Department of Resource Economics • University of Massachusetts Amherst

# Undergraduate Handbook

UMassAmherst

College of Social & Behavioral Sciences

Resource Economics

## B.S. Resource Economics

## B.S. Managerial Economics

### Fall 2022-Spring 2023


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# Overview of Undergraduate Programs and 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. As of Spring 2020, students in the Department of Resource Economics choose from two majors: B.S. Resource Economics and B.S. Managerial Economics.

Prior to Spring 2020, the department offered a B.S. in Resource Economics with a concentration in Managerial Economics. This degree required the same coursework as the current B.S. in Managerial Economics. The department currently has students who joined the department prior to Spring 2020 completing degrees in Resource Economics with a concentration in Managerial Economics. A degree in Resource Economics with a concentration in Managerial Economics is not an option for students entering the department Spring 2020 or later.

Students in Resource Economics and Managerial Economics complete 12 departmental core courses. 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. Resource Economics majors then complete five required courses related to environmental and natural resource issues and five upper-level selected courses. Managerial Economics majors then complete six required courses designed to build competency in accounting, management, finance, industrial organization, public policy and managerial decision making and four upper-level selected courses.

B.S. Resource Economics and B.S. Managerial Economics are STEM degrees for the purposes of Optional Practical Training (OPT).

Some career opportunities for graduates of each major are identified below. Although most students accept jobs upon graduation, some students 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 to learn more about the math courses recommended for students wishing to pursue graduate school in economics.

## Career Opportunities

### B.S. Resource Economics

Resource Economics 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, 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. They also engage in work related to environmental economics, natural resource economics, public policy, experimental economics, and behavioral economics. Resource Economics prepares graduates 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 environmental and natural resource areas. It also prepares graduates to pursue graduate degrees in resource economics, economics, and other fields.

**B.S. Managerial Economics**

Managerial Economics applies microeconomic theory and data analysis to business decision making. Students develop expertise in accounting, finance, business strategies, and market demand analysis. They also engage in work related to industrial organization, public policy, experimental economics, and behavioral economics. Microeconomic models and case studies are incorporated into the curriculum to demonstrate how an individual can make wise choices to operate effectively within a complex economy of millions of businesses linked by thousands of markets. Managerial Economics career opportunities include research, planning, marketing, and managerial positions in a wide range of firms and governmental agencies. Recent graduates hold positions in finance, insurance, banking, management, market research, merchandising, recruiting, consulting, and strategic planning as well as pursue graduate degrees in resource economics, economics, public policy, business administration, data analytics, and accounting.

# Summary of University Requirements

## University Graduation Requirements

1. 120 credits (minimum).
2. Minimum cumulative grade point average of 2.0.
3. Completion of General Education requirements as described below.
4. Completion of College requirements (if applicable). **Students who have Resource Economics or Managerial Economics as their primary major are exempt from the SBS Global Education requirement that is required for students in other SBS majors who entered UMass Amherst prior to Fall 2018. Students who entered UMass Amherst Fall 2018 or later do not have College level requirements across all SBS majors.**
5. Completion of the requirements of a major. Resource Economics and Managerial Economics major requirements are detailed on the following pages.

## University General Education Requirements

The General Education requirements consist of courses with General Education designations in the following areas (for students who entered UMass Amherst Fall 2018 or later):

**Writing**—Two courses required (one CW (or exemption—see Writing Program) and one upper level Junior Year Writing course offered by major department)

**Basic Math**—One course required (R1 or passing score on Tier 1 Math Exemption Exam)

**Analytic Reasoning**—One course required (R2)

**Biological and Physical World**—Two courses required (one BS and one PS)

**Social World**—Four courses required (one AL or AT, one HS, one SB, and one AL, AT, SB, I, or SI)

**Social and Cultural Diversity**—Two courses (one DU and one DG). DU courses focus on United States Diversity and DG courses focus on Global Diversity. All DU and DG courses carry dual Gen Ed designations (e.g. AL DU; SB DG). **Students must complete one DU or DG course in their first year at UMass Amherst.**

**Integrative Experience**—Offered through your major department. Number of courses varies by department.

**Additional General Education**—Two additional courses must be completed in any of the Gen Ed areas (except Writing) by transfer students. These additional courses ensure that transfer students earn the appropriate proportion of Gen Ed credits within their overall degree program.

For more information on the General Education program, please refer to: http://www.umass.edu/gened/

## Important Information Concerning General Education Requirements

1. As many as four courses from a student's major department can be applied to Gen Ed requirements: Junior Year Writing, Integrative Experience, one course applied to another Gen Ed requirement, and one applied to a Diversity requirement.
2. Gen Ed courses cannot be taken pass/fail.

**Fulfilling General Education Requirements**
**For those entering UMass Amherst as first year students Fall 2018 or later**

| CURRICULUM AREA | # OF COURSES REQUIRED | # OF CREDITS | FULFILLING THE REQUIREMENT |
|---|---|---|---|
| Writing | 2 courses | 6 credits | One course (CW) or exemption (see Writing Program) and one upper level 3-credit course in your major department (JYW) |
| Basic Mathematics | 1 course | 0-3 credits | One course (R1) or a passing score on the Tier 1 Math Exemption Exam |
| Analytic Reasoning | 1 course | 3 credits | One course (R2) |
| Biological & Physical World | 2 courses | 8 credits | One course (BS), and one course (PS) |
| Social World | 4 courses | 16 credits | One course (AL/AT), one course (HS), one course (SB), and one course (AL, AT, SB, I or SI) SI) |
| Social and Cultural Diversity | 2 courses | 8 credits | One course focusing on UNITED STATES diversity (DU) and one course focusing on GLOBAL diversity (DG). **One DU or DG course must be completed in first year.** |
| Integrative Experience | varies by dept. | varies by dept. | Courses required vary by department |

**For Transfer Students:**

Transfer students should consult an advisor on which General Education requirements they have left to complete. In addition to the requirements above, transfer students must also complete two additional Gen Ed courses from any area (except Writing).

# Resource Economics Department
# Student Learning Objectives

## The Department of Resource Economics seeks to prepare students to:

*Purpose of Learning:*

1. Creatively apply the acquired knowledge from their respective fields to make optimal choices in their professional and personal lives.

*Base of Learning:*

1. Understand and master microeconomics as a foundational theory.
2. Achieve proficiency in the supporting disciplines, such as macroeconomics, mathematics, statistics, and finance.
3. Acquire a broad knowledge in related fields in order to be well-versed in current economic and policy issues.
4. Communicate effectively;
    a. Orally,
    b. In writing, and
    c. Using current digital and multimedia technologies
5. Integrate theoretical principles with quantitative techniques to promote decision-making.
6. Synthesize, analyze, evaluate, and generate effective solutions to evolving problems in their respective fields and personal lives.

*Life-long Learning:*

1. Consistently foster safe, fair, open, and diverse professional and social environments.
2. Continually integrate new knowledge gained from a variety of sources, with ability to discern the quality of the source, in order to make well-informed decisions.

**Experiential Goals**

1. Enhance teamwork/collaborative skills through
    a. Group work, activities, assignments, etc., and/or
    b. Team-Based Learning (e.g. ResEc 112, ResEc 212, ResEc 394LI)
2. Experience active learning strategies: flipped classrooms, debate, field trips, economic experiments and games, presentations, student-response system (e.g., iClicker, Google Forms), etc.
3. Engage in non-economic aspects of career preparation (ResEc 112, Junior Year Writing, Integrated Experience semianr).
4. Conduct independent and group research.
5. Get involved in co-curricular activities (student groups, leadership).
6. Interact with alumni.
7. Participate in department-wide new-student meeting (new orientation which will provide an overview of the department, course plans, and resources as well as the learning objectives).
8. Enroll in internships

# Resource Economics Major Requirements

Many major courses are taught either fall or spring and all upper-level Resource Economics courses carry prerequisites (sometimes several). See **Department of Resource Economics Courses: Semesters Offered & Prerequisites** in this handbook for a summary. You must prepare a plan of study for all semesters through graduation to ensure that you can meet departmental requirements. A major requirements checksheet is provided in this handbook to assist with planning.

The Resource Economics (concentration in Environmental and Natural Resource Economics) major consists of twelve departmental core courses (Section A), five major required courses (Section B), and five upper-level selected courses (Section C). Section D provides suggested courses for students pursuing graduate school in resource economics or economics. Section E provides general information about the departmental requirements.

**A. Departmental Core Requirements (12 courses)**

1. MATH 127 (Calculus for Life and Social Sciences) or MATH 131 (Calculus I)
2. RES-ECON 102 (Intro to Resource Economics) or ECON 103 (Principles of Microeconomics)
3. ECON 104 (Principles of Macroeconomics)
4. Breadth requirement: RES-ECON 106 (formerly 162) (Economics is Everywhere) or RES-ECON 107 (formerly 121) (Hunger in the Global Economy)
5. RES-ECON 112 (Computing: Foundations to Frontiers)
6. RES-ECON 212 (Intro to Statistics for the Social Sciences) or STATISTC 240 (Intro to Statistics)
7. RES-ECON 202 (Price Theory) or ECON 203 (Intermediate Microeconomics)
8. ECON 204 (Intermediate Macroeconomics)
9. RES-ECON 213 (Intermediate Statistics for Business and Economics)
10. RES-ECON 313 (Decision Analysis)
11. RES-ECON 303 (Writing in Economics—Junior Year Writing)
12. RES-ECON 394LI (Life is Full of Choices—IE Seminar)

**B. Resource Economics Upper-Level Requirements**

1. RES-ECON 262 (Environmental Economics)
2. RES-ECON 263 (Natural Resource Economics)
3. RES-ECON 471 (Benefit-Cost Analysis)
4. RES-ECON 472 (Advanced Topics in Resource and Environmental Economics)
5. Public Policy Requirement: ENVSCI 213 (Intro to Environmental Policy) or NRC 309 (Natural Resource Policy and Admin) or RES-ECON 360 (formerly 397E) (Economic Development & The Environment) or RES-ECON 363 (Formerly 397W) (Economics of Water Policy) or POLISCI 383 (Energy Policy)

**C. Resource Economics Selected Courses**

The goal of the five selected upper-level elective courses is to add depth and/or breadth to the curriculum of the student's chosen major. Courses taken to add depth will allow students to develop a specialization and/or acquire certain skills in a specific area of interest within their major. Courses taken to add breadth will allow students to touch on topics related to their major. *All courses should be selected in conjunction with an advisor.* Please refer to the next section of this handbook for more specific information.

**D. Additional Recommended Courses (not requirements)**

1. For students considering graduate study in resource economics or economics, the following courses are strongly recommended:
    a. MATH 132 – Calculus II
    b. MATH 233 – Multivariate Calculus
    c. MATH 235 – Introduction to Linear Algebra
    d. RES-ECON 312 – Introductory Econometrics

**E. Other Departmental Requirements**

1. Departmental requirements may not be taken pass/fail.
2. The cumulative grade point average of all courses taken to satisfy departmental requirements 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 your academic advisor.

# Resource Economics Selected Courses

Students completing a degree in Resource Economics (concentration in Environmental and Natural Resource Economics) are required to complete 12 departmental core courses, five required courses related to environmental and natural resource issues, and five selected courses.

The goal of selected upper-level elective courses is to add depth and/or breadth to the curriculum of the student's chosen major. Courses taken to add depth will allow students to develop a specialization and/or acquire certain skills in a specific area of interest within their major. Courses taken to add breadth will allow students to touch on topics related to their major. *All courses should be selected in conjunction with an advisor.*

As a Resource Economics major, you may not have the ability to enroll in all of these courses through SPIRE. For courses you cannot enroll in through SPIRE, you will need to request instructor permission to enroll. Prior to enrolling, please check course prerequisites and enrollment eligibility in SPIRE.

