<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Lecture + Lab + Other</th>
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<tr>
<td>ECON F100X</td>
<td>Political Economy</td>
<td>3</td>
<td>Survey of the evolution and operation of the American domestic political economy with consideration of market failures and government responses. Review of major issues in political economy such as inflation, poverty and budget deficits. Exploration of linkages between American and global systems.</td>
<td>Placement in WRTG F111X.</td>
<td>3 + 0 + 0</td>
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<tr>
<td>ECON F111</td>
<td>Economics of Rural Alaska</td>
<td>(a)</td>
<td>3</td>
<td>Offered As Demand Warrants Basic economic concepts as they relate to issues and problems of contemporary regional development in rural Alaska. Socioeconomic consequences of the introduction of new technologies, modern economic infra-structures and corporate relationships to traditional, small scale communities.</td>
<td>Lecture + Lab + Other: 3 + 0 + 0</td>
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<tr>
<td>ECON F201X</td>
<td>Principles of Economics I: Microeconomics</td>
<td>(s)</td>
<td>3</td>
<td>Price and market theory, income distribution, public policy, labor markets, market structure, and externalities.</td>
<td>ECON F201X; ECON F202X; MATH F230X.</td>
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<tr>
<td>ECON F202X</td>
<td>Principles of Economics II: Macroeconomics</td>
<td>(s)</td>
<td>3</td>
<td>Analysis and theory of national income, money and banking, stabilization policy, and international trade and finance.</td>
<td>Lecture + Lab + Other: 3 + 0 + 0</td>
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<tr>
<td>ECON F227</td>
<td>Introductory Statistics for Economics and Business</td>
<td>3</td>
<td>Development of statistical techniques and their application to economic and business problems. Simple and multiple regression and correlation, analysis of variance, forecasting techniques, quality control, nonparametric methods and decision theory.</td>
<td>AIS F101.</td>
<td>Lecture + Lab + Other: 3 + 0 + 0</td>
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<tr>
<td>ECON F235X</td>
<td>Introduction to Natural Resource Economics</td>
<td>(s, a)</td>
<td>3</td>
<td>Microeconomic principles and their application to natural resource issues. Topics include supply, demand, marginality, optimality, elementary production economics, economic rent and comparative advantage. These principles applied to agency budget allocation decisions, multiple use, resource valuation, conservation, market failure and public outdoor recreation problems.</td>
<td>ECON F201X; ECON F202X; MATH F230X.</td>
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<tr>
<td>ECON F237</td>
<td>The Alaskan Economy</td>
<td>(s, a)</td>
<td>3</td>
<td>Offered Spring Economic problems in Alaska with analysis of historical trends and current patterns of economic growth; emphasis on present and future alternative economic policies and their potential impacts.</td>
<td>Lecture + Lab + Other: 3 + 0 + 0</td>
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<tr>
<td>ECON F321</td>
<td>Intermediate Microeconomics</td>
<td>(s)</td>
<td>3</td>
<td>Analysis of demand and supply under various market forms, cost and theory of production, factor pricing and theory of distribution and survey of welfare economics.</td>
<td>ECON F201X; ECON F202X; MATH F230X.</td>
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<tr>
<td>ECON F322</td>
<td>Managerial Economics</td>
<td>3</td>
<td>Interpretation of economic data and applications of economic theory in business firms. Bridging the gap between theory and practice through empirical studies, cases and decision problems. Emphasis upon decision-making using analysis of research data.</td>
<td>ECON F201X; ECON F202X; MATH F230X.</td>
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<tr>
<td>ECON F324</td>
<td>Intermediate Macroeconomics</td>
<td>(s)</td>
<td>3</td>
<td>Concepts and measurement of income, analysis of aggregate demand and supply and their relation to the level of prices, employment and economic growth.</td>
<td>Lecture + Lab + Other: 3 + 0 + 0</td>
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<tr>
<td>ECON F327</td>
<td>Intermediate Econometrics for Forecasting and Business</td>
<td>3</td>
<td>Offered As Demand Warrants Extension of topics developed in ECON F227 including methods of empirical analysis in the context of economic analysis and forecasting problems. Development of the science and art of building and using models in the context of economic analysis and forecasting. Understanding the fundamental theory underlying regression methods (including estimation, hypothesis testing, and prediction) and learning how to appropriately apply these techniques in the analysis of economic and business problems. Simple and multiple regression and correlation, analysis of variance, forecasting techniques, quality control, nonparametric methods and decision theory.</td>
<td>STAT F200X and ECON F227.</td>
<td>Lecture + Lab + Other: 3 + 0 + 0</td>
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<tr>
<td>ECON F335</td>
<td>Intermediate Natural Resource Economics</td>
<td>(0, s, a)</td>
<td>3</td>
<td>Extension of concepts developed in ECON F235X, using a higher level of economic analysis. Topics include welfare economics and economic efficiency concepts, benefit/cost analysis, resource allocation over time, resource taxation, common property problems, externalities, public goods, valuation of non-market resources, and land use planning issues.</td>
<td>COJO F131X or COJO F141X; ECON F201X; ECON F202X or ECON F235X; MATH F230X.</td>
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</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.
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; WRTG F111X; WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X; MATH F230X; upper division standing.
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; WRTG F111X; WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X; MATH F230X.
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; WRTG F111X; WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X; MATH F230X.
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; WRTG F111X; WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X.
Stacked with ECON F639.
Lecture + Lab + Other: 3 + 0 + 0

