Agricultural and Applied Economics (A A E)

A A E 1 — COOPERATIVE EDUCATION/CO-OP IN AGRICULTURAL & APPLIED ECONOMICS
1 credit.

Full-time off-campus work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career. Students receive credit only for the term in which they are actively enrolled and working. The same work experience may not count towards credit in A A E 399.

Requisites: So st, and consent of supervising instructor and academic advisor.

Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2015

A A E 215 — INTRODUCTION TO AGRICULTURAL AND APPLIED ECONOMICS
3 credits.

Introduction to economic ways of thinking about a wide range of problems and issues. Topics include consumption, production, prices, markets, finance, trade, pollution, growth, farms, taxes, and development.

Requisites: MATH 112

Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2017

A A E/ENVIR ST 244 — THE ENVIRONMENT AND THE GLOBAL ECONOMY
3 credits.

The "economic way of thinking" about global and regional environmental issues. Topics include climate change, biodiversity preservation, ocean fisheries, environmental impacts of international trade, poverty and the environment, and sustainability.

Requisites: Open to Freshmen

Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2017

A A E 246 — CLIMATE CHANGE ECONOMICS AND POLICY
3 credits.

Climate change and the role of applied economics in related policy analysis and research. Economics of mitigation, adaptation and geo-engineering, integrated assessment, environmental implications of energy use; climate change impacts on land use. Use of economic analysis and modeling for public policy design.

Requisites: None

Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2017

A A E 289 — HONORS INDEPENDENT STUDY
1-2 credits.

INTER-AG 288

Requisites: Enrolled in the CALS Honors Prgm So or Jr st.

Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

A A E 299 — INDEPENDENT STUDY
1-3 credits.

Open to Freshmen

Requisites: Freshmen, Sophomore or Junior standing written consent of instructor.

Repeatable for Credit: Yes, unlimited number of completions

Last Taught: Fall 2017

A A E/ECON/REAL EST/URB R PL 306 — THE REAL ESTATE PROCESS
3 credits.

Introductory survey course. Decision-making processes for the manufacture, marketing, management and financing of real estate space. Survey of institutional context, economics of urbanization, historical pattern and structure of city growth, and public policy issues regarding urban environment and business management.

Requisites: So, Jr, or Sr st; ECON 101

Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2017

A A E 319 — THE INTERNATIONAL AGRICULTURAL ECONOMY
3 credits.

The nature of trade in agricultural products, trade policies and practices of importing and exporting nations, agricultural policies of major trading blocks, market instability and other primary commodity problems, recent history and current developments in multilateral trade policy.

Requisites: AAE 215 or ECON 101 or consent of instructor
Repeatable for Credit: Yes, unlimited number of completions

Last Taught: Spring 2017
A A E 320 — FARMING SYSTEMS MANAGEMENT
3 credits.
Methods of economic analysis, planning and management applied to conventional and alternative farming systems.
Requisites: AAE 215 or ECON 101
Repeatable for Credit: No
Last Taught: Fall 2017

A A E 322 — COMMODITY MARKETS
3 credits.
Principles and practices in marketing systems for U.S. agricultural commodities. Vertical organization; forward contracts, future markets, agricultural options and price formation. Alternate management at the farm, processor, wholesale and retail levels.
Requisites: AAE 215 or ECON 101 or equivalent
Repeatable for Credit: No
Last Taught: Spring 2017

A A E 323 — COOPERATIVES
3 credits.
Cooperatives: Analysis of basic principles, structure and organization, legal bases, finance, history and role in U.S. economy. Different types and uses as tools in the U.S. and developing countries.
Requisites: Junior standing or consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2017

A A E/C&E SOC/SOC 340 — ISSUES IN FOOD SYSTEMS
3-4 credits.
With primary emphasis on the U.S., the course covers social, economic and biological dimensions of food systems. Using classroom and community experience, the course combines academic approaches with practitioner knowledge. A community project is required.
Requisites: SOC/C&E SOC 140, CE SOC/SOC 181, 210, or 211
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2017

