

School of Economic Sciences

Learning Outcomes and Assessment Plan 2011

I) Program Description

The School of Economic Sciences is a unified general economics and agricultural economics program committed to the land-grant heritage and tradition of discovery, education and service to society. The School of Economic Sciences was formed in 2004 by merging the Department of Agricultural and Resource Economics from the College of Agricultural, Human and Natural Resource Sciences and the Department of Economics from the College of Business and Economics. At that time SES had 34 full-time faculty members who work with eight support staff and 60 graduate students combined in its two MA and two PhD degrees. Undergraduate enrollment included 140 majors in economics, agricultural economics, agribusiness, and environmental and resource economics and management.

Despite being designated as an area of growth from the time of its formation, confirmed by the A2P2 process, SES currently has only 24.5 tenure/tenure-track faculty members, including in that number 6 with primary responsibility in Extension. We also have 1 non-tenure track teaching faculty member, and 1 non-tenure track research professor. Our state-funded staff is down to 3.5 FTEs. Meanwhile our student numbers have grown to 226 undergraduate majors and 83 graduate students, including 63 PhD students. Despite reductions, the breadth of expertise in SES allows us to contribute to WSU core programs in health sciences, global animal health, clean technology, and agriculture. We have revised all our degree programs, and the assessment reflects the current degrees.

SES now offers four degrees (one undergraduate degree and three graduate level degrees) and performs extensive teaching support in service courses for other areas of the university, especially business, engineering and agriculture. Through this service teaching and in our majors and graduate students we contribute to the WSU mission of extending knowledge. Our faculty includes nationally recognized teachers and research leaders in their areas of specialization, and in partnership with our Extension faculty extend knowledge in support of land-grant ideals.

At the undergraduate level we have the BS in Economics with seven options. The options available are 1) Agricultural Economics; 2) Business Economics; 3) Economic Analysis and Policy; 4) Environmental and Resource Economics; 5) Financial Economics; 6) Graduate School Preparation; and 7) International Trade and Development. Students take a core sequence in economic theory and quantitative methods, and then round out their programs with courses supporting their option, and with electives. As of December 8, 2009 we have 195 certified majors and 31 uncertified majors. In 2009, 56 undergraduate students graduated from SES programs. In addition to the BS in Economics, the School is part of the CAHNRS degree in Agriculture and Food Systems (AFS). There is a separate assessment plan for that degree and hence it will not be detailed here.

II) Service Courses

The School of Economic Sciences teaches two highly attended multiple section (generally 10-12) service courses for Washington State University: EconS 101, Fundamentals of Microeconomics and EconS 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 and BA degree programs in CAHNRS.

Because these courses are used so extensively throughout WSU, we assess them separately from our BS degree. The plan for their assessment is included as a separate section in the SES Assessment Plan. Our upper level service courses are also part of the SES undergraduate degree, and thus are not separately assessed. In 2009 SES taught over 1700 students in EconS 101 (Principles of Microeconomics) and over 1500 students in EconS 102 (Principles of Macroeconomics).

III) Assessment Team and System

SES has established an Undergraduate Studies Committee (USC). The USC collects the performance results of majors and report annually to the School Director. The USC also compiles the performance results for the service courses and will consider the curriculum of individual sections. They will make recommendations to the different instructors of the course and to the Director of SES based on outcomes across different Fundamentals of Microeconomics (EconS 101) and Macroeconomics (EconS 102) sections. Instructors of EconS 101 will meet annually to review course content, discuss approaches to teaching, and other issues related to fostering student learning.

Although the SES administration provides leadership, we have deliberately ceded assessment to the respective faculty committees mentioned in our plan (the USC in the case of the undergraduate program and courses). The SES Advisory Committee, which consists of alumni and supporters of the School of Economic Sciences, will receive a report on student performance in Economics Science degree at least once a year and will be asked to provide feedback (as detailed below).

Program Goals, Outcomes, and Measures

Learning Outcomes and Assessment Plan

Undergraduate Degrees

BS in Economics – 7 options

1) *Intended Outcomes Common to All Options:*

- 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. 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.

2) *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 the undergraduate degree program 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 (EconS 301), macroeconomic theory (EconS 302), quantitative methods (Math 171 or 201, MgtOp 215 or Stat 212) and econometrics (EconS 311).
 - b) All graduates successfully complete option-specific courses providing expertise in the skills and concepts required of their interest area.

For our majors we use an evaluation of the projects in the capstone class as the primary means of assessment.

- 2) All majors in SES degree programs take EconS 490, a 400-level integrative capstone class. EconS 490 assignments require knowledge of core economic and quantitative methods concepts, applications in the degree area, critical and evaluative thinking, and integration of concepts. A sample of these assignments across the 400-level integrative courses will be reviewed and evaluated separately by the faculty in the School of Economic Sciences 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 evaluated by the USC, which makes recommendations to the Director based on outcomes. Students are also encouraged to participate in an internship. This provides external evaluation of these skills in a professional context.

3) *Use of Assessments to Improve Outcomes for Future Students:*

- 1) The Undergraduate Studies 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 plan), the means used to assess understanding, and the level of mastery achieved by students. The USC will share their findings with the instructor of the class and with the Director of SES,. The USC will make 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.
- 2) 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.

IV) Service Courses

The School of Economic Sciences teaches two highly attended multiple section (generally 10-12) service courses for Washington State University: EconS 101, Fundamentals of Microeconomics and EconS 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 which involve 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 individuals (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 has developed common assignments using the **Aplia** on-line learning environment pertaining to the topics encompassed by the intended outcomes. 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. The **Aplia** assessment of student learning is externally developed by a respected provider of learning materials instrument used by SES to assure an assessment method that is sufficiently credible and verifiable. **Aplia** provides assessment reports by section on aggregate student performance on the specific core topics.

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

- 1) The Undergraduate Studies Committee (USC) collects the performance results of students, by instructor, and reports annually to the School Director. The USC will also 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. 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 which involve 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 has developed common assignments using the **Aplia** on-line learning environment pertaining to the topics encompassed by the intended

outcomes. 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. **Aplia** provides assessment reports by section on aggregate student performance on the specific core topics.

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

- 1) The Undergraduate Studies Committee (USC) will collect the performance results of students, by instructor, and report annually to the School Director. The USC will also 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. Instructors of Fundamentals of Macroeconomics will meet annually to review course content, discuss approaches to teaching, and other issues related to fostering student learning.

V) Analysis and Action Plan

Administrative Leadership and Support

As described in the SES assessment system above, the Administrative leadership’s role is primarily evaluative since assessment that is designed to improve curriculum belongs to the faculty. The faculty, through the USC, leads this effort and is supported by the SES Administration. To that end, we have purposefully removed any use of this particular assessment from annual review of individual faculty because we want the faculty to be open to find the shortcomings, if they exist, and to take the initiative to improve the curriculum.

The SES administration has emphasized the importance of assessment in practice and example to the faculty in the School. The Associate Director chaired the initial committee devising assessment procedures with the School, and wrote the first draft of the plan and rubrics which, after much feedback and involvement of the faculty, has been approved. At this point, with a plan in place and being implemented, assessment of the undergraduate program is the responsibility of the Undergraduate Studies Committee. However, the SES administration maintains expectations of the faculty for contributing to SES and WSU learning goals. For example, in every annual review, faculty are evaluated on how well they articulate learning goals in their classes, how well they link those class-specific learning goals to the SES and WSU goals, and how well the class assignments support the learning goals they articulate.