School of Economic Sciences

Learning Outcomes and Assessment Plan

I. Service Courses

The School of Economic Sciences teaches two highly attended multiple section (generally 10-12) service courses for Washington State University: Econ 101, Fundamentals of Microeconomics and Econ 102, Fundamentals of Macroeconomics. These courses provide the basic economic principles training that underlie all higher level economics classes taught at WSU, and form the foundation for understanding basic economic decision making skills required of a wide array of academic programs throughout the University. Among other programs, these courses service the BA in Business, the BA in HBM, various BS degrees in engineering, and a wide array of BS degree programs in CAHNRS.

Fundamentals of Microeconomics

a. ***Intended Outcomes:***

Microeconomics encompasses the study of economic decision making by individuals, including decisions made by both consumers and individual firms. Consumers and firms interact in markets to equilibrate the demand and supply of goods, and to establish market prices. The learning objectives for this course focus on the core topics needed to understand how individual consumers and firms make economic decisions so as to optimize utility, profit, or other economic objectives, and how markets lead to the determination of quantities demanded and supplied, and to market prices.

(1) **Students will learn the basic terminology of microeconomics.** The basic terminology of microeconomics will be understood. Students will be able to provide definitions for fundamental economic concepts, such as scarcity, choice, opportunity costs, supply, demand, market structure, equilibrium, utility, costs and profit.

(2) **Students will be able to apply the concepts of choice and opportunity cost to basic situations involving scarcity and clearly identify feasible choices.** At its simplest level, scarcity and opportunity cost are illustrated by the production possibility frontier (PPF). Students will be able to use the PPF to illustrate scarcity and choice, be able to show how to measure opportunity cost on a PPF, and use the PPF to illustrate feasible and infeasible consumption possibilities and efficient resource use.

(3) **Students will understand how markets operate and be able to identify welfare outcomes for consumers and firms.** Students will understand how the optimizing actions of individual (utility maximization) and firms (profit maximization) underlie demand and supply in markets, which interact to determine price and quantity. They will learn how self-interest drives individual and firm behavior, and how the resulting market equilibrium affects the welfare of consumers and firms.

(4) **Students will understand how different market structures, firm technologies and economic and social policies affect market equilibrium and welfare outcomes.** Market structure affects the actions and interactions of economic agents, and the distribution of welfare. Technologies and policies affect the efficiency of production and markets. Students will be able to contrast market outcomes under different market structures, and perform basic analyses of how policy and technological changes affect supply, demand, prices, and welfare.

b. ***Assessment of Expected Outcomes:***

(1) The School of Economic Sciences offers multiple sections of Fundamentals of Microeconomics every semester. Core topical coverage will be standardized across sections. Instructors will choose teaching materials in a way that facilitates coverage of the common core topics while also matching their own approach to teaching.

(2) The School of Economic Sciences will develop common assignments pertaining to the topics encompassed by the intended outcomes and these will be part of the evaluation of all students in the multiple sections of this class. Grading standards in this class will be tied to achieving learning goals in introductory economics principles classes, so that a "C" or better requires a basic understanding of introductory core economic principles topics and an "A" indicates mastery of all learning goals relating to core economics principles, as demonstrated by student performance on the common assignments.

c. ***Use of Assessments to Improve Outcomes for Future Students:***

The School Director will collect the performance results of students by instructor and report these results annually to the Undergraduate Issues Committee (UIC). The UIC will then consider the curriculum of individual sections and make recommendations to the different instructors of the course and to the Director of SES based on outcomes across different Econ 101 sections. The Director of SES will consider the findings of the UIC in the annual review of instructors. Instructors of Fundamentals of Microeconomics will meet annually to review course content, discuss approaches to teaching, and other issues related to fostering student learning.

Fundamentals of Macroeconomics

a. ***Intended Outcomes:***

Macroeconomics is the study of the overall aggregate economic activity that takes place in a society and of the interrelations among sectors within the economy. Among other topics, students learn about national income determination, inflation, unemployment, monetary and fiscal policy, business cycles, economic growth, and exchange rates. The learning objectives for this course focus on the core topics needed to understand how to measure a society's economic

well-being, and how the level of economic activity is determined, both from a perspective of economic policy analysis.