A A E/ECON/ENVIR ST 343 — ENVIRONMENTAL ECONOMICS
3-4 credits.
Microeconomic principles underlying the use of natural resources such as air, water, forests, fisheries, minerals and energy. These principles are applied in the examination of pollution control, preservation vs. development, deforestation, and other environmental issues.
Requisites: A A E 215, ECON 101, or ECON 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2017

A A E/AGRONOMY/INTER-AG/NUTR SCI 350 — WORLD HUNGER AND MALNUTRITION
3 credits.
Hunger and poverty in developing countries and the United States. Topics include: nutrition and health, population, food production and availability, and income distribution and employment.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2017

A A E/INTL ST 373 — GLOBALIZATION, POVERTY AND DEVELOPMENT
3 credits.
Addresses the process of globalization – trade, international capital flows, labor migration and remittances, and aid – from the perspective of developing economies and the development process.
Requisites: AAE 215, ECON 101 or equivalent, or consent of instructor
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2017

A A E/INTL ST 374 — THE GROWTH AND DEVELOPMENT OF NATIONS IN THE GLOBAL ECONOMY
3 credits.
This course explores the roles of markets, states, and civil institutions, using economic theory, computer simulations, and historical experience to better understand the forces that shape the wealth and well-being of nations and people around the world.
Requisites: ECON 101, or ECON 102, or AAE 215, or equiv
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2017

A A E 375 — SPECIAL TOPICS
1-4 credits.
Requisites: Cons inst
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017

A A E 399 — COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.
Requisites: Cons supervising inst, advisor, intrshp progm coordinator
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017
A A E 400 — STUDY ABROAD IN AGRICULTURAL AND APPLIED ECONOMICS
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. W-Madison Study Abroad Program
Requisites: Current registration in a U.
Repeatable for Credit: Yes, unlimited number of completions

A A E 419 — AGRICULTURAL FINANCE
3 credits.

Introduction to basic finance concepts. Topics include financial statements, ratio analysis and interpretation, investment analysis, capital budgeting, credit concepts, and capital markets.
Requisites: AAE 215 or ECON 101 or consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2017

A A E/ECON 421 — ECONOMIC DECISION ANALYSIS
4 credits.

Managerial oriented, applied presentation of microeconomic theory. Quantitative emphasis with extensive homework use of spreadsheets and written executive summaries of applied economic analyses. Applications on natural resources and agricultural markets.
Requisites: ECON 301 STAT 301, or equiv
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2017

A A E/ECON/INTL BUS 462 — LATIN AMERICAN ECONOMIC DEVELOPMENT
3 credits.

A historico-institutional analysis of development problems in the principal Latin American countries, with attention to differentiation of national growth patterns and alternative development strategies.
Requisites: ECON 102 or 111 and Jr st
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2017

A A E/ECON 473 — ECONOMIC GROWTH AND DEVELOPMENT IN SOUTHEAST ASIA
3 credits.

Evaluates economic development strategies in Southeast Asia and their implications for growth, distribution and environment. Students learn trade and development theory as well as specific knowledge of Southeast Asian economic development.
Requisites: Two crses in AAE and/or Econ, or cons inst
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2016

A A E/ECON 474 — ECONOMIC PROBLEMS OF DEVELOPING AREAS
3 credits.

Analyzes aggregate growth, income distribution and poverty in lower income economies. Uses microeconomics of imperfect labor, capital and insurance markets to explore why some individuals advance economically as their economies grow and others fall behind. Considers implications of aggregate and micro analysis for national and international economic policy.
Requisites: Sr st and two crses in econ
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2017

A A E/ECON 477 — AGRICULTURAL AND ECONOMIC DEVELOPMENT IN AFRICA
3 credits.

Composition, organization, and techniques of agricultural production; economic change and development of agriculture, economic policies, special problems of developing African agriculture.
Requisites: Two crses in AAE and/or Econ, or cons inst
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

A A E 500 — SENIOR CAPSTONE EXPERIENCE
3 credits.

Teaches students how to apply economic theory to economic problems, utilize quantitative techniques in economic analyses, and communicate findings and results of economic analyses.
Requisites: Sr st; MATH 211, AAE 420 Stat 201, or equivs
Repeatable for Credit: No
Last Taught: Spring 2017

A A E/ECON/REAL EST/URB R PL 520 — COMMUNITY ECONOMIC ANALYSIS
3 credits.

