

## Course Outline

### EE200 Data Science for Economic Analysis

Semester 1/2021 (Aug 9 – Nov 22, 2021)

**Number of credits:** 3 credits

#### Course description

Learning to work with data. Topics include (1) data sampling and cleaning (2) data storage and management (3) exploratory data analysis (4) prediction based on statistical tools such as regression, classification and clustering (5) communication of results through visualization and summary statistics. Students learn through real-world examples using programs such as advanced MS Excel, Python or R..

**Prerequisite:** 2nd year student or above.  
*(have taken at least 34 credits)*

#### Course objective:

In this course, students will learn to conduct data analysis and project on their topic of interest. Since this course focuses on economic issues, your topic and group project should be related to either microeconomics or macroeconomics. What the course will do is to stimulate an active-learning environment. Unlike most of the other classes you have attended, there won't be that many lectures. My role in this class will be a coach and conductor, rather than a lecturer.

This course divides into two significant parts. In the first part, I hope to introduce you to essential elements of a proper idea about the data and data science. To do this, we will discuss how to come up with meaningful linkages between business, economics, and data. We will then discuss

different components of standard data (your team paper). This part includes an introduction, literature review, theoretical framework, data acquisition, data management, prediction, and visualization of findings. You will be assigned to read and practice on data science projects as well as past seminar papers. The students will work on the suggested data and coding project.

In the second part, you will gradually take more roles in class. Each of you and your time will take a turn to present your topic, related literature, theoretical framework, methodology, and findings. Other students will pay close attention to your presentation. They will then come up with constructive comments and suggestions to improve your data science project. Occasionally, we will turn the class into individual meetings and team meetings. The course is where you discuss specific questions regarding your data science project and data skill with me.

### **Textbooks:**

There is no textbook for this course. However, I will post some useful articles on Google Classroom. There is also a list of readings that will be in Google classroom

### **Suggested readings by topics will be available after knowing you guys:**

#### **1. Data Science: business, computer, and statistics and mathematics**

Data Literacy, Fact, and Truth.

Talk to me.

Design Thinking:

OKRs:

Designing Your Life:

The Book of Why:

3 Dimensions of Data Science, Statistics, and Econometrics.

<https://clevertap.com/blog/data-science/>

<https://www.vox.com/the-highlight/2019/5/14/18520783/harvard-economics-chetty>

Data Science (MIT Press Essential Knowledge series)

Data for the People: How to Make Our Post-Privacy Economy Work for You

by Andreas Weigend

Everybody Lies: Big Data, New Data, and What the Internet Can Tell Us About Who We Really Are

by Seth Stephens-Davidowitz

<https://datarockie.com/free-data-science-books/>

Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy

<https://www.businessinsider.com/netflix-facebook-cambridge-analytica-documentary-trailer-great-hack-2019-7>

#### **2. Data Sampling and Cleaning**

<https://towardsdatascience.com/sampling-techniques-a4e3411d808>

<http://siteresources.worldbank.org/INTPOVRES/Resources/477227-1142020443961/2311843-1142870725726/2337154-1328041661816/8405489-1342716080957/12->

[StataforSampling2012\(KristenHimelein\).pdf](#)

<https://www.tableau.com/learn/whitepapers/data-prep-best-practices>

#### **3. Data Storage and Management**

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.661.538&rep=rep1&type=pdf>

<https://www.bmc.com/blogs/data-lake-vs-data-warehouse-vs-database-whats-the-difference/>

#### 4. Exploratory Data Analysis: Describe or Explain

- Tabulation
- Excel
- Pivot
- Power BI
- Stata®
- R
- Python
- Orange

Book of Why

Causal Inference in Statistics

Angrist, Joshua D., and Jörn-Steffen Pischke. Mastering 'Metrics: The Path from Cause to Effect. Princeton: Princeton University Press, 2015.

#### 5. Prediction

- Machine Learning basic form.  
<https://bruegel.org/2018/11/machine-learning-and-economics/>

Criteria for prediction

- Is it about causation?  
[http://www.equality-of-opportunity.org/bigdatacourse\\_stanford/](http://www.equality-of-opportunity.org/bigdatacourse_stanford/)

Mullainathan, Sendhil, and Jan Spiess. 2017. "Machine Learning: An Applied Econometric Approach." Journal of Economic Perspectives 31 (2): 87-106.

Stock, James H. and Mark W. Watson. Introduction to Econometrics. 4th Edition. Boston: Pearson, 2018. Note: earlier editions and all international editions printed in English are acceptable.

#### 6. Communication and Visualization

- Storytelling with data
- Show and Tell
- Draw to Win
- Dashboard White Paper from Tableau
- Ted Talk by Han Rosling
- Ted Talk by Simon Sinek

#### Other teaching materials:

If there is any PowerPoint presentation, the file(s) will be on Google Classroom.

#### Evaluation:

- |   |     |
|---|-----|
| 1. Group Review of Literature AKA book review                       | 10% |
| 2. Group Presentations on software and coding comparison on Gartner | 10% |
| 3. Group presentations of project and coding requirement            | 10% |
| 4. Group work on data visualization or dashboard:                   | 20% |
| 5. Group work on Python or R replication                            | 10% |
| 6. Final data science project and Communication                     | 40% |

**Data Science Projects:** A vital element of the course will be five small data projects, and final data science project, which will give students hands-on experience in working with data. We recommend and will support using the statistical software program like Stata® and Excel® for these projects, but

students are welcome to use other applications (e.g., Power BI, R, Python, Tableau, RapidMiner, Alteryx), provided that their code and workflow are clear. The group projects are designed to be more substantial than traditional problem sets and will include significant coding, reading, and writing elements that will give students a sense of how data scientists work.

**Collaboration Policy:** Discussion and the exchange of ideas and works are essential to data science work. You and your teams are encouraged to consult and discuss with your classmates on the data projects and to share resources and codes. However, you should ensure that any work you submit for evaluation is the result of your work and that it reflects your integrity. You should also understand and practice the standard citation practices, and please cite any books, articles, websites, lectures, etc. that have helped you with your work. If you received any help with your work (e.g., feedback on drafts, help with code, or programming), you must also acknowledge and give credit to this assistance.

### Your final Data Science Project

The project should be between 20-25 pages long presentation, including graphs, tables, dashboards, and figures (excluding bibliography and appendices). The paper should be composed of 5 main parts: 1) introduction 2) literature review 3) theoretical framework and methodology, and 4) findings 5) conclusion. We will discuss each section in more detail in class.

**(This schedule is subject to change. Please see Google Classroom for changes to dates, etc.)**

Class	Topics
9 Aug	Introduction - Review of Course and Data Science Resource. Identification of your project and install your tools.  Conduct Group Meetings to identify your topics, relevant literature, and Data Science Tool.
16 Aug	Introduction - Review of Course and Data Science Resource. Identification of your project and install your tools.  Conduct Group Meetings to identify your topics, relevant literature, and Data Science Tool.
23 Aug	<i>Book or Paper Review presentation</i>
30 Aug	<i>Workshop on Excel or PowerBI</i>
6 Sep	<i>Group presentation of Dashboard.</i>
13 Sep	<i>Workshop on Tableau or Power BI</i>
20 Sep	<i>Midterm Week and Review of Python or R</i>
<b>---- Midterm Exam: Submission of Data Science Project Interim Report</b>	
4 Oct	<i>Workshop - R or Python</i>

<b>Class</b>	<b>Topics</b>
11 Oct	<i>Workshop - R or Python</i>
18 Oct	<i>Workshop - R or Python</i>
25 Oct	<i>Workshop - R or Python</i>
1 Nov	<i>Machine Learning on Python</i>
8 Nov	<i>Orange for Machine Learning</i>
15 Nov	<i>Orange for Machine Learning</i>
22 Nov	<i>Presentation of Machine Learning</i>
<b>---- Final Project Presentation: TBA</b>	



## Course Outline

### EE 211 Principles of Microeconomics

Semester 1/2021

**Number of credits:** 3 credits (3-0-6)

#### Course Description:

Principles of microeconomics such as value, price, resource allocation, introduction to theories of consumption and production with an emphasis on factors determining supply and demand of goods and services, determination of price and efficiency of resource allocation in perfect and monopoly markets; competitive factor market and introductory concepts of market failures.

