Undergraduate Handbook

Consumer and Family Economics
Environmental & Natural Resource Economics
Managerial Economics

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Overview of Undergraduate Programs and Related Career Opportunities

The Department of Resource Economics is an academic unit within the College of Social and Behavioral Sciences at the University of Massachusetts Amherst. Students in the Department of Resource Economics choose among three options: Consumer and Family Economics, Environmental and Natural Resource Economics, and Managerial Economics.

Students in all three options take a common core of 10 courses plus the junior-year writing course and Integrative Experience Seminar. Departmental core courses have been selected to provide the basic tools of economic theory and quantitative decision-making and a perception of how our economic system works. They also provide a base of understanding on which to build an applied economics specialization. Ten additional courses are required for each option. Departmental option requirements enable students to focus course work on particular career specialties.

Some major career opportunities in each option are identified below. Although most Department graduates accept jobs upon graduation, a substantial number continue their education in graduate school. Students who are considering going to graduate school in any field of economics should supplement Departmental requirements with additional math courses. Consult with your advisor and note section IIC on page 6 regarding additional recommended courses.

Career Opportunities

Consumer and Family Economics

The Consumer and Family Economics option focuses on the economic needs and functions of individuals and families. Students are prepared to mediate between the consumer and various financial business institutions as financial counselors and consumer-affairs specialists. This option also provides students with a strong foundation for careers in the areas of family financial management and consumer policy. Graduates may also become Certified Financial Planners by passing the appropriate exams administered by the Commonwealth of Massachusetts. Consumer and Family Economics students are required to complete an intensive internship. While utilizing the knowledge and skills learned in their courses, students develop new skills and start to build a career network.

Environmental and Natural Resource Economics

The Environmental and Natural Resource Economics option prepares students to assist in public and private decisions about environmental and natural resource issues. Population and income growth are increasing the pressure on our resources, making allocation, management, and protection decisions among our top priorities. Water quality and supply, land use, climate change, energy use, pesticide policy, recycling, waste disposal, and marine fisheries management are some of the issues studied. Students learn to apply decision-making tools such as benefit-cost, risk-benefit, and cost-effectiveness analysis. This training prepares students for careers in research, planning, education, and administration with federal, state, or community governments, as well as in private businesses that provide services in various sustainability, environmental, and natural resource areas.
Managerial Economics

The Managerial Economics option concentrates on the application of economic principles to business decision-making. Students develop expertise in accounting, finance, business strategies, and market demand analysis. Microeconomic models and case studies are used to demonstrate how individuals can make wise choices to operate effectively within a complex economy of millions of businesses linked by thousands of markets. Career opportunities include research, planning, marketing, and managerial positions in a wide range of firms and government agencies, particularly in food and natural resource related industries. Recent graduates hold positions in food industry management, environmental consulting, energy demand analysis, market research, financial analysis, and strategic planning.
Summary of Undergraduate Requirements

I. University Requirements

A. University Graduation Requirements

1. 120 graduation credits.
2. Minimum cumulative average of 2.0.
3. Completion of General Education requirements as described below.
4. Completion of college requirements. Students who have Resource Economics as their primary major are exempt from the Global Education requirement that is required of other majors within the College of Social and Behavioral Sciences.
5. Completion of the requirements of a major. RES-ECON major requirements are detailed below. For more information on the General Education program please refer to: http://www.umass.edu/gened/

B. University General Education.

The General Education Requirements consist of courses with General Education designations in the following curriculum areas.

Basic Math and Analytic Reasoning - There are two course designations in this area: R1 and R2.

Biological and Physical World - There are two courses in this area: BS (Biological Science) and PS (Physical Sciences). A third option may be a course designated as SI (Science Interdisciplinary).

Social World - There are four course designations in this area: AL (Literature), AT (Arts), HS (Historical Studies), and SB (Social and Behavioral Sciences). A fifth and sixth option are courses designated I (Interdisciplinary) or SI (Science Interdisciplinary).

Social and Cultural Diversity - There are two course designations in this area: U (Diversity: United States) and G (Diversity: Global). Some courses are designated only U or G. Others may be combined with the Social World designations listed above and will appear [on SPIRE] as ALU, ATU, HSU, SBU, IU, ALG, ATG, HSG, SBG, IG.

Writing - There is one course designation in this area: CW.

Interdisciplinary Option - There are two course designations in this option: I (Interdisciplinary) and SI (Science Interdisciplinary).

IMPORTANT INFORMATION CONCERNING GENERAL EDUCATION COURSES

1. One course from your major department may count toward General Education requirements and one course may fulfill a Diversity requirement.

2. No more than three I, IU or SI courses may count toward General Education requirements. General Education courses cannot be taken on a pass/fail basis.

3. The Social and Cultural Diversity requirement can be combined with Social World requirements. For example, a course that is labeled as ALU will count as an AL in the Social World category and as a U.S. diversity requirement.
## FULFILLING GENERAL EDUCATION REQUIREMENTS

**FOR STUDENTS ENROLLING PRIOR TO FALL 2010**

<table>
<thead>
<tr>
<th>CURRICULUM AREA</th>
<th># OF COURSES REQUIRED</th>
<th># OF CREDITS EARNED</th>
<th>FULFILLING THE REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing</td>
<td>2 courses</td>
<td>6 credits</td>
<td>One course (CW) or exemption (see Writing Program) and one upper level 3-credit course in your major department.</td>
</tr>
<tr>
<td>Basic Mathematics</td>
<td>1 course</td>
<td>0-3 credits</td>
<td>One course (R1) or a passing score on the Tier 1 Math Exemption Exam</td>
</tr>
<tr>
<td>Analytic Reasoning</td>
<td>1 course</td>
<td>3 credits</td>
<td>One course (R2)</td>
</tr>
<tr>
<td>Biological &amp; Physical World*</td>
<td>3 courses</td>
<td>9 credits</td>
<td>One course (BS), one course (PS), and one course (BS, PS, or SI)</td>
</tr>
<tr>
<td>Social World</td>
<td>6 courses</td>
<td>18 credits</td>
<td>One course (AL), one course (AL, AT, SI, or I), one course (HS), one course (SB), one course (SB, SI, or I), and one course (AL, AT, HS, SB, SI, or I)</td>
</tr>
<tr>
<td>Social and Cultural Diversity**</td>
<td>2 courses</td>
<td></td>
<td>One course focusing on UNITED STATES diversity (U, ALU, ATU, HSU, IU, or SBU) and one course focusing on GLOBAL diversity (G, ALG, ATG, HSG, IG, or SBG)</td>
</tr>
</tbody>
</table>

* Students who entered the University before Fall 2005 can also satisfy this requirement with an I course.

**Students who entered the University before Fall 2002 can fulfill this requirement with any combination of G or U courses.