(1) **Students will learn the basic terminology of macroeconomics.** The basic terminology of macroeconomics will be understood. Students will be able to provide definition for fundamental economic concepts, including such concepts as scarcity, choice, opportunity costs, comparative advantage, GDP, GNP, national income, business cycles, money supply, monetary policy, fiscal policy, inflation, unemployment, trade deficits and exchange rates.

(2) **Students will be able to apply the concepts of choice and opportunity cost to basic situations involving scarcity and clearly identify feasible choices.** At its simplest level, scarcity and opportunity cost are illustrated by the production possibility frontier (PPF). Students will be able to use the PPF to illustrate scarcity and choice, be able to show how to measure opportunity cost on a PPF, and use the PPF to illustrate feasible and infeasible consumption possibilities and efficient resource use.

(3) **Students will understand the circular flow of the economy.** Macroeconomics analyzes how large sectors of the economy – government, households, business and trade with other countries – interact to determine the overall level of economic activity. Students will understand the role that each of these sectors play in determining GDP. Students will understand how goods and factor markets are related and understand national income accounting.

(4) **Students will understand how the level of economic activity in an economy is determined.** Students will learn basic models of national income determination, including models that include an international sector, understand the concept of equilibrium in the context of these models, and be able to apply the models to analyze the effects of monetary, fiscal and exchange rate policies on national income determination and the sectors that make up the economy.

(5) **Students will understand the gains from international trade.** Students will understand the concept of comparative advantage, and be able to use it to analyze the gains from trade.

b. ***Assessment of Expected Outcomes:***

(1) The School of Economic Sciences offers multiple sections of Fundamentals of Macroeconomics every semester. Core topical coverage will be standardized across sections. Instructors will choose teaching materials in a way that facilitates coverage of the common core topics while also matching their own approach to teaching.

(2) The School of Economic Sciences will develop common assignments pertaining to the topics encompassed by the intended outcomes and these will be part of the evaluation of all students in the multiple sections of this class. Grading standards in this class will be tied to achieving learning goals in introductory economics principles classes, so that a “C” or better requires a basic understanding of introductory core economic principles topics and an “A” indicates mastery of all learning goals relating to core economics principles, as demonstrated by student performance on the common assignments.

c. ***Use of Assessments to Improve Outcomes for Future Students:***

The School Director will collect the performance results of students by instructor and report these results annually to the Undergraduate Issues Committee (UIC). The UIC will then consider the curriculum of individual sections and make recommendations to the different instructors of the course and the Director based on outcomes across different Econ 102 sections. The Director of SES will consider the findings of the UIC in the annual review of instructors. Instructors of Fundamentals of Macroeconomics will meet annually to review course content, discuss approaches to teaching, and other issues related to fostering student learning.

II. Undergraduate Degrees

BS in Agricultural Economics and Management
BS in Agribusiness
BS in Environmental and Resource Economics and Management
BA in Economics

a1. ***Intended Outcomes Common to All Degrees:***

(1) **Graduates will understand economic concepts and quantitative methods:** The fundamental economic concepts and quantitative methods underlying intermediate (undergraduate level) applied economics analysis will be well understood for appropriate application in specific majors, including applications in the agricultural production sector, agribusiness sector, environmental and resource management issues, and general policy and business decision making. The School of Economic Sciences has developed a list of economic concepts and quantitative skills that represent the core set of topics that are common to learning outcomes across all degree programs in the School. These core economic concepts and quantitative skills are listed on the SES website at http://www.ses.wsu.edu/learning/.

(2) **Graduates will be well trained in critical, integrative, and evaluative thinking:** Fundamental economic concepts and quantitative methods are necessary tools for conducting economic analysis, but the ability to critically integrate these tools into logical decision-making constructs is the overarching goal of the degree programs. Graduates will be able to apply economic concepts, together with quantitative methods and technical information relating to the decision environment, to assist policy makers and target groups in evaluating economic tradeoffs and in making rational economic decisions (target groups include consumers, government, and enterprises dealing with agricultural commodities for the degrees in Agricultural Economics and Management or Agribusiness, consumers, government or general business enterprises for the degree in Economics, and government, natural resource-oriented businesses and focused interest groups for the degree in Environmental and Resource Economics Management). Graduates will also be capable of analyzing and evaluating broad economic and social problems concerning the allocation of individual, firm and social resources within their specific degree interest area.