*For students admitted prior to Fall 2022, if alternate electives were granted as upper-level electives,, we will continue to honor those approvals.*

## Resource Economics Upper-Level Electives (5 total):

- **1 upper-level (300-level or higher) course within the departments of Resource Economics or Economics**.
- **1 upper-level (300-level or higher) course from the College of Social and Behavioral Sciences (SBS):** (Anthropology, Communication, Economics, Journalism, Landscape Architecture, Legal Studies, Political Science, Public Policy, Resource Economics, Social Thought & Political Economy, Sociology, Sustainable Community Development)
- **3 upper-level (300-level or higher) courses from *any* department/college.** Will also allow Math 233 or 235 for this requirement.

**Important Notes:**

- A maximum of **2 courses may be applied from transfer credits**. The remainder of the upper-level requirements must be taken through UMass Amherst (this includes UWW, UMass-approved Study Abroad Program courses, and Five College Consortium courses).
- The courses **must be graded** to count – no pass/fail grades will be allowed. This means all internships are excluded, and independent studies may be included *only* if the experience is chosen to be graded as opposed to pass/fail.
- **At least one of these courses is encouraged to be quantitative** in nature (this would include courses within the department of Resource Economics or coursework in Math/Statistics/Computer Science/ Informatics/IT, etc.), particularly if you hope to go on to graduate study.
- While course options are broad for your upper-level requirements, *if you are interested in a particular focus, we encourage incorporating the suggestions in different focus areas on the following pages.*
    - *If you select a focus area, you may list on your resume a BS in Resource Economics: Health Economics Focus (ex.)*

# Resource Economics Selected Courses

While not required, some students like to use their selected courses to develop a focus area that aligns with their interests or career aspirations. The following is a small sampling of courses to consider. Students are not limited to the listed focus areas or courses listed therewithin. A course taken as part of a major requirement cannot also be counted as a selected upper-level elective.

## Behavioral/Experimental Economics

**RES-ECON 440 (was 462)** Experimental Economics
*Pre-requisite - Res-Econ 202 or 203*

**ECON 309** Game Theory
*Pre-requisite - Econ 103 or 102 and one of the following: Math 127, 128, 131, 132, Econ 151, 152*

**ECON 397BE** Behavioral Economics
*Pre-requisite - Econ 103 or Res-Econ 102*

**PSYCH 360** Social Psychology
*Pre-requisite - Psych 100 or 110*

## Managerial (Industrial Organization) Economics

**RES-ECON 312** Introduction to Econometrics
*Pre-requisite - Res-Econ 112, 202 (or 203) and 213*

**RES-ECON 315 (was 397A)** Economics of Contemporary Information Technology
*Pre-requisite - Res-Econ 102 or 103*

**RES-ECON 323 (was 314)** Financial Analysis for Consumers & Firms
*Pre-requisite - Res-Econ 102 or Econ 103 and Math 127 or 131*

**RES-ECON 324** Small Business Finance
*Pre-requisite - Res-Econ 102 or Econ 103 and Res-Econ 314 or Finance 301*

**RES-ECON 414 (was 497T)** Topics in Time Series & Forecasting
*Pre-requisite - Res-Econ 213*

**RES-ECON 428** Managerial Economics
*Pre-requisite - Accountg 221 or Res-Econ 323 (was 314) or Finance 301, and Res-Econ 202 or Econ 203, and Res-Econ 213 or 312, and Res-Econ 313*

**RES-ECON 452** Industrial Organization
*Pre-requisite - Res-Econ 202 or Econ 203*

**RES-ECON 453** Public Policy in Private Markets
*Pre-requisite - Res-Econ 452*

**ECON 309** Game Theory
*Pre-requisite - Econ 103 or 102 and one of the following: Math 127, 128, 131, 132, Econ 151, 152*

**ECON 311** Money and Banking
*Pre-requisite - Econ 103 or Res-Econ 102 and both Econ 104 and 204*

**ECON 313** Public Finance
*Pre-requisite - Econ 203 or Res-Econ 202*

**ECON 321** International Monetary Theory
*Pre-requisite - Econ 204*

**ECON 330** Labor in the American Economy
*Pre-requisite - Econ 103 or Res-Econ 102*

**FINANCE 301** Corporate Finance
*Pre-requisite - Accountg 221 or 233*

## Environmental & Natural Resource Economics

**RES-ECON 360 (was 397E)** Econ. Dev. & The Environment
*Pre-requisite - Res-Econ 102, 103, 262, or 263*

**RES-ECON 363 (was 397W)** The Economics of Water Policy
*Pre-requisite - none*

**ECON 308** Political Econ of the Environment
*Pre-requisite - Res-Econ 102 or Econ 103*

**ENVIRSCI 445** Sustainability/Problem Solving in Envir.Sci
*Pre-requisite - none*

**NRC 597EC** Analytical Methods for Energy & Climate Policy
*Pre-requisite - completed a 100-200 level course in Econ, Res-Econ, Math 104, or Math 101 and 102*

**POLISCI 383** Energy Policy
*Pre-requisite - none*

**SPP 397N** Natural Resource Policy & Administration
*Pre-requisite - none*

**SOCIOL 316** Environment and Society
*Pre-requisite - none*

## Health Economics

**RES-ECON 360 (was 397E)** Econ. Dev. & The Environment
*Pre-requisite - Res-Econ 102, 103, 262, or 263*

**RES-ECON 363 (was 397W)** The Economics of Water Policy
*Pre-requisite - none*

**RES-ECON 386 (was 397C) Health Economics**
*Pre-requisite - Res-Econ 202 or Econ 203*

**RES-ECON 452** Industrial Organization
*Pre-requisite - Res-Econ 202 or Econ 203*

**RES-ECON 453** Public Policy in Private Markets
*Pre-requisite - Res-Econ 452*

**PUBHLTH 490Z** Statistical Modeling for Health Data Sciences
*Pre-requisite - none*

**POLISCI 397P** Health Care Politics/Inequality
*Pre-requisite - none*

**ECON 340** Economics of Health
*Pre-requisite - Econ 103 or Res-Econ 102 and Econ 203 or Res-Econ 202*

**SOCIOL 353** Sociology of Medicine
*Pre-requisite - 100 or 200 level sociology course*

**SOCIOL 356** Social Forces, Health, & Lifecourse
*Pre-requisite - none*

**COMM 319** Health Communication
*Pre-requisite - none*

*(over)*

## Quantitative Economics

**RES-ECON 312 Introduction to Econometrics**
*Pre-requisite - Res-Econ 112, 202(or 203) and Res-Econ 213*
**RES-ECON 414 (was 497T)** Topics in Time Series & Forecasting
*Pre-requisite - Res-Econ 213*
**MATH 233** Multivariate Calculus
*Pre-requisite - Math 132*
**MATH 235** Intro to Linear Algebra
*Pre-requisite - none*
**STATISTC 515** Statistics I
*Pre-requisite - Math 132 with a grade of 'C' or better*
**STATISTC 516** Statistics II
*Pre-requisite - Statistc 515 with a grade of 'C' or better*
**STATISTC 525** Regression and Analysis of Variance
*Pre-requisite - Statistc 515*

## Media, Marketing & Social Influence

**RES-ECON 414 (was 497T)** Topics in Time Series and Forecasting
*Pre-requisite - Res-Econ 213*
**COMM 310** Social Influence and Persuasion
*Pre-requisite - none*
**COMM 339** Media and Public Policy
*Pre-requisite - Comm 122 or 222*
**COMM 494CI** Communication, Ecology, & Sustainability
*Pre-requisite - none*
**COMM 494LI** The Social Life of Algorithms
*Pre-requisite - none*
**COMM 497MT** Media, Technology, & Culture
*Pre-requisite - none*
**MARKETING 301** Fundamentals of Marketing
*Pre-requisite - none*
**SOCIOL 352** Media, Tech, & Sociology
*Pre-requisite - 100 or 200 level sociology course*
**SOCIOL 351** Social Networks and Analysis
*Pre-requisite - none*
**COMM 387** Advertising and Public Relations as Social Control
*Pre-requisite - Comm 287*
**Journal 301** Introduction to Multimedia Reporting
*Pre-requisite - Journal 300*
**Journal 339** Video Content Creation
*Pre-requisite - Journal 300*
**Journal 345** Media Criticism
*Pre-requisite - none*
**Journal 343** Data-Driven Storytelling
*Pre-requisite - Journal 300*

## IT

**RES-ECON 315 (was 397A)** Economics of Contemporary Information Technology
*Pre-requisite - Res-Econ 102 or 103*
**POLISCI 397SC** International Security & Cybersecurity Policy
*Pre-requisite - none*

## Economic Policy & Politics

**RES-ECON 363 (was 397W)** Economics of Water Policy
*Pre-requisite - none*
**RES-ECON 453** Public Policy in Private Markets
*Pre-requisite - Res-Econ 452*
**POLISCI 383** Energy Policy
*Pre-requisite - none*
**ANTHRO 336** Political Anthropology
*Pre-requisite - none*
**POLISCI 320** Public Administration
*Pre-requisite -none*
**POLISCI 397SC (UWW)** International Security & Cybersecurity Policy
*Pre-requisite - none*
**SPP 309/NRC 309 (formerly SPP 397N) N**atural Resource Policy & Administration
*Pre-requisite - none*

## Social Justice & Economics

**RES-ECON 360 (was 397E)** Econ. Dev. & The Environment
*Pre-requisite - Res-Econ 102, 103, 262, or 263*
**ECON 330** Labor in the American Economy
*Pre-requisite - Econ 103 or Res-Econ 102*
**ECON 333** Income Inequality & Policy Alternatives
*Pre-requisite - Econ 203 or Res-Econ 202*
**ECON 338** Compensation, Incentives & Productivity
*Pre-requisite -Econ 203 or Res-Econ 202*
**ECON 341** Labor Economics
*Pre-requisite - Econ 203 or Res-Econ 202*
**ECON 347** Economics of LGBT Issues
*Pre-requisite - none*
**ECON 397S** Gender and Economic Development
*Pre-requisite - Econ 103, 104 or Res-Econ 102*
**NRC 597EJ** Social Movements & Environmental Justice
*Pre-requisite - none*
**SOCIOL 204** Labor and Global Economy
*Pre-requisite - none*
**SPP 397M** Policies & Strategies for Social Change
*Pre-requisite - none*
**COMM 497** Gender and Communication
*Pre-requisite - none but preference given to seniors*

## Sustainable Development

**RES-ECON 360 (was 397E)** Econ. Dev. & The Environment
*Pre-requisite - Res-Econ 102, 103, 262, or 263*
**SUSTCOMM 333** Intro. to Community Econ. Dev.
*Pre-requisite - none*
**COMM 494CI** Communication, Ecology, & Sustainability
*Pre-requisite - none*