## FOR STUDENTS ENROLLING FALL 2010 OR LATER

<table>
<thead>
<tr>
<th>CURRICULUM AREA</th>
<th># OF COURSES REQUIRED</th>
<th># OF CREDITS EARNED</th>
<th>FULFILLING THE REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing</td>
<td>2 courses</td>
<td>6 credits</td>
<td>One course (CW) or exemption (see Writing Program) and one upper level 3-credit course in your major department.</td>
</tr>
<tr>
<td>Basic Mathematics</td>
<td>1 course</td>
<td>0-3 credits</td>
<td>One course (R1) or a passing score on the Tier 1 Math Exemption Exam</td>
</tr>
<tr>
<td>Analytic Reasoning</td>
<td>1 course</td>
<td>3 credits</td>
<td>One course (R2)</td>
</tr>
<tr>
<td>Biological &amp; Physical World</td>
<td>2 courses</td>
<td>8 credits</td>
<td>One course (BS), and one course (PS)</td>
</tr>
<tr>
<td>Social World</td>
<td>4 courses</td>
<td>16 credits</td>
<td>One course (AL/AT), one course (HS), one course (SB), and one course (AL, AT, SB, I or SI)</td>
</tr>
<tr>
<td>Social and Cultural Diversity</td>
<td>2 courses</td>
<td></td>
<td>One course focusing on UNITED STATES diversity (U, ALU, ATU, HSU, IU, or SBU) and one course focusing on GLOBAL diversity (G, ALG, ATG, HSG, IG, or SBG)</td>
</tr>
<tr>
<td>Integrative Seminar</td>
<td>1 course</td>
<td>3 credits</td>
<td>A variety of options will be offered during students’ junior or senior year.</td>
</tr>
</tbody>
</table>

Transfer students should consult an advisor on which General Education requirements they have left to complete.
II. RES-ECON Departmental Requirements

NOTE: Most Resource Economics courses are taught either fall or spring AND all upper level Resource Economics courses carry prerequisites (sometimes several!). See Resource Economics Courses: Semesters Offered & Prerequisites on page 9 for a summary. You must prepare a plan of study for all semesters through graduation to ensure that you can meet departmental requirements. The Major Requirements checksheet is provided on page 7 to assist with this planning.

The RES-ECON Major consists of three main components as specified in Sections A, B, and C below. Section D provides general information about the departmental requirements:

A. RES-ECON Departmental Core Requirements – required by all options (12 courses)

Fundamental Competencies
1. One Calculus course – either MATH 127 - Calculus for the Life and Social Sciences I or MATH 131 - Calculus I.
3. RES-ECON 303 - Writing in Resource Economics (General Education junior year writing course).

Microeconomics
4. RES-ECON 102 - Introduction to Resource Economics. ECON 103 may be substituted.
5. RES-ECON 202 - Price Theory (Intermediate Microeconomics). ECON 203 may be substituted.

Macroeconomics
6. ECON 104 - Introduction to Macroeconomics.
7. ECON 204 - Intermediate Macroeconomic Theory.

Quantitative Decision Making
8. RES-ECON 212 - Introductory Statistics for the Social Sciences. STATISTC 240 may be substituted.

Resource Economics Breadth Requirement
11. An introductory course in the department other than the requirement of the student’s option. Introductory courses are: RES-ECON 121 - Hunger in a Global Economy; RES-ECON 162 - The Consumer in Our Society; RES-ECON 262 - Environmental Economics; and RES-ECON 263 - Natural Resource Economics.

Integrative Experience Seminar
12. RES-ECON 394LI - Life if Full of Choices (General Education Integrative Experience Seminar).

B. RES-ECON Departmental Option Requirements

There are three options within the Department of Resource Economics:
- Consumer and Family Economics
- Environmental and Natural Resource Economics
- Managerial Economics

Each option has its own set of specified courses in addition to the departmental core listed above (see pages 10-12). These requirements are identified on the following pages. The requirements include:
- Option Requirements (5-6 requirements depending on the option)
- Selected Courses (4-5 courses depending on the option)

Suggested Selected Courses for each option are listed in this handbook. Other courses may be used to satisfy the Selected Course requirements but must be approved by the student’s academic advisor prior to enrollment in the course. A waiver form must be completed and filed in the student’s academic file.

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1 RES-ECON 162 is required in the Consumer and Family Economics option. Therefore, students in this option cannot use this course as the breadth requirement. Similar reasoning applies to RES-ECON 262 and RES-ECON 263 in the Environmental & Natural Resource Economics option.
C. Additional Recommended Courses (not requirements)

1. For students considering graduate study, the following courses are strongly recommended:
   a. MATH 128 - Calculus for the Life and Social Sciences II or MATH 132 - Calculus II
   b. MATH 233 - Multivariate Calculus
   c. MATH 235 - Introduction to Linear Algebra
   d. RES-ECON 312 - Introductory Econometrics

D. Other RES-ECON Departmental Requirements

1. Departmental requirements may not be taken pass/fail.
2. The grade point average of all courses taken to satisfy departmental requirements (in parts IIA, IIB and IIC above) must be 2.0 or better.
3. The student is responsible for following and completing departmental requirements.
4. Any exception to departmental requirements must be approved by the Academic Advisor and Undergraduate Program Director. A waiver form must be completed and filed in the student’s academic folder.

III. Summary of Graduation Requirements for a Student Majoring in RES-ECON

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. University Requirements</td>
<td>36</td>
</tr>
<tr>
<td>2. Department Requirements</td>
<td></td>
</tr>
<tr>
<td>a) Department Core</td>
<td>33-35</td>
</tr>
<tr>
<td>b) Junior Year Writing Course</td>
<td>3*</td>
</tr>
<tr>
<td>c) Integrative Experience Sem.</td>
<td>1</td>
</tr>
<tr>
<td>d) Option Courses (Required + Selected Courses)</td>
<td>30</td>
</tr>
<tr>
<td>Total Department Requirements</td>
<td>67-69</td>
</tr>
<tr>
<td>3. Free Electives</td>
<td>15-17**</td>
</tr>
<tr>
<td>Total Graduation Credits</td>
<td>120</td>
</tr>
</tbody>
</table>

* The Junior Year Writing course, shown as a department requirement, is also a University General Education requirement. Thus, in reality the University requires 39 credits.

**The number of free elective credits will usually be greater than 17 because some departmental requirements may also be counted toward University General Education requirements. These include MATH 127 or 131 (R2), ECON 104 (SB), and one department course: either RES-ECON 102 (SB) or 121 (SBG) or 162 (SB) or 212 (R2) or 262 (SB) or 263 (SB). (RES-ECON 121 may also be used additionally to fulfill a General Education Global Diversity requirement.)
REQUIREMENTS CHECKSHEET
Bachelor of Science (BS) in Resource Economics

**Option:**
- CONSUMER AND FAMILY ECONOMICS (CFE)
- ENVIRONMENTAL & NATURAL RESOURCE ECONOMICS (ENRE)
- MANAGERIAL ECONOMICS (ME)

**Departmental Core Requirements (33-36 credits):**

<table>
<thead>
<tr>
<th>Sem.</th>
<th>Grade</th>
<th>Course</th>
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</tbody>
</table>

**Fundamental Competencies:**
- MATH 127 or MATH 131 Calculus I (R2)
- RES-ECON 112 Computing: Foundations to Frontiers
- RES-ECON 123 Intro to Res Econ (SB) or ECON 102 Intro Microeconomics (SB)
- RES-ECON 202 Price Theory OR ECON 203 Intermediate Microeconomic
  Pre-req MATH 127(or 131), RES-ECON 102(or ECON 103)
- ECON 104 Intro to Macroeconomics (SB)
- ECON 204 Intermediate Macroeconomic
  Pre-req Econ 104

**Microeconomics:**
- RES-ECON 102 Intro to Res Econ (SB) or ECON 103 Intro Microeconomics (SB)
- RES-ECON 202 Price Theory OR ECON 203 Intermediate Microeconomic
  Pre-req MATH 127(or 131), RES-ECON 102(or ECON 103)
- ECON 204 Intermediate Macroeconomic
  Pre-req Econ 104

**Quantitative Decision-Making:**
- RES-ECON 212 Introduction to
  Statistics/Social Science (R2) or
  STATISTC 240 Introduction to Statistics (R2)
- RES-ECON 213 Intermediate Statistics for
  Business and Economics
  Pre-req RES-ECON 212, 211 or STATISTC 240
- RES-ECON 214 Quantitative Methods in
  Applied Economics
  Pre-req RES-ECON 212, 211 or STATISTC 240

**Resource Economics Breadth Requirement:**
- RES-ECON 121 Hunger Global Econ (SBG) or
  RES-ECON 162 Consumer in Society (SB) or
  RES-ECON 262 Environmental Econ (SB) or
  RES-ECON 263 Natural Resource Econ (SB)
  (must be in addition to requirements for option
  requirements on page 2 of Checksheet)