Economic theory (location and growth) applicable to community economic development; the role of private and public sector in local economic development, and techniques for economic analysis of community.
Requisites: ECON 301 or equiv
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2017
A A E/ECON 526 — QUANTITATIVE METHODS IN AGRICULTURAL AND APPLIED ECONOMICS
4 credits.

Use of quantitative methods (mathematics, statistics, and optimization) to analyze problems faced by decision makers in natural resources and agriculture. Extensive homework requiring use of quantitative methods via spreadsheet tools to solve problems from an applied decision context.

Requisites: MATH 211, ECON 301, STAT 301, or equiv
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

A A E/ECON/F&W ECOL 531 — NATURAL RESOURCE ECONOMICS
3 credits.

Economic concepts and tools relating to management and use of natural resources, including pricing principles, cost-benefit analysis, equity, externalities, economic rent, renewable and nonrenewable resources, and resource policy issues.

Requisites: ECON 301 and MATH 211, or equiv
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2017

A A E/M H R 540 — INTELLECTUAL PROPERTY RIGHTS, INNOVATION AND TECHNOLOGY
3 credits.

Uses economic concepts to illustrate the nature of technological innovation, competition, and economic growth. Topics: economics of the intellectual property protection (IPP); market structure and innovation; interaction between public and private sectors; IPP and anticompetitive policies; globalization.

Requisites: ECON 301 or equiv
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

A A E 567 — PUBLIC FINANCE IN LESS DEVELOPED COUNTRIES
3 credits.

Potential and limitations of fiscal policy as a development instrument in low-income countries; tax harmonization in economic integration; case studies in tax reform; budgeting and planning.

Requisites: Intro crse in econ thry, public finance or econ dev
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2012

A A E 635 — APPLIED MICROECONOMIC THEORY
3 credits.

Microeconomic theory applied to consumers, producers, markets, and welfare analysis. Emphasis is on the mathematics of duality and optimization methods. Computer applications of the theory.

Requisites: Two semesters of calc ECON 301, or cons inst
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017
A A E 636 — APPLIED ECONOMETRIC ANALYSIS I
3 credits.

Introduction to the standard linear regression model with an emphasis on application issues. Includes statistical foundation, hypothesis testing, functional form, model selection and procedures for handling violations of model assumption.

**Requisites:** Intermed stats or cons inst

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Fall 2017

A A E 637 — APPLIED ECONOMETRIC ANALYSIS II
3 credits.

Extension of the standard regression model is the primary focus. Topics: nonlinear regression models, maximum likelihood estimation, panel data, simultaneous equations, linear and nonlinear systems, analysis of discrete choice, limited dependent variables. Empirical economic applications and policy analysis.

**Requisites:** AAE 636 or cons inst

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Spring 2017

A A E 641 — FOUNDATIONS OF AGRICULTURAL ECONOMICS
3 credits.

Overview of the economic performance of agriculture in feeding the growing world population. Examines contemporary economic issues in the food sector, along with research methods used in their analysis. Covers production analysis, risk and uncertainty, food demand, market structure, policy and welfare analysis.

**Requisites:** AAE 635 and 636, or equivalent

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Spring 2016

A A E 642 — FOUNDATIONS OF DEVELOPMENT ECONOMICS
3 credits.

An overview of development economics, covering both basic theory and empirical applications. Topics include economic growth, trade, measurement of poverty and inequality, human capital, agricultural household models, technology adoption, migration, credit, savings, insurance, infrastructure, and the environment.

**Requisites:** AAE 635 and 636, or equivalent

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Spring 2017

A A E 643 — FOUNDATIONS OF ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS
3 credits.

Survey of historical topics and contemporary research questions in environmental and resource economics. Focus areas include foundational models of human/environment interaction, definition and evaluation of the suite of environmental policy instruments, measuring environmental costs and benefits, and examining natural resource use.

**Requisites:** AAE 635 and 636, or equivalent

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Spring 2017

A A E/ENVIR ST/F&W ECOL 652 — DECISION METHODS FOR NATURAL RESOURCE MANAGERS
3-4 credits.

