

# Resource Economics and Management, M.S.

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## Degree Offered

- Master of Science

## Nature of the Program

The M.S. program in Resource Economics and Management (REM) provides advanced training in the areas of natural resource, environmental, agricultural, energy, agribusiness, and rural development economics. The primary objective of this program is to prepare students for further graduate study or a variety of careers in business and government. A candidate for the degree must comply with University, College, and Program requirements. The M.S. degree in Resource Economics and Management can be obtained under either course work or thesis options.

## Admissions for 2025-2026

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).

\* International students must meet WVU's minimum score requirement for English language proficiency (<https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2023-2024/international-graduate-applicant/>).

Candidates for the M.S. in Resource and Economics Management degree may be admitted on a regular or provisional basis. Prerequisites for admission include the following:

- Twelve or more semester credits in economics, agricultural and resource economics, statistics, or appropriate social science courses (should include a course in intermediate microeconomics)
- Three or more semester hours of credit in calculus

Students lacking these prerequisites have to complete coursework to acquire them.

Traditional (On-Ground) Major Code: 1725

Online Major Code: 1726

## Program Requirements

- Traditional (On-Ground) Program Requirements (p. 1)
- Online Program Requirements (p. 3)

A candidate for the M.S. degree in Resource Economics and Management must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

## TRADITIONAL (ON-GROUND) PROGRAM REQUIREMENTS

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

Graduate courses offered toward the degree must be approved by the student's graduate committee. Thesis and non-thesis options are available for the master's degree. Students should select one option by the time twelve hours of coursework are completed (usually by the end of the first semester

in the program) and after consulting with their graduate advisor or committee. Candidates with graduate research assistantships must select the thesis option.

Code	Title	Hours
<b>Required Courses</b>		
ARE 601	Applied Microeconomics	4
ARE 621	Quantitative Methods in Resource Economics	3
ARE 624	Econometric Methods in Resource Economics	3
Select one of the following:		3
ARE 632	Natural Resource and Environmental Economics	
ARE 633	Natural Resource Policy Analysis	
<b>Select one of the following Options:</b>		<b>17</b>
<b>Thesis Option *</b>		
ARE 697	Research (6 Hours)	
Electives (11 Hours)		
Written and Oral Exam		
<b>Non-Thesis Option (Coursework)</b>		
Electives (15 Hours)		
ARE 696	Graduate Seminar (2 Hours)	
<b>Non-Thesis Option (Professional Paper)</b>		
Electives (15 Hours)		
ARE 696	Graduate Seminar (1 Hour)	
ARE 697	Research (1 Hour)	
Professional Paper		
Total Hours		30

\*

A minimum of thirty credit hours of approved coursework can include not more than six hours of credit for the thesis. Proficiency in economics plus agricultural and resource economics is expected. Approved courses in closely related areas may be included. The student's graduate committee must approve the student's course of study and thesis topic.

## ELECTIVES

Code	Title	Hours
ARE 440	Futures Markets and Commodity Prices	3
ARE 445	Energy Economics	3
AGEE 642	Agriculture Education Research Methods and Design	3
ARE 585	Economics of Water Resources and Energy	3
ARE 600	Research Methods	1
ARE 620	Adaptation and Mitigation Strategies for Addressing Climate Change	3
ARE 422	New Venture Creation	3
RESM 480	Environmental Regulation	3
RESM 440 & 440L	Foundations of Applied Geographic Information Systems and Foundations of Applied Geographic Information Systems Laboratory *	3
RESM 444	Advanced GIS for Natural Resource Management *	3
RESM 575	Spatial Analysis for Resource Management *	3
RESM 585	GIS and Spatial Analysis Project *	3
RESM 540	Geospatial Modeling *	3
ESWS 525	Principles of Water Resources *	3
RESM 560	Advanced Energy Project and Program Management *	3
ARE 461	Agribusiness Finance *	3
ARE 620	Adaptation and Mitigation Strategies for Addressing Climate Change	3

\*

Course is offered in-person and online.

## ONLINE PROGRAM REQUIREMENTS

Code	Title	Hours
<b>Required Courses</b>		
ARE 601	Applied Microeconomics	4
ARE 621	Quantitative Methods in Resource Economics	3
ARE 624	Econometric Methods in Resource Economics	3
Select one of the following:		3
ARE 632	Natural Resource and Environmental Economics	
ARE 633	Natural Resource Policy Analysis	
<b>Select one of the following Options:</b>		<b>17</b>
<b>Thesis Option *</b>		
ARE 697	Research (6 Hours)	
Electives (11 Hours)		
Written and Oral Exam		
<b>Non-Thesis Option (Coursework)</b>		
Electives (15 Hours)		
ARE 696	Graduate Seminar (2 Hours)	
<b>Non-Thesis Option (Professional Paper)</b>		
Electives (15 Hours)		
ARE 696	Graduate Seminar (1 Hour)	
ARE 697	Research (1 Hour)	
Professional Paper		
Total Hours		30

\*

A minimum of thirty credit hours of approved coursework can include not more than six hours of credit for the thesis. Proficiency in economics plus agricultural and resource economics is expected. Approved courses in closely related areas may be included. The student's graduate committee must approve the student's course of study and thesis topic.

## ELECTIVES

Code	Title	Hours
RESM 440 & 440L	Foundations of Applied Geographic Information Systems and Foundations of Applied Geographic Information Systems Laboratory *	3
RESM 444	Advanced GIS for Natural Resource Management *	3
RESM 575	Spatial Analysis for Resource Management *	3
RESM 585	GIS and Spatial Analysis Project *	3
RESM 540	Geospatial Modeling *	3
ESWS 525	Principles of Water Resources	3
RESM 560	Advanced Energy Project and Program Management *	3
ARE 461	Agribusiness Finance *	3
ARE 620	Adaptation and Mitigation Strategies for Addressing Climate Change	3

\*

Course is offered in-person and online.

## Major Learning Outcomes

### RESOURCE ECONOMICS AND MANAGEMENT

The primary objective of this major is to prepare students for further graduate study or a variety of careers in business and government. Learning goals are that each graduate:

- Apply economic reasoning to the analysis of selected contemporary economic problems
- Demonstrate proficiency in the use of quantitative tools for the analysis of applied issues in resource economics and management.

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- Recognize and formulate effective written and oral communication, giving appropriate consideration to the audience, context and format.