokkelenberg, Edward C., Associate Professor and Chair, PhD, 1981, Northwestern University: National income accounts, macro-labor economics, energy forecasting, econometrics. (1980)

Leamer, Laurence E., Professor Emeritus, PhD, 1950, University of Chicago: Economic education. (1951)

Leighton, Richard L., Associate Professor, PhD, 1961, Duke University: International trade. (1964)

Leiman, Melvin, Associate Professor Emeritus, PhD, 1963, Columbia University: History of economic thought, radical political economy, Marxism. (1963)

Liu, Jung-Chao, Professor, PhD, 1960, University of Michigan: Economy of China, mathematical economics. (1970)

Lovejoy, Robert M., Associate Professor Emeritus, PhD, 1963, University of Michigan: Monetary theory, Italian economic policy, financial markets. (1965)


Melville, Robert F., Professor Emeritus, PhD, 1961, Harvard University: Public finance. (1963)

Michal, Jan M., Professor Emeritus, LLD, 1946, Charles University, Prague: Comparative economic systems, international economics, economics of central planning, macroeconomics. (1964)

Nelson, Phillip J., Bartle Professor, PhD, 1957, Columbia University: Industrial organization, economics of population, microeconomics. (1969)

Ofek, Haim, Associate Professor, PhD, 1971, Columbia University: Advanced microeconomic theory, labor economics, industrial organization. (1981)

Plassmann, Florenz, Assistant Professor, PhD, 1997, Virginia Polytechnic Institute and State University: Public economics, applied microeconomics. (1999)

Polachek, Solomon W., Distinguished Professor and Dean of Harpur College of Arts and Sciences, PhD, 1973, Columbia University: Labor economics, human capital and income distribution, econometrics. (1983)

Wong, Linda, Assistant Professor, PhD, 1998, University of Iowa: Labor economics, gender issues economics. (1999)

Yoon, Bong J., Associate Professor, PhD, 1978, University of Illinois at Urbana-Champaign: Econometrics, microeconomics, labor economics. (1983)
UNDERGRADUATE PROGRAMS

The economics curriculum provides understanding of the origins, characteristics and functions of our economic organization, and develops ability to appraise the functioning of the economy and proposals for its improvement. The curriculum emphasizes the development of tools of economic analysis and the study of current institutional arrangements and their consequences. Attention is focused on the effects of individual and collective actions on the economic process.

The department offers the BA and BS degrees in economics. The BA degree offers an excellent background for students planning to enter careers or professional schools in business, law or public policy. The BS offers two specializations. The BS specialization in Economic Analysis provides the essential mathematical background for employment or graduate study in economics, especially for students planning to enroll in economics doctoral programs. The BS specialization in Financial Economics is offered for students planning employment or graduate study in financial analysis. Moreover, the department offers concentrations in five areas of economics. The department also offers a minor.

The Economics Department views the grade of D as passing but unsatisfactory. Therefore, a course in which a grade of D was received is not acceptable as a prerequisite and cannot be used to fulfill the requirements for a major or minor in economics. A course taken under the Pass/Fail option cannot be used to fulfill the requirements for a major or minor in economics.

Courses numbered 110 and below are intended for nonmajors and may not be used to fill major requirements. Courses numbered in the 400s are advanced courses open to students with the proper prerequisites.

Economics Major—BA Degree

Departmental requirements for a BA degree in economics are 10 full courses in economics, or their equivalent, distributed as listed below. At least five of these courses, and two at the 400 level, must be taken here at Binghamton.

1. ECON 160 and 162.
2. ECON 360 and 362.
3. ECON 366 or MATH 448.
4. Five other full courses in economics numbered above 110, or their equivalent, of which at least three must be chosen from courses numbered 400-489 (hence practica, independent studies, internships and honors courses do not count for this requirement) and no more than one may be chosen from courses numbered in the 100s.

Economics Major—BS Specialization in Economic Analysis

Departmental requirements for the BS specialization in Economic Analysis are 16 full courses from economics and mathematics distributed as listed below. At least six courses in economics, and two at the 400 level, must be taken at Binghamton.

1. ECON 160 and 162.
2. ECON 360 and 362.
3. ECON 366 or MATH 448.
4. ECON 464 and 466.
5. MATH 221, 222, 304 and 323.
6. Three additional full courses (or equivalent) chosen from economics courses numbered 400-489 (hence practica, independent studies, internships and honors courses do not count for this requirement).
7. Two full courses (or equivalent) chosen from courses in economics numbered above 110, no more than one of which may be numbered in the 100s, or from the following courses in mathematics or computer science: MATH 314, 357, 371, 447, 448, 461, 471, 478, CS 140. Other mathematics courses numbered 300 and above may be substituted after written petition to the economics undergraduate director.

