

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 required electives (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 SPP 309/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 Upper-Level Required Electives

The goal of the five upper-level required 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

Upper-Level Required Electives

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 upper-level required electives.

The goal of upper-level required 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 Required 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

Upper-Level Required Electives

While not required, some students use their selected courses to develop a focus area that aligns with their interests/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. Please note: a course listed outside of the department may be restricted, and each course may not be offered every term. Defer to the restrictions and prerequisites listed on SPIRE. Also, a course taken as a major requirement cannot also be counted as an upper-level required elective.

Behavioral/Experimental Economics

RES-ECON 440 (was 462) Experimental Economics

Pre-requisite - Res-Econ 202 or 203

ECON 302 (was 397BE) Behavioral Economics

Pre-requisite - Econ 103 or Res-Econ 102

ECON 309 Game Theory

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

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

ECON 310/SPP 310 Environmental and Resource Economics

Pre-requisite - none

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

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 - Statisc 515 with a grade of 'C' or better

STATISTC 525 Regression and Analysis of Variance

Pre-requisite - Statisc 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

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

ECON 310/SPP 310 Environmental and Resource Economics

Pre-requisite - none

SPP 320/POLISCI 320 Public Administration

Pre-requisite - none

SPP 394PO/LEGAL 394PO Politics & Policy in the American Police State

Pre-requisite - Soph standing, SPP 280 or Legal Studies 250

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 369 (was 397S) Gender & 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 312 (was 397M) Policies & Strategies for Social Change

Pre-requisite - none

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

Resource Econ Academic Planning and Goals

This template is intended for planning purposes only

Name:	ID:	Email:	Grad Term:	Date:
--------------	------------	---------------	-------------------	--------------

You, as a student, are responsible for:

- Ensuring that all graduation requirements are fulfilled. Your Academic Requirement Report (ARR) can be viewed in SPIRE
- Meeting with your academic advisor before choosing courses each semester to review your progress toward graduation
- Monitoring progress toward any credential (major/minor/certificate/dual degree, etc.) outside 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 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) up to two courses between any two or more credentials.

Fall Term	Winter Term	Spring Term	Summer Term
year: <input type="text"/>	year: <input type="text"/>	year: <input type="text"/>	year: <input type="text"/>
year: <input type="text"/>	year: <input type="text"/>	year: <input type="text"/>	year: <input type="text"/>
year: <input type="text"/>	year: <input type="text"/>	year: <input type="text"/>	year: <input type="text"/>
year: <input type="text"/>	year: <input type="text"/>	year: <input type="text"/>	year: <input type="text"/>

- Calculus I
- Intro Micro
- Econ 104
- Res-Econ 112
- Breadth course
- Intro Statistics
- Intermediate Micro
- Econ 204
- Res-Econ 213
- Res-Econ 313
- Res-Econ 262
- Res-Econ 263
- Policy Course
- JYW
- Res-Econ 394LI (IE)
- Res-Econ 471 (IE)
- Res-Econ 472 (IE)
- ResEc/Ec 300+
- SBS 300+
- Any 300+
- Any 300+
- Any 300+
- All Gen Eds
- Additional Creds Needed for Graduation Reqs

Gen Eds :

<input type="checkbox"/> CW	<input type="checkbox"/> BS	<input type="checkbox"/> HS	<input type="checkbox"/> DU	**Transfer Student? <input type="checkbox"/> Y <input type="checkbox"/> N	MTB? <input type="checkbox"/> Y <input type="checkbox"/> N
<input type="checkbox"/> R1 (Calc I/II)	<input type="checkbox"/> PS	<input type="checkbox"/> SB (Intro Micro)	<input type="checkbox"/> DG	<input type="checkbox"/> **Additional Transfer Gen Ed (MTB exempt)	
<input type="checkbox"/> R2 (Calc I/II)	<input type="checkbox"/> AL/AT	<input type="checkbox"/> SW (Intro Macro)		<input type="checkbox"/> **Additional Transfer Gen Ed (MTB exempt)	