**Integrative Experience Seminar:**
- RES-ECON 394LI Life is Full of Choices:
  ResEcon Integrative Seminar (Gen Ed IE)
  Pre-req RES-ECON 112 AND Junior Standing

**General Education Requirements:**

<table>
<thead>
<tr>
<th>Sem.</th>
<th>Grade</th>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>College Writing 112 (CW)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Basic Math (R1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Analytic Reason (R2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Biological Science (BS)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical Science (PS)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Literature (AL) or Arts (AT)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Historical Studies (HS)</td>
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<tr>
<td></td>
<td></td>
<td>Social &amp; Behavioral (SB)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social World (AL, AT, HS, SB, I, SI)</td>
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<tr>
<td></td>
<td></td>
<td>United States Diversity Course (U)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Global Diversity Course (G)</td>
<td></td>
</tr>
</tbody>
</table>
*Transfer Student (See Below) |
*Transfer Student (See Below) |

* Transfer students are required to take **two additional General Education courses** under transfer General Education Requirements. These courses can be 3 or 4 credits each in any General Education category. Commonwealth Transfer Compact (CTC) & Mass Transfer Block (MTB) transfer students are excluded from this requirement.

**You are responsible:**
- To ensure that all graduation requirements are fulfilled.
  Your Academic Requirements Report (ARR) can be viewed on your SPIRE account. You will meet with your advisor before choosing your courses each semester to review your progress toward completing graduation requirements.
- To keep track of the requirements for other minors or majors you are pursuing.
- To meet with your advisor every semester.

**Also, please note that:**
- Departmental requirements may not be taken pass/fail.
- The grade point average for all courses taken to satisfy departmental requirements must be a 2.0 or better.
- Any exception to departmental requirements must be approved by the Academic Advisor and Undergraduate Program Director. A waiver form must be completed and filed in the student’s academic folder.
**Option Requirements:** Complete ALL requirements listed in declared option (subplan)

### Consumer & Family Economics (CFE) (16 cr + 9 cr internship)

<table>
<thead>
<tr>
<th>Sem.</th>
<th>Grade</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RES-ECON 162 Consumer in Our Society (SB)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 314 Fin. Analysis for Cons./Firms</td>
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<tr>
<td></td>
<td></td>
<td>Pre-req RES-ECON 102(or ECON 103); MATH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>127(or 131)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 362 Consumer Protection/Legis.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-req RES-ECON 162</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 460 Family Economics</td>
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<tr>
<td></td>
<td></td>
<td>(Integrative Experience &amp; Capstone Course)</td>
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<td></td>
<td></td>
<td>Pre-req RES-ECON 202(or ECON 203) or consent of instructor</td>
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<tr>
<td></td>
<td></td>
<td>RES-ECON 470 Family Economic Policy:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Issues &amp; Implications</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Integrative Experience &amp; Capstone Course)</td>
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<td></td>
<td></td>
<td>Pre-req RES-ECON 162; RES-ECON 360 or consent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Internship (9 credits minimum)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-req Junior standing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Usually completed during summer</td>
</tr>
</tbody>
</table>

### Environmental & Natural Resource Economics (ENRE) (17 cr)

<table>
<thead>
<tr>
<th>Sem.</th>
<th>Grade</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RES-ECON 262 Environmental Econ (SB)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 263 Natural Resource Econ (SB)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 471 Benefit-Cost Analysis of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Natural Resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Integrative Experience &amp; Capstone Course)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-req RES-ECON 202(or ECON 203)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 472 Advanced Topics in Resource &amp; Environment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Integrative Experience &amp; Capstone Course)</td>
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<tr>
<td></td>
<td></td>
<td>Pre-req RES-ECON 202(or ECON 203)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENVIRSCI 213 Intro to Environ Policy OR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>POLISCI 382 Environmental Policy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Other policy courses may fulfill this requirement</td>
</tr>
</tbody>
</table>

### Managerial Economics (ME) (18 cr)

<table>
<thead>
<tr>
<th>Sem.</th>
<th>Grade</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ACCOUNTNG 221 Intro to Accounting I</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-req Sophomore Standing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MANAGMNT 301 Principles of Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-req Junior Standing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 314 Fin. Analysis for Cons./Firms</td>
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<tr>
<td></td>
<td></td>
<td>Pre-req RES-ECON 102(or ECON 103); MATH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>127(or 131)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FINANCE 301 Corporate Finance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-req ACCOUNTNG 221 and Junior Standing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 452 Industrial Organization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Integrative Experience Course)</td>
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<tr>
<td></td>
<td></td>
<td>Pre-req RES-ECON 202(or ECON 203)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 453 Public Policy in Private</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Markets (Integrative Experience Course)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-req RES-ECON 452 or consent of instructor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 428 Managerial Economics</td>
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<td></td>
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<td>(Capstone Course)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-req ACCOUNTNG 221 or RES-ECON 314 or FINANCE 301; RES-ECON 202(or ECON 203); RES-ECON 213; RES-ECON 313</td>
</tr>
</tbody>
</table>

**Selected Courses (Upper Year Electives) (12-18 cr)**

Number of courses depends on Option:
- Consumer & Family CFE (5 courses)
- Environmental & Natural Resources ENRE (5 courses)
- Managerial Economics ME (4 courses)