NAME: _____ ID: _____ Grad Term: _____ Date: _____

# RESOURCE ECONOMICS: REQUIREMENTS CHECKSHEET

Bachelor of Science (B.S.) Resource Economics

| RESOURCE ECONOMICS CORE REQUIREMENTS | | | RESOURCE ECONOMICS (ENRE) UPPER LEVEL COURSES | | |
|---|---|---|---|---|---|
| Semester | Grade | Course | Semester | Grade | Course |
| Foundational Requirements | | | Upper Level Requirements | | |
| | | **MATH 127** *(3r.)* **OR MATH 131** *(4cr.)* Calculus I (R1, R2) | | | **RES-ECON 394LI** Life is Full of Choices<br>*RES-ECON Integrative Exp. Seminar (Gen Ed IE)*<br>*Pre-req Junior Standing* |
| | | **RES-ECON 102** Intro to Res Econ (SB) *(4cr.)* **OR**<br>**ECON 103** Intro Microeconomics (SB) *(4cr.)* | | | **RES ECON 471** Benefit-Cost Analysis of Natural Resources *Pre-req RES ECON 202 or ECON 203*<br>(Integrative Experience and Captstone *Course)* |
| | | **ECON 104** Intro to Macroeconomics (SB) *(4cr.)* | | | **RES-ECON 472** Advanced Topics in Resource and Environmental Economics (IE and Capstone Course)<br>*Pre-req RES-ECON 212 or STATS 240; RES-ECON 202 or ECON 203* |
| | | **RES-ECON 112** Computing Foundations to Frontiers *(3cr.)* | | | |
| | | **RES-ECON 106 (162)** Economics is Everywhere (SB) *(4cr.)* ***OR***<br>**RES-ECON 107 (121)** Hunger Global Econ (SBDG) *(4cr.)* | | | |
| | | **RES-ECON 212** Introduction to Statistics/Social Science (R1, R2) *(4cr.)* **OR**<br>**STATISTC 240** Introduction to Statistics (R1, R2) *(4cr.)* | | | |
| Intermediate Requirements | | | Resource Economics Selected Courses | | |
| | | **RES-ECON 202** Price Theory **OR**<br>**ECON 203** Intermediate Microeconomics<br>*Pre-req MATH 127 or Math 131; RES-ECON 102 or ECON 103* | **RESOURCE ECONOMICS (ENRE) SELECTED COURSES:**<br>**Upper Year Electives** *(3-4cr.)*<br>At least 5 selected courses must be chosen from the courses list shown in the Resource Economics Undergraduate Handbook | | |
| | | **ECON 204** Intermediate Macroeconomics<br>*Pre-req MATH 127 or Math 131; ECON 104* | | | **RES-ECON or**<br>**ECON 300+** |
| | | **RES-ECON 213** Intermediate Statistics for Business and Economics<br>*Pre-req RES-ECON 212 or STATS 240* | | | **SBS 300+** |
| | | **RES-ECON 313** Decision Analysis<br>*Pre-req RES-ECON 212 or STATS 240* | | | **ANY 300+** |
| | | **RES ECON 262** Environmental Economics | | | **ANY 300+** |
| | | **RES ECON 263** Natural Resource Economics | | | **ANY 300+** |
| | | **RES-ECON 303** Writing in Resource Economics (Junior Year Writing) or Equivalent JYW in another department<br>*Pre-req Junior Standing ; CW 112* | | | |
| | | **ENVSCI 213** Intro to Environmental Policy **OR**<br>**NRC 309** Natural Resource Policy & Admin **OR**<br>**RES-ECON 360 (397E)** Econ Dev. & The Environment **OR**<br>**RES-ECON 363 (397W)** Economics of Water Policy **OR**<br>**POLISCI 383** Energy Policy | | | |

***Please turn over***

Date: _____ Advisor: _____ Declared: _____ Emailed: _____ rev.6/22

# RESOURCE ECONOMICS: REQUIREMENTS CHECKSHEET

Bachelor of Science (B.S.) in Resource Economics - ENRE

**GENERAL EDUCATION (UNIVERSITY) REQUIREMENTS**

| SEMESTER | GRADE | REQUIREMENT | COURSE/CREDITS |
|---|---|---|---|
| | | COLLEGE WRITING (CW) | |
| | | BASIC MATH (R1) | |
| | | ANALYTICAL REASONING (R2) | |
| | | BIOLOGICAL SCIENCE (BS) | |
| | | PHYSICAL SCIENCE (PS) | |
| | | LITERATURE (AL) or ART (AT) | |
| | | HISTORICAL STUDIES (HS) | |
| | | SOCIAL & BEHAVIORAL (SB) | |
| | | SOCIAL WORLD (AL, AT, HS, SB, I, SI) | |
| | | UNITED STATES DIVERSITY (DU) | |
| | | GLOBAL DIVERSITY (DG) | |
| | | TRANSFER COURSE ** See explanation below | |
| | | TRANSFER COURSE ** See explanation below | |

**Transfer students are required to take two (2) additional General Education courses under the Transfer General Education requirements. These courses can be 3 or 4 credits each in any General Education category. Commonwealth Transfer Compact (CTC) and Mass Transfer Block (MTB) transfer students are excluded from this requirement.

***You (as a student) are responsible for:***

- Ensuring that all graduation requirements are fulfilled. Your Academic Requirement Report (ARR) can be viewed on your SPIRE account.
- Meeting with your academic advisor before choosing your courses each semester to review your progress toward graduation.
- Monitoring progress toward any credential (major, minor, certificate, dual degree, etc.) outside of the Department of Resource Economics. You are highly encouraged to meet with an advisor from the related department(s).

***Also, please note that:***

- Departmental requirements may not be taken pass/fail.
- The cumulative grade point average for all courses taken to satisfy departmental requirements must be a 2.0 or better.
- Any exception to the departmental requirements must be approved and documented by your Academic Advisor.
- You may only overlap (double dip) two courses between any credentials. You are expected to plan ahead to ensure you follow this University policy and make the best courses for your learning experience and plan.

| **Credits** | | | **Suggested Courses / Terms** | **Credits** |
|---|---|---|---|---|
| *Credits Earned* | | | | |
| *Credits in Progress (+)* | | | | |
| *Total Credits (=)* | | | | |
| *Credits needed to 120* | | | | |
| | | | | |

*NOTES:*

# Resource Economics Sample Sequence of Courses

## Resource Economics Suggested Sequence of Courses
## Concentration in Environmental and Natural Resource Economics

### Students Exempt from ENGL WRIT 112

| FIRST YEAR FALL SEMESTER | | FIRST YEAR SRING SEMESTER | |
|---|---|---|---|
| Math 127 or 131 | 3 or 4 | Res-Econ 212 | 4 |
| Res-Econ 102 | 4 | Econ 104 | 4 |
| AL/AT Gen Ed | 4 | DU or DG Gen Ed | 4 |
| Res Ec breadth requirement | 4 | Res-Econ 112 | 3 |
| | | | |
| **CREDITS 15-16** | | **CREDITS 15** | |

### Students Not Exempt from ENGL WRIT 112

| FIRST YEAR FALL SEMESTER | | FIRST YEAR SPRING SEMESTER | |
|---|---|---|---|
| Math 127 or 131 | 3 or 4 | Res-Econ 212 | 4 |
| Res-Econ 102 | 4 | Econ 104 | 4 |
| Res Ec breadth requirement | 4 | DU or DG Gen Ed | 4 |
| Engl Writ 112 | 3 | Res-Econ 112 | 3 |
| | | | |
| **CREDITS 14-15** | | **CREDITS 15** | |
| **SOPHOMORE FALL SEMESTER** | | **SOPHOMORE SPRING SEMESTER** | |
| Res-Econ 202 or Res-Econ 213 | 4 or 3 | Res-Econ 202 or Res-Econ 213 | 4 or 3 |
| HS Gen Ed | 4 | Res-Econ 262 | 4 |
| RES-ECON 263 | 4 | DU or DG Gen Ed or general elective | 4 |
| BS Gen Ed or general elective | 4 | PS Gen Ed | 4 |
| | | | |
| **CREDITS 15-16** | | **CREDITS 15-16** | |
| **JUNIOR FALL SEMESTER** | | **JUNIOR SPRING SEMESTER** | |
| Res-Econ 313 | 3 | Policy requirement | 3 |
| Res-Econ 303 | 3 | Res-Econ selected course | 3 |
| Res-Econ 394LI | 1 | Res-Econ selected course | 3 |
| Econ 204 | 3 | General elective | 3 |
| AL/AT Gen Ed or general elective | 4 | General elective | 3 |
| **CREDITS 14** | | **CREDITS 15** | |
| **SENIOR FALL SEMESTER** | | **SENIOR SPRING SEMESTER** | |
| Res-Econ 472 | 3 | Res-Econ 471 | 3 |
| Res-Econ selected course | 3 | Res-Econ selected course | 3 |
| Res-Econ selected course | 3 | General elective | 3 |
| General elective | 3 | General elective | 3 |
| General elective | 3 | General elective | 3 |
| **CREDITS 15** | | **CREDITS 15** | |

# Departmental Honors in Resource Economics

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.umass.edu/honors/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 full time 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.umass.edu/honors/admissions/apply
- Students who are already CHC members must 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

| | |
|---|---|
| Option A | Individually Contracted Honors Thesis: RES-ECON 499Y Honors Research and RES-ECON 499T Honors Thesis |
| Option B | Honors Thesis Seminar: RES-ECON 499CA and RES-ECON 499DA Economics of Renewable Energy Transition |
| Option C | Alternate Honors Thesis/Project Seminar as approved by Honors Program Director |

Although not required, we strongly encourage Departmental Honors students to enroll in RES-ECON 312 (Introductory 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 through CHC PATHS: https://www.umass.edu/honors/advising/handbook/forms

# Managerial Economics Major Requirements

Some major courses are taught either fall or spring and all upper-level major courses carry prerequisites (sometimes several). See **Department of Resource Economics Courses: Semesters Offered & Prerequisites** in this handbook for a summary. You must prepare a plan of study for all semesters through graduation to ensure that you can meet departmental requirements. A major requirements checksheet is provided in this handbook to assist with planning.

The Managerial Economics major consists of twelve departmental core courses (Section A), six major required courses (Section B), and four upper-level selected courses (Section C). Section D provides suggested courses for students pursuing graduate school in resource economics or economics. Section E provides general information about the departmental requirements.

**A. Departmental Core Requirements (12 courses)**

1. MATH 127 (Calculus for Life and Social Sciences) or MATH 131 (Calculus I)
2. RES-ECON 102 (Intro to Resource Economics) or ECON 103 (Principles of Microeconomics)
3. ECON 104 (Principles of Macroeconomics)
4. Breadth requirement: RES-ECON 106 (was 162) (Economics is Everywhere) or RES-ECON 107 (was 121) (Hunger in the Global Economy) or RES-ECON 262 (Environmental Economics) or RES-ECON 263
   (Natural Resource Economics)
5. RES-ECON 112 (Computing: Foundations to Frontiers)
6. RES-ECON 212 (Intro to Statistics for the Social Sciences) or STATISTC 240 (Intro to Statistics)
7. RES-ECON 202 (Price Theory) or ECON 203 (Intermediate Microeconomics)
8. ECON 204 (Intermediate Macroeconomics)
9. RES-ECON 213 (Intermediate Statistics for Business and Economics)
10. RES-ECON 313 (Decision Analysis)
11. RES-ECON 303 (Writing in Economics—Junior Year Writing)
12. RES-ECON 394LI (Life is Full of Choices—IE Seminar)

**B. Managerial Economics Upper-Level Requirements**

1. ACCOUNTNG 221 (Intro to Financial Accounting)
2. MANAGEMNT 301 (Principles of Management)
3. RES-ECON 323 (formerly 314) (Financial Analysis for Consumers and Firms) or FINANCE 301 (Corporate Finance)
4. RES-ECON 452 (Industrial Organization)
5. RES-ECON 453 (Public Policy in Private Markets)
6. RES-ECON 428 (Managerial Economics)

**C. Managerial Economics Selected Courses**

The goal of the four selected upper-level elective courses is to add depth and/or breadth to the curriculum of the student's chosen major. Courses taken to add depth will allow students to develop a specialization and/or acquire certain skills in a specific area of interest within their major. Courses taken to add breadth will allow students to touch on topics related to their major. *All courses should be selected in conjunction with an advisor.* Please refer to the next section of this handbook for more specific information.

