<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Attributes</th>
<th>Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON F100X</td>
<td>Political Economy</td>
<td>3</td>
<td>Placement in ENGL F111X or higher or permission of instructor.</td>
<td>UAF Core Political Economy, UAF GER Social Sciences Req</td>
<td>(s)</td>
</tr>
<tr>
<td>ECON F111</td>
<td>Economics of Rural Alaska</td>
<td>3</td>
<td>AIS F131X or COMM F141X; ECON F201X; ECON F202X</td>
<td></td>
<td>(a)</td>
</tr>
<tr>
<td>ECON F201X</td>
<td>Principles of Economics I: Microeconomics</td>
<td>3</td>
<td>ENGL F111 or ECON F235X; MATH F230X or equivalent.</td>
<td></td>
<td>(s)</td>
</tr>
<tr>
<td>ECON F202X</td>
<td>Principles of Economics II: Macroeconomics</td>
<td>3</td>
<td>ECON F201X; ECON F202X; MATH F230X or equivalent.</td>
<td></td>
<td>(s)</td>
</tr>
<tr>
<td>ECON F227</td>
<td>Introductory Statistics for Economics and Business</td>
<td>3</td>
<td>Placement in ENGL F111X or higher or permission of instructor.</td>
<td></td>
<td>(s)</td>
</tr>
<tr>
<td>ECON F235X</td>
<td>Introduction to Natural Resource Economics</td>
<td>3</td>
<td>Offered Fall.</td>
<td>UAF GER Social Sciences Req</td>
<td>(s, a)</td>
</tr>
<tr>
<td>ECON F237</td>
<td>The Alaskan Economy</td>
<td>3</td>
<td>Offered Spring</td>
<td></td>
<td>(s, a)</td>
</tr>
<tr>
<td>ECON F321</td>
<td>Intermediate Microeconomics</td>
<td>3</td>
<td>Placement in ENGL F111X or higher or permission of instructor.</td>
<td></td>
<td>(s)</td>
</tr>
<tr>
<td>ECON F322</td>
<td>Managerial Economics</td>
<td>3</td>
<td>Offered As Demand Warrants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECON F324</td>
<td>Intermediate Macroeconomics</td>
<td>3</td>
<td>Placement in ENGL F111X or higher or permission of instructor.</td>
<td></td>
<td>(s)</td>
</tr>
<tr>
<td>ECON F327</td>
<td>Intermediate Econometrics for Forecasting and Business</td>
<td>3</td>
<td>Offered As Demand Warrants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECON F335</td>
<td>Intermediate Natural Resource Economics</td>
<td>3</td>
<td>Offered Fall.</td>
<td>UAF GER Social Sciences Req</td>
<td>(s, a)</td>
</tr>
</tbody>
</table>
ECON F350  Money and Banking  (s)  
3 Credits  
The liquid wealth system in the United States, including the commercial banking system, the Federal Reserve System and nonbank financial institutions; the regulation of money and credit and its impact on macroeconomic policy objectives.  
Prerequisites: ECON F201X; ECON F202X.  
Lecture + Lab + Other: 3 + 0 + 0  
ECON F351  Public Finance  (s)  
3 Credits  
Offered Fall  
Economic justifications for government; federal, state and local government, taxation, spending and debt; their effects on allocation, distribution, stabilization and growth.  
Prerequisites: ECON F201X; ECON F202X; MATH F230X or equivalent.  
Lecture + Lab + Other: 3 + 0 + 0  
ECON F409  Industrial Organization and Public Policy  (W, s)  
3 Credits  
The relationship of market structure to the economic conduct and performance of firms and industries, the determinants, measurement and classification of market structure, public policy toward mergers, industrial and aggregate concentration.  
Prerequisites: ECON F201X; ECON F202X; ENGL F111X; ENGL F211X or F213X; MATH F230X or equivalent; upper division standing; or permission of instructor.  
Lecture + Lab + Other: 3 + 0 + 0  
ECON F420  Labor Markets and Public Policy  (W, s)  
3 Credits  
Offered Spring Odd-numbered Years  
Application of labor market analysis and wage theory as they relate to public policy issues. Topics include determination of wages, taxation and employment, economic impact of unions, economics of discrimination, and issues relating to women's and minorities' changing roles in the labor market.  
Prerequisites: ECON F201X; ECON F202X; ENGL F111X; ENGL F211X or F213X; MATH F230X or equivalent; permission of instructor.  
Lecture + Lab + Other: 3 + 0 + 0  
ECON F434  Environmental Economics  (W, a)  