#### Prerequisites:

For economics major students or students aimed to transfer to economics major only.

### Course Objectives:

After completing this course, students should have developed a range of skills enabling them to understand economic concepts and use those concepts to analyze specific questions.

By the end of this course, students should be able to:

- Understand the concept of opportunity cost
- Understand market forces of supply and demand
- Understand the concept of elasticities
- Understand the concept of consumer and producer surpluses
- Understand consumer behavior.
- Understand firm behavior in perfectly competitive and in monopoly structure.
- Analyze different types of market structures (a competitive market Vs. Monopoly).
- Understand how to apply economic principles to a range of policy questions.

Students should also have the skills needed to:

- Use supply and demand diagrams to analyze the impact of overall changes in supply and demand on price and quantity.
- Calculate producer and consumer surplus.
- Solve a consumer's utility maximization problem mathematically and graphically; analyze the impact of changes in price and income on a consumer's decision via shifting income and substitution effects.
- Solve a firm's cost minimization problem mathematically and graphically.
- Analyze the behavior of firms in a perfectly competitive market in the short-run and the long-run.
- Analyze the behavior of firm in a monopoly and calculate the resulting changes in producer or consumer surplus.
- Use economic tools to analyze economic policies.

### Expected Learning Outcomes:

#### 1. Morality and Ethics

Applicability	Expected Learning Outcomes
●	1.1 Students demonstrate integrity.
○	1.2 Students prioritize social and public benefits over personal ones.
●	1.3 Students are punctual and comply with the code of conduct of the institution and society at large.
○	1.4 Students are responsible and accountable to society, the nation, and the subject of economics.
○	1.5 Students realize the cultural and environmental value of the sustainable society.

## 2. Knowledge

Applicability	Expected Learning Outcomes
●	2.1 Students know and understand modern economics principles and theories, and are up to date with new developments.
●	2.2 Students know and understand Thai and global economic structure, and the importance of major international economic events.
●	2.3 Students know and understand instruments of economic analysis.
●	2.4 Students know and understand applied fields in economics, including monetary, public, international, business, natural resource and environmental, industrial, agricultural, cooperative, political, developmental, and entrepreneurial economics as well as agribusiness.
○	2.5 Students are informed about related fields including sociology, business administration, education, law policy, and science.

## 3. Intellectual Development

Applicability	Expected Learning Outcomes
●	3.1 Students have developed individual critical thinking.
●	3.2 Students are sufficiently trained in research skills.
●	3.3 Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand causes of current economic problems in Thailand. Based on analysis and synthesis, students demonstrate an ability to propose policy guidelines to resolve problems.

## 4. Interpersonal Skills and Responsibilities

Applicability	Expected Learning Outcomes
●	4.1 Students are responsible for assigned tasks and work in groups effectively.
○	4.2 Students have problem-solving skills.
○	4.3 Students show leadership skills and team spirit.
●	4.4 Students are always improving themselves.
○	Students have good interpersonal skills, adapting and working under different conditions.

## 5. Quantitative Analysis, communication and information technology

Applicability	Expected Learning Outcomes
○	5.1 Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.
○	5.2 Students communicate effectively and select appropriate presentation methods.
○	5.3 Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.

Remark: ● Primary expected outcome ○ Secondary expected outcome

### Textbooks:

Mankiw, N.G., (2018) **Principles of Microeconomics**, 8th ed., Cengage, (ISBN-10: 1-305-97149-3 ISBN-13: 978-1-305-97149-3) \*\*\*with MINDTAP\*\*\*

Krugman, P. and Robin Wells, (2018) **Microeconomics**. 3rd ed. Macmillan Education, (Hereafter, KW)—Earlier editions are applicable.

Pindyck, R. S., & Rubinfeld, D. L. (2018). **Microeconomics**. Upper Saddle River, N.J: Pearson/Prentice Hall.

### Evaluation:

Homework Assignments, Quizzes and Class Attendances	10 points
Midterm Exam	40 points
Final Exam	50 points
<b>Total</b>	<b>100 points</b>

### Remarks:

- **Mid-Term Examination:** Saturday, October 2, 2021 (09:00-11:00 hrs.)
- **Final Examination:** Friday, December 17, 2021 (9:00-11:30 hrs.)

**Study Plan:**

The class schedule shown below may be adjusted during the semester as needed.

Sessions	Date	Topics	Activities/Text & Materials/ Media
#1: <b>Economics: The Study of Choice</b>	10 – 17 Aug (2 lectures)	<ul style="list-style-type: none"> <li>○ <b>What is Economics all about?</b></li> <li>○ <b>The Basic Economic Problems</b></li> <li>○ <b>Circular Flow</b></li> <li>○ <b>Microeconomics Vs. Macroeconomics</b></li> <li>○ <b>Confronting Scarcity: Production Possibilities Curve (PPC)</b> <ul style="list-style-type: none"> <li>▪ Assumptions</li> <li>▪ An Illustration of Scarcity, Choice and Opportunity Costs Using the PPC</li> <li>▪ Economic Growth and Changes in the PPC</li> </ul> </li> <li>○ <b>Economists' Tool Kit</b> <ul style="list-style-type: none"> <li>▪ Equilibrium Analysis</li> <li>▪ Comparative Static Analysis</li> <li>▪ Constrained Optimization</li> </ul> </li> </ul>	<b>Read:</b> Mankiw, chs.1-2; KW, chs.1-2
#2-#3: <b>Demand, Supply, and Equilibrium</b>	19 – 31 Aug (4 lectures)	<ul style="list-style-type: none"> <li>○ <b>Market: Meaning and Components</b></li> <li>○ <b>Demand: Buyers' Behavior</b> <ul style="list-style-type: none"> <li>• Meaning</li> <li>• Law of Demand</li> <li>• Individual and Market Demands</li> <li>• The Determinants of Demand (or Demand Shifters)</li> <li>• The Distinction of "Change in Quantity Demanded" and "Change in Demand"</li> </ul> </li> <li>○ <b>Supply: Sellers' Behavior</b> <ul style="list-style-type: none"> <li>• Meaning</li> <li>• Law of Supply</li> <li>• Firm and Market Supplies</li> </ul> </li> </ul>	<b>Read:</b> Mankiw, ch.4; KW, ch.3

Sessions	Date	Topics	Activities/Text & Materials/ Media
		<ul style="list-style-type: none"> <li>• The Determinants of Supply (or Supply Shifters)</li> <li>• The Distinction of “Change in Quantity Supplied” and “Change in Supply”</li> <li>○ <b>Market Equilibrium: When Demand and Supply Meet</b> <ul style="list-style-type: none"> <li>• Meaning and How to Determine the Equilibrium</li> <li>• What Will Happen if Market is Not Yet in an Equilibrium? (<a href="#">Adam Smith’s Invisible Hand or Market Clearing Process</a>)</li> </ul> </li> <li>○ <b>Shocking an Equilibrium</b> <ul style="list-style-type: none"> <li>• When demand curve shifts</li> <li>• When supply curve shifts</li> <li>• When both demand and supply curve simultaneously shift</li> </ul> </li> </ul>	
#4: <b>Elasticity: A Measure of Response</b>	2 – 7 Sep (2 lectures)	<ul style="list-style-type: none"> <li>○ <b>Elasticity</b> <ul style="list-style-type: none"> <li>▪ Meaning</li> <li>▪ Measurement</li> <li>▪ Why Elasticity? :Absolute Change, Relative Change, and Percentage Change</li> </ul> </li> <li>○ <b>Price Elasticity of Demand: Defined</b> <ul style="list-style-type: none"> <li>▪ Computing Price Elasticity of Demand</li> <li>• Point-Price Elasticity of Demand</li> <li>• Arc-Price Elasticity of Demand</li> <li>• Determinants of Price Elasticity of Demand</li> <li>• Total Revenue and Price Elasticity of Demand</li> </ul> </li> <li>○ <b>Other Demand Elasticities</b> <ul style="list-style-type: none"> <li>• Income Elasticity of Demand</li> </ul> </li> </ul>	<b>Read:</b> Mankiw, ch.5; KW, ch.6