**D. Additional Recommended Courses (not requirements)**

1. For students considering graduate study in resource economics or economics, the following courses are strongly recommended:
    a. MATH 132 – Calculus II
    b. MATH 233 – Multivariate Calculus
    c. MATH 235 – Introduction to Linear Algebra
    d. RES-ECON 312 – Introductory Econometrics

**E. Other Departmental Requirements**

1. Departmental requirements may not be taken pass/fail.
2. The cumulative grade point average of all courses taken to satisfy departmental requirements 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 your academic advisor.

# Managerial Economics Selected Courses

Students completing a degree in Managerial Economics are required to complete 12 departmental core courses, six required courses related to accounting, management, finance, industrial organization, public policy, and managerial decision making, and four selected courses.

The goal of selected upper-level elective courses is to add depth and/or breadth to the curriculum of the student's chosen major. Courses taken to add depth will allow students to develop a specialization and/or acquire certain skills in a specific area of interest within their major. Courses taken to add breadth will allow students to touch on topics related to their major. *All courses should be selected in conjunction with an advisor.*

As a Managerial Economics major, you may not have the ability to enroll in all potential course options through SPIRE. For courses you cannot enroll in through SPIRE, you will need to request instructor permission to enroll. For ISOM courses, submit an override request form. Prior to enrolling, please check course prerequisites and enrollment eligibility in SPIRE.

*For students admitted prior to Fall 2022, if alternate electives were granted as upper-level electives, we will continue to honor those approvals.*

## Managerial Economics Upper-Level Electives (4 total):

- **1 upper-level (300-level or higher) course within the departments of Resource Economics or Economics**.
- **1 upper-level (300-level or higher) course from the College of Social and Behavioral Sciences (SBS):** (Anthropology, Communication, Economics, Journalism, Landscape Architecture, Legal Studies, Political Science, Public Policy, Resource Economics, Social Thought & Political Economy , Sociology, Sustainable Community Development).
- **2 upper-level (300-level or higher) courses from *any* department/college.** Will also allow Math 233 or 235 to fill this requirement.

**Important Notes:**

- A maximum of **2 courses may be applied from transfer credits**. The remainder of the upper-level requirements must be taken through UMass Amherst (this includes UWW, UMass-approved Study Abroad program courses, and Five College Consortium courses).
- The courses **must be graded** to count – no pass/fail grades will be allowed. This means all internships are excluded, and independent studies may only be included if the experience is chosen to be graded as opposed to pass/fail.
- **At least one of these courses is encouraged to be quantitative** in nature (this would include courses within the department of Resource Economics or coursework in Math/Statistics/Computer Science/ Informatics/IT, etc.), particularly if you hope to go on to graduate study.
- While course options are broad for your upper-level requirements, *if you are interested in a particular focus, we encourage incorporating the suggestions in different focus areas on the following pages.*
    - *If you select a focus area, you may list on your resume a BS in Managerial Economics: Health Economics Focus (ex.)*

# Managerial Economics Selected Courses

While not required, some students like to use their selected courses to develop a focus area that aligns with their interests or career aspirations. The following is a small sampling of courses to consider. Students are not limited to the listed focus areas or courses listed therewithin. A course taken as part of a major requirement cannot also be counted as a selected upper-level elective.

## Behavioral/Experimental Economics

**RES-ECON 440 (was 462)** Experimental Economics
*Pre-requisite - Res-Econ 202 or 203*

**ECON 309** Game Theory
*Pre-requisite - Econ 103 or 102 and one of the following: Math 127, 128, 131, 132, Econ 151, 152*

**ECON 397BE** Behavioral Economics
*Pre-requisite - Econ 103 or Res-Econ 102*

**PSYCH 360** Social Psychology
*Pre-requisite - Psych 100 or 110*

## Managerial (Industrial Organization) Economics

**RES-ECON 312** Introduction to Econometrics
*Pre-requisite - Res-Econ 112, 202 (or 203) and 213*

**RES-ECON 315 (was 397A)** Economics of Contemporary Information Technology
*Pre-requisite - Res-Econ 102 or 103*

**RES-ECON 323 (was 314)** Financial Analysis for Consumers & Firms
*Pre-requisite - Res-Econ 102 or Econ 103 and Math 127 or 131*

**RES-ECON 324** Small Business Finance
*Pre-requisite - Res-Econ 102 or Econ 103 and Res-Econ 314 or Finance 301*

**RES-ECON 414 (was 497T)** Topics in Time Series & Forecasting
*Pre-requisite - Res-Econ 213*

**ECON 309** Game Theory
*Pre-requisite - Econ 103 or 102 and one of the following: Math 127, 128, 131, 132, Econ 151, 152*

**ECON 311** Money and Banking
*Pre-requisite - Econ 103 or Res-Econ 102 and both Econ 104 and 204*

**ECON 313** Public Finance
*Pre-requisite - Econ 203 or Res-Econ 202*

**ECON 321** International Monetary Theory
*Pre-requisite - Econ 204*

**ECON 330** Labor in the American Economy
*Pre-requisite - Econ 103 or Res-Econ 102*

**FINANCE 301** Corporate Finance
*Pre-requisite - Accountg 221 or 233*

## Environmental & Natural Resource Economics

**RES-ECON 360 (was 397E)** Econ. Dev. & The Environment
*Pre-requisite - Res-Econ 102, 103, 262, or 263*

**RES-ECON 363 (was 397W)** The Economics of Water Policy
*Pre-requisite - none*

**Res-Econ 471** Cost Benefit Analysis
*Pre-requisite - Res-Econ 202 or Econ 203*

**Res-Econ 472** Advanced Topics in Environment and Resource Economics
*Pre-requisite - Res-Econ 202 or Econ 203 and Res-Econ 212 or Statistcs 240*

**ECON 308** Political Econ of the Environment
*Pre-requisite - Res-Econ 102 or Econ 103*

**ENVIRSCI 445** Sustainability/Problem Solving in Envir.Sci
*Pre-requisite - none*

**NRC 597EC** Analytical Methods for Energy & Climate Policy
*Pre-requisite - completed a 100-200 level course in Econ, Res-Econ, Math 104, or Math 101 and 102*

**POLISCI 383** Energy Policy
*Pre-requisite - none*

**SPP 309/NRC 309 (formerly SPP 397N)** Natural Resource Policy & Administration
*Pre-requisite - none*

**SOCIOL 316** Environment and Society
*Pre-requisite - none*

## Health Economics

**RES-ECON 360 (was 397E)** Econ. Dev. & The Environment
*Pre-requisite - Res-Econ 102, 103, 262, or 263*

**RES-ECON 363 (was 397W)** The Economics of Water Policy
*Pre-requisite - none*

**RES-ECON 386 (was 397C)** Health Economics
*Pre-requisite - Res-Econ 202 or Econ 203*

**PUBHLTH 490Z** Statistical Modeling for Health Data Sciences
*Pre-requisite - none*

**POLISCI 397P** Health Care Politics/Inequality
*Pre-requisite - none*

**ECON 340** Economics of Health
*Pre-requisite - Econ 103 or Res-Econ 102 and Econ 203 or Res-Econ 202*

**SOCIOL 353** Sociology of Medicine
*Pre-requisite - 100 or 200 level sociology course*

**SOCIOL 356** Social Forces, Health, & Lifecourse
*Pre-requisite - none*

**COMM 319** Health Communication
*Pre-requisite - none*

*(over)*

## Quantitative Economics

**RES-ECON 312 Introduction to Econometrics**
*Pre-requisite - Res-Econ 112, 202(or 203) and Res-Econ 213*
**RES-ECON 414 (was 497T)** Topics in Time Series & Forecasting
*Pre-requisite - Res-Econ 213*
**MATH 233** Multivariate Calculus
*Pre-requisite - Math 132*
**MATH 235** Intro to Linear Algebra
*Pre-requisite - none*
**STATISTC 515** Statistics I
*Pre-requisite - Math 132 with a grade of 'C' or better*
**STATISTC 516** Statistics II
*Pre-requisite - Statistc 515 with a grade of 'C' or better*
**STATISTC 525** Regression and Analysis of Variance
*Pre-requisite - Statistc 515*

## Media, Marketing & Social Influence

**RES-ECON 414 (was 497T)** Topics in Time Series and Forecasting
*Pre-requisite - Res-Econ 213*
**COMM 310** Social Influence and Persuasion
*Pre-requisite - none*
**COMM 339** Media and Public Policy
*Pre-requisite - Comm 122 or 222*
**COMM 494CI** Communication, Ecology, & Sustainability
*Pre-requisite - none*
**COMM 494LI** The Social Life of Algorithms
*Pre-requisite - none*
**COMM 497MT** Media, Technology, & Culture
*Pre-requisite - none*
**MARKETING 301** Fundamentals of Marketing
*Pre-requisite - none*
**SOCIOL 352** Media, Tech, & Sociology
*Pre-requisite - 100 or 200 level sociology course*
**SOCIOL 351** Social Networks and Analysis
*Pre-requisite - none*
**COMM 387** Advertising and Public Relations as Social Control
*Pre-requisite - Comm 287*
**Journal 301** Introduction to Multimedia Reporting
*Pre-requisite - Journal 300*
**Journal 339** Video Content Creation
*Pre-requisite - Journal 300*
**Journal 345** Media Criticism
*Pre-requisite - none*
**Journal 343** Data-Driven Storytelling
*Pre-requisite - Journal 300*

## IT

**RES-ECON 315 (was 397A)** Economics of Contemporary Information Technology
*Pre-requisite - Res-Econ 102 or 103*
**POLISCI 397SC** International Security & Cybersecurity Policy
*Pre-requisite - none*

## Economic Policy & Politics

**RES-ECON 363 (was 397W)** Economics of Water Policy
*Pre-requisite - none*
**POLISCI 383** Energy Policy
*Pre-requisite - none*
**ANTHRO 336** Political Anthropology
*Pre-requisite - none*
**POLISCI 320** Public Administration
*Pre-requisite -none*
**POLISCI 397SC (UWW)** International Security & Cybersecurity Policy
*Pre-requisite - none*
**SPP 309/NRC 309 (formerly SPP 397N)** Natural Resource Policy & Administration
*Pre-requisite - none*

## Social Justice & Economics

**RES-ECON 360 (was 397E)** Econ. Dev. & The Environment
*Pre-requisite - Res-Econ 102, 103, 262, or 263*
**ECON 330** Labor in the American Economy
*Pre-requisite - Econ 103 or Res-Econ 102*
**ECON 333** Income Inequality & Policy Alternatives
*Pre-requisite - Econ 203 or Res-Econ 202*
**ECON 338** Compensation, Incentives & Productivity
*Pre-requisite -Econ 203 or Res-Econ 202*
**ECON 341** Labor Economics
*Pre-requisite - Econ 203 or Res-Econ 202*
**ECON 347** Economics of LGBT Issues
*Pre-requisite - none*
**ECON 397S** Gender and Economic Development
*Pre-requisite - Econ 103, 104 or Res-Econ 102*
**NRC 597EJ** Social Movements & Environmental Justice
*Pre-requisite - none*
**SOCIOL 204** Labor and Global Economy
*Pre-requisite - none*
**SPP 397M** Policies & Strategies for Social Change
*Pre-requisite - none*
**COMM 497** Gender and Communication
*Pre-requisite - none but preference given to seniors*