Selected courses must be chosen from the course list for each option as shown in the Resource Economics Undergraduate Handbook.
<table>
<thead>
<tr>
<th>Semester(s) Offered</th>
<th>Res-Econ Course #</th>
<th>Course Name</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall &amp; Spring</td>
<td>102</td>
<td>Introduction to Resource Economics</td>
<td></td>
</tr>
<tr>
<td>Fall &amp; Spring</td>
<td>112</td>
<td>Computing: Foundations to Frontiers</td>
<td></td>
</tr>
<tr>
<td>Fall</td>
<td>121</td>
<td>Hunger in a Global Economy</td>
<td></td>
</tr>
<tr>
<td>Fall (every year) &amp; Spring (in even numbered years)</td>
<td>162</td>
<td>The Consumer in Our Society</td>
<td>RES-ECON 102 or ECON 103; MATH 127 or MATH 131</td>
</tr>
<tr>
<td>Fall &amp; Spring</td>
<td>202</td>
<td>Price Theory</td>
<td>RES-ECON 102 or ECON 103; MATH 127 or MATH 131</td>
</tr>
<tr>
<td>Fall &amp; Spring</td>
<td>212</td>
<td>Introductory Statistics for the Social Sciences</td>
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</tr>
<tr>
<td>Fall &amp; Spring</td>
<td>213</td>
<td>Intermediate Statistics for Business and Economics</td>
<td>RES-ECON 212 or STATISTIC 240</td>
</tr>
<tr>
<td>Spring</td>
<td>262</td>
<td>Environmental Economics</td>
<td></td>
</tr>
<tr>
<td>Fall</td>
<td>263</td>
<td>Natural Resource Economics</td>
<td></td>
</tr>
<tr>
<td>Fall &amp; Spring</td>
<td>303</td>
<td>Writing in Resource Economics</td>
<td>ENGLWRIT 112 and Junior Standing</td>
</tr>
<tr>
<td>Spring</td>
<td>312</td>
<td>Introductory Econometrics</td>
<td>RES-ECON 202 or ECON 203; RES-ECON 213; RES-ECON 112 or consent of instructor</td>
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<tr>
<td>Fall</td>
<td>313</td>
<td>Quantitative Methods in Applied Economics</td>
<td>RES-ECON 212 or STATISTIC 240</td>
</tr>
<tr>
<td>Fall</td>
<td>314</td>
<td>Financial Analysis for Consumers and Firms</td>
<td>RES-ECON 102 or ECON 103; MATH 127 or MATH 131</td>
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<tr>
<td>Spring</td>
<td>324</td>
<td>Small Business Finance</td>
<td>RES-ECON 102 or ECON 103; RES-ECON 314 or FINANCE 301</td>
</tr>
<tr>
<td>Spring (in odd numbered years)</td>
<td>362</td>
<td>Consumer Protection &amp; Legislation</td>
<td>RES-ECON 162</td>
</tr>
<tr>
<td>Fall &amp; Spring</td>
<td>394LI</td>
<td>Life is Full of Choices: Res Econ Integrative Seminar</td>
<td>RES-ECON 112 &amp; Junior Standing</td>
</tr>
<tr>
<td>Spring</td>
<td>397A</td>
<td>Economics of Contemporary Information Technology</td>
<td>RES-ECON 102 or ECON 103</td>
</tr>
<tr>
<td>Fall &amp; Spring</td>
<td>428</td>
<td>Managerial Economics (Capstone Course)</td>
<td>ACCOUNTG 221 or RES-ECON 314 or FINANCE 301; RES-ECON 202 or ECON 203; RES-ECON 213 or 312; RES-ECON 313</td>
</tr>
<tr>
<td>Fall &amp; Spring</td>
<td>452</td>
<td>Industrial Organization in Resource Economics (IE Course)</td>
<td>RES-ECON 202 or ECON 203</td>
</tr>
<tr>
<td>Fall &amp; Spring</td>
<td>453</td>
<td>Public Policy in Private Markets (IE Course)</td>
<td>RES-ECON 452 or consent of instructor</td>
</tr>
<tr>
<td>Spring (in odd numbered years)</td>
<td>460</td>
<td>Family in Economic Systems (IE &amp; Capstone Course)</td>
<td>RES-ECON 202 or ECON 203; or consent of instructor</td>
</tr>
<tr>
<td>Spring</td>
<td>462</td>
<td>Experimental Economics</td>
<td>RES-ECON 202 or ECON 203</td>
</tr>
<tr>
<td>Spring (in even numbered years)</td>
<td>470</td>
<td>Family Economic Policy: Issues &amp; Implications (IE &amp; Capstone Course)</td>
<td>RES-ECON 162; RES-ECON 314 or consent of instructor</td>
</tr>
<tr>
<td>Spring</td>
<td>471</td>
<td>Benefit-Cost Analysis of Natural Resource Programs (IE &amp; Capstone Course)</td>
<td>RES-ECON 202 or ECON 203</td>
</tr>
<tr>
<td>Fall</td>
<td>472</td>
<td>Advanced Topics in Resource &amp; Environmental Economics (IE &amp; Capstone Course)</td>
<td>RES-ECON 202 or ECON 203</td>
</tr>
</tbody>
</table>

*IE = Integrative Experience
Consumer and Family Economics Option Requirements

NOTE: Most Resource Economics courses are taught either fall or spring AND all upper level Resource Economics courses carry prerequisites (sometimes several!). See page 9 for a summary. You must prepare a plan of study for all semesters through graduation to insure that you can meet departmental requirements.

1. Students in this option take the following five courses plus five courses selected from the list in Part 2, in addition to the 12 departmental core courses. Also, Part 3 indicates that an internship is required.
   RES-ECON 162 The Consumer in Our Society
   RES-ECON 314 Financial Analysis for Consumers and Firms
   RES-ECON 362 Consumer Protection and Legislation
   RES-ECON 460 Family Economics (Integrative Experience & Capstone)
   RES-ECON 470 Family Economic Policy: Issues and Implications (Integrative Experience & Capstone)

2. Select five courses from the following course list. Other courses not on this list may be substituted with the approval of the advisor. Note: Prerequisites may be required in some cases. Students can refine their area of specialization by selecting all or most of these six courses according to the groups below:

   For students who want to focus on Family Economics and Policy:
   RES-ECON 428 Managerial Economics
   ECON 341 Labor Economics
   ECON 348 Political Economy of Women
   POLISCI 280 Public Policy
   POLISCI 384 Comparative Public Policy
   SOCIOL 222 The Family
   SOCIOL 327 Social Change
   SOCIOL 341 Social Welfare

   For students who want to focus on Family Financial Management:
   RES-ECON 324 Small Business Finance
   ACCOUNTG 221 Introduction to Accounting I
   ECON 313 Public Finance
   FINANCE 301 Corporation Finance
   FINANCE 305 Investments
   MANAGMNT 301 Principles of Management

   For students who want to focus on Consumer Economics:
   RES-ECON 452 Industrial Organization
   RES-ECON 453 Public Policy in Private Markets
   COMM 287 Advertising as Social Communication
   ECON 308 Political Economy of the Environment
   ECON 311 Money and Banking
   ECON 321 International Monetary Theory
   ECON 322 International Trade
   MARKETNG 301 Fundamentals of Marketing
   MARKETNG 410 Consumer Behavior

   For students in any area of focus:
   RES-ECON 312 Introductory Econometrics

3. Internship: An internship is required. (9-12 credits)
Environmental & Natural Resource Economics
Option Requirements

NOTE: Most Resource Economics courses are taught either fall or spring AND all upper level Resource Economics courses carry prerequisites (sometimes several!). See page 9 for a summary. You must prepare a plan of study for all semesters through graduation to ensure that you can meet departmental requirements.

1. Students in this option take the following five courses plus five courses selected from the list in Part 2, in addition to the 12 departmental core courses.

   RES-ECON 262 - Environmental Economics
   RES-ECON 263 - Natural Resource Economics
   RES-ECON 471 - Benefit-Cost Analysis of Natural Resource Programs (Integrative Experience & Capstone)
   RES-ECON 472 - Advanced Topics in Resource and Environmental Economics (Integrative Experience & Capstone)

   One Policy course - ENVIRSCI 213 Intro to Environmental Policy, POLISCI 382 Environmental Policy, POLISCI 383 Energy Policy or NRC 409 Natural Resources Policy and Administration

2. Select five courses from the following course list. Other courses not on this list may be substituted with the approval of the advisor. Students who wish to organize their choices to complete a career emphasis should consult with their advisor to identify the appropriate courses. NOTE: Prerequisites may be required for some of the courses listed below. (Courses with a * cannot be used as both a Policy course and selected course.)

**Physical and Biological Science**

- BIOLOGY 421 - Plant Ecology
- ENVIRSCI 214 - Ecosystems, Biodiver. & Global Change
- Other 300 – 500 level Environmental Science Courses
- GEO-SCI 494LI - Living on Earth: Real-world Issues
- GEO-SCI 497E - Geography, Policy and Environment
- GEO-SCI 497PA - Protected Areas/Indigenous People
- PLSOILIN 342 - Pesticides, the Envir. & Public Policy
- PUBHLTH 562 - Air Quality Assessment
- STOCKSCH 350 - Sustainable Soil and Crop Management
- STOCKSCH 375 - Soil and Water Conservation

**Natural Resource Conservation**

- NRC 260 - Fish Conservation and Management
- NRC 261 - Wildlife Conservation
- NRC 297E - Forest Ecology and Conservation
- NRC 540 - Forest Resources Management
- NRC 564 - Wildlife Habitat Management
- NRC 571 - Fisheries Science and Management
- NRC 575 - Case Studies
- NRC 577 - Ecosystem Modeling and Simulation
- NRC 586 - Natural Resource Inventory of Local Lands
- NRC 590GC - Global Environmental Conservation
- NRC 590TP - Adapting to Climate Change: Theories, Policies and Action
- NRC 597EL - Environmental Law

