

**Program Student Learning Assurance Plan Requirements  
Word Template**

**Academic Cycle:** AY 2011-2012

**Plan Date:** Sep 27, 2012

**School/College:** Arts and Science

**Department/Program:** MA Economics

**Person completing the Plan:** Prof. Man-lui Lau, Graduate Advisor

**Department Mission Statement:**

- The mission of the MA Economics program is to train students the necessary analytic and quantitative skill to carry out economic analysis in business organization or research institute.

**Program Student Learning Goals:**

- Students should be analytical and quantitative proficient upon completion of the program.

**Program Student Learning Outcomes:**

- Students should be equipped with the necessary skills to understand how government policies affect the markets.
- Students should be equipped with the necessary skills to understand how fiscal policies and monetary policy affect the macro economy.
- Students should be equipped with necessary econometric techniques to carry out empirical studies.

**Program Student Learning Rubrics:**

- For each learning outcome, students are expected to attend the average achievement.

Outcome	Average Achievement of Outcome [Benchmark Standard]
<b>1a.</b> Students will be able to apply indifference curve analysis to study how government policies affect welfare of the households.	c. Can solve problems on <b>indifference curve analysis</b> similar to i) the examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam.
<b>1b.</b> Students will acquire knowledge of the theory of decision making under uncertainty and apply it to economic problem.	c. Can solve problems on <b>decision under uncertainty</b> similar to i) the examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam.
<b>1c.</b> Students will acquire knowledge of the role of information in economic analysis.	c. Can solve problems on <b>the role of information in economic analysis</b> similar to i) the examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam.
<b>1d.</b> Students will acquire knowledge of the theory of firms.	c. Can solve problems on <b>the theory of firms</b> similar to i) the examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam
<b>1e.</b> Students will acquire knowledge of different market structures such as perfect competition, monopoly, monopsony, monopolistic competition, duopoly and oligopoly.	c. Can solve problems on <b>market structure</b> similar to i) the examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam.
<b>1f.</b> Students will acquire knowledge of basic game theory and its application in microeconomics.	c. Can solve problems on <b>game theory</b> similar to i) the examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam.
<b>1g.</b> Students will acquire	c. Can solve problems on <b>general equilibrium</b> similar to i) the

knowledge of general equilibrium theory and the relationship between competitive equilibrium and Pareto optimality.	examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam.
<b>2a.</b> Students will acquire knowledge of the Solow growth model, the AK endogenous growth theory and R&D-based growth theory.	c. Can solve problems on <b>growth theory</b> similar to i) the examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam.
<b>2b.</b> Students will acquire knowledge of the basic model of business cycle fluctuations and policy applications.	c. Can solve problems on <b>model of business cycle</b> similar to i) the examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam.
<b>2c.</b> Students will acquire knowledge of theory of investment, theory of consumption, Keynesian theory of aggregate demand, IS-LM model, theory of Philips curve, rational expectations hypothesis and stabilization monetary policy.	c. Can solve problems on <b>the various theories</b> similar to i) the examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam.
<b>3a.</b> Students will be able to solve unconstrained and constrained optimization problems and apply the techniques in economics problems.	c. Can solve problems on <b>unconstrained and constrained optimization</b> similar to i) the examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam.
<b>3b.</b> Students will be able to use the Kuhn-Tucker Theory to solve optimization problems with inequality constraints and apply the techniques in economics problems.	c. Can solve problems on <b>Kuhn-Tucker Theory</b> similar to i) the examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam.
<b>3c.</b> Students will acquire	c. Can solve problems on <b>concave, convex, homogeneous and</b>