Economics Major—BS Specialization in Financial Economics

Departmental requirements for the BS specialization in Financial Economics are 16 full courses distributed as listed below. No course may be counted toward more than one requirement, and at least six courses in economics, and two at the 400 level, must be taken at Binghamton.

1. ECON 160 and 162.
2. ECON 360 and 362.
3. ECON 366 or MATH 448.
4. ECON 466 or Economic Forecasting.
5. ECON 503, MATH 220 or MATH 323.
6. RHET 346.
7. CS 205.
8. Two courses chosen from ACCT 211, FIN 311, Economic Information or Economic Forecasting.
9. Five other full courses in economics numbered above 110, or their equivalent, of which: (a) no more than one may be chosen from...
courses numbered in the 100s; (b) at least three must be chosen from courses numbered 400-489; and (c) at least two must be chosen from one of the following three concentrations:

- Financial Economics—ECON 350, 442, 450
- International Economics—ECON 414, 436, 437
- Industrial Economics—ECON 440, 446
- Game Theory, Economics of Organizations

Inclusion of an internship (ECON 395 or 495) among or in addition to the courses chosen for requirement (9) is strongly recommended.

Concentrations
Concentrations (consisting of combinations of economics courses and courses from related departments) are available in a number of fields. At present, economics majors may opt to concentrate in economics of business, economics and government, international economics and world economy, economics of the workplace and environment, or economic philosophy and thought. Students should consult with their adviser either before or soon after declaring the major.

Honors Program
Graduation with honors in economics can be earned by completing a BA or BS degree program that includes ECON 498, Honors Research Design (2 credits), and ECON 499, Honors Thesis (4 credits), and submitting a thesis judged worthy of honors in conjunction with ECON 499. ECON 498 may be counted as one-half course and ECON 499 as one course toward satisfaction of BA or BS requirements.

Admission to the honors program and to ECON 498-499 is limited to majors with a 3.3 GPA in economics and a 3.0 GPA overall. Completion of or concurrent enrollment in ECON 466 and MATH 222 is recommended but not required. Requests for admission to the program should be directed to the instructor of ECON 498 in the second semester of the junior year.

Economics Minor
Departmental requirements for a minor in economics are six full courses or their equivalent, distributed as listed below. At least four of the courses must be taken here at Binghamton.

1. ECON 160 and 162.
2. ECON 360 or 362.
3. Any three full courses in economics or their equivalent in addition to those used to satisfy requirements (1) and (2), at least one of which must be chosen from courses numbered 400-489. Students taking both ECON 360 and ECON 362 may credit one toward satisfaction of requirement (2) and one toward satisfaction of requirement (3).

Graduate Programs
The department offers graduate programs leading to both MA and PhD degrees. The focus of the programs is on the applied aspects of the discipline. A strong foundation in economic theory is initially developed, followed by specialization in several subdisciplines of economics. Emphasis is usually placed on the specialization’s empirical and policy applications. The programs provide a flexible framework adaptable to a wide variety of professional objectives.

The MA program may lead to a terminal degree preparing students for employment in economic research at government and private organizations. The MA program may also provide a base for further graduate work in economics.

The PhD program prepares individuals for careers in teaching, government, and research. The program offers the opportunity to specialize in various fields.

Graduate students are strongly encouraged to develop a working knowledge of the computer and its application to economic analysis. Graduate students receiving assistantships are usually assigned responsibilities that prepare them for teaching and research.

Fields of Specialization
The department offers the following fields of specialization at the MA and PhD levels:

- Econometrics—applied and theoretical
- Environmental economics
- Finance (SOM)
- Labor economics
- International economics
- Monetary economics
- Public economics
- Urban economics

Admission
Qualified students holding a bachelor’s or master’s degree are eligible for admission to the programs. An undergraduate major in economics is desirable but not essential for admission. Students considered by the graduate committee to be insufficiently prepared for graduate-level work may be required to:

1. take additional courses over and above those normally needed for the degree, or
2. register for additional independent study in those areas in which the student may be deficient.

All applicants are required to submit scores from the Graduate Record Examination.
Master of Arts Program

The three MA programs in economics each require 32-40 credit hours of coursework and typically take three semesters of full-time work. The program requirements can be divided into core courses (theory, econometrics), electives, and additional requirements (if any). All finance courses are taken in the School of Management (SOM).