**Public Policy, Business and Economics**

- ECON 309 - Game Theory
- ECON 313 - Public Finance
- ECON 366 - Economic Development
- ENVIRDES 553 - Resource Policy and Planning
- ENVIRDES 577 - Urban Policies
- ENVIRDES 591B - Sustainable Cities
- ENVIRSCI 213 - Introduction to Environmental Policy *
- HISTORY 383 - American Environmental History
- NRC 382 - Human Dimensions of Natural Resource Mgmt.
- NRC 409 - Natural Resources Policy and Administration *
- POLISCI 181 - Controversies in Public Policy
- POLISCI 253 - International Envir. Politics & Policy
- POLISCI 280 - Public Policy
- POLISCI 382 - Environmental Policy *
- POLISCI 383 - Energy Policy *
- REGIONPL 553 - Resource Policy and Planning
- REGIONPL 558 - Issues in Environmental Management
- REGIONPL 575 - Environmental Law and Res. Mgmt.
- RES-ECON 312 - Introductory Econometrics
- RES-ECON 428 - Managerial Econ. in Food & Res. Indus.
- RES-ECON 452 - Industrial Org. in Resource Econ.
- RES-ECON 453 - Public Policy in Private Markets
- RES-ECON 462 - Experimental Economics
Managerial Economics Option Requirements

NOTE: Most Resource Economics courses are taught either fall or spring AND all upper level Resource Economics courses carry prerequisites (sometimes several!). See page 9 for a summary. You must prepare a plan of study for all semesters through graduation to insure that you can meet departmental requirements.

1. Students in this option take the following six courses plus four courses selected from the list in Part 2, in addition to the 12 departmental core courses.

   ACCOUNTG 221 Introduction to Accounting I
   MANAGMNT 301 Principles of Management
   RES-ECON 314 Financial Analysis for Consumers and Firms (or FINANCE 301 Corp. Finance)
   RES-ECON 452 Industrial Organization in Resource Economics *(Integrative Experience)*
   RES-ECON 453 Public Policy in Private Markets *(Integrative Experience)*
   RES-ECON 428 Managerial Economics *(Capstone)*

2. Select four courses from the following course list. Other courses not on this list may be substituted with the approval of the advisor. (Courses with a * cannot be used to fulfill both a required course and a selected course.)

   **RES-ECON Courses**
   RES-ECON 312 Introductory Econometrics
   RES-ECON 314 Financial Analysis for Consumers and Firms*
   RES-ECON 324 Small Business Finance
   RES-ECON 362 Consumer Protection and Legislation
   RES-ECON 397A Economics of Contemporary Information Technology
   RES-ECON 462 Experimental Economics
   RES-ECON 471 Benefit-Cost Analysis of Natural Resource Programs

   **SCH-MGMT Courses**
   ACCOUNTG 222 Introduction to Accounting II
   FINANCE 301 Corporation Finance*
   FINANCE 305 Investments
   MANAGMNT 314 Human Resource Management
   MANAGMNT 444 Management-Union Relations
   MARKETNG 301 Fundamentals of Marketing
   MARKETNG 410 Consumer Behavior
   MARKETNG 425 Sales and Distribution Strategy
   MARKETNG 441 Marketing Management

   **ECON Courses**
   ECON 311 Money and Banking
   ECON 321 International Monetary Theory
   ECON 322 International Trade
   ECON 330 Labor in the American Economy
   ECON 341 Labor Economics
   ECON 394CI Economics of Cooperative Enterprises

   **Other Courses**
   SOCIOL 327 Social Change
   SOCIOL 386 Complex Organizations
# Suggested Sequence of Courses

## FIRST YEAR STUDENTS EXEMPT FROM ENGLWRIT 112

<table>
<thead>
<tr>
<th>FIRST YEAR FALL SEMESTER</th>
<th>FIRST YEAR SPRING SEMESTER</th>
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<tbody>
<tr>
<td>Math 127 or 131</td>
<td>3 or 4</td>
</tr>
<tr>
<td>Res-Econ Breadth (100/200 level) or Res-Econ 112</td>
<td>3 or 4 Res-Econ Breadth (100/200 level)</td>
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<tr>
<td>Social World (AL/AT)</td>
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<tr>
<td>Res-Econ 102 or Econ 104</td>
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<td><strong>CREDITS 15-17</strong></td>
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## FIRST YEAR STUDENTS NOT EXEMPT FROM ENGLWRIT 112

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<tr>
<th>FIRST YEAR FALL SEMESTER</th>
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<tr>
<td>Math 127 or 131</td>
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<td>Englwrit 112 or Res-Econ Breadth or Res-Econ 112</td>
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<td>Res-Econ 102 or Econ 104</td>
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<td>Biol. &amp; Phys. World (BS or PS)</td>
<td>4 Social World (AL/AT)</td>
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## SOPHOMORE FALL SEMESTER

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<tr>
<td>Res-Econ 202 or Econ 204</td>
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<tr>
<td>Res-Econ 213</td>
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<tr>
<td>Res-Econ 112 or Res-Econ Breadth</td>
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<tr>
<td>Social World (HS) + Diversity (U/G)</td>
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<td>Social World (SB) or elective</td>
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## JUNIOR FALL SEMESTER

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<td>Res-Econ 303</td>
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<tr>
<td>Econ 204</td>
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<tr>
<td>Res-Econ Option required course</td>
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<td>Elective</td>
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## SENIOR FALL SEMESTER

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<th>SENIOR SPRING SEMESTER</th>
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<tr>
<td>Integrative Experience Seminar</td>
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<tr>
<td>Res-Econ Option required course</td>
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<tr>
<td>Res-Econ Option required course</td>
</tr>
<tr>
<td>Res-Econ Option required course</td>
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<tr>
<td>Elective</td>
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<td><strong>CREDITS 13</strong></td>
</tr>
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</table>

## CREDITS 15-17

- Math 127 or 131
- Res-Econ Breadth (100/200 level) or Res-Econ 112
- Social World (AL/AT)
- Res-Econ 102 or Econ 104
- Biol. & Phys. World (BS or PS)

## CREDITS 16-17

- Res-Econ 102 or Econ 104
- Englwrit 112 or Res-Econ Breadth
- Res-Econ 112
- Res-Econ 212
- Social World (AL/AT)

## CREDITS 17-19

- Res-Econ 202 or Econ 204
- Res-Econ 213
- Res-Econ 112 or Res-Econ Breadth
- Social World (HS) + Diversity (U/G)
- Social World (SB) or elective

## CREDITS 17-18

- Res-Econ Option required course
- Social World (AL/AT/SB/I/SI) + (U/G)
- Biol. & Phys. (BS or PS) or elective

## CREDITS 15

- Res-Econ Option required course
- Elective
- Res-Econ Option required course
- Elective
- Res-Econ Option required course
- Elective

## CREDITS 13

- Elective
Undergraduate Course Descriptions

102 Introduction to Resource Economics (SB) (both semesters)

112 Computing: Foundations to Frontiers (both semesters)
Students work in a team-based learning environment to develop understanding of contemporary computing tools and concepts and the higher-order skills necessary to design and develop information systems that serve the interests of an organization. The class works in a reciprocal partnership with the Amherst Survival Center to learn hands-on how information systems developed in class impact an organization and the community it serves. Students are evaluated through a variety of means: projects, homework, informal reflections, exams, and a portfolio.

121 Hunger in a Global Economy (SBG) (fall semester)
Explores the causes of hunger (chronic undernutrition) from an economic perspective. Focus on how population growth and economic development are increasing demand for food and on the prospects for food production to supply those needs at affordable prices, while sustaining the environment. Discussion in the context of the global economy in which increased trade links even the poorest urban and rural residents in developing countries to market forces.