## Sustainable Development

**RES-ECON 360 (was 397E)** Econ. Dev. & The Environment
*Pre-requisite - Res-Econ 102, 103, 262, or 263*
**SUSTCOMM 333** Intro. to Community Econ. Dev.
*Pre-requisite - none*
**COMM 494CI** Communication, Ecology, & Sustainability
*Pre-requisite - none*

NAME: _____ ID: _____ Grad Term: _____ Date: _____

# RESOURCE ECONOMICS: REQUIREMENTS CHECKSHEET

Bachelor of Science (B.S.) in Managerial Economics

| MANAGERIAL ECONOMICS CORE REQUIREMENTS | | | MANAGERIAL ECONOMICS (ME) UPPER LEVEL COURSES | | |
|---|---|---|---|---|---|
| Semester | Grade | Course | Semester | Grade | Course |
| Foundational Requirements | | | Upper Level Requirements | | |
| | | **MATH 127** *(3cr.)* ***OR*** **MATH 131** *(4cr.)* Calculus I *(R1, R2)* | | | **RES-ECON 394LI** Life is Full of Choices: *(1cr.)* *RES-ECON Integrative Exp. Seminar (Gen Ed IE)* *Pre-req Junior Standing* |
| | | **RES-ECON 102** Intro to Res Econ *(SB)* ***OR*** **ECON 103** Intro Microeconomics *(SB) (4cr.)* | | | **RES-ECON 452** Industrial Organization *(3cr.)* *(Integrative Experience Course)* *Pre-req RES-ECON 202 or ECON 203* |
| | | **ECON 104** Intro to Macroeconomics *(SB) (4cr.)* | | | **RES-ECON 453** Public Policy in Private Markets *(3cr.)* *(Integrative Experience Course)* *Pre-req RES-ECON 452 or Instructor Consent* |
| | | **RES-ECON 112** Computing Foundations to Frontiers *(3cr.)* | | | **RES-ECON 428** Managerial Economics *(3cr.)* *(Capstone Course)* *Pre-req ACCOUNTING 221 or RES-ECON 323 (was 314) or FINANCE 301;* ***AND*** *RES-ECON 202 or ECON 203;* ***AND*** *RES-ECON 213;* ***AND*** *RES-ECON 313* |
| | | **RES-ECON 106 (162)** Economics is Everywhere *(SB)* ***OR*** **RES-ECON 107 (121)** Hunger Global Econ *(SBDG)* ***OR*** **RES ECON 262** Environmental Econ ***OR*** **RES ECON 263** Natural Resource Econ *(4 cr.)* | | | |
| | | **RES-ECON 212** Introduction to Statistics/ Social Science *(R1, R2) (4cr.)* ***OR*** **STATISTC 240** Introduction to Statistics /Math *(R1, R2) (4cr.)* | | | |
| Intermediate Requirements | | | Managerial Economics Selected Courses | | |
| | | **RES-ECON 202** Price Theory *(4cr.)* **OR** **ECON 203** Intermediate Microeconomics *(3cr.)* *Pre-req MATH 127 or Math 131; RES-ECON 102 or ECON 103* | **Managerial Economics: UPPER YEAR ELECTIVES** *(3-4cr.)* At least 4 selected courses must be chosen from the course list shown in the Resource Economics Undergraduate Handbook | | |
| | | **ECON 204** Intermediate Macroeconomics *(3cr.)* *Pre-reqs MATH 127 or Math 131; ECON 104* | | | **RES-ECON or ECON 300+** |
| | | **RES-ECON 213** Intermediate Statistics for Business and Economics *(3 cr.)* *Pre-req RES-ECON 212 or STATS 240* | | | **SBS 300+** |
| | | **RES-ECON 313** Decision Analysis *(3cr.)* *Pre-req RES-ECON 212 or STATS 240* | | | **ANY 300+** |
| | | **ACCOUNTING 221** Principles of Financial Accounting *(3cr.)* *Pre-req Sophomore standing* | | | **ANY 300+** |
| | | **MANAGEMENT 301** Principles of Management *(3cr.)* *Pre-req Junior Standing* | | | |
| | | **RES-ECON 323 (314)** Financial Analysis for Consumers/Firms *(3 cr.) Pre-req RES-ECON 102 or ECON 103, Math 127 or 131* **OR** **FINANCE 301** Corporate Finance *(3 cr.)* *Pre-req ACCOUNTING 221 and Junior Standing* | | | |
| | | **RES-ECON 303** Writing in Resource Economics Junior Year Writing) *(3 cr.)* *Pre-req Junior Standing and English Writing 112* *Other departments JYW may fulfill this requirement* | | | |

***Please turn over***

Date: _____ Advisor: _____ Declared: _____ Emailed: _____

# RESOURCE ECONOMICS: REQUIREMENTS CHECKSHEET

Bachelor of Science (B.S.) in Managerial Economics

**GENERAL EDUCATION (UNIVERSITY) REQUIREMENTS**

| SEMESTER | GRADE | REQUIREMENT | COURSE/CREDITS |
|---|---|---|---|
| | | COLLEGE WRITING (CW) | |
| | | BASIC MATH (R1) | |
| | | ANALYTICAL REASONING (R2) | |
| | | BIOLOGICAL SCIENCE (BS) | |
| | | PHYSICAL SCIENCE (PS) | |
| | | LITERATURE (AL) or ART (AT) | |
| | | HISTORICAL STUDIES (HS) | |
| | | SOCIAL & BEHAVIORAL (SB) | |
| | | SOCIAL WORLD (AL, AT, HS, SB, I, SI) | |
| | | UNITED STATES DIVERSITY (DU) | |
| | | GLOBAL DIVERSITY (DG) | |
| | | TRANSFER COURSE ** See explanation below | |
| | | TRANSFER COURSE ** See explanation below | |

**Transfer students are required to take two (2) additional General Education courses under the Transfer General Education requirements. These courses can be 3 or 4 credits each in any General Education category. Commonwealth Transfer Compact (CTC) and Mass Transfer Block (MTB) transfer students are excluded from this requirement.

***You (as a student) are responsible for:***

- Ensuring that all graduation requirements are fulfilled. Your Academic Requirement Report (ARR) can be viewed on your SPIRE account.
- Meeting with your academic advisor before choosing your courses each semester to review your progress toward graduation.
- Monitoring progress toward any credential (major, minor, certificate, dual degree, etc.) outside of the Department of Resource Economics. You are highly encouraged to meet with an advisor from the related department(s).

***Also, please note that:***

- Departmental requirements may not be taken pass/fail.
- The cumulative grade point average for all courses taken to satisfy departmental requirements must be a 2.0 or better.
- Any exception to the departmental requirements must be approved and documented by your Academic Advisor.
- You may only overlap (double dip) two courses between any credentials. You are expected to plan ahead to ensure you follow this University policy and make the best courses for your learning experience and plan.

| **Credits** | | | **Suggested Courses / Terms** | **Credits** |
|---|---|---|---|---|
| *Credits Earned* | | | | |
| *Credits in Progress (+)* | | | | |
| *Total Credits (=)* | | | | |
| *Credits needed to 120* | | | | |
| | | | | |

*NOTES:*

# Managerial Economics Sample Sequence of Courses

## Managerial Economics Suggested Sequence of Courses

### Students Exempt from ENGL WRIT 112

| FIRST YEAR FALL SEMESTER | | FIRST YEAR SRING SEMESTER | |
|---|---|---|---|
| Math 127 or 131 | 3 or 4 | Res-Econ 212 | 4 |
| Res-Econ 102 | 4 | Econ 104 | 4 |
| AL/AT Gen Ed | 4 | DU or DG Gen Ed | 4 |
| Res Ec breadth requirement | 4 | Res-Econ 112 | 3 |
| | | | |
| **CREDITS 15-16** | | **CREDITS 15** | |

### Students Not Exempt from ENGL WRIT 112

| FIRST YEAR FALL SEMESTER | | FIRST YEAR SPRING SEMESTER | |
|---|---|---|---|
| Math 127 or 131 | 3 or 4 | Res-Econ 212 | 4 |
| Res-Econ 102 | 4 | Econ 104 | 4 |
| Res Ec breadth requirement | 4 | DU or DG Gen Ed | 4 |
| Engl Writ 112 | 3 | Res-Econ 112 | 3 |
| | | | |
| **CREDITS 14-15** | | **CREDITS 15** | |
| **SOPHOMORE FALL SEMESTER** | | **SOPHOMORE SPRING SEMESTER** | |
| Res-Econ 202 or Res-Econ 213 | 4 or 3 | Res-Econ 202 or Res-Econ 213 | 4 or 3 |
| Accounting 221 | 3 | Econ 204 | 3 |
| BS Gen Ed | 4 | DU or DG Gen Ed or general elective | 4 |
| HS Gen Ed or general elective | 4 | PS Gen Ed | 4 |
| | | | |
| **CREDITS 14- 15** | | **CREDITS 14-15** | |
| **JUNIOR FALL SEMESTER** | | **JUNIOR SPRING SEMESTER** | |
| Res-Econ 313 | 3 | Res-Econ 323 (was 314) or Finance 301 | 3 |
| Res-Econ 303 | 3 | Managerial Econ selected course | 3 |
| Res-Econ 394LI | 1 | Managerial Econ selected course | 3 |
| Management 301 | 3 | General elective | 4 |
| AL/AT Gen Ed or general elective | 4 | General elective | 3 |
| **CREDITS 14** | | **CREDITS 16** | |
| **SENIOR FALL SEMESTER** | | **SENIOR SPRING SEMESTER** | |
| Res-Econ 452 | 3 | Res-Econ 453 | 3 |
| Managerial Econ selected course | 3 | Res-Econ 428 | 3 |
| General elective | 3 | Managerial Econ selected course | 3 |
| General elective | 4 | General elective | 4 |
| General elective | 3 | General elective | 3 |
| **CREDITS 16** | | **CREDITS 16** | |

# Departmental Honors in Managerial Economics

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.umass.edu/honors/curriculum

**Admission Criteria for Managerial 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 full time 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 Managerial 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.umass.edu/honors/admissions/apply
- Students who are already CHC members must 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 Managerial 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

| | |
|---|---|
| Option A | Individually Contracted Honors Thesis: RES-ECON 499Y Honors Research and RES-ECON 499T Honors Thesis |
| Option B | Honors Thesis Seminar: RES-ECON 499CA and RES-ECON 499DA Economics of Renewable Energy Transition |
| Option C | Alternate Honors Thesis/Project Seminar as approved by Honors Program Director |

Although not required, we strongly encourage Departmental Honors students to enroll in RES-ECON 312 (Introductory 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 through CHC PATHS: https://www.umass.edu/honors/advising/handbook/forms

# Resource Economics Minor Requirements

Name:_____ ID:_____ Grad Term:_____Date:_____

Focus Area:_____

## Resource Economics -Minor Requirements Check Sheet

The Resource Economics Minor consists of 7 courses: 4 core requirements and 3 upper-level requirements.