(3) **Graduates will have strong communication skills:** Well developed verbal and written communication skills are necessary for efficient and clear dissemination of economic analysis, as well as for success in private and public sector careers that logically follow the degrees offered by the School of Economic Sciences. Graduates will be capable of communicating the results of economic analyses in a clear, compelling, and informative fashion in both oral and written forms.

a2. ***Additional Outcomes for Specific Degrees***

(1) **Graduates in the B.S. in Agricultural Economics and Management will have a fundamental understanding of management concepts**. An understanding of basic management concepts is needed in order to implement organizational procedures that achieve an appropriate use and management of inputs or resources**.** Graduates in this degree program will have suitable training in management principles.

(2) **Graduates in the B.S. in Environmental and Resource Economics and Management will have a fundamental understanding of the concepts of natural resource management and use.** An understanding of resource management concepts is needed for appropriate resource use. Graduates in this degree will be trained in environmental and natural resource issues and policies, and understand the concepts needed for managing environmental and natural resources.

(3) **Graduates in the B.S. in Agribusiness will understand basic business concepts:** The fundamentals of management, marketing, and finance concepts are necessary for designing and implementing integrated resource allocation decisions within the context of modern multi-faceted Agribusiness firms. Graduates in this degree program will comprehend management, marketing, and finance principles for appropriate application in the agribusiness sector.

b. ***Assessment of Expected Outcomes:***

Instructors of all SES undergraduate courses will specify core topics and learning goals specific for their course and institute grading standards tied to these topics, so that a "C" or better requires a basic understanding of the core topics and an "A" indicates a complete mastery of these topics.

(1) Coursework for economic concepts and quantitative methods. Students in all of the undergraduate degree programs offered by the School of Economic Sciences complete courses that provide core economic concepts and quantitative methods skills needed for their specific degree:

(a) All graduates successfully complete courses in intermediate microeconomic theory (Econ 301 or 302) and quantitative methods (Math 171 or 201, MgtOp 215 or Stat 212).

(b) All graduates successfully complete field-specific courses providing expertise in the skills and concepts required of their interest area.

- BS in Agricultural Economics and Management students take Ag Ec 340, 440 or 350, 370, 450 for management and decision-making skills
- BS in Agribusiness students take Econ 320 for an understanding of the money and banking system, Ag Ec 340, 360 and 460 for management skills, Ag Ec 450 or 453 for marketing background, Ag Ec 330 or Fin 325 for skills in finance, and Math 202 and Ag Ec 407 or 409 for additional knowledge of quantitative methods.
- BS in Environmental and Resource Economics and Management students take Ag Ec 425 and 480 and Econ 481 for decision-making in the context of environmental and natural resources, and Ag Ec 407 or 409 for additional skills in quantitative methods
- BA in Economics students take Econ 311 for additional skills in econometric methods, Econ 401 for mastery of macroeconomic concepts, and eight 300- and 400-level field courses in Economics (three of which must be at the 400-level) for skills in policy analysis and application.

(2) All majors in SES degree programs take at least one 400-level integrative class in the School (Ag Ec 440, 450, 460, 480 or Econ 490). Courses will use assignments that require a knowledge of core economic and quantitative methods concepts, applications to the specific degree area, critical and evaluative thinking, and concept integration. A sample of these assignments across the 400-level integrative courses will be reviewed and evaluated separately by the UIC to assess whether program majors are meeting the overall program objectives. Class grades and a written evaluation of each student's critical and evaluative thinking, analytical skills, and concept integration performance are forwarded by instructors to the School Director for collection and review. The School Director collates the results and forwards them to the Undergraduate Issues Committee. Students are also encouraged to participate in an internship. This provides external evaluation of these skills in a professional context.