3 Credits  
Offered Spring Odd-numbered Years  
An extension of concepts introduced in ECON F235X, using a higher level of economic analysis. An analysis of the economic forces involved in environmental degradation, preservation and regulation. Topics include pollution, biodiversity, wilderness and climatic change.  
Prerequisites: ECON F201X and ECON F202X or ECON F235X; ENGL F111X; ENGL F211X or ENGL F213X; MATH F230X or equivalent; permission of instructor.  
Lecture + Lab + Other: 3 + 0 + 0  
ECON F439  Energy Economics  (W, s, a)  
3 Credits  
Offered Fall Odd-numbered Years  
Market forces and institutions affecting the allocation of energy resources. Special attention to intertemporal allocative decisions and the role that public policy plays in influencing the rate at which energy resources are used over time.  
Prerequisites: ECON F201X and ECON F202X or ECON F235X; ENGL F111X; ENGL F211X or ENGL F213X; or permission of instructor.  
Stacked with ECON F639.  
Lecture + Lab + Other: 3 + 0 + 0  
ECON F451  Public Expenditure Analysis  (W)  
3 Credits  
Offered Spring Odd-numbered Years  
Uses and economic effects of governmental expenditures, budgeting techniques, and their effects on resource allocation.  
Prerequisites: ECON F201X; ECON F202X; ENGL F111X; ENGL F211X or ENGL F213X; MATH F230X or equivalent; or permission of instructor.  
Lecture + Lab + Other: 3 + 0 + 0  
ECON F463  International Economics  (W, s, a)  
3 Credits  
Prerequisites: ECON F201X; ECON F202X; ENGL F111X; ENGL F211X or F213X; MATH F230X or equivalent; or permission of instructor.  
Lecture + Lab + Other: 3 + 0 + 0  
ECON F601  Microeconomic Theory I  
3 Credits  
Offered Fall  
Analysis of consumer and producer theory, price determination and welfare economics.  
Prerequisites: ECON F321 or equivalent; MATH F251X or equivalent; graduate standing; or permission of instructor.  
Lecture + Lab + Other: 3 + 0 + 0  
ECON F602  Economic Modeling  
3 Credits  
Offered Fall  
A hands on approach to applied microeconomics and resource modeling. Students extend their training in economic theory and econometrics to model real life problems in the areas of renewable and exhaustible resources, non-market valuation and environmental economics. Special emphasis will be given to the use of econometric analyses.  
Prerequisites: ECON F601; ECON F626 or equivalent; graduate standing; or permission of instructor.  
Lecture + Lab + Other: 3 + 0 + 0  
ECON F603  Macroeconomic Theory I  
3 Credits  
Offered Spring  
Analysis of the underlying causes of unemployment, economic instability, inflation and economic growth.  
Prerequisites: ECON F321 or equivalent; ECON F324 or equivalent; MATH F251X or equivalent; graduate standing; or permission of instructor.  
Lecture + Lab + Other: 3 + 0 + 0  
ECON F613  Resilience Internship  
2 Credits  
Offered Fall  
Students of the Resilience and Adaptation Program participate in internships to broaden their interdisciplinary training, develop new research tools and build expertise outside their home disciplines. Internships are eight to ten weeks of full time commitment and take place during the student's first summer in the program. In the autumn students meet to discuss their internship experiences and make public presentations.  
Prerequisites: ANTH/BIOL/ECON/NRM F667; ANTH/BIOL/ECON/NRM F668; or permission of instructor.  
Cross-listed with ANTH F617; BIOL F613; NRM F613.  
Lecture + Lab + Other: 2 + 0 + 0
ECON F616  Economics Background for Resilience and Adaptation  (a)  1 Credit
Offered Fall
Provides the economics background that is necessary for understanding the role of economics in complex systems involving interactions among biological, economic, and social processes. Designed for incoming students of the Resilience and Adaptation Program (RAP), who have not received training in ecology.
Prerequisites: Graduate student enrollment or permission of instructor.
Lecture + Lab + Other: 1 + 0 + 0