Sessions	Date	Topics	Activities/Text & Materials/ Media
		<ul style="list-style-type: none"> <li>• Cross Price Elasticity of Demand</li> <li>○ <b>Elasticity of Supply: Meaning, Measurement and Determinants</b></li> </ul>	
#5: <b>Consumers, Producers, and the Efficiency of Markets</b>	9 Sep (1 lecture)	<ul style="list-style-type: none"> <li>○ <b>Consumer Surplus</b> <ul style="list-style-type: none"> <li>▪ Willingness to Pay (WTP)</li> <li>▪ Using the Demand Curve to Measure Consumer Surplus</li> <li>▪ Effect of a Price Change on Consumer Surplus</li> <li>▪ What Does Consumer Surplus Measure?</li> </ul> </li> <li>○ <b>Producer Surplus</b> <ul style="list-style-type: none"> <li>▪ Cost and the Willingness to Sell</li> <li>▪ Using the Supply Curve to Measure Producer Surplus</li> <li>▪ Effect of a Price Change on Producer Surplus</li> <li>▪ What Does Producer Surplus Measure?</li> </ul> </li> <li>○ <b>Market Efficiency</b></li> </ul>	<b>Read:</b> Mankiw, ch.7; KW, ch.4
#6 <b>Applications on Demand, Supply, and Government Policies</b>	14 Sep (1 lecture)	<ul style="list-style-type: none"> <li>○ <b>Government Intervention in Market Prices</b> <ul style="list-style-type: none"> <li>▪ Price Ceilings <ul style="list-style-type: none"> <li>▪ Its effect on price and quantity</li> <li>▪ Its inefficiency in resource allocation</li> <li>▪ Welfare Analysis of Price Ceilings (Who gain and lose from the policy?)</li> </ul> </li> <li>▪ Price Floors <ul style="list-style-type: none"> <li>▪ Its effect on price and quantity (Case study: Agricultural commodities)</li> <li>▪ Its inefficiency in resource allocation</li> <li>▪ Welfare Analysis of Price Ceilings (Who</li> </ul> </li> </ul> </li> </ul>	<b>Read:</b> Mankiw, ch. 6; KW, chs.5 and 7

Sessions	Date	Topics	Activities/Text & Materials/ Media
		<p>gain and lose from the policy?)</p> <ul style="list-style-type: none"> <li>▪ Effects of Taxes <ul style="list-style-type: none"> <li>• A Unit Tax Vs. Ad Valorem Tax</li> <li>• Meaning and Effect of a Unit Tax on Supply and Demand Curves</li> <li>• A Unit Tax Imposed on Producers Vs. A Unit Tax Imposed on Consumers <ul style="list-style-type: none"> <li>• Its effect on price consumers paid, price producers received, consumers' tax burden, producers' tax burden, government tax revenue, consumer and producer surplus, and total surplus</li> </ul> </li> <li>• Demand and Supply Elasticities: Implications on tax burdens incurred by consumers and producers</li> <li>• The differences between Unit Tax imposed on producers and on consumers</li> </ul> </li> <li>▪ Effects of Subsidy Given to Producers</li> </ul>	
#7-#9: <b>The Theory of Consumer Choice</b>	16 – 23 Sep (4 lectures)	<ul style="list-style-type: none"> <li>○ <b>Utility Theory (or Cardinal Approach)</b> <ul style="list-style-type: none"> <li>• The Meaning of Utility</li> </ul> </li> </ul>	<b>Read:</b> Mankiw, ch.21; KW, chs.10-11; Frank, chs.3-4;;

Sessions	Date	Topics	Activities/Text & Materials/ Media
		<ul style="list-style-type: none"> <li>• Relationship between Total Utility and Marginal Utility</li> <li>• Law of Diminishing Marginal Utility</li> <li>• Consumers' Equilibrium (or Rational Spending Rule) and Change in Equilibrium</li> <li>○ <b>Indifference Curves Theory (or Ordinal Approach)</b></li> <li>○ What a Consumer Wants <ul style="list-style-type: none"> <li>• The Meaning of Indifference Curve</li> <li>• Properties of Indifference Curve</li> <li>• Slope of Indifference Curve and Marginal Rate of Substitution (MRS)</li> </ul> </li> <li>○ What the Consumer Can Afford <ul style="list-style-type: none"> <li>• Budget Line: Meaning, Slope, and Change in Budget Line</li> </ul> </li> <li>○ How the Consumer Optimally Chooses</li> <li>○ Consumer Equilibrium and Change in Equilibrium</li> <li>○ Derivation of an Individual Demand Curve Using Indifference Curves and Budget Lines</li> <li>○ How a Consumer Responds to Change in Price: Substitution and Income Effects (Hicksian Approach)</li> </ul>	Lipsey, ch. 6 (& appendix);
#10-#12: <b>Production and Cost in the Short-Run and in the Long-Run</b>	5 – 26 Oct (7 lectures)	<ul style="list-style-type: none"> <li>○ <b>Firm and the Objectives of Production</b></li> <li>○ <b>Production Functions</b></li> <li>○ <b>The Meaning of Cost</b> <ul style="list-style-type: none"> <li>▪ Economic and accounting costs</li> <li>▪ Sunk costs</li> <li>▪ Private cost and social cost</li> </ul> </li> <li>○ <b>Distinction between Short-run and Long-run</b></li> </ul>	<b>Production in the Short-Run</b> <b>Read:</b> Mankiw, ch.13; KW, ch.12; Frank, chs.9-10; Supplement Note provided in our class, <b>Production in the Long-Run</b>

Sessions	Date	Topics	Activities/Text & Materials/ Media
		<ul style="list-style-type: none"> <li>○ <b>Production and Costs in the Short-run</b> <ul style="list-style-type: none"> <li>▪ Total Product (TP), Average Product (AP), Marginal Product (MP)</li> <li>▪ Relationship of TP, AP, and MP</li> <li>▪ Law of Diminishing Returns</li> <li>▪ Stage of Production</li> </ul> </li> <li>○ <b>Relationship between Costs and Production</b></li> <li>○ <b>Short-run Costs of Production: TFC, TVC, TC, AFC, AVC, ATC, MC</b></li> <li>○ <b>Production and Costs in the Long-run Isoquant</b> <ul style="list-style-type: none"> <li>○ Isocost</li> <li>○ Least Cost Combination</li> <li>○ Expansion Path</li> <li>○ The Meaning of Returns to Scale</li> <li>○ Long-run Costs of Production: LTC, LAC, LMC</li> <li>○ Relationship between Expansion Path and LTC</li> <li>○ Relationship between Long-run and Short-run Costs</li> <li>○ Economies and Diseconomies of Scale</li> </ul> </li> </ul>	<p><b>Read:</b> Supplement Note provided in our class; Frank, chs. 9-10; KW, ch. 12</p>
#11-#13: <b>Market Structure</b>	28 Oct – 16 Nov (6 lectures)	<ul style="list-style-type: none"> <li>○ <b>Meaning</b></li> <li>○ <b>Structure of Perfect and Imperfect Markets</b></li> <li>○ <b>Producer's Objectives</b></li> <li>○ <b>The Meanings of Profits and Loss</b></li> <li>○ <b>Profit Maximization</b> <ul style="list-style-type: none"> <li>▪ TR-TC Approach</li> <li>▪ MR-MC Approach</li> </ul> </li> <li>○ <b>Perfectly Competitive Market</b></li> </ul>	<p><b>Read:</b> Mankiw, chs.14-15; KW, chs. 13-14</p>