(3) All graduates take coursework in oral and written communication that meets or exceeds WSU general education requirements. In addition, all students take at least two "Writing in the Major" courses that require significant writing assignments, including a term project or paper. Class grades and a written assessment of each student's writing performance are forwarded by the instructors to the School Director for collection and review. The SES Advisory Committee, which consists of alumni and supporters of the School of Economic Sciences, will receive a report on student performance by the Director at least once a year. The Advisory Committee will be asked to provide feedback to the School about a) the appropriateness of the learning objectives, especially with regard to prospective future careers of SES graduates, and b) the progress SES is making towards meeting the learning objectives as reflected in each annual report. SES students are also encouraged to participate in an internship which requires documented outcomes (see http://www.ses.wsu.edu/academics/internship/internship.htm). This provides external evaluation of communication skills in a professional context.

c. ***Use of Assessments to Improve Outcomes for Future Students:***

The Undergraduate Issues Committee will review the core topics and learning goals specified for each undergraduate course taught in SES (including how the course contributes to the learning goals specified in this document), the means used to assess understanding, and the level of

mastery achieved by students. The UIC will share their findings with the instructor of the class and with the Director of SES, who will consider these findings in the annual review of instructors. Suggestions relating to the overall curriculum, or to specific course content or teaching approach will be made as appropriate where perceived opportunities exist to more fully achieve intended learning outcomes. Performance results are used to compare student skills with perceived needs in the marketplace.

III. Masters Degree

MA in Applied Economics

a. ***Intended Outcomes:***

(1) **Graduates will understand economic theory and quantitative methods at an advanced level:** Advanced economic theory and quantitative methods will be well understood for applied economic analysis and empirical research in the field.

(2) **Graduates will be rigorously-trained in critical, integrative, and evaluative thinking:** Graduates will be able to rigorously apply economic theory, quantitative methods, and institutional knowledge relating to the economic problem context to conduct relevant analysis that facilitates the ability of consumers, agricultural and nonagricultural firms, and/or policy makers to make economically rational decisions. Graduates will be capable of rigorous analysis and evaluation of broad economic and social problems concerning the allocation of individual, firm and social resources.

(3) **Graduates will have advanced communication skills:** Advanced written and oral communication skills are necessary for efficient and clear dissemination of the knowledge generated from rigorous economic analysis, as well as for success in private and public sector careers in the various subfields of economics. Graduates will develop advanced communication skills through writing and presenting the content of class assignments and research papers written as requirements in graduate courses, as well as in the writing and oral presentation of a Master's project or thesis.

b. ***Assessment of Expected Outcomes:***

Instructors of all SES Master's level courses will specify core topics and learning goals for their course and institute grading standards tied to these topics, so that a "B" or better requires a strong understanding of the core topics and an "A" indicates a complete mastery of these topics.
(1) All graduates successfully complete core courses in microeconomic theory (Ag Ec 508) and quantitative methods (Ag Ec 507, 509 and MgtOp 591). Instructors of these courses will specify core topics for the course and institute grading standards tied to these topics, so that a "B" requires a clear understanding of the core topics and an "A" indicates a complete mastery of these topics.

(2) All graduates take twelve credits of economic application, of which at least 9 credits involve 500-level integrative classes that provide institutional context for problems in their field of interest. All graduates also write a research paper or thesis. An assessment of each student's critical, analytical, evaluative and integrative thinking skills, as demonstrated in the research paper or thesis, is forwarded by the student's committee to the School Director for collection and subsequent analysis by the GSC.

(3) All graduates write a research paper or thesis. An evaluation of each student's writing skills as demonstrated in the research paper or thesis, and oral communication skills as demonstrated in the oral defense of the research paper or thesis is forwarded by the student's committee to the School director for collection and review. The SES Advisory Committee, which consists of alumni and supporters of the School of Economic Sciences, will receive a report on student performance by the Director at least once a year. The Advisory Committee will be asked to provide feedback to the School about a) the appropriateness of the learning objectives, especially with regard to how they relate to prospective future careers of SES graduates, and b) the progress SES is making towards meeting the learning objectives as reflected in each annual report.

c. ***Use of Assessments to Improve Outcomes for Future Students:***
The Graduate Studies Committee will review the core topics and learning goals specified for each course (including how the course contributes to the learning goals specified in this document), the means used to assess understanding, and the level of mastery achieved by students. The GSC will share their findings with the instructor of the class and with the Director of SES, who will consider these findings in the annual review of instructors, as well as with the graduate advisers to assist in the effective guidance of future students in course selection and sequencing. Suggestions relating to the overall program curriculum, or to specific course content or teaching approach will be made as appropriate where perceived opportunities exist to more fully achieve intended learning outcomes. Performance results are used to compare student skills with perceived needs in the marketplace.