COURSE REQUIREMENTS  

<table>
<thead>
<tr>
<th>Program</th>
<th>Credits</th>
<th>Core Courses</th>
<th>Electives</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Traditional Program</strong></td>
<td></td>
<td>ECON 500 (or 611). Microeconomic Theory*</td>
<td>4 (8)</td>
<td>32</td>
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<tr>
<td></td>
<td></td>
<td>ECON 501 (or 613). Macroeconomic Theory*</td>
<td>4 (8)</td>
<td>32</td>
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<tr>
<td></td>
<td></td>
<td>ECON 594. MA Workshop</td>
<td>4 (8)</td>
<td>32</td>
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<tr>
<td><strong>Applied Economics Program</strong></td>
<td></td>
<td>ECON 500 (or 611). Microeconomic Theory*</td>
<td>4 (8)</td>
<td>32</td>
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<tr>
<td></td>
<td></td>
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<td>4 (8)</td>
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<tr>
<td></td>
<td></td>
<td>ECON 502 (or 615 and 616). Econometric Methods*</td>
<td>4 (8)</td>
<td>32</td>
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<td></td>
<td></td>
<td>ECON 594. MA Workshop</td>
<td>4 (8)</td>
<td>32</td>
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<tr>
<td><strong>Economics and Finance Program</strong></td>
<td></td>
<td>ECON 500 (or 611). Microeconomic Theory*</td>
<td>4 (8)</td>
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<td>4 (8)</td>
<td>32</td>
</tr>
<tr>
<td><strong>Economics and Specialization in Finance</strong></td>
<td></td>
<td>ECON 500, 611 and 612. Microeconomic Theory</td>
<td>12</td>
<td>56</td>
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<tr>
<td></td>
<td></td>
<td>ECON 613 and 614. Macroeconomic Theory I and II</td>
<td>8</td>
<td>56</td>
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<tr>
<td></td>
<td></td>
<td>ECON 615 and 616. Statistics and Econometrics</td>
<td>8</td>
<td>56</td>
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<td></td>
<td></td>
<td>Finance courses (SOM)**</td>
<td>8</td>
<td>56</td>
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<td></td>
<td></td>
<td>Economics electives (500 or 600 level)</td>
<td>12 (8)</td>
<td>56</td>
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<tr>
<td></td>
<td></td>
<td>MGMT 501. (or previous accounting course)</td>
<td>4 (8)</td>
<td>56</td>
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</tbody>
</table>

*MA students may elect to substitute those indicated in parentheses for the one initially designated.

**See graduate director for list of possible finance courses.

OTHER REQUIREMENTS

Students in all MA programs must submit an acceptable research paper written in conjunction with the MA Workshop (ECON 594), in addition to completing at least 32 credits of 500- or 600-level courses. The elective courses are normally taken in economics, although, with the consent of the department's director of graduate studies, one course may be taken in another department. Courses presented for the degree must be completed with a cumulative grade-point average of at least 3.0 (B average). Students studying toward the doctoral degree may request that the MA degree be awarded once they have fulfilled all the MA degree requirements, and may substitute a paper from a four-credit 600-level course for the ECON 594 requirement. Alternatively, a B average in ECON 611, 612, 613 and 614, or passage of both PhD theory comprehensive exams, may be substituted for ECON 594.

Doctor of Philosophy Program

The two PhD programs in economics each require a total of 56 credit hours of coursework and normally take four or more years of full-time work to complete. The degree requirements can be divided into three general areas—core courses (24 credit hours), electives (32 credit hours) and dissertation (no set number of credit hours required). In addition, the student must pass four comprehensive examinations: micro theory, macro theory and two elective fields. All finance courses are taken in the School of Management. Permission to enroll in the PhD program in economics with specialization in finance is granted on a selective basis.

COURSE REQUIREMENTS  

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</table>

The elective courses, except where noted above, are normally taken in economics. Ordinarily the University-wide residence requirement is to be met by registration in 24 credits, excluding ECON 597, 697 and 699.

Courses presented for the degree must be completed with a cumulative grade-point average of at least 3.0 (B average). Except for
ECO N 503, courses used to fulfill the department's MA requirements may also be used to fulfill the department's PhD elective requirements. Only two of ECO N 500, 501 and 502 may be counted toward the PhD elective course requirements.

**See graduate director for list of required finance courses. Students without previous exposure to financial accounting must first take MGMT 501.**

**DISSERTATION**

The student must submit a dissertation that embodies original work on some significant topic in theoretical or applied economics. Before undertaking the dissertation, the student is assigned an advisory committee consisting of faculty whose research interests are appropriate to the proposed problem.

After completing all comprehensive examinations and course requirements, the student must develop a written prospectus of the dissertation topic and obtain the approval of the prospectus by the thesis committee. The prospectus should include a brief statement of the problem and the student's proposed approach to answering the problem. In the case of empirical studies, the student should also include a discussion of the data.