Sessions	Date	Topics	Activities/Text & Materials/ Media
		<ul style="list-style-type: none"> <li>▪ The Nature of Demand, TR, MR, AR and Their Relationships</li> <li>▪ Short-run Equilibrium</li> <li>▪ Derivation of Firm's and Market's Short-run Supply Curves</li> <li>▪ Long-run Equilibrium</li> <li>○ <b>Monopoly</b></li> <li>▪ Causes of Monopoly</li> <li>▪ The Nature of Demand, TR, MR, AR and Their Relationships</li> <li>▪ Short-run Equilibrium</li> <li>▪ Economic Effects of Monopoly</li> <li>○ <b>Comparison between Perfect Competition and Monopoly</b></li> </ul>	
#14: <b>Factor Markets</b>	18 – 23 Nov (2 lectures)	<ul style="list-style-type: none"> <li>○ <b>Demand for factor as a derived demand</b></li> <li>○ <b>The firm's demand for a factor</b></li> <li>○ <b>The supply of a factor</b></li> <li>○ <b>Determination of factor prices</b></li> </ul> <p>Under the two scenarios:</p> <ol style="list-style-type: none"> <li>1) Both factor market and output market are perfectly competitive.</li> <li>2) Factor market is perfectly competitive but output market is under monopoly</li> </ol>	<b>Read:</b> Mankiw, ch.18; KW, ch. 20; Perloff, ch. 15.1-15.3
#15: <b>Market Failure</b>	25 Nov (1 lecture)	<ul style="list-style-type: none"> <li>○ <b>Meaning and Characteristics</b></li> <li>○ <b>Origins of Market Failure</b> <ul style="list-style-type: none"> <li>▪ Monopoly Power</li> <li>▪ Public Goods</li> <li>▪ Externalities</li> <li>▪ Asymmetric Information</li> </ul> </li> <li>○ <b>Consequences of Market Failure</b></li> </ul>	<b>Read:</b> Mankiw, chs.10-11, 15 and 22; KW, chs. 17-18
			<b>Watch:</b> "Erin Brockovich", "Day After Tomorrow".

Sessions	Date	Topics	Activities/Text & Materials/ Media
		○ <b>Correction of Failure and Imperfections: Government or Private sector</b>	

Course Outline  
**EE212 PRINCIPLES OF MACROECONOMICS**  
Semester 1/2021

**Number of credits:** 3 credits

**Course Description**

This is a mandatory first-year undergraduate course that is aimed at introducing macroeconomics, their applications, and limitations. The course will explore how macroeconomic theories attempt to explain how society functions, and how they are constantly challenged by actual economic realisations and new data.

This course explains the current state of literature on the determinants of economic growth, and how/why they vary across countries. The foundations include understanding the determination of national income, theories of aggregate consumption and aggregate investment, accelerator principle, money market, theory of demand for and supply of money, the joint equilibrium model of product and money markets (IS-LM model), balance of payments, and fiscal and monetary policies as means to 'stabilise' an economy. This will lay the foundation of your future economic courses and career.

Important debates on the Thai economy, as well as the 1997 Asian Financial Crisis, Subprime Crisis, public debt, and inequality will be critically examined.

**Course Objective:**

Introduce students to the formal study of economics, the necessary tools, as well as the current state of macroeconomic knowledge;

- Equip students with tools to understand and solve economic problems using principles, measurement, and observation;
- Make students acquainted with economic data sources such as national income, GDP, and labour force statistics and surveys;
- Provide students with the knowledge and understanding of economic statistics such as economic growth, unemployment rate, inequality indicators, inflation – along with their conceptual or source-based limitations;

- Introduce students to academic research writing through class assignments, and guide the development of research methods;

**Prerequisites:** Exclusively for economics major student or students who plan to transfer to the economics major

**Evaluation:**

Assignment and Problem sets	10%
Midterm exam	35%
Final exam	55%
Total	<u>100%</u>
Mid-Term Examination	Saturday 2 October 2021 Time: 08.00 – 09.30 am
Final Examination	Friday 17 December 2021 Time: 1.30 – 4.00 pm

Remarks:1) Evaluation methods are subject to change

2) No classes will be held during Songkran holidays

3) To pass this course, it is necessary (but is not sufficient) to attend and actively participate in every class. There will be assignments and problem sets throughout the course. In order to excel in the problem sets and examinations, students are expected to have a good working knowledge of the topics covered based on class materials, mandatory reading list, and own research.

**Main Text (Choose one of these textbooks, then choose the latest edition available for that textbook):**

Case, Karl E. and Ray C. Fair (2009), *Principles of Macroeconomics* (9<sup>th</sup> ed.): Prentice Hall.

Core-Econ, [\*The Economy\*](#).

Krugman, P. and Robin Wellis (2018), *Macroeconomics (5<sup>th</sup> ed.)*: Worth Publishers.

Wattanakoon, Panit (2021), *Principles of Macroeconomics* (W)

**Recommended Text**

Froyen, Richard T. (2009), *Macroeconomics, Theories and Policies* (9<sup>th</sup> ed.): Prentice Hall.

Lipsey, R.G., Ragan, C.T.S. and Storer, P.A. (2008), *Economics* (13<sup>th</sup> ed.): Pearson Addison-Wesley

Mankiw, N.G., *Principles of Macroeconomics* (2009): South-Western Cengage Learning

**Class Policies:**

Attendance is strongly encouraged. It is the responsibility of the students to obtain any information announced in the class. Ignorance of such information due to absence of class is not a valid defence.

If a student has any question about the lecture, it is highly encouraged to raise them in class.

Exam materials are cumulative – meaning that in order to perform well in the finals, students must have good understanding of the materials covered in the midterms. Make-up examinations are not permitted unless; (i) in case of illness – you need to provide the faculty with the doctor’s medical note; (ii) family emergency – case-by-case basis.

Students are encouraged to work together and exchange ideas outside of class. However, plagiarism and cheating will be treated seriously with disciplinary actions. Thammasat University and our faculty take academic integrity extremely seriously, and there will be academic consequences if you are found possibly guilty of misconducts. Please refer to the university guidelines if you have any questions.

Any changes to the course outline (if any) will be announced in the class or uploaded on BE-moodle.

### Expected Learning Outcomes:

#### 1. Morality and Ethics

Applicability	Expected Learning Outcomes
●	1.1 Students demonstrate integrity.
○	1.2 Students prioritize social and public benefits over personal ones.
●	1.3 Students are punctual and comply with the code of conduct of the institution and society at large.
○	1.4 Students are responsible and accountable to society, the nation, and the subject of economics.
○	1.5 Students realize the cultural and environmental value of the sustainable society.

#### 2. Knowledge

Applicability	Expected Learning Outcomes
●	2.1 Students know and understand modern economics principles and theories, and are up to date with new developments.
●	2.2 Students know and understand Thai and global economic structure, and the importance of major international economic events.
●	2.3 Students know and understand instruments of economic analysis.
●	2.4 Students know and understand applied fields in economics, including monetary, public, international, business, natural resource and environmental, industrial, agricultural, cooperative, political, developmental, and entrepreneurial economics as well as agribusiness.
○	2.5 Students are informed about related fields including sociology, business administration, education, law policy, and science.

#### 3. Intellectual Development

Applicability	Expected Learning Outcomes
●	3.1 Students have developed individual critical thinking.
●	3.2 Students are sufficiently trained in research skills.