IV. Doctoral Degrees

PhD in Agricultural Economics
PhD in Economics

a. ***Intended Outcomes:***

(1) **Graduates will understand and be capable of applying economic theory and quantitative methods at the highest professional levels of rigor:** Advanced economic theory and quantitative methods will be well understood. Emphasis is placed on development of the formal theory and quantitative tools necessary for original research contributions to the field. Graduates will be capable of making basic research contributions to the literature, as well as conduct applied economic analyses at the highest levels of rigor.

(2) **Graduates will be trained in critical, integrative, and evaluative thinking at the highest professional levels of rigor** Graduates will be able to integrate advanced economic theory, advanced quantitative methods, and institutional knowledge relating to the economic problem context to conduct research at the frontiers of the profession in order to assist consumers, firms, and policy makers in making economically rational decisions. Graduates will be able to conduct advanced analysis and evaluation of broad economic and social problems concerning the allocation of individual, firm and social resources. Graduates with the PhD in Agricultural Economics will be differentiated by their expertise in analyzing resource decisions and institutions involved in the food and fiber sector of the economy, or in analyzing economic issues relating to natural resources and the environment.

(3) **Graduates will have advanced communication skills oriented towards academic professionals.** Advanced written and oral communication skills are necessary for Ph.D-level economists to contribute effectively to the economics literature, and are also necessary for efficient and clear dissemination of the knowledge generated from advanced economic analysis to target groups in the private and public sectors.

b. ***Assessment of Expected Outcomes:***
Instructors of all SES Ph.D. level courses will specify core topics and learning goals for the course and institute grading standards tied to these topics, so that a "B" or better requires a strong understanding of the core topics and an "A" indicates a complete mastery of these topics.

(1) All graduates successfully complete a rigorous sequence of advanced courses in economic theory (Ag Ec/Econ/Fin 500, 501, 502, 503, and 504) and quantitative methods (Ag Ec/Econ/Fin 510, 511, 512) and pass qualifying examinations in microeconomics, macroeconomics, and quantitative methods.

(2) All graduates take at least two integrative, advanced topics classes that provide institutional framework for economic problems in their field of specialization (Ag Ec/Econ/Fin 594 and 595 for the PhD in Agricultural Economics; any two related 59x courses for the PhD in Economics) and pass a preliminary examination. They also write a dissertation. An evaluation of each student's critical thinking, evaluative, and integrative performance as demonstrated in the dissertation is forwarded by the student's committee to the School Director for collection and review. Publications of advanced students and recent graduates will be monitored by the Director with expectations that advanced students and recent graduates are making substantive contributions to the literature. The Director will report the findings to the Graduate Studies Committee.

(3) All graduates write a dissertation. An evaluation of each student's writing skills as demonstrated in the dissertation is forwarded by the student's committee to the School Director for collection and review. The oral communication skills of the graduate are critically evaluated at two main stages in the student's program, the first being the oral preliminary exam in which the student defends his or her research proposal and associated economic theory and quantitative methods concepts associated with the research, and the second being the final oral presentation and defense of the student's finished dissertation research.

c. ***Use of Assessments to Improve Outcomes for Future Students:***

The Graduate Studies Committee will review the core topics and learning goals specified for each course (including how the course contributes to the learning goals specified in this document), the means used to assess understanding, and the level of mastery achieved by students. The GSC will share their findings with the instructor of the class and with the Director of SES, who will consider these findings in the annual review of instructors, as well as with the graduate advisers to assist in the effective guidance of future students in course selection and sequencing. Suggestions relating to the overall program curriculum, or to specific course content or teaching approach will be made as appropriate where perceived opportunities exist to more fully achieve intended learning outcomes. In addition, the Chair of the Graduate Studies Committee each year will report the pass rate for qualifying exams in microeconomics, macroeconomics and quantitative methods to the Director of the School of Economic Sciences. Persistent differences in the pass rates will be reviewed by the faculty of the sequences of advanced courses and, if warranted, suggestions for changes in course content and teaching approach will be made and implemented. The overall assessment results are used to compare student skills with perceived needs in the marketplace.