Applications of quantitative methods, including optimization and simulation, to the management of natural resources, especially forests.

**Requisites:** MATH 211 or equiv Comp Sci 132 or equiv

**Course Designation:** Gen Ed - Quantitative Reasoning Part B

**Breadth - Biological Sci.** Counts toward the Natural Sci req

**L&S Credit -** Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** No

**Last Taught:** Spring 2017

A A E/ECON/ENVIR ST/URB R PL 671 — ENERGY ECONOMICS
3 credits.

The method, application, and limitations of traditional economic approaches to the study of energy problems. Topics include microeconomic foundations of energy demand and supply; optimal pricing and allocation of energy resources; energy market structure, conduct, and performance; macro linkages of energy and the economy; and the economics of regulatory and other public policy approaches to the social control of energy.

**Requisites:** (Senior standing and ECON 101 or AAE 215) or graduate standing

**Course Designation:** Breadth - Social Science

**L&S Credit -** Counts as Liberal Arts and Science credit in L&S

**Grad 50% -** Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Spring 2017

A A E 681 — SENIOR HONORS THESIS
2-4 credits.

**Requisites:** Honors candidacy

**Course Designation:** Honors - Honors Only Courses (H)

**Repeatable for Credit:** No

**Last Taught:** Fall 2009

A A E 682 — SENIOR HONORS THESIS
2-4 credits.

Continuation of 681.

**Requisites:** Honors program candidacy AAE 681

**Course Designation:** Honors - Honors Only Courses (H)

**Repeatable for Credit:** No

**Last Taught:** Spring 2010
A A E 691 — SENIOR THESIS
2 credits.
Requisites: Sr st and cons inst
Repeatable for Credit: No
Last Taught: Fall 2014

A A E 692 — SENIOR THESIS
2 credits.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2015

A A E 699 — SPECIAL PROBLEMS
1-4 credits.
Requisites: Sr st and cons inst
Course Designation: Level - Advanced
L&S Credit: Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017

A A E 705 — APPLIED MICROECONOMICS
3 credits.
Focuses on developing a conceptual as well as empirical analysis of microeconomic behavior, including production and consumption analysis, technical change, and investment. Emphasizes empirical applications of microeconomics, with implications for efficiency and welfare analysis.
Requisites: AAE 635 STAT/MATH 309 or equiv
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2012

A A E 706 — APPLIED RISK ANALYSIS
3 credits.
Conceptual empirical analysis of economic behavior under risk and its implications for management and policy decisions. Emphasis on economic applications to the agricultural and food sector.
Requisites: AAE 635
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

A A E/ECON 707 — INSTITUTIONAL ECONOMICS
3 credits.
Comparative analysis of neoclassical and institutional economics, with emphasis on economic epistemology, agency theory, transaction costs, firms and markets, property rights, externalities, welfare economics, efficiency, and rules of social choice.
Requisites: AAE 635 or equiv
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2010

A A E 729 — THE MICRODYNAMICS OF ENVIRONMENT AND DEVELOPMENT
3 credits.
Explores the intersection of environmental and development economics using advanced theoretical and empirical models to examine rural conservation and development, technology adoption and diffusion, and the dynamics of investment behavior in the presence of imperfect capital markets.
Requisites: AAE 635 required, ECON 711 recommended
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2014

A A E 730 — FRONTIERS IN DEVELOPMENT ECONOMICS 1
3 credits.
Theory and empirical evidence on growth and development in low-income countries. Topics may include: measurement of poverty and inequality, risk and insurance, social networks, technology adoption, education, corruption, institutions, and behavioral economics.
Requisites: ECON 709 and ECON 711
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2017

A A E 731 — FRONTIERS IN DEVELOPMENT ECONOMICS 2
3 credits.
Theory and evidence on growth and development in emerging economies, with primary focus on globalization, trade, labor markets and human capital. We use open-economy general equilibrium models to examine welfare implications of global shocks and domestic economic policies.
Requisites: ECON 709 and ECON 711
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2016

A A E 732 — ECONOMICS OF DEVELOPMENT 3
3 credits.
Theory and empirical evidence on growth and development in low-income countries. Course will emphasize microeconomics topics, including household and intra-household models, asset accumulation, risk and asymmetric information.
Requisites: Grad st in AAE or econ or cons inst
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2009
A A E 737 — APPLIED ECONOMETRIC ANALYSIS III
3 credits.