When the initial prospectus has been developed to the extent that it is ready for examination by the entire department, the student must present and defend the prospectus to a graduate seminar of faculty and students. The presentation should be made with the advice of the student's dissertation committee. This seminar provides feedback on the dissertation topic. It must be presented at least six months prior to the final oral examination in defense of the dissertation.

The two-course sequence ECO N 693 and ECO N 694 is normally taken during the third year of graduate work. All resident PhD candidates who have completed their comprehensive examinations are required to register for either ECO N 693, 694, 698 or 699.

**ADMISSION TO CANDIDACY**

The student who satisfies the following requirements is recommended for candidacy for the doctor of philosophy in economics.

1. Course requirements: complete the program of coursework described above.
2. Other requirements: fulfill these as specified above.
3. Comprehensive examinations: The PhD theory comprehensive exams in microeconomic theory and macroeconomic theory must each be taken no later than the beginning of the second semester following completion of the required course sequence—ECO N 611 and 612 for microeconomic theory, and ECO N 613 and 614 for macroeconomic theory—and must each be successfully completed, if not passed the first time, no later than the beginning of the third semester following completion of the respective course sequence. In general, it is advised that the theory comprehensive examinations be taken as early in the student's career as possible. Within two years of passing these examinations, the student must pass examinations in two elective fields, selected from the list of specializations appearing under "Fields of Specialization." For students in the economics and finance specialization, one of the elective field comprehensive examinations must be in finance. No exam may be taken more than twice. Students not meeting the comprehensive exam requirements are terminated from the PhD program.*

*Permission to take any examination may be denied students whose cumulative grade-point average for all courses taken for credit in the Economics Department is below 3.0 (B).

**FINAL EXAMINATION**

After the student's admission to candidacy, the degree of doctor of philosophy in economics is recommended by the department for the student who has completed an approved program of study; submitted a dissertation acceptable to the advisory committee; and passed a final oral examination in defense of the dissertation.

**COURSE OFFERINGS/UNDERGRADUATE**

**NOTE:** Unless otherwise noted, all undergraduate courses carry 4 credits.

**ECO N 103. INTRODUCTION TO THE INTERNATIONAL ECONOMY**

International monetary and trade theory, policies and institutions. Monetary topics include exchange rate determination, trade balances, the international debt crisis and the global economic system. Trade topics include commodity flows, impacts of free trade on economic well-being, trade policies and their consequences. Intended for nonmajors. May be used to satisfy economics minor but not major requirements.

**ECO N 144. POVERTY AND DISCRIMINATION**

Conservative, liberal and radical perspectives for analyzing problems of poverty and racial discrimination. Analysis of public policies such as income maintenance programs, minimum wage legislation, affirmative action, education and housing policies. Not open to students with junior or senior standing.

**ECO N 160. PRINCIPLES OF MICROECONOMICS: COMPETITION, MONOPOLY AND ECONOMIC WELFARE**

Examination of contemporary economic systems based on tools of microeconomics. Theoretical analysis of prices and profits as guides to resource allocation, industrial structure, meaning of economic welfare, proper function of government in the economy, distribution of income.
Students may take ECON 160 and 162 in either order they choose.

**ECON 162. PRINCIPLES OF MACROECONOMICS: INFLATION AND UNEMPLOYMENT**
Determinants of the Gross National Product, incomes and employment. Sources of demand for goods and services; problems of unemployment and inflation; use of taxes, government spending and control over supply of money to fight unemployment and inflation. Economic growth: its causes, and arguments for and against growth. Students may take ECON 160 and 162 in either order they choose.

**ECON 181. SELECTED TOPICS IN ECONOMICS**  
offered as needed, variable credit  
Introduction to study and analysis of selected economic issue. Specific topic announced in advance. May be repeated for credit with consent of department.

**ECON 183. SELECTED TOPICS IN APPLIED MICROECONOMICS**  
offered as needed, variable credit  
Introduction to study and analysis of selected microeconomic issue. Specific topic announced in advance. May be repeated for credit with consent of department.

**ECON 185. SELECTED TOPICS IN APPLIED MACROECONOMICS**  
offered as needed, variable credit  
Introduction to study and analysis of selected macroeconomic issue. Specific topics announced in advance. May be repeated for credit with consent of department.

**ECON 313. INTERNATIONAL POLITICAL ECONOMY**
National and international economic policy: the U.S. has made significant contributions to international trade and financial practices during the past half century. Its policies in the future will change as nationals organize in blocs, as environmental issues take precedent, as population increases and as disparities in income levels become more evident. The course evaluates economic concepts that have supported national directions in the past and explores promising ideas to help in the future.