162 The Consumer in Our Society (SB) (fall semester every year, spring semester in even-numbered years)
An introduction to Consumer Economics and the role that consumers play including their decision-making and market and non-market consumption activities. Focus on contemporary consumer economic issues in addition to topics such as consumer rights and responsibilities, the impact of advertising, use of consumer credit, product safety, consumer fraud, and legal protections available to consumers.

202 Price Theory (both semesters)
Intermediate level microeconomic theory focusing on consumer demand theory and economics of production. Geometric and mathematical approaches presented. Models of market behavior related to example situations are explored. Applications to business and government decision-making emphasized. Required theory course for more advanced departmental offerings. Prerequisites: RES-ECON 102 or ECON 103, MATH 127 or MATH 131.

212 Introductory Statistics for the Social Sciences (R2) (both semesters)
Designed for students in the social science and business related fields of study. Introduction to basic statistical methods used to collect, summarize, and analyze numerical data. Emphasis on application to decision making; examples from the social sciences and business. Topics include: common statistical notation, elementary probability theory, sampling, descriptive statistics, statistical estimation and hypothesis testing. Basic algebra and familiarity with computer and internet necessary.

213 Intermediate Statistics for Business and Economics (R2) (both semesters)
Topics include hypothesis testing for two populations, analysis of variance for comparing three or more populations, simple linear regression, topics in multiple regression, and univariate time-series techniques like moving averages and exponential smoothing. Statistical software is used for advanced computations. Basic algebra required. Prerequisites: RES-ECON 212 or RES-ECON 211 or STATISTIC 240.
262 Environmental Economics (SB) (spring semester)
Economic analysis of environmental problems, focusing on air, water and land pollution. Emphasis is on analyzing individual incentives that lead to pollution, the valuation of environmental quality amenities, and the design and evaluation of regulations that seek to improve environmental quality. Includes the economic analysis of global climate change.

263 Natural Resource Economics (SB) (fall semester)
Economic analysis of natural resource use and conservation. Includes analyses of the use of fuel, forest, marine and biodiversity resources. Focuses on evaluating natural resource use in terms of efficiency and sustainability, and designing regulations for correcting inefficient and unsustainable resource markets.

303 Writing in Resource Economics (both semesters)
This course satisfies the Junior Year Writing requirement for students in RES-ECON. The emphasis is on developing students’ skills in critical thinking, writing, and effective communication. Prerequisite: ENGLWRIT 112 and Junior Standing.

312 Introductory Econometrics (spring semester)
Basic concepts in econometric methods. Estimation of the general linear model with applications to theoretical economic models. Introduction to problems and methods to solve problems common in economic data: multicollinearity, heteroskedasticity and autocorrelation. Nonlinear models, binary independent variables and binary dependent variable methods. Application of methods to real world data; emphasis is on application using econometric software. Students undertake a research project. Prerequisites: RES-ECON 202 or ECON 203, RES-ECON 213 or OIM 250, RES-ECON 112 or consent of the instructor.

313 Quantitative Methods in Applied Economics (fall semester)
Introduction to contemporary quantitative methods as applied to production, marketing, and resource management problems in both private and public settings. Topics include: linear programming and decision making under uncertainty. Prerequisite: RES-ECON 211 or RES-ECON 212 or STATISTIC 240.

314 Financial Analysis for Consumers and Firms (fall semester)
Foundations of the interest rate theory and fundamentals of finance. A problem-solving approach to selected financial applications as they affect microeconomic units such as the individuals, households, and small businesses. Financial planning, spending, credit and saving, investing, taxes, insurance, retirement, and estate planning are examples of the topics that will be examined. Prerequisites: RES-ECON 102 or ECON 103, MATH 127 or MATH 131.

324 Small Business Finance (spring semester)
Theory and application of entrepreneurial finance and basic financial management for a small firm. Emphasis will be placed on writing and presenting a complete business plan, in addition to examining topics such as financial statements, profitability and break-even analysis, working capital, capital budgeting, and forecasting. Prerequisite: RES-ECON 102 or ECON 103 and RES-ECON 314 or FINANCE 301.

362 Consumer Protection and Legislation (spring semester in odd-numbered years)
An introduction to basic issues in the seller-consumer relationship and to laws designed to protect consumers from unsafe products and fraudulent business practices. Topics include: product safety, consumer fraud, unfair business practices, and analysis of economic and social impact of consumer regulation. Prerequisite: RES-ECON 162.
394LI Life if Full of Choices: ResEcon Integrative Experience Seminar (both semesters)
Students will reflect on and integrate their learning and experience through the following activities: 1) Update a personal Reflective Portfolio and complete a series of activities in which they inventory and map courses taken, work experience, and extracurricular activities and identify skills they have attained through this experience; develop an updated resume, a networking website profile, and presentations of themselves as Resource Economists; and explore careers in Resource Economics and identify the skills needed to succeed in those career paths, and 2) Participate in weekly team activities comparing personal portfolios, honing communications about what Resource Economists know and can do, and identifying Resource Economics projects and making presentations seeking funding. This 1-credit course, plus one pair of 3-credit courses identified in the Academic Requirements Report, satisfies the Integrative Experience requirement for BS-ResEc majors. Prerequisite: RES-ECON 112 and Junior Standing.

397A Economics of Contemporary Information Technology (spring semester in odd-numbered years)
Economic analysis of the role that information plays in the economy, and study of the contemporary problems in information production, distribution and consumption that stem from the widespread adoption of new information technologies. Will address both macro and micro implications of IT, and both efficiency and equity concerns at the local, national, and international levels. Prerequisite: RES-ECON 102 or ECON 103.

428 Managerial Economics (both semesters)
Application of economic theory and quantitative analysis to the managerial decision-making process. Topics include: cost and production economics, demand analysis, business forecasting, investment project evaluation, and pricing and promotional strategies. Prerequisites: ACCOUNTG 221 or RES-ECON 314 or FINANCE 301, RES-ECON 202 or ECON 203, RES-ECON 213 or 312, RES-ECON 313. Capstone Course

452 Industrial Organization in Resource Economics (both semesters)
Market structure models with application to various industries. Firm behavioral strategies under different market structures. The role of product differentiation, advertising, market power, mergers, barriers to entry, and price and non-price rivalry. Market performance including prices, costs, profits, labor issues, and progressiveness. Prerequisite: RES- ECON 202 or ECON 203. Integrative Experience Course

453 Public Policy in Private Markets (both semesters)
Rationale and structure of public policies that affect the operation of private markets in the U.S., with special emphasis on consumer goods industries. Focus on antitrust and competition policies (e.g., those covering collusive restraints of trade, monopolization, and mergers) and on policies that affect product quality and information (e.g., product standards, regulation of advertising and labeling). Prerequisite: RES-ECON 452 or consent of instructor. Integrative Experience Course

460 Family in Economic Systems (spring semester in odd-numbered years)
An economic analysis of the behavior and circumstances of families and households. The course covers issues such as household decision-making, allocation of time, human capital, fertility, labor-force participation, and wage inequality. Standard microeconomic analysis will be applied to the production and consumption activities of the household. Prerequisites: RES-ECON 202 or ECON 203 or consent of instructor. Integrative Experience & Capstone Course

462 Experimental Economics (spring semester)
The purpose of this class is to introduce the methodology of experimental economics and what we have learned from the application of these techniques. Economics is fundamentally the study of how individuals, firms and governments allocate scarce resources. This involves decision making which is the focus of experimental economics. The techniques of Experimental Economics are used for a myriad of purposes. Roth (1995) in the introduction to the Handbook of Experimental Economics categorizes these as “Speaking to Theorists”, “Searching for Facts”, and “Whispering in the Ears of Princes” (p. 22). We will focus on “Speaking to Theorists”
– how the decision making of real economic agents relates to theory and the implications for public policy “Whispering in the Ears of Princes”. When students complete this class they will be expected to understand how individuals make decisions in a wide range of situations. Students will understand the importance of taking into account preferences for altruism, fairness and reciprocity to the predictions of standard theory, and also be able to identify situations where these preferences are important and when they are overshadowed by factors such as competition. Prerequisite: RES-ECON 202 or ECON 203.