●	3.3 Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand causes of current economic problems in Thailand. Based on analysis and synthesis, students demonstrate an ability to propose policy guidelines to resolve problems.
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#### 4. Interpersonal Skills and Responsibilities

Applicability	Expected Learning Outcomes
●	4.1 Students are responsible for assigned tasks and work in groups effectively.
○	4.2 Students have problem-solving skills.
○	4.3 Students show leadership skills and team spirit.
●	4.4 Students are always improving themselves.
○	4.5 Students have good interpersonal skills, adapting and working under different conditions.

#### 5. Quantitative Analysis, Communication and Information Technology

Applicability	Expected Learning Outcomes
●	5.1 Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.
○	5.2 Students communicate effectively and select appropriate presentation methods.
●	5.3 Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.

## Teaching Plans

Week	Topic	Reading
1	<b>1. Introduction to Macroeconomics (3 hours)</b> 1.1 Introduction to Economics 1.2 Macroeconomic objectives and macroeconomic policy 1.3 Types of macroeconomics variables 1.3.1 Stock vs flow variables 1.3.2 Real vs nominal variables 1.4 Key Macroeconomic variables 1.4.1 Output/Input 1.4.2 Employment/Unemployment 1.4.3 Price level/Inflation 1.4.4 Interest rate 1.4.5 Exchange rate 1.5 Brief history of economic thoughts	The Economy, <a href="#">unit 1</a> Krugman & Wells, chapter 6  Case & Fair, ch. 5, 7; LRS, ch. 1, 2, 19, 31; Mankiw ch. 1, 2, 23  W, ch.1
2	<b>2. Main measurements in macroeconomics (3 hours)</b> 2.1 The component of macro economy 2.2 Circular flow diagram 2.3 GDP vs GNP 2.4 Measurement of GDP 2.4.1 Product approach 2.4.2 Expenditure approach 2.4.3 Income approach 2.5 Nominal GDP vs. Real GDP and GDP deflator 2.6 Limitation of GDP concept 2.7 Measuring price changes: inflation and deflator 2.8 Measuring unemployment: definitions and limitations 2.9 Measuring distribution: concepts and limitations	Krugman & Wells, chapter 7, 8  Case & Fair, ch. 6; LRS, ch.20, Mankiw ch. 10, 11  W, ch.2

Week	Topic	Reading
3, 4	<b>3. National Income and Equilibrium Determination (9 hours)</b> 3.1 Introduction 3.2 Composition of desired aggregate expenditure (DAE) 3.2.1 Desired aggregate consumption expenditure and consumption theories 3.2.1.1 Absolute income hypothesis 3.2.1.2 Permanent income hypothesis 3.2.1.3 Life cycle hypothesis 3.2.2 Desired aggregate investment expenditure 3.2.2.1 Determination of aggregate investment 3.2.2.2 Present Value (PV) and net present value (NPV) concept 3.2.2.3 MEC and MEI 3.2.2.4 The accelerator principle 3.2.3 Desired aggregate government expenditure 3.2.4 Desired aggregate net exports 3.3 Equilibrium national income 3.3.1 Definition 3.3.2 Determination of equilibrium national income 3.3.2.1 $Y = DAE$ approach 3.3.2.2 Leakage = Injection approach 3.3.3 Changes in equilibrium national income and adjustment to new equilibrium 3.4 Inflationary and deflationary gap 3.5 Keynesian, Classical and Non-Keynes non-classical concept	Case & Fair, ch. 6; LCR, ch.21, 22  Krugman & Wells, chapter 9  W, ch.3
5, 6	<b>4. Short-run economic fluctuations, unemployment, and fiscal policy at work (6 hours)</b> 4.1 Growth and economic fluctuations 4.2 Output growth & changes in unemployment 4.3 Transmission of economic shocks 4.3.1 Household target wealth & consumption spending 4.3.2 Investment spending 4.4 Objectives of fiscal policy: dampening or amplifying fluctuations 4.5 Paradox of Thrift & the fallacy of composition 4.6 Multiplier and policymaking 4.7 Budget balance & government's finances 4.8 Fiscal policy and the rest of the world	The economy, <a href="#">unit 13-14</a> Krugman & Wells, chapter 11, 13  Case & Fair, ch. 9; LCR, ch. 32, Froyen Ch. 18, Mankiw ch. 21  W, ch 5
Mid-Term Examination <span style="float: right;">October 2, 2021 9.00-11.00 AM</span>		
8	<b>5. The Money Market and Monetary Policy (3 hours)</b> 5.1 Money creation and money multiplier 5.2 Money and money market 5.3 Money supply and Central bank roles 5.3.1 Money supply 5.3.2 Central bank roles 5.4 Demand for money 5.5 Equilibrium in money market 5.6 Changes in equilibrium money market	The Economy, <a href="#">unit 10</a> Krugman & Wells, chapter 14  Case & Fair, ch. 10-11; LRS, ch. 27, 28, 29, Froyen ch. 16, Mankiw ch. 16  W, ch. 6
9, 10	<b>6. The IS-LM Model (7.5 hours)</b>	Froyen, ch. 7

Week	Topic	Reading
	<ul style="list-style-type: none"> <li>6.1 Product market and IS curve               <ul style="list-style-type: none"> <li>6.1.1 Investment, interest rate and product market equilibrium</li> <li>6.1.2 The derivation of IS curve</li> <li>6.1.3 Factors determining slope of IS curve</li> <li>6.1.4 Shifts in IS curve</li> </ul> </li> <li>6.2 Money market and LM curve               <ul style="list-style-type: none"> <li>6.2.1 The derivation of LM curve</li> <li>6.2.2 Factors determining slope of LM curve</li> <li>6.2.3 Shifts of LM curve</li> </ul> </li> <li>6.3 IS-LM in terms of equation</li> <li>6.4 The IS-LM combined</li> <li>6.5 Changes in equilibrium of product and money market</li> <li>6.6 Fiscal &amp; monetary policy effectiveness</li> </ul>	W, ch. 9
11, 12	<p><b>7. The AD-AS Model (3 hours)</b></p> <ul style="list-style-type: none"> <li>7.1 Aggregate Demand (AD)               <ul style="list-style-type: none"> <li>7.1.1 The derivation of AD curve from IS-LM model</li> <li>7.1.2 Movement along AD and shifts of AD</li> </ul> </li> <li>7.2 Aggregate Supply (AS)               <ul style="list-style-type: none"> <li>7.2.1 Short- and long-run AS</li> <li>7.2.2 Movement along AS and shift of AS</li> </ul> </li> <li>7.3 Equilibrium and changes in equilibrium               <ul style="list-style-type: none"> <li>7.3.1 Equilibrium in AD-AS model</li> <li>7.3.2 Changes in equilibrium in AD-AS model</li> </ul> </li> <li>7.4 The analysis of fiscal policy and monetary policy using AD-AS model</li> </ul>	<p>Krugman &amp; Wells, chapter 12</p> <p>Case &amp; Fair, ch. 12, 13; Froyen, ch. 8, ch. 10; LRS, ch. 23, 24, 25, 30; Mankiw ch. 20, 21, 22</p> <p>W, ch.4</p>
13	<p><b>8. Inflation, Unemployment, and Monetary Policy (4.5 hours)</b></p> <ul style="list-style-type: none"> <li>8.1 Definition and causes of inflation               <ul style="list-style-type: none"> <li>8.1.1 Demand-pulled/cost-pushed inflation</li> <li>8.1.2 Inflation as a monetary phenomenon</li> </ul> </li> <li>8.2 Inflation, the business cycle, and the Phillips curve</li> <li>8.3 Inflation and unemployment: constraints and preferences</li> <li>8.4 Phillip's curve mutation and theoretical responses               <ul style="list-style-type: none"> <li>8.4.1 The role of expectation, commitment, and credibility</li> </ul> </li> <li>8.5 Shocks and policy responses               <ul style="list-style-type: none"> <li>8.5.1 Supply shocks</li> <li>8.5.2 Monetary policy responses, and exchange-rate channel</li> <li>8.5.3 Demand shocks, and demand-side policies</li> </ul> </li> </ul>	<p>The Economy, <a href="#">unit 15</a></p> <p>Krugman &amp; Wells, chapter 14, 15</p> <p>W, ch.4,7</p>
14	<p><b>9. Open-economy macroeconomics (3 hours)</b></p> <ul style="list-style-type: none"> <li>9.1 Capital flows &amp; the Balance of Payment</li> <li>9.2 Relationship between difference in saving and investment and current account               <ul style="list-style-type: none"> <li>9.2.1 Inflation &amp; real exchange rate</li> </ul> </li> <li>9.3 The market for foreign exchanges               <ul style="list-style-type: none"> <li>9.3.1 Meaning and importance of foreign exchange rate</li> <li>9.3.2 Demand &amp; supply of foreign exchange</li> <li>9.3.3 Exchange rate regimes and the impossibility trinity</li> </ul> </li> <li>9.4 Purchasing Power Parity vs Market Exchange Rate</li> <li>9.5 Exchange rate and macroeconomic policymaking</li> </ul>	<p>Krugman &amp; Wells, Chapter 19</p> <p>Case &amp; Fair, ch. 20; LRS, ch. 34, 35, Froyen ch. 14, Mankiw ch. 18</p> <p>W, ch.8</p>
<p>Final Examination</p> <p>December 17, 2021</p> <p>1.30 – 4.00 PM</p>		