**ECON 314. ECONOMICS OF DEVELOPING COUNTRIES**
Major problems of development: institutional factors, resources, population. Various theories of development process. Policy implementation; regional programs, international cooperation, aid. Problems, theories, policies, in terms of recent data of selected developing countries. Prerequisite: ECON 160.

**ECON 315. COMPARATIVE ECONOMIC SYSTEMS**

**ECON 317. THE ECONOMY OF CHINA**

**ECON 331. ECONOMICS OF POPULATION AND ENVIRONMENT**
Preliminary examination of relationships between economic system and environmental system. Pollution as economic phenomenon, theory of externalities, scarcity and growth. Appropriate public policies to deal with these problems. No credit toward requirements for major or minor in economics is given for ECON 331 if student has already passed or is currently enrolled in ECON 433. Prerequisite: ECON 160.

**ECON 343. INTRODUCTION TO LABOR ECONOMICS AND INDUSTRIAL RELATIONS**
Introduction to labor markets, theoretical and institutional analysis. Labor force trends, unions and collective bargaining, the relation between education and earnings, alternative theories of the labor market. Analysis of current policy issues such as unemployment, inflation, productivity growth, and discrimination. No credit toward requirements for major or minor in economics is given for ECON 243 if student has already passed or is currently enrolled in ECON 443. Prerequisite: ECON 160.

**ECON 349. ECONOMICS OF LAW AND PROPERTY RIGHTS**

**ECON 350. U.S. FINANCIAL SYSTEM—MARKETS AND INSTITUTIONS**

**ECON 360. MICROECONOMIC THEORY**
Contemporary microeconomic analysis; demand, supply, price theory, allocation of economic resources. Tools of micro theory applied to solving theoretical and social problems. Prerequisites: ECON 160.

**ECON 362. MACROECONOMIC THEORY**
Theories of levels of income, employment, growth, savings, investment, money and prices, applied to solving theoretical and social problems. Prerequisite: ECON 162.

**ECON 366. STATISTICAL METHODS**
Introduction to theory and techniques of statistics as applied in economics. Probability theory, descriptive statistics, statistical inference. Not open to students who have credit for MATH 348. Neither MATH 147 nor PSYC 243 is a substitute for ECON 366.

**ECON 381. SELECTED TOPICS IN ECONOMICS**  
offered as needed, variable credit  
Intermediate study and analysis of selected economic issue. Specific topic and prerequisites (normally ECON 160 or 162, or both) announced in advance. May be repeated for credit with consent of department.
ECO 383. SELECTED TOPICS IN APPLIED MICROECONOMICS offered as needed, variable credit
Intermediate study and analysis of selected microeconomic issue. Specific topic and prerequisite (normally ECON 160) announced in advance. May be repeated for credit with consent of department.

ECO 385. SELECTED TOPICS IN APPLIED MACROECONOMICS offered as needed, variable credit
Intermediate study and analysis of selected macroeconomic issue. Specific topic and prerequisite (normally ECON 162) announced in advance. May be repeated for credit with consent of department.

ECO 395. INTERNSHIP IN SECURITIES MARKETS
2 credits
Application of economic analysis to practical experience in a securities brokerage firm, under joint supervision of firm's representative and a member of the economics faculty. Open only to economics majors and economics minors in Harpur College. May not be repeated for credit. Not open to students with credit for ECON 295 or any other internship in a securities firm. Prerequisite: ECON 350, 442 or FIN 311.

ECO 397. INDEPENDENT STUDY IN ECONOMICS variable credit
Tutorial study for intermediate students of special topics not offered elsewhere in the curriculum. Prerequisites: ECON 160 or 162 as appropriate to the topic, and consent of faculty sponsor.

ECO 414. ECONOMIC DEVELOPMENT: EAST ASIA
Meaning and measurement of economic underdevelopment, entrepreneurship and technical change, balanced vs. unbalanced growth, optimal allocation of investment. Relationships of disguised unemployment and population growth to development. Examples from and applications to East Asia. Prerequisites: ECON 360 and 362.

ECO 426. HISTORY OF ECONOMIC THOUGHT
Evolution of economic doctrine from emergence of national states in Europe to present: survey of ideas of economists, such as Smith, Ricardo, Malthus, Mill, Marshall, Veblen and Keynes. Interaction of methods of economic theorizing with changing socioeconomic conditions. Prerequisites: ECO 162 and 360.

ECO 428. ENVIRONMENTAL POLICY
Scope and significance of public policy toward the environment. Theories of government intervention. Policy tools. Theories of policy effectiveness. Impact of political, economic, social and technical factors on policy outcomes. Prerequisites: ECON 360.