- Upper-level requirements for the **general Resources Economics Minor** may be completed across all focus areas.
  - List on resume as Minor in Resource Economics
- Upper-level requirements may be concentrated within one **Focus Area** in order to develop a specialization.
  - Students select one focus area: Environmental and Natural Resources, Behavioral/Experimental, Quantitative, Managerial (Industrial Organization) or Health Economics
  - List on resume as Minor in Resource Economics: Health Economics Focus (ex.)

| **Core Requirements (Completed by all minors)** | | |
|---|---|---|
| Sem. | Grade | Course |
| | | **Res-Econ 102** Intro to Resource Economics |
| | | **Res-Econ 106 (was 162) Economics is Everywhere** OR **Res-Econ 107 (was 121)** Hunger Global Econ |
| | | **Res-Econ 202** Price Theory<br>*Pre-req MATH 127 or MATH 131; RES-ECON 102 or ECON 103* |
| | | **Res-Econ 212** Intro to Statistics |

| **Upper-Level Requirements (Completed by all minors, selected courses vary by focus area)** | | |
|---|---|---|
| Sem. | Grade | Course |
| | | Selected **200+** Course**:** _____ (200, 300, or 400 level) |
| | | Selected **300+** Course**:** _____ (300 or 400 level) |
| | | Selected **400+** Course**:** _____ (400 level) |

See course offerings on page 2.

About the Resource Economics Minor:

- You may declare a minor in Resource Economics at any time prior to graduation by submitting this Google form.
- A grade point average of 2.0 or better in the minor is required.
- No course toward the minor can be taken on a pass/fail basis.
- Transfer credits and course substitutions will be evaluated on an individual basis by your advisor.
- Three or more Res-Econ 396 Independent study credits may be substituted for one focus area requirement (and no more than one) as deemed appropriate by instructor/faculty sponsor and advisor.

Note: Students seeking a STEM degree may want to consider selecting Resources Economics or Managerial Economics as their primary major. Both majors offer a STEM designated Bachelor of Science with OPT/CPT eligibility.

# Resource Economics
# Minor Requirements, cont'd

## Course Offerings by Focus Area

### Environmental and Natural Resources Economics

**Res-Econ 213** Intermediate Statistics
*Pre-req RES-ECON 212 or STATS 240*

**Res-Econ 262** Environmental Economics

**Res-Econ 263** Natural Resource Economics

**Res-Econ 360 (was 397E)** Econonomic Development & the Environment
*Pre-req RES-ECON 102 or ECON 103 or RES-ECON 262 or RES-ECON 263*

**Res-Econ 363 (was 397W)** The Economics of Water Policy

**Res-Econ 471** Cost Benefit Analysis
*Pre-req RES-ECON 202 or ECON 203*

**Res-Econ 472** Advanced Topics in Environment and ResEcon
*Pre-req RES-ECON 202 or ECON 203, RES-ECON 212 or STATS 240*

### Behavioral/Experimental Economics

**Res-Econ 213** Intermediate Statistics
*Pre-req RES-ECON 212 or STATS 240*

**Econ 309** Game Theory
*Pre-req RES-ECON 102 or ECON 103; AND one of: MATH 127, 128 131 or 132*

**Res-Econ 313** Decision Analysis
*Pre-req RES-ECON 212 or STATS 240*

**Res-Econ 440 (was 462)** Experimental Econ ***(required for focus area)***
*Pre-req RES-ECON 202 or ECON 203*

### Quantitative Economics

**Res-Econ 213** Intermediate Statistics
*Pre-req RES-ECON 212 or STATS 240*

**Res-Econ 312** Introductory Econometrics
*Pre-req RES-ECON 202 or ECON 203, RES-ECON 213, RES-ECON 112 or Instructor Consent*

**Res-Econ 313** Decision Analysis
*Pre-req RES-ECON 212 or STATS 240*

**Res-Econ 414 (was 497T)** Topics in Time Series and Forecasting
*Pre-req RES-ECON 213*

**Res-Econ 428** Managerial Economics
*Pre-req ACCOUNTING 221 or RES-ECON 323 (was 314) or FINANCE 301; AND RES-ECON 202 or ECON 203; AND RES-ECON 213; AND RES-ECON 313*

### Managerial (Industrial Organization) Economics

**Res-Econ 213** Intermediate Statistics
*Pre-req RES-ECON 212 or STATS 240*

**Res-Econ 312** Introductory Econometrics
*Pre-req RES-ECON 202 or ECON 203, RES-ECON 213, RES-ECON 112 or instructor consent*

**Res-Econ 313** Decision Analysis
*Pre-req RES-ECON 212 or STATS 240*

**Res-Econ 315 (was 397A)** Economics of Contemporary Info Tech
*Pre-req RES-ECON 102 or ECON 103*

**Res-Econ 323 (was 314)** Financial Analysis for Consumers/Firms
*Pre-req RES-ECON 102 or ECON 103 and RES-ECON 323 (was 314) or Finance 301*

**Res-Econ 324** Small Business Finance
*Pre-req RES-ECON 102 or ECON 103*

**Res-Econ 414 (was 497T)** Topics in Time Series and Forecasting
*Pre-req RES-ECON 213*

**Res-Econ 428** Managerial Economics
*Pre-req ACCOUNTING 221 or RES-ECON 323 (was 314) or FINANCE 301; AND RES-ECON 202 or ECON 203; AND RES-ECON 213; AND RES-ECON 313*

**Res-Econ 452** Industrial Organization
*Pre-req RES-ECON 202 or ECON 203*

**Res-Econ 453** Public Policy in Private Markets
*Pre-req RES-ECON 452 or Instructor Consent*

### Health Economics

**Res-Econ 213** Intermediate Statistics
*Pre-req RES-ECON 212 or STATS 240*

**Res-Econ 360 (was 397E)** Economic Development & the Environment
*Pre-req RES-ECON 102 or ECON 103 or RES-ECON 262 or RES-ECON 263*

**Res-Econ 363 (was 397W)** The Economics of Water Policy

**Res-Econ 386 (was 397C)** Health Economics ***(required for focus area)***
*Pre-req RES-ECON 202 or ECON 203 or Instructor Consent*

**Res-Econ 452** Industrial-Organization
*Pre-req RES-ECON 202 or ECON 203*

**Res-Econ 453** Public Policy in Private Markets
*Pre-req RES-ECON 452 or Instructor Consent*

**Pubhlth 490Z** Statistical Modeling for Health Data Science
*Pre-req experience with R. Consult with instructor as needed.*

# Dept. of Resource Economics Courses: Semesters Offered & Prerequisites

| Semester(s) Offered | Res-Econ Course # | Course Name | Prerequisites |
|---|---|---|---|
| Fall & Spring | 102 | Introduction to Resource Economics | |
| Fall | 106 (was 162) | Economics is Everywhere | |
| Spring | 107 (was 121) | Hunger in a Global Economy | |
| Fall & Spring | 112 | Computing: Foundations to Frontiers | |
| Fall & Spring | 202 | Price Theory | RES-ECON 102 or ECON 103; MATH 127 or MATH 131 |
| Fall & Spring | 212 | Introductory Statistics for the Social Sciences | |
| Fall & Spring | 213 | Intermediate Statistics for Business and Economics | RES-ECON 212 or STATISTC 240 |
| Spring | 262 | Environmental Economics | |
| Fall | 263 | Natural Resource Economics | |
| Fall & Spring | 303 | Writing in Resource Economics | ENGLWRIT 112 and Junior Standing |
| Spring | 312 | Introductory Econometrics | RES-ECON 202 or ECON 203; RES-ECON 213; RES-ECON 112 or consent of instructor |
| Fall & Spring | 313 | Decision Analysis | RES-ECON 212 or STATISTC 240 |
| Spring | 315 (was 397A) | Economics of Contemporary Information Technology | RES-ECON 102 or ECON 103 |
| Fall & Spring | 323 (was 314) | Financial Analysis for Consumers and Firms | RES-ECON 102 or ECON 103; MATH 127 or MATH 131 |
| Spring | 324 | Small Business Finance | RES-ECON 102 or ECON 103; RES-ECON 323 (was 314) or FINANCE 301 |
| Spring | 360 (was 397E) | Economic Development and the Environment | RES-ECON 102 or ECON 103 or RES-ECON 262 or RES-ECON 263 or consent of instructor |
| Fall | 363 (was 397W) | The Economics of Water Policy | |
| Fall | 386 (was 397C) | Health Economics | RES-ECON 202 or ECON 203 |
| Fall & Spring | 394LI | Life is Full of Choices *(IE Seminar)* | Junior Standing |
| Spring | 414 (was 497T) | Topics in Time Series and Forecasting | RES-ECON 213 |
| Fall & Spring | 428 | Managerial Economics *(Managerial Econ Capstone Course)* | ACCOUNTG 221 or RES-ECON 323 (was 314) or FINANCE 301; RES-ECON 202 or ECON 203; RES-ECON 213; RES-ECON 313 |
| Fall | 440 (was 462) | Experimental Economics | RES-ECON 202 or ECON 203 |
| Fall & Spring | 452 | Industrial Organization in Resource Economics *(Managerial Econ IE Course)* | RES-ECON 202 or ECON 203 |
| Fall & Spring | 453 | Public Policy in Private Markets *(Managerial Econ IE Course)* | RES-ECON 452 or consent of instructor |
| Spring | 471 | Cost Benefit Analysis *(Resource Economics IE & Capstone Course)* | RES-ECON 202 or ECON 203 |
| Fall | 472 | Advanced Topics in Resource & Environmental Economics *(Resource Economics IE & Capstone Course)* | RES-ECON 212 or STATS 240; RES-ECON 202 or ECON 203 |
| Fall & Spring | 499CA/DA | Honors Thesis Seminar: Economics of Renewable Energy Transition | CHC Senior or instructor permission |

**Please note: The semester(s) courses are offered is subject to change. Please check the SPIRE course guide for the current or upcoming semester for the most up-to-date information.**

# Undergraduate Course Descriptions

**102 Introduction to Resource Economics (SB) (both semesters)**
Principles of microeconomic theory for majors and non-majors. Concepts of supply, demand, markets, economic welfare and policies. Applications to resource management in business and government context emphasized.

**106 (formerly 162) Economics is Everywhere (SB) (fall semester)**
In this course, we seek to elucidate our role as consumers in society and demonstrate the usefulness of economic perspectives in understanding not just the economy, but society more broadly. We are all consumers in many ways. We consume physical products, of course, but we also consume art, media, information, policy, and natural resources. This course will use economics to shed light on these many dimensions of consumption. We will begin by establishing some key economic principles and themes. We will then proceed to use these as a lens for thinking through diverse topics, ranging from classic consumer markets to education policy, from environmental issues to fashion and entertainment.

**107 (formerly 121) Hunger in a Global Economy (SB DG) (spring 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.

**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. Topics include data analysis and modeling using MS Excel spreadsheets and relational data management using MS Access and an introduction to SAS analytics software. Students are evaluated through a variety of means: group projects, individual homework, in class team-based exercises, informal reflections, peer evaluations, and exams.

**202 Price Theory (both semesters)**
The purpose of this course is to present intermediate level microeconomic theory. Primarily we will focus on consumer demand theory and economics of production. Both graphical and mathematical approaches will be presented. This course provides the background necessary for more advanced courses in the department. Prerequisites: RES-ECON 102 or ECON 103; MATH 127 or MATH 131.

**202H Price Theory, Honors (fall semester)**
The purpose of this course is to present intermediate level microeconomic theory using calculus. In addition to the core topics in consumer theory, theory of the firm, and market structure, we will cover more advanced topics including Game Theory, Uncertainty, Asymmetric Information, and Moral Hazard. We will use both geometric and mathematical approaches to economic analysis. 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.

**Please note: The semester(s) courses are offered is subject to change. Please check the SPIRE course guide for the current or upcoming semester for the most up-to-date information.**

**213 Intermediate Statistics for Business and Economics (R2) (both semesters)**
This course covers methods of sample-based estimation and inference. 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 (if time permits) such as moving averages and exponential smoothing. Statistical software is used for advanced computations. Basic algebra required. Prerequisites: RES-ECON 212 or STATISTC 240.