470 Family Economic Policy: Issues and Implications (spring semester in even-numbered years)
This course includes: (1) an overview of issues critical to the economic well-being of individuals and families around the world and its impact on the U.S. economy and (2) a review of public programs that affect the economic well-being of families in the United States. Special attention will be paid to the underlying philosophies of U.S. public welfare programs and their economic impact on households, an understanding of the policy process, and the fundamentals of family economics research. Prerequisites: RES-ECON 162; RES-ECON 314 or consent of the instructor. Integrative Experience & Capstone Course

471 Benefit-Cost Analysis of Natural Resource Programs (spring semester)
Theoretical foundations and practical procedures of benefit-cost analysis as applied to public natural resources and environmental projects, programs, and regulations. Critical discussion of strengths and weaknesses of this tool. Topics from water resources, land use, outdoor recreation, air quality, coastal zone management, and other natural resources and environmental areas. Prerequisite: RES-ECON 202 or ECON 203. Integrative Experience & Capstone Course

472 Advanced Topics in Resource and Environmental Economics (fall semester)
Topics may include: the design of environmental and natural resource policies, particularly incentive-based policies; the analysis and control of environmental risks; cost-benefit analyses of specific environmental policies; critiques of cost-benefit analysis; international environmental cooperation; environmental and natural resource policy in the developing world; sustainability; and the conservation of biodiversity. Prerequisite: RES-ECON 202 or ECON 203. Integrative Experience & Capstone Course

196H, 296H, 396H, 496H Honors Independent Study
These courses require a faculty sponsor. Contact the Commonwealth College Office—301 Commonwealth Honors College—to add these courses.

196, 296, 396, 496 Independent Study
Independent Study courses are available to students who wish to pursue a particular topic in depth. They generally take the form of a reading course with weekly one-on-one discussions with the professor about the reading, a research experience with completion of a written mini-thesis report involving regular consultation with the professor, or a combination of these two formats. Other formats are possible with the approval of the professor selected by the student to direct the course. Independent study courses do not count toward any departmental requirements.

298, 398, 498 Practicum (Semester Long Courses)
298Y, 398Y, 498Y Practicum (Year Long Courses)
Under the University Internship Program students may work in a professional environment and earn academic credit. The program integrates practical professional experience with the student’s prior and future course of study. Eligible students, working with a faculty sponsor, can earn up to 15 credits for a full semester internship. All internship courses are offered as mandatory PASS/FAIL. Students doing internships in summer register through Continuing Education for credits. For more information see “Searching for Internships, Co-ops, and Employment” on page 21 of this handbook and see Julie Caswell (in 223 Stockbridge) or Sheila Mammen (in 303 Stockbridge), departmental Internship Coordinators, for more details about internships.
499N, O Honors Thesis Seminar: Implementing Sustainability and Social Responsibility in Today’s Economy
Preference in registration given to Commonwealth Honors College Seniors using this course toward their Honors Project requirement; others as space permits. Prospective students should email Dr. Crago at ccrago@resecon.umass.edu with a brief essay describing why they want to take the course and what they hope to achieve by participating in it. See Departmental Honors Program on page 19 for details.

499Y Honors Research/499T Honors Thesis
See Departmental Honors Program on page 19 for details. Contact the Commonwealth College Office—301 Commonwealth Honors College—to add this course
Departmental Honors in Resource Economics

Please make an appointment by email to see Dr. Angela de Oliveira, Honors Program Director, to discuss your interest in the Honors Program at adeolive@resecon.umass.edu.

Departmental Honors (DH) is an Advanced Scholarship track of Commonwealth Honors College (CHC). Students may complete DH as part of the full CHC curriculum, which includes Honors General Studies, or they may complete DH alone. All DH students are members of CHC. For an overview of the entire Commonwealth Honors College curriculum see: https://www.honors.umass.edu/curriculum.

Admission Criteria for Resource Economics Departmental Honors:
Minimally, to be eligible to apply for Department Honors (DH), students must have:

- An overall GPA of 3.400 or higher earned after one fulltime semester of UMass Amherst coursework.
- The ability to complete the DH-Track requirements.
- The ability to complete the CHC residency requirement, i.e., 45-graded (not pass/fail) credits earned at UMass Amherst (not transferred).

Admission Process for Resource Economics Departmental Honors:

- UMass Amherst students who are not already members of Commonwealth Honors College (CHC) must apply to Departmental Honors (DH), an Advanced Scholarship track of CHC, via the CHC online application using the following link: https://www.honors.umass.edu/admissions/apply-current-students.
- Students who are already CHC members meet with the department’s Honors Program Director (HPD) regarding their interest in joining Departmental Honors (DH), an Advanced Scholarship track of CHC. The HPD will determine a student's eligibility and preparedness for DH. Admission to DH will be at the discretion of the HPD based on the criteria as established by the department and CHC (see Admission Criteria above). The HPD will notify the CHC office of newly accepted DH students so appropriate steps can be taken for SPIRE designation.

Requirements for Resource Economics Departmental Honors:
Successful completion of the DH course requirements and the submission of a properly formatted Honors Thesis manuscript will result in the award of “Departmental Honors” on the student’s academic transcript. The course requirements for Departmental Honors are:

- 1 RES-ECON honors course any level with grade of B or better
- 1 RES-ECON honors course 300-level or higher with grade of B or better
- Honors Thesis with grades of B or better earned in both parts

<table>
<thead>
<tr>
<th>Option A</th>
<th>Individually Contracted Honors Thesis: RES-ECON 499Y Honors Research and RES-ECON 499T Honors Thesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option B</td>
<td>Honors Thesis Seminar: RES-ECON 499N and RES-ECON 499O Implementing Sustainability and Social Responsibility in Today’s Economy</td>
</tr>
<tr>
<td>Option C</td>
<td>Alternate Honors Thesis/Project Seminar as approved by Honors Program Director</td>
</tr>
</tbody>
</table>

Although not required, we strongly encourage Departmental Honors students to enroll in RES-ECON 312 (Econometrics).

Note: exceptions to the requirements above require approval by both the Honors Program Director and a CHC advisor; requests must be submitted in writing via the CHC Petition for Exception form: https://www.honors.umass.edu/forms-and-documents.
Searching for Internships, Co-ops, & Employment

UMass Career Services and the Department can be helpful to you in finding internships, co-ops, and employment opportunities and in taking full advantage of the opportunities you discover. Nonetheless, much of the responsibility rests with the individual student. As an individual, you must take the initiative to act on this information and these opportunities. Establish a relationship with Career Services during your first or second year. Build a network of contacts and use creative methods to identify additional opportunities. Active participation in the Department’s Undergraduate Club, the Resource Economics Society, will prove helpful.

Internships and Co-ops
Internships and cooperative placements in the summer months between academic years or within a semester are excellent ways to use the knowledge and skills learned in your courses, develop new skills, and start to build your career network. To get started, attend a workshop offered by Career Services (see http://www.umass.edu/careers/) and then meet with your academic advisor or the department internship coordinator, Dr. Sheila Mammen (smammen@resecon.umass.edu) to discuss opportunities.