knowledge of the properties of concave function, convex function, homogeneous function and homothetic function.	<b>homothetic functions</b> similar to i) the examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam.
<b>3d.</b> Students will be able to solve comparative statics problem.	c. Can solve problems on <b>comparative statics</b> similar to i) the examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam.
<b>3e.</b> Students will be able to solve first order differential equations and apply the techniques to economics problems.	c. Can solve problems on <b>first order differential equations</b> similar to i) the examples discussed in lecture and ii) the problems in the problem sets, in a closed-book exam.
<b>4a.</b> Students will be able to express economic theory in terms of an observable model.	c. Can complete the task with some guidance from the Professor.
<b>4b.</b> Students will be able to formulate a strategy for collecting data necessary to estimate a well-specified empirical model.	c. Can complete the task with some guidance from the Professor.
<b>4c.</b> Students will be able to determine the appropriate estimation method for the empirical model.	c. Can complete the task with some guidance from the Professor.
<b>4d.</b> Students will be able to utilize statistical software to conduct such estimation and meaningfully interpret the results.	c. Can complete the task with some guidance from the Professor.
<b>4e.</b> Students will acquire knowledge of the set-up of the multiple linear regression model.	c. Can complete the task with some guidance from the Professor.
<b>4f.</b> Students will acquire knowledge of how to interpret the coefficients of the multiple	c. Can complete the task with some guidance from the Professor.

linear regression model.	
<b>4g.</b> Students will be able to calculate and interpret the $R^2$ and adjusted $R^2$ .	c. Can complete the task with some guidance from the Professor.
<b>4h.</b> Students will acquire knowledge of the implications for estimated results when the assumptions of the classical linear model are violated (e.g. omitted variables, heteroskedasticity, serial correlation) and how to estimate the models under these conditions.	c. Can complete the task with some guidance from the Professor.
<b>5a.</b> Students will be able to develop an original economic research.	c. Can complete the task with some guidance from the Professor.
<b>5b.</b> Students will be able to compile a professional literature survey	c. Can complete the task with some guidance from the Professor.
<b>5c.</b> Students will be able to specify a theoretical and testable empirical model.	c. Can complete the task with some guidance from the Professor.
<b>5d.</b> Students will be able to carry out econometric analysis.	c. Can complete the task with some guidance from the Professor.
<b>5e.</b> Students will be able to carry out effective communication of the study's principal findings and policy implications.	c. Can complete the task with some guidance from the Professor.

### Program Student Learning Curriculum Map:

- Learning outcome 1a-1g are taught in Econ 601 Graduate Microeconomics.
- Learning outcome 2a-2c are taught in Econ 602 Graduate Macroeconomics.
- Learning outcome 3a-3e are taught in Econ 615 Mathematical Economics.
- Learning outcome 4a-4h are taught in Econ 620 Econometrics.

- Learning outcome 5a-5e are taught in Graduate Seminar, Seminar in Financial Econometrics and Seminar in International Economics.

**Program Student Learning Assurance Methods:**

- Learning outcomes 1a-1g and 2a-2c are accessed through the questions asked in the comprehensive examinations held at the beginning of the Fall and Spring semester. Learning outcomes 3a-3e are accessed through the questions asked in the final examination.

**Program Self-evaluation WASC Rubric:**

- 1a.** Students will be able to apply indifference curve analysis to study how government policies affect welfare of the households.

Assessment Questions: Fall 2011 Comprehensive Examination Question I 1), 2), II d), V 1)  
Spring 2012 Comprehensive Examination Question I 1), 2), III 1)

<b>Average of Questions</b>	<b>2011 Fall</b>	<b>2012 Spring</b>
Very good	3	3
Good	3	3
Average	2	4
Poor	0	0
Very poor	0	0
<b>Total</b>	<b>8</b>	<b>10</b>

- 1b.** Students will acquire knowledge of the theory of decision making under uncertainty and apply it to economic problem.

Assessment Questions: Fall 2011 Comprehensive Examination Question I 3), 4), III 4)  
Spring 2012 Comprehensive Examination Question I 1), 2), III 1)

<b>Average of Questions</b>	<b>2011 Fall</b>	<b>2012 Spring</b>
Very good	3	4
Good	2	3
Average	3	3
Poor	0	0
Very poor	0	0
<b>Total</b>	<b>8</b>	<b>10</b>

**1c.** Students will acquire knowledge of the role of information in economic analysis.

Assessment Questions: Fall 2011 Comprehensive Examination Question I 3), IIb), III6)  
 Spring 2012 Comprehensive Examination Question I 1), 2), III 1)

Average of Questions	2011 Fall	2012 Spring
Very good	3	4
Good	2	3
Average	3	3
Poor	0	0
Very poor	0	0
<b>Total</b>	<b>8</b>	<b>10</b>

**1e.** Students will acquire knowledge of different market structures such as perfect competition, monopoly, monopsony, monopolistic competition, duopoly and oligopoly.