**262 Environmental Economics (SB) (spring semester)**
Economic analysis of environmental problems focusing on air, water, and land pollution. Emphasis is on analyzing the individual incentives that lead to environmental degradation, the valuation of environmental quality, 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 Resource Economics and Managerial Economics majors. 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. Nonlinear models, binary independent variables and binary dependent variable methods. Application of methods to real world data; emphasis is on application through use of econometric software. Students undertake research projects. Prerequisites: RES-ECON 202 or ECON 203; RES-ECON 213; RES-ECON 112; or consent of the instructor.

**313 Decision Analysis (both semesters)**
No matter what type of job you get when you leave the Res Econ family, you will need to be able to make good decisions using numbers. Some of you will get jobs performing analysis, while some of you will need to judge the credibility of the analysis done by others. The goal of this class is to introduce you to decision analysis. Decision Analysis covers how to best make decisions in an uncertain world. Topic include belief formation and updating, logical decision making and avoiding common decision errors, and appropriate information gathering. Fit with other courses: This course contributes to the quantitative sequence by further reinforcing how numbers can help us to make good decisions and by improving the students' technical skills related to probabilities. The course contributes to the theoretical sequence by focusing on logical and consistent decision making and an understanding of behavioral biases that can adversely affect decision-making. Prerequisite: RES-ECON 212 or STATISTC 240.

**315 (formerly 397A) Economics of Contemporary Information Technology (spring semester)**
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.

**Please note: The semester(s) courses are offered is subject to change. Please check the SPIRE course guide for the current or upcoming semester for the most up-to-date information.**

**323 (formerly 314) Financial Analysis for Consumers and Firms (both semesters)**
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; RES-ECON 323 (was 314) or FINANCE 301.

**360 (formerly 397E) Economic Development and the Environment (spring semester)**
This course introduces students to a holistic framework for understanding the relationships between global inequality, economic development, and environmental degradation. A range of practical pathways toward more sustainable global development are discussed and evaluated from economic, societal, and environmental perspectives. Topics include: the development gap; climate change; food security; population growth and distribution; approaches to addressing extreme poverty; biodiversity and ecosystem services; health, education, agriculture, and political institutions in the context of economic development; global carrying capacity and environmental load. Prerequisite: RES-ECON 102 or ECON 103 or RES-ECON 262 or RES-ECON 263 or consent of instructor.

**363 (formerly 397W) The Economics of Water Policy (fall semester)**
This course offers a broad overview of domestic and global water policy topics. In particular, the course will explore these topics through the lens of economics. The class covers both water quality and water quantity topics. U.S. topics will include a discussion of major environmental and health statutes such as the Clean Water Act and Safe Drinking Water Act. Environmental justice impacts will be discussed. Global topics will cover a range of subjects including the importance of sanitation and safe drinking water in developing countries. Issues of water scarcity in both domestic and global settings will be explored. Foundational economic topics will cover supply and demand models, non-market valuation techniques, and water pricing.

**386 (formerly 397C) Health Economics (fall semester)**
This course introduces students to the theory and methods of health economics and demonstrates how these methods can be applied to understand phenomena and analyze issues in health policy, business, and management. We will explore how scholars and practitioners address empirical questions in health economics and the methods and data that are available. Topics include: COVID-19 and the diffusion and innovation in health care; the demand for health care; health insurance; geographic variation in medical spending; physician labor market; hospital and health systems; pharmaceutical, biotech, and medical devices; drug development, pricing, and FDA regulation; technology assessment; special topics (poll). Prerequisite: RES-ECON 202 or ECON 203 or consent of the instructor

**394LI Life is Full of Choices: Integrative Experience Seminar (both semesters)**
Students will reflect on and integrate their collegiate learning and experiences to date by completing the following activities: develop a personal reflective portfolio, inventory and identify skills attained as an undergraduate, update professional materials such as resume, cover letter and networking profiles; and explore career options. Students will participate in weekly team activities in a team-based-learning environment that fosters engagement and peer-to-peer feedback. This 1-credit course, plus RES-ECON 471 and RES-ECON 472, satisfies the Integrative Experience requirement for Resource Economics majors. This 1-credit course, plus RES-ECON 452 and RES-ECON 453, satisfies the Integrative Experience requirement for Managerial Economics majors. Prerequisite: Junior standing.

**Please note: The semester(s) courses are offered is subject to change. Please check the SPIRE course guide for the current or upcoming semester for the most up-to-date information.**

**414 (formerly 497T) Topics in Times Series and Forecasting (spring semester)**
**In this course we will explore and develop a variety of univariate time-series techniques. We will show how to use these techniques to make forecasts for different economic variables. We will compare forecasts using univariate methods with forecasts obtained using econometric models. Prerequisite: RES-ECON 213.**

**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 323 (was 314) or FINANCE 301; RES-ECON 202 or ECON 203; RES-ECON 213 or 312; and RES-ECON 313. Capstone course for Managerial Economics majors.

**440 (was 462) Experimental Economics (fall 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.

**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, price and non-price rivalry. Market performance including welfare, costs, and profits. BS Managerial Economics majors can satisfy their Integrative Experience requirement by taking this course plus RES-ECON 394LI and 453. Prerequisite: RES- ECON 202 or ECON 203.

**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). BS Managerial Economics majors can satisfy their Integrative Experience requirement by taking this course plus RES-ECON 394LI and 452. Prerequisite: RES-ECON 452 or consent of instructor.

**471 Cost-Benefit Analysis (spring semester)**
This course introduces students to theoretical foundations and practical procedures of cost-benefit analysis (CBA) as applied to public natural resources and environmental projects, programs, and regulations. The course will cover critical discussion of strengths and weaknesses of CBA. Students will learn discounting, non-market valuation, and social welfare analysis. This course fulfills the General Education Integrative Experience requirement for BS Resource Economics majors when taken with RES-ECON 394LI and RES-ECON 472. Prerequisite: RES-ECON 202 or ECON 203. Capstone course for Resource Economics majors.

**Please note: The semester(s) courses are offered is subject to change. Please check the SPIRE course guide for the current or upcoming semester for the most up-to-date information.**

**472 Advanced Topics in Resource and Environmental Economics (fall semester)**
This course addresses advanced topics in environmental and natural resource economics. It applies tools from microeconomic theory and statistics to analyze a wide array of environmental issues, including energy efficiency programs, conservation initiatives, climate change mitigation, 'green' products and ecolabeling, and the impacts of pollution on human health. BS Resource Economics majors can satisfy their Integrative Experience requirement by taking this course plus RES-ECON 394LI and RES-ECON 471. Prerequisite: RES-ECON 212 or STATS 240; RES-ECON 202 or ECON 203. Capstone course for Resource Economics majors.

**196H, 296H, 396H, 496H Honors Independent Study**
These courses require a faculty sponsor. Contact the Commonwealth Honors College Advising Center—201 Commonwealth Honors College—to add these courses.

**396 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. See "Undergraduate Independent Study Fall/Spring Process Form" in this handbook for more details about independent studies.

**398 Practicum (Semester Long Courses)**
**398Y 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 9 credits of RES-ECON 398 for internship work. RES-ECON 398 is offered as mandatory PASS/FAIL. Students doing internships in summer register through Continuing and Professional Education for credits. See "Undergraduate Internship Process Student Guide" in this handbook for more details about internships.

**499CA, DA Honors Thesis Seminar—Economics of Renewable Energy Transition**
Transitioning our energy system to one that is supplied primarily by clean and renewable energy sources is arguably one of the most important challenges of the 21st century. Modern society depends on reliable and affordable energy supply and energy markets affect all economic sectors including corporations and households. The success of the energy transition will depend on the development and deployment of new technology, as well as market mechanisms and policies to support this transition. This course will explore economic aspects of the renewable energy transition, including the costs and benefits of electricity from solar and wind, the environmental impact of energy consumption, and policies to support market growth and technology adoption. We will also cover topics related to equity in energy markets and how the renewable energy transition can contribute to social welfare and equity. Course content will also include topics related to research development, writing, and presentation. Students will develop research proposals in the Fall and complete their Honors Theses in the Spring.

Notes: CHC Seniors of all majors are encouraged to apply. Prospective students should email Dr. Christine Crago at ccrago@resecon.umass.edu with a brief essay that discusses their (1) coursework and experience in economics and other fields related to renewable energy, and (2) motivations for taking the course.

**499Y/499T Honors Research/Honors Thesis**
See Departmental Honors Program section of the handbook for details. Contact the Commonwealth Honors College Advising Center—301 Commonwealth Honors College—to add this course.
**Please note: The semester(s) courses are offered is subject to change. Please check the SPIRE course guide for the current or upcoming semester for the most up-to-date information.**

## How Do I Find an Internship?

Internships provide many benefits including, but not limited to, direct work experience, marketable skills, and networking opportunities. To find internship opportunities and/or related support services, visit:

- **UMass Amherst Career Services** https://www.umass.edu/careers/internships-and-co-ops
- **College of Social and Behavioral Sciences (SBS) Career & Professional Development** https://www.umass.edu/sbs/career-advising/find-jobs-internships
- **Handshake** (UMass Amherst supported career platform) https://umass.joinhandshake.com/login
- Read the weekly **ResEc Newsletter** for employers specifically seeking students from our field.
- **International Programs Office** https://www.umass.edu/ipo/iss is the best resource for questions regarding eligibility, tips for success and CPT authorization for international students. The CPT process will begin with department approval for your internship, followed by CPT paperwork and then your Handshake submission.
- Talk with friends, family, faculty, etc. to learn about other opportunities that might be available

## Is Academic Credit the Right Choice?

Once you have found, applied for, and accepted an internship, you have the option to earn academic credit for the experience. This is true for both paid and unpaid internships. Internships are valuable experiences in and of themselves and the decision to seek credit depends on your personal circumstances. Consider:

- How will internship credits fit with your academic plan? Consult your advisor and consider progress toward degree completion as well as credit load implications.
- Based on above, determine and weigh financial implications for seeking credit.
- What do you hope to gain from internship credits and academic work related to your internship?
- In order to be eligible for internship credit, you must have earned 45 credits and have a GPA of 2.0 or above. If you do not meet either or both of these criteria, you will require SBS Dean approval.

If your internship is directly related to Resource Economics, you have the option to enroll in Res-Econ 398. You can also receive credit for lesser-related internships via University course 298.

## What Can I Expect if I Enroll in Res-Econ 398?

### Hours

You will be expected to work 40 hours per credit earned. Many students opt for 3 credits (120 hours over the course of a semester), but you have options including 1, 2, or 4 credits. UMass Amherst students can earn up to 18 internship credits during the course of degree completion. Resource Economics typically limits students to 6 credits in any one given term/semester.

### Faculty Sponsorship

You are responsible for finding and working with a faculty sponsor in order to receive credit. Within Resource Economics, the primary faculty sponsor for general internships is Colby Gray (c.gray@umass.edu).

### Academic Requirements

Internships are Pass/Fail. In order to pass, you must meet the academic requirements you collaboratively set with your faculty sponsor. See sample expectations.

**Sample Expectations for 3 Credit Internship (General)**
(Note expectations increase or decrease based on the number of credits earned.)

***Complete a Work Log:*** Submit weekly documentation of hours worked in the internship ensuring you have met the minimum work hours for the credits you are receiving by the end of the semester. If hours are split between multiple locations, indicate the location associated with all hours.

**Sample Expectations for 3 Credit Internship (General) -Continued**

***Attend Faculty Sponsor Meetings:*** Over the course of your internship, you will be responsible for scheduling and attending 3 check-in meetings with your sponsor.