Remark: This schedule is subject to change.



# B.E. International Program

Faculty of Economics, Thammasat University



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## Course Outline for EE 302 World Economic History

**Semester: S/2015 (June 6 – July 29, 2016)**

**Number of credits: 3 credits**

### **Course Content:**

*Study and analysis of world economy with an emphasis on the economic expansion of Western territories between the 14<sup>th</sup> and the 21<sup>st</sup> centuries. Emphases are given to contextual changes in economy, geography, history society, culture, religion and politics as the role of determining economic leadership of certain economies, such as Italy, Portugal, Spain, the United Kingdom, Belgium, the Netherlands, France, Germany, Sweden, the United States and Japan.*

### **Course Objectives:**

This class has three primary purposes. Firstly, it is to identify the major economic changes that have occurred throughout world history, and to analyze what they were, when they occurred, and why. Thus, students will be expected to know (or learn) the basic outlines of world history, so that they can learn how economic rules have shaped it.

Secondly, the class seeks to demonstrate how the rules and laws of economics are universal; they apply through time and space. Thus, students will learn how complex organizations have been created throughout history, how material, technological and human capital limitations have influenced societies and history, and how different societies have solved similar problems in different, and similar, ways. And they will learn how the laws of economics apply in non-market economies, how decisions and resources are allocated in the absence of modern markets.

Finally, the class will explore the economic, societal and political prerequisites of economic growth. Economic growth throughout history shows some persistent patterns, and these patterns apply to today, as well as the past. Different theories of growth and development stress different factors as being key; the answer to the question of what specific factors are necessary for sustained economic growth has great import to the world today.

## Prerequisites:

Econ 211 (introduction to economics) is not a prerequisite for this course, though it will be very helpful. While this course will be very non-mathematical, a certain degree of familiarity with economic terms and concepts is assumed. A basic knowledge of world history is also assumed for this course. Students should be familiar with the broad outlines of world history. Certain periods of history will be highlighted in greater detail, to demonstrate or illustrate concepts taught, but students will not be expected to know these periods in detail before class.

## Text: (Moodle Code – 2437)

There is not a standard text for this subject, and most of the books on the subject assume either an extensive working knowledge of Western History, or a great deal of familiarity with economic subjects; often the books assume both. As such, the material for the course will come from several sources, all collected into a general reader. The readings are drawn from the books and articles listed below. All books are available in my office, those who want to read deeper into the topics.

Landes, David, The Wealth and Poverty of Nations, New York, W.W. Norton and Company, 1999

Cameron, Rondo and Larry Neal, A Concise Economic History of the World: From Paleolithic Times to the Present, New York, Oxford University Press, 2003

Jones, Eric, The European Miracle: Environments, Economies and Geopolitics in the History of Europe and Asia, New York: Cambridge University Press, 2003

North, Douglass C. and Robert Paul Thomas, The Rise of the Western World: A New Economic History, New York; Cambridge University Press, 1973

North, Douglass C., Structure and Change in Economic History, Douglass C. North, W.W. Norton and Company, New York, 1981

Mokyr, Joel, The Lever of Riches: Technological Creativity and Economic Progress, New York, Oxford University Press, 1990

Clark, Gregory, A Farewell to Alms: A Brief Economic History of the World, Princeton, Princeton University Press, 1997

## Mentioned Texts:

These are books that have had a significant impact outside economics, which will be briefly covered in class. Again, they are available, but are not required for class.

Olsen, Mancur, The Rise and Decline of Nations, New York, Yale University Press, 1981

Kennedy, Paul, The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000, New York, Vintage Books, 1987

Diamond, Jared, Guns, Germs and Steel; the Fates of Human Societies, New York, W.W. Norton and Co, 1999

## Evaluation:

The class evaluations will be based on two exams, given throughout the semester. Each exam will be 1½ hours in length, students will have a choice of what questions to answer. A sample exam will be passed out before the midterm.

Midterm: 40%

Final: 60%

## Cheating:

Don't. If you do, and I catch you, you will be reported to the program director for appropriate punishment. At a minimum, you will receive a zero on the exam you are caught cheating on, other punishments include automatically failing the course, and being suspended for one (or more) semesters.

## Topics:

Below is a tentative course outline. Depending on student knowledge, some parts may move a little faster or slower. Certain classes, will involve a more in depth analysis of historic facts; essentially I will use those classes to make sure you know the history of the period well enough to discuss the economic underpinnings of it. Other classes will delve into economic theory more.

Introduction: Homo economicus throughout time. Economic history, vs. history of economics. Economics as human capital. People as rational beings. Evolutionary models of economic progress. The S curve. Humans as social animals.

### Week 1a The world 10,000 B.C.

Prehistoric man. The hunter-gatherer tribe. Population pressure, and **the S curve**. Property rights. **Marginal values** of everything. The jungle wasteland. **Time allocation and gender roles**.

Two Models of early Population growth. Jared Diamond/Kemmer model. Property **rights, spillover effects**. The conservative (safety) bias of society, and **risk adverse** tribes. **Early trade and specialization**. **Comparative and absolute advantage** in family production.

### Week 1b – The world 7,000 B.C.

The first agricultural Revolution. **The North Model**. **Olsen's roving bandit** model. The **raw materials** of agricultural growth, **factors of production**. The beginning of **property rights**, and **economic specialization and social classes**.

### Week 2a – The world 3,000 B.C.

The second agricultural revolution. The birth of empires. The **Hydraulic society**. The **problem of coordination**. **Technological problems vs. institutional problems**. Ancient Babylon. Ancient Assyria. Ancient Egypt. Ancient China. Ancient India. The **holdout problem** in irrigation. **Transaction costs**. **"The Surplus"**, and the use(s) of it.

**The north model of government**. **The Olsen model of tyranny**. Ancient **public goods vs. publicly provided goods**.

### **Week 2b The world 431 B.C.**

Trade and Money. **Coinage and agoras.** The role of money. The greek city states. Transportation costs. Specialization and **Smithian growth (pt. 1).** Government as other than tyranny. **Colonization. Incentives. Planned vs. emergent organization.** Athens and Sparta, Citizens and Helots. Natural disasters and the end of capital. Relative effects on Capital and Labor.