ECO 430. URBAN ECONOMICS
Economic functions of cities; economic interrelationships between urban core and greater metropolitan area. Problems of location, land use, industrial and population distribution, race, housing, transportation. Prerequisite: ECON 360.

ECO 433. ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS
Market failures in the allocation of environmental and natural resources. Efficiency and equity implications of environmental policies. Topics include acid rain, global warming, water pollution, fisheries, air pollution, species extinction and loss of habitat, such as tropical forests. Prerequisite: ECON 360.

ECO 436. INTERNATIONAL TRADE
Theories of international trade, tariffs, import quotas, commercial policies and agreements. Foreign trade, trade policies of the United States. GATT, NAFTA, EC and other world economic organizations. Prerequisite: ECON 360.

ECO 437. INTERNATIONAL MONETARY ECONOMICS
Topics covered in this course are: the balance of payments, exchange rate determination, monetary and fiscal policies for external stability, capital mobility, and the international monetary system. Various policy questions such as persistent U.S. deficit in the balance of payments, the debt crisis of developing countries, the European Currency Unit, etc., will be explored along with theories. Prerequisites: ECON 160 and 362.

ECO 440. INDUSTRIAL ORGANIZATION AND PUBLIC POLICY
Relationship between behavior of firm and market structure: how these relationships affect public welfare and are regulated by social intervention. Prerequisite: ECON 360.

ECO 442. FINANCIAL ECONOMICS
Investment decisions for businesses and households, involving a knowledge of security market operations and investment theory. Prerequisites: ECON 360 and 362 or equivalent.

ECO 443. ECONOMICS OF LABOR
Labor supply; determinants of population growth, labor force participation, education, training and health of labor force. Specific labor market problems: wage determination, labor's share of national income, unemployment, impact of unions. Prerequisite: ECON 360. Suggested prerequisite: ECON 366.

ECO 445. PUBLIC EXPENDITURES AND PUBLIC CHOICE
Government as the agency that corrects for market defects. Theories of public goods, externalities, and Pareto optimal redistribution of income. Topics in the modeling of government or public choice, including economic analysis of coalition formation, governmental size, behavior of voters, behavior of political representatives and bureaucrats and support for certain types of legislation, including regulation. Prerequisite: ECON 360.

ECO 446. ECONOMICS OF TAXATION
Criteria for evaluation of tax structures: concepts of economic efficiency and equity. Evaluation of contemporary United States federal, state and local tax structures using these criteria; role of tax reform. Study of effects of personal income, corporate income, consumption, excise, social security and property or wealth taxes on choices made by economic agents. Evaluation of alternative methods of governmental finance such as inflation and debt financing. Prerequisite: ECON 360.

ECO 450. MONETARY ECONOMICS
Supply and demand for money, theory and evidence. Function of money, interest rates and banking system in credit and income determination process. Instruments, techniques, theory of monetary policy. Prerequisite: ECON 362.

ECO 459. ECONOMIC GROWTH AND FISCAL POLICY

ECO 464. MATHEMATICAL ECONOMIC ANALYSIS
Application of mathematical tools to study of contempo-
rary economic problems. Prerequisites: ECON 360 and 362 and MATH 221, 222, 304 and 323, or consent of instructor. BA majors in economics may not use both this course and ECON 466 to fulfill the required three courses numbered 400-489.

ECON 466. INTRODUCTION TO ECONOMETRICS
Econometric techniques necessary for understanding economic literature; application of these techniques. Treatment of multiple regression and multicollinearity; introduction to simultaneous equations systems; additional topics, such as identification, autocorrelation, errors in variables, use of computers in econometric research. Prerequisite: ECON 366 or equivalent. Recommended prerequisite: ECON 360 or 362. BA majors in economics may not use both this course and ECON 464 to fulfill the required three courses numbered 400-489.

ECON 481. SELECTED TOPICS IN ECONOMICS
offered as needed, variable credit
Advanced study and analysis of selected economic issue. Specific topic and prerequisites (normally ECON 360 or 362, or both) announced in advance. May be repeated for credit with consent of department.

ECON 483. SELECTED TOPICS IN APPLIED MICROECONOMICS
offered as needed, variable credit
Advanced study and analysis of selected microeconomic issue. Specific topic and prerequisite (normally ECON 360) announced in advance. May be repeated for credit with consent of department.

ECON 485. SELECTED TOPICS IN APPLIED MACROECONOMICS
offered as needed, variable credit
Advanced study and analysis of selected macroeconomic issue. Specific topic and prerequisite (normally ECON 362) announced in advance. May be repeated for credit with consent of department.