Finding a Job after Graduation
The greatest amount of employment assistance available through the University is that offered by Career Services. To learn of the assistance available there and establish your credentials file, you should visit Career Services well in advance of graduation, and certainly during your junior year. To keep informed of events/programs offered be sure to maintain contact with Career Services, read the Collegian regularly for announcements, and take note of the 2nd floor Stockbridge Hall “Undergraduate News” bulletin board. Resources offered by Career Services include:

- Resume Writing
- Cover Letter Writing
- E-Recruiting
- Networking
- Career Fair Preparation
- Accepting and Negotiating Offers
- Interview Preparation
- Alumni Mentor Program
- Individual meetings with Advisors

Who to contact:
Career Services, Goodell Building, room 511. http://www.umass.edu/careers/

Self Help
Most students are quite resourceful. Searching for employment opportunities is an occasion where you can help yourself considerably. Developing a network of contacts and information is one very useful step you can take. Contacts can be developed by attending events such as meetings and conferences involving persons from the industry or occupational area of greatest interest to you. They can also be made through internships and co-ops, part-time jobs, guest speakers or seminars at school, career or internship fairs, or through friends, acquaintances, and alumni in the field. In addition, opportunities to make use of your resume may occur at any time. Be sure that you are prepared.
MINOR IN RESOURCE ECONOMICS

1. Base Requirements (Satisfy All)

<table>
<thead>
<tr>
<th>Sem.</th>
<th>Grade</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RES-ECON 102, Intro to Res Econ (or ECON 103)</td>
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<td></td>
<td></td>
<td>RES-ECON 212 or STATISTIC 240, Intro to Statistics</td>
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<td></td>
<td>MATH 127 or 131, Calculus I</td>
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<td></td>
<td></td>
<td>Four Departmental Courses as specified by Area of Concentration (See 2. Area of Concentration)</td>
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<td></td>
<td></td>
<td>A grade point average of 2.0 or better on all courses that count towards minor.</td>
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</tbody>
</table>

2. Area of concentration (Choose One)

<table>
<thead>
<tr>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer &amp; Family Economics</td>
</tr>
<tr>
<td>Environmental &amp; Natural Resource Economics</td>
</tr>
<tr>
<td>Managerial Economics</td>
</tr>
</tbody>
</table>

Complete 4 courses as specified by Area of Concentration. (See 3. Departmental Courses for course options for each Area of Concentration).

Note:
1. Transfer credits will be evaluated on an individual basis.
2. Independent study and practicum courses will not be counted toward the minor.
3. Econ 203 may be substituted for RES-ECON 202 as a pre-requisite for other courses, but ECON 203 CANNOT be counted as one of the four departmental courses students must take under each option.
4. Other equivalent courses from other departments will be evaluated on an individual basis by the Chief Undergraduate Advisor.

To Declare a MINOR in RESOURCE ECONOMICS:

Once you have completed the BASE REQUIREMENTS (7 courses with GPA of 2.0), or you are in your last semester of study and in the process of completing the requirements, fill out SECTION A of the DECLARATION OF AN ACADEMIC MINOR form (http://www.umass.edu/registrar/media/DeclarationofAcademicMinor.pdf) and submit it to the Chief Undergraduate Advisor, Resource Economics, Stockbridge 208C for confirmation.

Department of Resource Economics
http://www.umass.edu/resec
208 Stockbridge Hall
University of Massachusetts Amherst
Amherst, Massachusetts 01003-9246

Lianne H. Raposo
Chief Undergraduate Advisor
208C Stockbridge Hall
E-mail: advising@resecon.umass.edu
### CONSUMER & FAMILY ECONOMICS

<table>
<thead>
<tr>
<th>Sem.</th>
<th>Grade</th>
<th>Course</th>
<th>Semester</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RES-ECON 162, The Consumer in Our Society</td>
<td>Fall (every) &amp;</td>
<td>RES-ECON 162</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Spring (even)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>RES-ECON 314, Fin. Analysis for Consumers/Firms</td>
<td>Fall</td>
<td>RES-ECON 102 or ECON 103; MATH 127 or 131</td>
</tr>
</tbody>
</table>

Choose Two of the Following:

<table>
<thead>
<tr>
<th>Sem.</th>
<th>Grade</th>
<th>Course</th>
<th>Semester</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RES-ECON 362, Consumer Protection</td>
<td>Spring (odd)</td>
<td>RES-ECON 162</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 460, Family Economics</td>
<td>Spring (odd)</td>
<td>RES-ECON 202 of ECON 203 or instructor consent</td>
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<tr>
<td></td>
<td></td>
<td>RES-ECON 470, Family Economic Policy: Issues &amp; Implications</td>
<td>Spring (even)</td>
<td>RES-ECON 162; RES-ECON 314 or instructor consent</td>
</tr>
</tbody>
</table>

### ENVIRONMENTAL & NATURAL RESOURCE ECONOMICS

<table>
<thead>
<tr>
<th>Sem.</th>
<th>Grade</th>
<th>Course</th>
<th>Semester</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RES-ECON 262, Environmental Economics or RES-ECON 263 Natural Resource Economics</td>
<td>Spring or Fall, resp.</td>
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Choose Three of the Following:

<table>
<thead>
<tr>
<th>Sem.</th>
<th>Grade</th>
<th>Course</th>
<th>Semester</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RES-ECON 263, Nat. Res. Econ. or RES-ECON 262 Environ. Econ. (opposite of above)</td>
<td>Fall or Spring, resp.</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 202, Price Theory</td>
<td>Fall &amp; Spring</td>
<td>RES-ECON 102 or ECON 103; MATH 127 or 131</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 213, Intermediate Statistics</td>
<td>Fall &amp; Spring</td>
<td>RES-ECON 212 or STATISTIC 240</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 312, Introductory Econometrics</td>
<td>Spring</td>
<td>RES-ECON 202 or ECON 203; RES-ECON 213 or OIM 250; RES-ECON 112 or consent of instructor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 471, Benefit-Cost Analysis of Nat. Res.</td>
<td>Spring</td>
<td>RES-ECON 202 or ECON 203</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 472, Adv. Topics Res. &amp; Environ. Econ.</td>
<td>Fall</td>
<td>RES-ECON 202 or ECON 203</td>
</tr>
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</table>

### MANAGERIAL ECONOMICS

<table>
<thead>
<tr>
<th>Sem.</th>
<th>Grade</th>
<th>Course</th>
<th>Semester</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RES-ECON 428, Managerial Economics</td>
<td>Fall &amp; Spring</td>
<td>RES-ECON 202 or ECON 203; RES-ECON 103 or ECON 103; MATH 127 or 131</td>
</tr>
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</table>

Choose Three of the Following:

<table>
<thead>
<tr>
<th>Sem.</th>
<th>Grade</th>
<th>Course</th>
<th>Semester</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RES-ECON 202, Price Theory</td>
<td>Fall &amp; Spring</td>
<td>RES-ECON 102 or ECON 103; MATH 127 or 131</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 213, Intermediate Statistics</td>
<td>Fall &amp; Spring</td>
<td>RES-ECON 212 or STATISTIC 240</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 312, Introductory Econometrics</td>
<td>Spring</td>
<td>RES-ECON 202 or ECON 203; RES-ECON 213 or OIM 250; RES-ECON 112 or consent of instructor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 313 Quantitative Methods in App. Econ.</td>
<td>Fall</td>
<td>RES-ECON 212 or STATISTIC 240</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 314, Fin. Analysis for Consumers/Firms</td>
<td>Fall</td>
<td>RES-ECON 102 or ECON 103; MATH 127 or 131</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 324, Small Business Finance</td>
<td>Spring</td>
<td>RES-ECON 102 or ECON 103; RES-ECON 314 or FINANCE 301</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 452, Industrial Organization in Res. Ec.</td>
<td>Fall &amp; Spring</td>
<td>RES-ECON 202 or ECON 203</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 453, Public Policy in Private Markets</td>
<td>Fall &amp; Spring</td>
<td>RES-ECON 452 or consent of instructor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RES-ECON 471, Benefit-Cost Analysis of Nat. Res.</td>
<td>Spring</td>
<td>RES-ECON 202 or ECON 203</td>
</tr>
</tbody>
</table>
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