Credits:	Notes:
Creds earned	
Creds in prog	
Total Creds =	
Creds needed to 120	

Helpful Links & Action Steps

There are many steps you can take to stay well informed and be an active participant in your academic plan. Based on your most recent advising appointment, we recommend following up with:

Courses:

- [Upper-level required electives](#): (see Table of Contents)
- [Minor, Second major, or 4+1 program](#): Advising and admissions managed by respective department/program
- [Dual degree](#): Submit form to registrar during senior year; complete all requirements including 150 credits to graduate
- [Commonwealth Honors College \(CHC\)](#): email [CHC advising team](#) for assistance
- [Sharing/Overlapping/Double dipping between credentials](#): Check restrictions, read "Using Courses for Multiple Credentials"
- [Enrolling in a Non-ResEcon class](#): Review instructions and pre-reqs in Spire. Contact the listed instructor and/or an advisor from the department. Resource Economics Advising cannot enroll you in other department's classes. Common Contacts: [Computer Science](#), [Economics](#), [Isenberg School of Management \(Business minor\)](#), [Information Technology](#)
- [Civic Engagement & Service Learning \(CESL\)](#)
- Finding an [Enrollment appointment](#)
- [Repeating a course](#)
- [Part-time study](#): Always talk to Financial Aid first! See [Housing](#) requirements if applicable
- [Graduation term update](#)
- [Preparing for Graduation](#): Check list to make sure you get everything done
- [SBS Academic Deans](#): Approval for late withdrawals, credit overloads, info about course additions, pass/fail designation and more. See related forms at [SBS How Do I?](#) [Appeals for suspension/dismissal](#) must be sent to Deans on time!

Time Away from Campus:

- [Enrolling in UWW](#) (summer/winter classes): Follow current undergraduate student directions, [Explore UWW classes](#)
- [Senior Year in Absentia \(SYIA\) form](#): Planning to finish your degree away from campus
- [Transfer courses](#) for credit: See commonly accepted [Equivalent courses](#) for major/University requirements, or review [AP/IB/A-Level/CLEP exam equivalencies](#): If pursuing CLEP, check out [Modernstates.org](#) for resources
- [Studying Abroad](#): Begin with IPO peer advisors to explore options, work with Res Econ advisor to determine which requirements you can fulfill abroad, finalize your plan and Res Econ advising will review and approve major courses via "ICAF" Or consider a [Domestic Exchange](#), or the "SBS in" [DC](#) or [Boston](#) program
- [Five College Interchange](#): Enroll in courses at Smith, Mount Holyoke, Hampshire or Amherst Colleges

Careers & Money:

- [Internship credits](#) or [Co-op](#): If interning in Boston, look into opportunities through the [Mount Ida Campus](#). Additional career resources include [Handshake](#), [Upcoming career events](#), [Companies currently hiring](#), [Student Job board](#), [Professional development advising](#), and [SBS Career Channels](#)
- [Curricular Practical Training \(CPT\)](#): Required for working International students. Consult with IPO first, then speak with Colby (c.gray@umass.edu) about faculty sponsorship when you reach this part of the process
- [Scholarships \(Academic Works\)](#)
- [Smart About Money \(SAM\)](#)

Academic/Personal TLC:

- [Center for Counseling & Psychological Health \(CCPH\)](#)
- [Center for Multicultural Advancement and Student Success \(CMASS\)](#)
- [Dean of Students](#)
- [Disability Services](#)
- [International Programs Office for International Students & Scholars \(IPO\)](#)
- [Learning Resource Center \(LRC: Tutoring\)](#) and [Writing Center](#)
- [SBS Remediating Inequity through Student Engagement \(RISE\)](#)
- [Student Success Toolkit](#)
- [University of Massachusetts Police Department \(UMPD\)](#)

See also [UMatter Resources](#) for additional points of contact.

Other: _____

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 SPRING 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	