Prepares students for their own empirical work by examining contemporary econometric techniques as they are used in development, environment and natural resources, and agricultural economics. Guides students through a selection of applied models using past and current research as examples. By hearing lectures and working through papers, problem sets, replication exercises, and/or research projects, students will develop a deeper understanding of the many facets of empirical research in economics.

**Requisites:** ECON 709 and 710

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Fall 2017

A A E 741 — ADVANCED POLICY ANALYSIS
3 credits.

Economic efficiency and welfare at the micro and macro levels. Role of contracts and effects of policy instruments related to pricing and trade policy, under uncertainty. Role of technology and effects of globalization in developed and developing countries.

**Requisites:** ECON 711 or cons inst

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Fall 2011

A A E 746 — FRONTIERS IN AGRICULTURAL ECONOMICS 1
3 credits.

Economics of agricultural technology innovation and adoption, properties and measurement of production and productivity, and impact evaluation. Empirical methods, including surveys, experiments, randomized trials, and instrumental variable methods of testing applied microeconomic models.

**Requisites:** ECON 709 and ECON 711

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Fall 2016

A A E/ECON 747 — FRONTIERS IN AGRICULTURAL ECONOMICS 2
3 credits.

Organization, design, and performance of food and agricultural markets. Industrial organization; firm boundaries, contracting, and collective action; spatial, temporal, and quality dimensions of market design.

**Requisites:** ECON 709 and ECON 711

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Fall 2011

A A E 760 — FRONTIERS IN ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS 1
3 credits.

Economic tools and principles pertaining to the optimal management of natural resources. Theoretical models characterize efficient resource use and predict management decisions under different institutional settings. Empirical applications relate to public and private management of forests, fish, wildlife, minerals, and energy resources. Examples highlight the importance of discount rates, property rights, and government policies.

**Requisites:** ECON 709 and ECON 711

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Spring 2017

A A E 762 — FRONTIERS IN ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS 2
3 credits.

The role of markets and government in the allocation of environmental goods and services. Topics include public goods, externalities and market failure; policy instruments for dealing with environmental quality problems such as air pollution; and distributional impacts of environmental regulations.

**Requisites:** ECON 709 and ECON 711

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Fall 2016

A A E 770 — INTRODUCTION TO QUANTITATIVE METHODS IN RESOURCE AND ENERGY ECONOMICS
3 credits.

The fundamental mathematics and statistics necessary for the study of quantitative methods in resource and energy demand. Topics include the mathematics of optimization and its role in basic welfare theory and consumer demand; linear and matrix algebra and their application in both modeling consumer behavior and the statistical analysis of models; and the fundamentals of statistical analysis relevant to econometric analysis of resource and energy demand, including probability theory, sampling distributions, and statistical inference.

**Requisites:** Enrollment in the Resource and Energy Demand Analysis Master's program, or Special Student status and consent of instructor

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Summer 2017
A A E 771 — MICROECONOMICS OF RESOURCES AND ENERGY: THEORY TO PRACTICE
3 credits.
Applying economic theory to the practice of resource and energy demand analysis. Topics include consumer demand theory and the proper modeling of demand systems, theoretical underpinnings of behavioral economics, welfare theory, cost benefit analysis and cost-effectiveness analysis, and technology adoption and diffusion.
Requisites: Declared in the Resource and Energy Demand Analysis program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

A A E 772 — APPLIED ECONOMETRICS OF RESOURCE AND ENERGY DEMAND
4 credits.
The estimation of the economic models of resource and energy demand, including evaluation of energy and resource programs, estimating demand systems in the study of dynamic pricing models, estimating discrete choice models, forecasting resource and energy demand from econometric models, and topics in the application of big-data analytics in resource and energy demand analysis.
Requisites: AAE 636, and enrollment in the Resource and Energy Demand Analysis Master’s program, or Special Student status and consent of instructor.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2017