### **Week 3a The world 1 A.D.**

Empire: The Romans. Roman law and courts. The **economics of the Law.** Organizational genius. **Smithian growth, absolute and comparative advantage in a large empire. Economies of scale** for enterprises and states. Roman agriculture, the **slave system.** Extended example: The Roman legion, and the complexity of ancient societies. Baumol, good and bad **entrepreneurship.**

### **Week 3b The world 478 A.D.**

The Roman decline. The technological explanation (North). The biological explanation (xxxx). The military explanation (Luttwak, Higgens). The **distributive coalition** hypothesis (Olsen). Also, Byzantium, and early Islam.

### **Week 4a Interlude -- Taking stock of the world, and how it was governed.**

The state. Theories of the State. North. Olsen, Others. Going back in time: China, Egypt, Persia, Greece, Rome, The Barbarians.

### **Week 4b The world in 1066 A.D.**

The Early middle ages and the problem of security. Feudalism and the Manorial system. The western world. Violence. Trade as a public good – “the encompassing interest”. Economies of scale in violence. The feudal system of national defense. Self-sufficiency, the absence of encompassing power. Political competition. The role of military technology. A model of path-dependent military dominance, the hurdle effect on a new Rome – monopoly and barriers to entry.

### **Week 5a The world of 1348**

The Black Death. Recap of Diamond hypothesis. The effect on Europe, the Middle East and Asia. The Malthusian hypothesis. Relative prices of factors of production. Changes in the status of the peasantry. Legal rights. The Rebirth of Mediterranean trade, and the new commercial organizations – banks, insurance, corporations, double entry bookkeeping, credit, etc.

### **Week 5b The world of 1500**

The age of exploration. Portuguese and Chinese fleets. Columbus and the new world. The Aztecs, incas, and silver. The gunpowder revolution, the end of feudalism and the rise of the nation state. European economies – The Netherlands, England, Spain, France. The three field system. The market economy, the common law system. Thick markets.

### **Week 6a The world of 1700**

The early industrial revolution, mercantilism, colonies and trade.  
Narrative of the industrial revolution 1  
Theories of the industrial revolution 1

### **Week 6b The world of 1850**

Narrative of the industrial revolution 2  
Narrative of the industrial revolution 2  
Schumpeterian growth, rising productivity. Escape from Malthusian economics. Free trade, most favored nation status. The Technological arms race.

**Week 7a The world of 1914**

The later industrial revolution, imperialism, free trade, global smithian growth (globalization), trade unionism, the beginning of the welfare state. Central planning, Marxism (fascism), and the USSR.

**Week 7b The world of 1948**

Standardization, global monopolies and cartels

**Week 8a The world of 2005 A.D.**

The (non) importance of resources. Human Capital and the Asian Miracle. (idea – Arab and Asian face). The Modern Welfare State. Petrocracies. Free trade and modern finance. The role of economics in economies. Public choice theory. The bureaucratic state.

**Course Evaluation:**

Type of evaluation	Evaluation Method	Evaluation date
Midterm Exam	40%	July 1, 2016, 13.00 – 14.30 hrs.
Final Exam	60%	August 1, 2016, 09.00 – 12.00 hrs.

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### Course Outline

#### EE 311: Microeconomics Theory

Semester 1/2021 (August 9 - November 27, 2021)

**Number of Credit:** 4(4-0-8)

**Prerequisite:** EE 211 and MA 216

#### Course Description:

Demand and supply analysis, consumer behaviour and demand theory, production and cost of production, different types of product market structures, price determination in factor markets, decision-making over time, general equilibrium analysis, and introductory welfare economics and public policy.

#### Course objectives:

1. Understand and able to apply the consumer behavior and demand theory.
2. Understand and be able to explain the relationship between inputs and output in the short run and long run. Understand types of cost curves and their properties as well as understanding the relationship between production and costs.
3. Know the characteristics of each type of product market structure. Know how to determine the equilibrium price and quantity for each market structure.

4. Know how to determine the equilibrium price and quantity for each type of factor market.
5. Understand the three general equilibrium conditions and the Pareto optimality concept.
6. Understand the factors that lead to market failure and the way to solve the market failure.

**Method of Instruction:** There are a total of 60 class-hours for this course or 4 hours per week. Class activities in each week will consist of three hours of lectures, and one hour of discussions, exercises and quizzes. Students are expected to work on about two 15-minute quizzes during class hours, and participate in class discussions.

### Grading Criteria:

Quizzes	15%
Mid-term examination	35%
Final examination	50%

### Important Dates

Class begins	11 August 2021
Add-Drop period	16 – 19 August 2021
Midterm Exam period (no classes)	26 Sep - 3 Oct 2021
<b>Midterm</b>	<b>Saturday, 2 October 2021; 13.00 – 15.30 hrs</b>
<b>Final</b>	<b>Friday, 3 December 2021; 09.00 – 12.00 hrs</b>
Last day for course withdrawal	15 November 2021
Last classes	27 November 2021

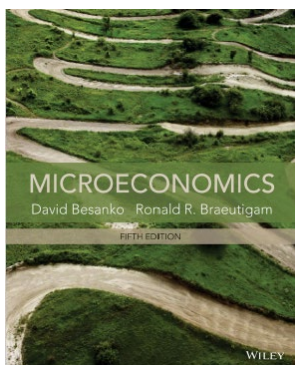
### Holidays

Wednesday, 13 October 2021                      Anniversary of the Death of King Bhumibol

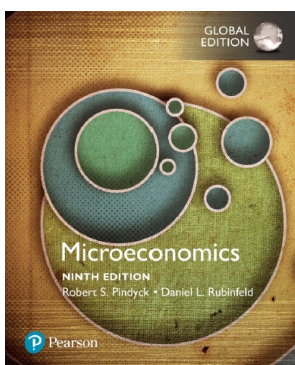
### Main Textbooks

There are several textbooks that cover similar materials. **The first four books will be used extensively, but, for many topics, they can be used interchangeably with the other listed books.** It is important to realize, however, that no single textbook contains **all** the materials covered in this course. It is therefore essential that you read several sources, and that you review the concepts listed under “REVIEW” on your own, so that our time can be more valuably spent on new topics.

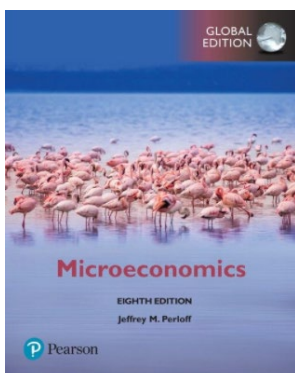
- 1) **Besanko, David, and Ronald R. Braeutigam, *Microeconomics: An Integrated Approach*, (5<sup>th</sup> ed.) New York: John Wiley & Sons, 2014.**



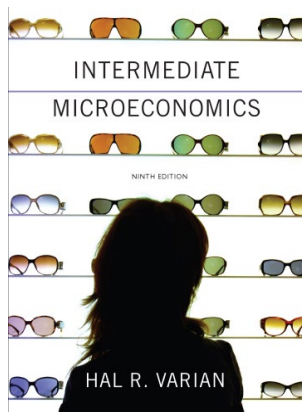
- 2) Pindyck, Robert S. and Daniel E. Rubinfeld. *Microeconomics*, (9<sup>th</sup> ed.), New Jersey: Prentice -Hall, 2018.



- 3) Perloff, *Microeconomics*, (8<sup>th</sup> ed.) Boston: Peason, 2018.



- 4) Varian, Hal *Intermediate Microeconomics*, (9<sup>th</sup> ed.) New York: Norton, 2014.



- 5) Salvatore, Dominick, *Microeconomics: Theory and Applications*, (5<sup>th</sup> ed.), New York: Oxford University Press. 2008.
- 6) Frank, Robert H. (9<sup>th</sup> ed.). *Microeconomics and Behavior*, New York: McGraw-Hill, 2015.
- 7) Miller, R.L., and R.P.H. Fishe. *Microeconomics: Price Theory in Practice*, New York: Harper Collins, 1995.
- 8) Hirshleifer, Jack *Price Theory and Applications* (6<sup>th</sup> ed.), New Jersey: Prentice - Hall, 1998.
- 9) Griffiths, Alan and Stuart Wall, *Microeconomics: Theory & Applications*, London: Longman, 2000.
- 10) Nicholson, Walter and Christopher M. Snyder, *Intermediate Microeconomics and Its Application*, (11<sup>th</sup> ed.), Dryden Press, 2009.