Assessment Questions: Fall 2011 Comprehensive Examination Question III 2), 5)  
 Spring 2012 Comprehensive Examination Question II, III 3)

Average of Questions 1,2, and 5.1	2011 Fall	2012 Spring
Very good	3	2
Good	4	6
Average	1	2
Poor	0	0
Very poor	0	0
<b>Total</b>	<b>8</b>	<b>10</b>

**1g.** Students will acquire knowledge of general equilibrium theory and the relationship between competitive equilibrium and Pareto optimality.

Assessment Questions: Fall 2011 Comprehensive Examination Question III 2)  
 Spring 2012 Comprehensive Examination Question III 2)

Average of Questions 1,2, and 5.1	2011 Fall	2012 Spring
Very good	4	4
Good	3	3
Average	1	3
Poor	0	0
Very poor	0	0
<b>Total</b>	<b>8</b>	<b>10</b>

**2a.** Students will acquire knowledge of the Solow growth model, the AK endogenous growth theory and R&D-based growth theory.

Assessment Questions: Comprehensive Examination Questions 1,2, and 5.1

Average of Questions 1,2, and 5.1	2011 Fall	2012 Spring
Very good	3	4
Good	4	4
Average	1	1
Poor	0	1
Very poor	0	0
<b>Total</b>	<b>8</b>	<b>10</b>

**2b.** Students will acquire knowledge of the basic model of business cycle fluctuations and policy applications.

Assessment Questions: Comprehensive Examination Questions 4 and 5.2

Average of Questions 4 and 5.2	2011 Fall	2012 Spring
Very good	2	4
Good	5	3
Average	1	2
Poor	0	1
Very poor	0	0
<b>Total</b>	<b>8</b>	<b>10</b>

**2c.** Students will acquire knowledge of theory of investment, theory of consumption, Keynesian theory of aggregate demand, IS-LM model, theory of Philips curve, rational expectations hypothesis and stabilization monetary policy.

Assessment Questions: Comprehensive Examination Questions 4 and 5.2

Average of Questions 4 and 5.2	2011 Fall	2012 Spring
Very good	3	2
Good	2	5
Average	3	2
Poor	0	1
Very poor	0	0
<b>Total</b>	<b>8</b>	<b>10</b>



- 3a. Students will be able to solve unconstrained and constrained optimization problems and apply the techniques in economics problems.

Assessment Questions: Fall 2011 Econ 615 Final Examination Questions 1

	<b>2011 Fall</b>
Very good	8
Good	3
Average	5
Poor	0
Very poor	0
<b>Total</b>	<b>16</b>

- 3b. Students will be able to use the Kuhn-Tucker Theory to solve optimization problems with inequality constraints and apply the techniques in economics problems.

Assessment Questions: Fall 2011 Econ 615 Final Examination Questions 2

	<b>2011 Fall</b>
Very good	10
Good	3
Average	3
Poor	0
Very poor	0
<b>Total</b>	<b>16</b>

- 3c. Students will acquire knowledge of the properties of concave function, convex function, homogeneous function and homothetic function.

Assessment Questions: Fall 2011 Econ 615 Final Examination Questions I 2)

Average of Questions 4 and 5.2	<b>2011 Fall</b>
Very good	10
Good	6
Average	0
Poor	0
Very poor	0
<b>Total</b>	<b>16</b>

**3d.** Students will be able to solve comparative statics problem

Assessment Questions: Fall 2011 Econ 615 Final Examination Questions 3, 4

Average of Questions 4 and 5.2	<b>2011 Fall</b>
Very good	10
Good	4
Average	2
Poor	0
Very poor	0
<b>Total</b>	<b>16</b>

**3e.** Students will be able to solve first order differential equations and apply the techniques to economics problems.

Assessment Questions: Fall 2011 Econ 615 Final Examination Questions I 1), 4

Average of Questions 4 and 5.2	<b>2011 Fall</b>
Very good	6
Good	8
Average	2
Poor	0
Very poor	0
<b>Total</b>	<b>16</b>