**Select and Complete 2 Academic Assignments:**

- Summative Essay: 6 pages of reflection on your experience in the internship (training received, what you are learning, how you are growing, connections you are making, etc.) *Students are limited to 1 summative essay per internship experience.*
- In-Depth Self-Assessment: With employer support/permission, collect and write-up 360-degree feedback (feedback from supervisor, peers, and direct reports) regarding your current performance including suggestions for improvement. Submit this feedback along with a self-assessment of your work and a plan for self-improvement during the remainder of the internship. In total, this assignment should be 6 pages in length with at least 1 page devoted to self-assessment and 1 page dedicated to an improvement plan. *Students are limited to 1 self-assessment per internship experience.*
- Employer Interviews: With employer support/permission, select 3 employees with different roles or experiences within the organization. Conduct an interview with each using questions you develop and submit a 2-page summary of each interview (6 pages in total). *Students are limited to 2 sets of employer interviews per internship experience.*
- Project Summary: If your internship affords you the opportunity to create a specific presentation, project, or report, you may submit this item for review (adhering to the employer's redaction/confidentiality expectations) along with a 4-5 page reflection on what you learned by completing the project. *Students are limited to 2 project summaries per internship experience.*
- Live Presentation: Develop an in-depth presentation with slides/visuals to be presented during one of your meetings with your faculty sponsor. This presentation may be an overview of your role/experience, an in-depth look at a specific job function, etc. Present to faculty and any other students in attendance (approximately 10 minutes in length). This presentation may be recorded and/or used for departmental purposes. *Students are limited to 1 Live Presentation per internship experience.*
- Marketing Pitch: Work with the Academic Programs Manager for Resource Economics to develop content for our website, social media accounts, or other marketing materials related to your internship experience. Use this as an opportunity to pitch your experience and gain marketing experience at the same time. May include (in consultation with you) classroom visits or RES events. *Students are limited to 1 Marketing Pitch per internship experience.*
- Propose Your Own Idea(s): Seek faculty approval for another equivalent assignment.

**Sample Expectations for 3 Credit Internship (Academically-Focused)**

***Complete a Work Log:*** See above.

***Attend Faculty Sponsor Meetings:*** See above.

***In-Depth Study:*** Work with your faculty sponsor to determine connection points between your internship and Resource Economics fundamentals. Expectations will vary by interests and may require employer permission. Options include, but are not limited to:

- Utilizing company data sets to research a specific question that may be of both academic interest and utility to your employer.
- Applying a theory or construct in the work setting and summarizing your observations.
- Completing a literature review related to the company, industry, or specific commodity.
- Expanding upon current or past major-specific course work relevant to internship duties.

## How do I Get Started?

1. Meet with your faculty sponsor to develop the academic requirements for the internship you've secured. Conversations should be completed before add/drop of term.
2. After this meeting, submit an internship experience in Handshake and the Department will enroll you in Res-Econ 398. You may then begin actively working on your established plan.

## What is Independent Study?

Independent study courses are available to students who wish to pursue a particular topic in depth under the direction of a faculty sponsor. They generally take the form of a reading course with weekly one-on-one discussions, a research experience with completion of a written mini-thesis report involving regular consultation with the faculty sponsor, or a combination of these two formats. Other formats are possible with the approval of the sponsor selected by the student to direct the course.

## Is Independent Study in Resource Economics the Right Choice?

Independent study courses do not count toward any departmental requirements if taken pass/fail, but may count toward upper-level selected electives if taken for a grade. In either case, they are an excellent option for fulfilling elective credits for students motivated to delve deeply into a topic and engage in a thought-provoking one-on-one learning/mentorship experience. Steps to take before you start the independent study process:

- Consult with your academic advisor on how independent study credits will fit into your overall graduation plan and determine what is feasible. Note, Res-Econ independent study is separate from and cannot be considered as internship credits or Honors individualized credit.
- Develop an initial concept or plan to pitch to a faculty sponsor.
    - How many credits are you interested in pursuing and when?
    - What topic(s) interest you and why?
    - Do you have ideas to contribute to reading or research content?

## Process

After answering the questions above, the following steps must be taken:

1) Student seeks out a faculty sponsor within the Department of Resource Economics. Students are encouraged to begin conversations proactively (ideally during pre-registration or registration).
2) Student and Faculty Sponsor establish a mutually agreed upon set of expectations using the contract to guide conversation. Both parties must be satisfied with the level of rigor established and overall clarity of the contract. A student who does not wish to meet the minimum expectations of the faculty sponsor may elect not to pursue independent study credits.
3) Student finalizes the contract (likely writing-up details from a verbal exchange with faculty sponsor) and acquires the 3 required electronic signatures (student, faculty and UPD -Undergraduate Program Director). The student and faculty sponsor signatures indicate mutual agreement with all contract details. Faculty should assist with UPD communication as needed.
4) Student sends the completed contract to Kellie Nicholas, Academic Programs Manager for Resource Economics at kjnicholas@umass.edu (cc faculty sponsor) before the add/drop period ends for the term in which the independent study will take place. See here for relevant dates: https://www.umass.edu/registrar/calendars/academic-calendar.
5) The Academic Programs Manager adds the independent study in Spire as a section of Res-Econ 396.The faculty sponsor will be listed as the instructor.
6) Faculty Sponsor enters the final grade in Spire by the term deadline. (Again, see academic calendar.)

## Contract *(continues on page 2)*

Student Name: _____

Student Major: _____ Student ID #: _____

Faculty Sponsor/Instructor: _____

**Contract** ***(continued)***

Number of Credits (1-6 with each credit equivalent to 3 academic hours per week): _____

Grading Basis (UG Letter or Mandatory Pass/Fail): _____

Meeting Structure:

*Consider meeting frequency and dates, mode, and other pertinent details.*

Communication & Feedback:

*Consider details regarding communication expectations and/or methods for giving, receiving and responding to feedback beyond established meeting structure.*

Core Expectations:

*Consider learning objectives, key components of the independent study, and related due dates.*

Grading:

*Provide details regarding how the student's work will be evaluated. Consider meeting attendance, communication, adherence to core expectations, and overall quality of work. Factor in the UG Letter vs. Mandatory P/F grading basis decision. The choice of grading basis cannot be changed after the Add/Drop period ends.*

Other:

*Provide further notes as desired, including any additional documentation that will accompany the contract.*

**Signatures**

Student:_____

Faculty Sponsor: _____

Resource Economics Undergraduate Program Director (UPD): _____

*This form is for Fall/Spring independent study within the Department of Resource Economics. Winter/Summer independent study follows University Without Walls (UWW) procedures. See https://www.umass.edu/uww/resources/independent-study-or-practicum.*

# Department of Resource Economics Scholarships

## Herbert L. Forest Scholarship

The Herbert L. Forest Scholarship supports juniors and seniors majoring in Resource Economics, Managerial Economics, Veterinary and Animal Sciences, Food Science, Plant and Soil Science, Horticulture, Sustainable Food & Farming, or Turfgrass Management. Applicants should have a demonstrated career interest related to dairy marketing and must be in good academic standing. The scholarship was established to honor the late Herbert L. Forest, a distinguished alumnus of the Department of Resource Economics at the University of Massachusetts Amherst. Mr. Forest served as Director of the Dairy Division of the Agricultural Marketing Service of the United States Department of Agriculture for most of his career. He supervised the establishment and operation of Federal Milk Marketing Orders throughout the United States and was also involved in numerous international negotiations related to trade in dairy products. Mr. Forest died during 1993. Since his death, the Herbert L. Forest Scholarship fund has continued to benefit significantly from the contributions of his family, friends, and admirers.

ELIGIBILITY: Applicants must be juniors or seniors next fall majoring in Resource Economics, Managerial Economics, Veterinary and Animal Science, Food Science, Plant and Soil Science, Horticulture, Sustainable Food & Farming, or Turfgrass Management. Applicants must be in good academic standing and with a career interest related to dairy marketing.

## William (Red) Curtin Scholarship

For 43 years Mr. Curtin was a financial writer and commodities market expert with the Boston Herald-Traveler newspaper. His commodity forecasts were circulated nationwide through the Associated Press. Mr. Curtin also ran a Commodities Market Service for the Northeast for 30 years. His friends and colleagues established this scholarship in 1984 to honor his memory. The William (Red) Curtin Scholarship supports undergraduate students who are in good academic standing and demonstrate financial need.

ELIGIBILITY: Applicants must be undergraduate students majoring in Resource Economics or Managerial Economics in good academic standing and with demonstrated financial need.

*Note: This scholarship will not be awarded in 2023.*

## Mrs. Clifton Johnson Scholarship

A scholarship for Resource Economics or Managerial Economics students who exhibit academic achievement and are residents of Hampshire County.

ELIGIBILITY: Applicants must be undergraduate Resource Economics or Managerial Economics majors and residents of Hampshire County.

*Note: This scholarship will not be awarded in 2023.*

## Knowlton Scholarship

A scholarship for Resource Economics or Managerial Economics students who exhibit academic achievement.

ELIGIBILITY: Applicants must be undergraduate Resource Economics (concentration in Managerial Economics) or Managerial Economics majors.

**Marjorie Merchant Scholarship**
A scholarship for Resource Economics or Managerial Economics students who exhibit academic achievement. Recipients will be chosen based on scholastic achievement and financial need.

ELIGIBILITY: Applicants must be undergraduate Resource Economics or Managerial Economics majors with demonstrated financial need.

**Oreana Merriam Scholarship**
Established to provide financial support to sophomores, juniors or seniors who are majoring in Resource Economics or Managerial Economics. Eligible recipients will have a cumulative GPA of 3.0 or greater.

ELIGIBILITY: Applicants must be undergraduate Resource Economics or Managerial Economics majors with a cumulative GPA of 3.0 or higher.

**Helen Whittier Scholarship**
A scholarship for Resource Economics or Managerial Economics students.

ELIGIBILITY: Applicants must be undergraduate Resource Economics or Managerial Economics majors.

**Additional Information:**
All Department of Resource Economics are applied for and awarded in the spring semester.

To apply for scholarships:

1. Go to the Academic Works webpage and sign in with your UMass Net ID and password.
2. Complete the General Application. Once you do this, you'll see all the scholarships you qualify for. Once you do this, you'll see any supplemental applications for your major(s). Completing the supplemental applications will qualify you for additional scholarships.
3. Click on a scholarship link and upload supplementary documents (resumes, letters from faculty, etc., depending on the award).
4. Submit your application and see your dashboard, which shows you the status of any pending and submitted applications.

Please email acadworks@umass.edu with any questions.

# Resource Economics Society

The Resource Economics Society is a UMass student-run organization for current and prospective Resource Economics and Managerial Economics majors. Our goals are to facilitate academic, professional, and community development as well as provide networking between alumni, faculty, and undergraduates within the Department of Resource Economics. By hosting a diverse collection of events ranging from professional development seminars, to alumni and faculty guest speakers, along with volunteer opportunities, we prepare and expose our members to opportunities that go beyond the classroom. If you are interested in being a part of R.E.S. you can email us at ResEcClub@gmail.com, find us on Facebook at "The Resource Economics Society," or follow us on Instagram @umassres to keep up to date with our meetings and events. New members are always welcome!

**2022-2023 Executive Team:**

Shoxruxxon Madjidov – Co-President

Johnny Poon – Co-President

Angelina DiCarlo – Executive Team Member

Aidan Fitzgerald – Executive Team Member

Hannah Lee – Executive Team Member

# Department of Resource Economics Contact Information

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