ECON F623  Mathematical Economics  3 Credits
Offered Fall
Mathematical techniques including matrix algebra, differential and integral calculus. Particular attention is given to static and comparative statics analysis and dynamic models.
Prerequisites: MATH F251X or equivalent; graduate standing; or permission of instructor.
Lecture + Lab + Other: 3 + 0 + 0

ECON F626  Econometrics  3 Credits
Offered Spring
Introduction to econometric theory. Single equation and multiple equation system estimation, including inference and hypothesis testing and results of assumption violation.
Prerequisites: ECON F227 or equivalent; MATH F251X or equivalent; STAT F401; graduate standing; or permission of instructor.
Lecture + Lab + Other: 3 + 0 + 0

ECON F627  Advanced Econometrics  3 Credits
Offered Fall
Advanced Econometrics is the second graduate econometrics course in the Ph.D. in Resource Economic program. This course builds upon the theoretical and empirical tools developed in ECON F626. Large sample theory and the Maximum Likelihood estimation theory are covered. Limited dependent variable models widely used in applied microeconometric modeling are developed and extended. Univariate and multivariate time series modeling and forecasting is developed.
Prerequisites: ECON F626 or equivalent; graduate standing; or permission of instructor.
Lecture + Lab + Other: 3 + 0 + 0

ECON F635  Renewable Resource Economics  (a)  3 Credits
Offered Fall
The theory, methods of analysis and current literature of natural resource economics and policy for fisheries, forests and wildlife. Topics include externalities, property rights, public goods, benefit-cost analysis, amenity values and other non-market resource services, and environmental policy.
Prerequisites: ECON F321; ECON F335 or equivalent; MATH F251X or equivalent; graduate standing; or permission of instructor.
Lecture + Lab + Other: 3 + 0 + 0

ECON F636  Non-Renewable Resource Economics  (a)  3 Credits
Offered Spring
Exploration of issues relating to the mineral and energy markets. The analysis of energy and mineral use over time, capital investment problems and world market dynamics are explored. Topics include futures markets, present value, energy value and entropy.
Prerequisites: ECON F321; ECON F335 or equivalent; MATH F251X or equivalent; graduate standing; or permission of instructor.
Lecture + Lab + Other: 3 + 0 + 0

ECON F637  Evolution of Conservation Concepts and Policy  3 Credits
Offered Fall Even-numbered Years
Resource policy issues development and implementation including forestry, mining, fisheries, oil, wildlife and other topics as demand warrants. Focus on policy issues involved in management of Alaska’s resources.
Prerequisites: Graduate standing or permission of instructor.
Cross-listed with NRM F637.
Lecture + Lab + Other: 3 + 0 + 0

ECON F639  Energy Economics  (a)  3 Credits
Offered Fall Odd-numbered Years
Market forces and institutions affecting the allocation of energy resources. Special attention to intertemporal allocative decisions and the role that public policy plays in influencing the rate at which energy resources are used over time.
Prerequisites: ECON F201X and ECON F202X or ECON F235X; graduate standing; or permission of instructor.
Stacked with ECON F439.
Lecture + Lab + Other: 3 + 0 + 0