A A E 773 — SEMINAR IN RESOURCE AND ENERGY DEMAND ANALYSIS
1-2 credits.
Current issues in resource and demand analysis, with presentations by academic researchers and industry professionals, to introduce students to current issues in resource and demand analysis, and to develop their critical thinking about addressing these issues.
Requisites: Declared in the Resource and Energy Demand Analysis program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017

A A E 774 — PRACTICUM IN RESOURCE AND ENERGY DEMAND ANALYSIS I
1 credit.
The first in a 2-course sequence that comprises the capstone course in Resource and Energy Demand Analysis, in which students synthesize their training in a simulated "real world" analysis. The course is designed to reflect the full range of professional responsibilities of a resource/energy demand analyst, from data retrieval/cleaning to analysis to reporting.
Requisites: AAE 771 and enrollment in the Resource and Energy Demand Analysis Master’s program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2017

A A E 776 — PRACTICUM IN RESOURCE AND ENERGY DEMAND ANALYSIS II
3 credits.
The second in a 2-course sequence that comprises the capstone course in Resource and Energy Demand Analysis, in which students synthesize their training in a simulated "real world" analysis. The courses is designed to reflect the full range of professional responsibilities of a resource/energy demand analyst, from data retrieval/cleaning, to analysis, to reporting.
Requisites: AAE 771 and enrollment in the Resource and Energy Demand Analysis Master’s program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2017

A A E 777 — SURVEY AND SAMPLE DESIGN IN APPLIED ECONOMICS
2 credits.
Teaches generation and use of survey data. Topics include identification of target population, random, stratified, cluster sampling, power analysis, survey collection implementation, retrospective and prospective surveys of respondent choice, experimental choice in survey design, and econometric modeling of respondent choices.
Requisites: Declared in the Resource and Energy Demand Analysis program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017
A A E 780 — RESEARCH COLLOQUIUM
3 credits.

For AAE Ph.D. students to develop a dissertation proposal. Working in groups and with some additional feedback from individual advisors. Developing research questions, literature search, word models, math models, testable hypotheses, identification strategies. Working with data, using LATEX, giving presentations. Peer review of weekly assignments. Developing cohort for subsequent feedback through dissertation writing and job search.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2017

A A E 799 — PRACTICUM IN AGRICULTURAL AND APPLIED ECONOMICS TEACHING
1-3 credits.

Instructional orientation to teaching at the higher education level in the agricultural and life sciences, direct teaching experience under faculty supervision, experience in testing and evaluation of students, and the analysis of teaching performance.

Requisites: Grad st cons inst
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

A A E/POLI SCI 835 — GAME THEORY AND POLITICAL ANALYSIS
3 credits.

An introduction to the tools of game theoretic analysis, with reference to the use of game theory in political science. Intended for those desiring a basic familiarity with the theory, and for those planning further work in formal modeling.

Requisites: Graduate or professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2017

A A E 875 — SPECIAL TOPICS
1-4 credits.

Requisites: Graduate or professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2016

A A E/ENVIR ST/POP HLTH/PUB AFFR 881 — BENEFIT-COST ANALYSIS
3 credits.

This course will present the welfare economics underpinnings for evaluating the social benefits and costs of government activities. Issues such as uncertainty, the social discount rate, and welfare weights will be discussed; case studies from the environmental, social policy, and agricultural areas will be studied.

Requisites: Grad st, PUB AFFR 818 880 or POP HLTH/I SY E 875 at least one crse in econ or cons inst
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

A A E/ANTHRO/C&E SOC/GEOG/HISTORY/LACIS/POLI SCI/PORTUG/ SOC/SPANISH 982 — INTERDEPARTMENTAL SEMINAR IN THE LATIN-AMERICAN AREA
1-3 credits.

Interdisciplinary inquiry in Latin American society and culture.

Requisites: Graduate or professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017

A A E 990 — RESEARCH AND THESIS
1-12 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017

A A E 999 — SPECIAL WORK - AGRICULTURAL AND APPLIED ECONOMICS
1-3 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017