ECON 491. PRACTICUM IN COLLEGE TEACHING IN ECONOMICS
variable credit
Independent study by teaching in ECON 160, 162 and other courses. Various assignments closely directed by instructor, including leading discussion section, maintaining office hours, reading examinations. Does not satisfy major or all-college requirements. Pass/Fail option only. Prerequisites: superior achievement in ECON 360 or 362, or other appropriate courses, consent of instructor and director of undergraduate studies.

ECON 495. INTERNSHIP IN ECONOMICS
variable credit
Internship applying economic analysis in business or public agency under supervision of faculty sponsor. Prerequisites: ECON 360 or 362 as appropriate to emphasis of the internship, and consent of faculty sponsor. May not be used for securities firm internships. Students with securities firm placements must register for ECON 395. May not be repeated for credit. Open only to majors and minors in Harpur College.

ECON 497. INDEPENDENT STUDY IN ECONOMICS
variable credit
Tutorial study for advanced students of special topics not offered elsewhere in the curriculum. Prerequisites: ECON 360 or 362 as appropriate to the topic, and consent of faculty sponsor. May be repeated for credit with consent of department.

ECON 498. HONORS RESEARCH DESIGN
2 credits
Design of honors research project and preliminary research under the supervision of director of honors program. Prerequisite: admission to honors program.

ECON 499. HONORS THESIS
Execution of research project developed in ECON 498 and writing of honors thesis under supervision of faculty sponsor. Prerequisite: successful development of research project in ECON 498.

COURSE OFFERINGS/GRADUATE

ECON 500. MICROECONOMIC THEORY
fall
Review of neoclassical price theory; analytically rigorous geometrical presentation with occasional use of elementary calculus.

ECON 501. MACROECONOMIC THEORY
fall
Macroeconomic theory, problems of macroeconomic policy and recent U.S. experience. Neoclassical, Keynesian, monetarist and supply-side models. Primarily for master’s degree candidates and those with limited undergraduate background in economic theory.

ECON 502. ECONOMETRIC METHODS
spring
Introductory course which applies regression analysis to economic problems. Required course for all MA students working on applied or economics and finance degrees. Prerequisite: statistical methods or equivalent.

ECON 503. MATHEMATICAL ANALYSIS FOR ECONOMISTS
fall
Sharpen students’ mathematical skills in areas of mathematical analysis important in study of economic theory. No previous knowledge of higher mathematics assumed. Course covers topics that normally constitute two or three semesters of calculus, one semester of linear algebra.

ECON 591. SEMINAR ON THE TEACHING OF COLLEGE ECONOMICS
fall/spring, 1 credit/semester
Graduate seminar course on teaching of college economics. Class presentations on teaching/student topics, discussions, student presentations. No exams, but extensive class participation required. Fall course required for all first-year graduate TAs; PhD students interested in earning Certificate in College Teaching must complete both fall and spring versions of this course.

ECON 594. MA ECONOMICS WORKSHOP
fall
Defined research project for each student. Topic chosen by faculty and individual student related to area of specialization offered by department. Discussions of these projects, research procedures in general, economic background relevant to projects. Required course for all MA students.

ECON 597. READINGS AND RESEARCH FOR MA CANDIDATES
1-4 credits
Independent reading and research.

ECON 609. SELECTED TOPICS IN ECONOMICS OF PUBLIC POLICY
Framework for offering courses in applied microeconomic theory. Topics vary from semester to semester, usually represent application of economics to current social problems such as health, pollution, natural resources, regulation, education, urban public finance.

ECON 611. MICROECONOMIC THEORY I
spring
Techniques of constrained optimization, comparative static
ECON 612. MICROECONOMIC THEORY II  
Welfare economics, consumer theory under uncertainty, production and cost theory, general equilibrium analysis, intertemporal theory, including both capital and investment theory. Prerequisites: ECON 611 or equivalent, and ECON 503 or equivalent.

ECON 613. MACROECONOMIC THEORY I  
Classical theory of income and employment; aggregate supply and demand analysis; inflation; disequilibrium macroeconomics; modern theories of consumption, investment, and money; monetarism; new classical and new Keynesian approaches to macroeconomics.

ECON 614. MACROECONOMIC THEORY II  
Growth theory and growth accounting; inflation and unemployment, including Phillips curve, its microeconomics foundations; rational expectations school; stabilization policies; macroeconometric models; international macroeconomics.

ECON 615. ECONOMETRIC STATISTICS  
Basic theory of probability, sampling, estimation, hypothesis testing, correlation and regression analysis, analysis of variance, with applications to economic research. Undergraduate course in statistics, year of calculus essential.

ECON 616. ECONOMETRICS  
Focus on basic linear regression model within framework of classical general linear model. Desirable properties of estimators; hypothesis testing; prediction; autocorrelation and heteroskedasticity, dynamic equations; problems and techniques involving simultaneous equations. Prerequisite: ECON 615 or equivalent.