ECON F647  Global to Local Sustainability  (a)  3 Credits
Offered Fall
Explores the basic principles that govern resilience and change of ecological and social systems. Principles are applied across a range of scales from local communities to the globe. Working within and across each of these scales, students address the processes that influence ecological, cultural and economic sustainability, with an emphasis on northern examples.
Prerequisites: Graduate standing in a natural science, social science, humanities or interdisciplinary program at UAF; permission of instructor.
Cross-listed with ANTH F647; BIOL F647; NRM F647.
Lecture + Lab + Other: 3 + 0 + 0
### ECON F649 Integrated Assessment and Adaptive Management

<table>
<thead>
<tr>
<th>Credits</th>
<th>Offered</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Spring</td>
<td>Interdisciplinary exploration of theoretical and practical considerations of integrated assessment and adaptive management. Students survey concepts important in understanding societal and professional-level decision-making. Students work as individuals and as a team to undertake case studies with relevance to integrated assessment and adaptive management. Collectively, the class builds a portfolio of cases and conducts an integrated assessment. Note: In case of enrollment limit, priority will be given to graduate students in the Resilience and Adaptation Program in order for them to be able to meet their core requirement. The course is designed to fit into the sequence of the Resilience and Adaptation program's core courses. It is open to other graduate students interested in and prepared to conduct interdisciplinary studies relating to sustainability.</td>
</tr>
</tbody>
</table>

**Prerequisites:** Graduate student standing in a natural science, social science, humanities or interdisciplinary program at UAF or another university, or permission of instructor.

**Recommended:** ANTH/BIOL/ECON/NRM F647; ANTH/BIOL/ECON/NRM F648 and ANTH/BIOL/ECON/NRM F667 previously or concurrently.

**Cross-listed with:** ANTH F649; BIOL F649; NRM F649.

**Lecture + Lab + Other:** 3 + 0 + 0

### ECON F667 Resilience Seminar I

<table>
<thead>
<tr>
<th>Credits</th>
<th>Offered</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fall</td>
<td>Provides a forum for new students of the Resilience and Adaptation graduate program to explore issues of interdisciplinary research that are relevant to sustainability. A considerable portion of the seminar is student-directed, with students assuming leadership in planning seminar activities with the instructor.</td>
</tr>
</tbody>
</table>

**Prerequisites:** Enrollment in Resilience and Adaptation graduate program or have permission of instructor.

**Recommended:** ANTH/BIOL/ECON/NRM F647 taken concurrently.

**Cross-listed with:** ANTH F667; BIOL F667; NRM F667.

**Lecture + Lab + Other:** 2 + 0 + 0

### ECON F668 Resilience Seminar II

<table>
<thead>
<tr>
<th>Credits</th>
<th>Offered</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Spring</td>
<td>Provides a forum for new students of the Resilience and Adaptation graduate program to explore issues of interdisciplinary research that are relevant to sustainability. The seminar provides support to each student planning his/her summer internship and preparing and presenting a thesis research prospectus.</td>
</tr>
</tbody>
</table>

**Prerequisites:** ANTH/BIOL/ECON/NRM F647; ANTH/BIOL/ECON/NRM F667; or permission of instructor.

**Cross-listed with:** ANTH F668; BIOL F668; NRM F668.

**Lecture + Lab + Other:** 2 + 0 + 0

### ECON F670 Seminar in Research Methodology

<table>
<thead>
<tr>
<th>Credits</th>
<th>Offered</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Spring</td>
<td>Philosophy of research and importance of the scientific method to solution of research problems.</td>
</tr>
</tbody>
</table>

**Prerequisites:** Graduate standing.

**Lecture + Lab + Other:** 1 + 0 + 0

### ECON F692 Seminar

<table>
<thead>
<tr>
<th>Credits</th>
<th>Offered</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lecture + Lab + Other:** 0 + 0 + 0

### ECON F698 Non-Thesis Research/Project

<table>
<thead>
<tr>
<th>Credits</th>
<th>Offered</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lecture + Lab + Other:** 0 + 0 + 0

### ECON F699 Thesis

<table>
<thead>
<tr>
<th>Credits</th>
<th>Offered</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lecture + Lab + Other:** 0 + 0 + 0