ECON F451  Public Expenditure Analysis  (W)  
3 Credits
Offered Spring Odd-numbered Years
Purposes and economic effects of governmental expenditures, budgeting techniques, and their effects on resource allocation.
Prerequisites: ECON F201X; ECON F202X; WRTG F111X; WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X; MATH F230X.
Lecture + Lab + Other: 3 + 0 + 0

ECON F463  International Economics  (W, s, a)  
3 Credits
Prerequisites: ECON F201X; ECON F202X; WRTG F111X; WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X; MATH F230X.
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; MATH F251X; graduate standing.
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; graduate standing.
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; ECON F324; MATH F251X; graduate standing.
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 for eight to ten weeks of full time commitment and take place during the student's first summer in the program. In autumn students meet to discuss their internship experiences and make public presentations.
Prerequisites: ANTH/BIOL/ECON/NRM F667; ANTH/BIOL/ECON/NRM F668.
Cross-listed with ANTH F617; BIOL F613; NRM F613.
Lecture + Lab + Other: 2 + 0 + 0
ECON F616  Economics Background for Resilience and Adaptation  
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.  
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; graduate standing.  
Lecture + Lab + Other: 3 + 0 + 0  

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

ECON F635  Renewable Resource Economics  
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; MATH F251X; graduate standing.  
Lecture + Lab + Other: 3 + 0 + 0  

ECON F636  Nonrenewable Resource Economics  
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; MATH F251X; graduate standing.  
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.  
Cross-listed with NRM F637.  
Lecture + Lab + Other: 3 + 0 + 0  

ECON F639  Energy Economics  
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.  
Stacked with ECON F439.  
Lecture + Lab + Other: 3 + 0 + 0  

ECON F647  Global to Local Sustainability  
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.  
Cross-listed with ANTH F647; BIOL F647; NRM F647.  
Lecture + Lab + Other: 3 + 0 + 0  

ECON F649  Integrated Assessment and Adaptive Management  
3 Credits  
Offered Spring  
An interdisciplinary exploration of the 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 requirements. 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.  
Prerequisites: Graduate student standing in a natural science, social science, humanities or interdisciplinary program at UAF or another university.  
Recommended: ANTH F647, BIOL F647, ECON F647, NRM F647; ANTH F667, BIOL F667, ECON F667, NRM F667.  
Cross-listed with ANTH F649; BIOL F649; NRM F649.  
Lecture + Lab + Other: 3 + 0 + 0
ECON F667  Resilience Seminar I
1 Credit
Offered Fall
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.
Prerequisites: Enrollment in Resilience and Adaptation graduate program.
Recommended: ANTH F647, BIOL F647, ECON F647 or NRM F647 (taken concurrently).
Cross-listed with ANTH F667; BIOL F667; NRM F667.
Lecture + Lab + Other: 2 + 0 + 0

ECON F668  Resilience Seminar II
1 Credit
Offered Spring
Provides a forum for new students of the Resilience and Adaptation graduate program to explore issues of interdisciplinary research relevant to sustainability. The seminar provides support to each student planning his/her summer internship and preparing and presenting a thesis research prospectus.
Prerequisites: ANTH/BIOL/ECON/NRM F647; ANTH/BIOL/ECON/
NRM F667.
Cross-listed with ANTH F668; BIOL F668; NRM F668.
Lecture + Lab + Other: 2 + 0 + 0

ECON F670  Seminar in Research Methodology
1 Credit
Offered Spring
Philosophy of research and importance of the scientific method to solution of research problems.
Prerequisites: Graduate standing.
Lecture + Lab + Other: 1 + 0 + 0

ECON F692  Seminar
1-12 Credits
Lecture + Lab + Other: 0 + 0 + 0

ECON F698  Non-Thesis Research/Project
1-9 Credits
Lecture + Lab + Other: 0 + 0 + 0

ECON F699  Thesis
1-9 Credits
Lecture + Lab + Other: 0 + 0 + 0