ECON 617. APPLIED ECONOMETRICS  
Further development of econometric theory, combined with applications. Simultaneous equation estimation techniques; time series methods; rational expectations and econometrics; tests of causality; non-nested hypothesis tests; extensive computer applications. Prerequisite: ECON 616 or equivalent.

ECON 618. TOPICS IN ECONOMETRICS  
Applications of econometrics, both theoretical and empirical. Frontier function estimation, limited dependent variables, censoring and truncation, model specification testing, longitudinal data analysis and unobservable variables.

ECON 622. HISTORY OF ECONOMIC THOUGHT  
Evolution of economic doctrine from emergence of national states in Europe to present. Survey of ideas of prominent economists, including Smith, Ricardo, Malthus, Mills, Marshall, Veblen, Keynes and contemporaries like Friedman, Galbraith, Sweezy.

ECON 631. MONETARY THEORY AND POLICY  
Overview of prewar and postwar monetary theory. Velocity, demand for and supply of money, money substitutes, portfolio theory. Theory of monetary policy, including channels of monetary policy, lags, targets, indicators. Monetary policy in foreign sector.

ECON 633. SEMINAR IN MONETARY THEORY  
Critical analysis of current macroeconomic theorems, models, hypotheses, in static and dynamic setting. Prerequisite: ECON 613 or equivalent.

ECON 636. PUBLIC REVENUES  
Application of welfare economics to broad range of problems concerning incidence and effects of tax and debt policy. Personal and corporate income tax, consumption taxes, social security tax, property tax, value added tax, etc., and public debt.

ECON 637. PUBLIC EXPENDITURES  

ECON 641. LABOR ECONOMICS  
Factors affecting quantity, quality of labor supply; economic determinants of population size, labor force participation, education, training. Factors determining demand for different types of labor. Special features of labor markets, effects of unions, inflation and unemployment.

ECON 642. SEMINAR IN LABOR ECONOMICS  
Investment in human capital: schooling, on-the-job training, job search, occupational choice, unemployment, labor force participation. Economics of labor demand and trade unions. Development of analytical tools and application of these tools to current issues.

ECON 651. INTERNATIONAL TRADE THEORY  
Real trade theory; theory of comparative advantage, determinants of commodity composition and factor content of trade, empirical tests of international trade theories, theory of commercial policy, monopolistic competition in international trade, uncertainty in international trade models.

ECON 652. SEMINAR IN INTERNATIONAL MONETARY THEORY  
Advanced topics in international monetary theory. Balance of payments and foreign exchange market; asset markets (international portfolio diversification); models of exchange-rate determination; balance-of-payments adjustment; policies for internal and external balance. Prerequisite: ECON 651.

ECON 656. ECONOMIC DEVELOPMENT  
Economic development and problems of measurement; critical review of theories and policies.

ECON 681. URBAN ECONOMICS  
Economics of cities, and patterns of urban location. Sources of growth and decline for regions, metropolitan areas, cities, suburbs. Interaction of urban location decisions with housing markets, racial problems, local governments, transportation system.

ECON 682. ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS  
Topics include externalities, market intervention, policy instruments and equity and efficiency criteria, measuring costs and benefits of environmental improvement, and optimal use of natural resources with emphasis on energy resources and renewable open access resources such as marine resources. Prerequisite: ECON 637.
ECON 693. PREDISSERTATION RESEARCH SEMINAR IN ECONOMICS I
fall, 2 credits
PhD predissertation research seminar to introduce advanced graduate students to economic research and to help them select and begin work on suitable dissertation topics.

ECON 694. PREDISSERTATION RESEARCH SEMINAR IN ECONOMICS II
spring, 2 credits
Continuation of ECON 693.

ECON 696. SEMINAR IN SPECIAL TOPICS
Content determined by instructor.

ECON 697. READING AND RESEARCH FOR PhD CANDIDATES
1-4 credits
Independent reading and research.

ECON 698. PREDISSERTATION RESEARCH
1-9 credits/semester
Independent reading and/or research in preparation for comprehensive examinations for admission to PhD candidacy, and/or preparation of dissertation prospectus.

ECON 699. DISSERTATION
1-9 credits/semester
Research for and preparation of the dissertation.

ECON 700. CONTINUOUS REGISTRATION
1 credit/semester
Required for maintenance of matriculated status in graduate program. No credit toward graduate degree requirements.

ECON 707. RESEARCH SKILLS
1-4 credits
Development of research skills required within graduate programs. May not be applied toward course credits for any graduate degree. Prerequisite: approval of relevant graduate program directors or department chairs.