### Supplementary Reading (for fun):

Levitt, Steven D. and Stephen J. Dubner, *Freakonomics*, New York: Harper Torch, 2006.

Harford, Tim, *The Undercover Economist: Exposing Why the Rich Are Rich, the Poor Are Poor--and Why You Can Never Buy a Decent Used Car!*, Oxford University Press, 2006.

Marshall Jevons, *Murder at the Margin*, New Jersey: Princeton University Press, 1978, 1993.

*The Fatal Equilibrium*, New York: Balantine Books, 1985.

*A Deadly Indifference*, New Jersey: Princeton University Press, 1995.

Oyer, Paul, *Everything I Ever Needed to Know about Economics I Learned from Online Dating*, Harvard Business Review Press, 2014.

Dan Ariely, *The Upside of Irrationality: The Unexpected Benefits of Defying Logic at Work and at Home*, Harper; 1 edition (June 1, 2010)

Dan Ariely, *Predictably Irrational, Revised and Expanded Edition: The Hidden Forces That Shape Our Decisions*, Harper Perennial; 1 Exp Rev edition (April 27, 2010)

Dan Ariely, *The Honest Truth About Dishonesty: How We Lie to Everyone--Especially Ourselves*, Harper Perennial; Reprint edition (June 18, 2013)

**Movies:**

“A Beautiful Mind” Universal Studios, 2001.

“An Inconvenient Truth”, 2006.

“Inside Job”, 2010.

**Some Useful Links:**

Student Resources for Frank's text:

[http://highered.mcgraw-hill.com/sites/0073375942/student\\_view0/index.html](http://highered.mcgraw-hill.com/sites/0073375942/student_view0/index.html)

Nobel Prize in Economic Sciences:

[http://nobelprize.org/nobel\\_prizes/economics/shortfacts.html](http://nobelprize.org/nobel_prizes/economics/shortfacts.html)

Robert H. Frank: <http://www.robert-h-frank.com/>

Econ Ph.D. Net: <http://www.econphd.net/>

Hal R. Varian: <http://people.ischool.berkeley.edu/~hal/>

The Official Paul Krugman Web Page: <http://web.mit.edu/krugman/www/>

The Undercover Economist: <http://timharford.com>

The Airport Economist: <http://www.theairporeconomist.com>

The Economist Magazine: <http://www.economist.com>

**Expected Learning Outcomes:****1. Morality and Ethics**

Applicability	Expected Learning Outcomes
●	1.1 Students demonstrate integrity.
○	1.2 Students prioritize social and public benefits over personal ones.
●	1.3 Students are punctual and comply with the code of conduct of the institution and society at large.
○	1.4 Students are responsible and accountable to society, the nation, and the subject of economics.
○	1.5 Students realize the cultural and environmental value of the sustainable society.

**2. Knowledge**

Applicability	Expected Learning Outcomes
●	2.1 Students know and understand modern economics principles and theories, and are up to date with new developments.
●	2.2 Students know and understand Thai and global economic structure, and the importance of major international economic events.
●	2.3 Students know and understand instruments of economic analysis.
●	2.4 Students know and understand applied fields in economics, including monetary, public, international, business, natural resource and environmental, industrial, agricultural, cooperative, political, developmental, and entrepreneurial economics as well as agribusiness.
○	2.5 Students are informed about related fields including sociology, business administration, education, law policy, and science.

**3. Intellectual Development**

Applicability	Expected Learning Outcomes
●	3.1 Students have developed individual critical thinking.
●	3.2 Students are sufficiently trained in research skills.

Applicability	Expected Learning Outcomes
●	3.3 Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand causes of current economic problems in Thailand. Based on analysis and synthesis, students demonstrate an ability to propose policy guidelines to resolve problems.

#### 4. Interpersonal Skills and Responsibilities

Applicability	Expected Learning Outcomes
●	4.1 Students are responsible for assigned tasks and work in groups effectively.
●	4.2 Students have problem-solving skills
○	4.3 Students show leadership skills and team spirit.
●	4.4 Students are always improving themselves.
○	4.5 Students have good interpersonal skills, adapting and working under different conditions.

#### 5. Quantitative Analysis, Communication and Information Technology

Applicability	Expected Learning Outcomes
○	5.1 Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.
●	5.2 Students communicate effectively and select appropriate presentation methods.
○	5.3 Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.

## Teaching Plan:

### 1. Introduction

#### 1.1 Why Study Microeconomics?

Application of Demand and Supply concepts: government intervention

**Review:** Concepts of consumer and producer surplus.  
**Read:** Besanko & Braeutigam Chs. 2 & 9, Pindyck & Rubinfeld Chs. 2 and 9, Perloff Chs. 2, 3, 9, Frank Ch. 2.

### 2. Consumer Behavior and Demand Theory

#### 2.1 Indifference Curve Analysis

- assumptions
- properties of indifference curve
- analysis of goods, bads, neuters

**Review:** Properties of indifference curves.  
**Read:** Besanko & Braeutigam Ch. 3 & 4., Pindyck & Rubinfeld Ch. 3, Perloff Ch.4 & App. 4A, Frank Ch.3.

#### 2.2 Consumer equilibrium and changes in equilibrium

- consumer equilibrium and duality
- changes in income
- changes in price: income effect and substitution effect
- compensated and uncompensated demand curves
- market demand
- network externalities
- application: vouchers vs. income transfers

**Review:** Construction of demand curves, elasticities.  
**Read:** Besanko & Braeutigam Ch. 5, Pindyck & Rubinfeld Ch. 4, Appendix, Perloff Ch. 5; Salvatore Ch 3 (3.4-3.5) Chs.4 -5, Frank Chs. 4-5, Appendix; Varian Ch. 7.8 & Ch. 8.

#### 2.3 Intertemporal consumption (consumption overtime)

- time preference and time value of money
- cases: regular income, productive opportunities
- supply of saving
- consumption and pricing of durable goods and non-renewable resources

**Read:** Varian, Ch. 10, Pindyck & Rubinfeld Ch.15, Perloff Ch. 16, Frank Ch.15 Appendix.

## 2.4 Consumption under uncertainty

- describing risky outcomes
- evaluating risky outcomes
- bearing and eliminating risk
- the demand for risky assets (Pindyck, Ch.5, Topic 5.4)

**Read:** Besanko & Braeutigam Ch. 15 (15.1-15.4), Pindyck & Rubinfeld Ch.5, Perloff Ch. 17 (17.1-17.2), Frank Ch. 6 (pp.198-210), Varian Ch. 12

## 3. Production and Costs

### 3.1 Production equilibrium

- least cost combination
- duality in production
- relationship between product curves and cost curves

### 3.2 Production functions and costs

- homogeneous production functions and their properties
- returns to scale
- elasticity of substitution

**Review:** All product and cost curves; e.g. AP, MP, TP, TC, AC, MC.

**Read:** Besanko & Braeutigam Chs. 6-8, Pindyck & Rubinfeld Chs.6-7, Perloff Chs.6-7, Frank Chs.9-10.

## 4. Product Markets

### 4.1 Perfectly competitive markets

- long-run equilibrium and efficiency

**Review:** Characteristics of perfectly competitive markets, price and output under perfect competition.

**Read:** Besanko & Braeutigam Ch. 9, Pindyck & Rubinfeld Ch.8, Perloff Ch. 8, Frank Ch.11.

### 4.2 Monopoly

- meaning of market power
- price and output determination
- multi-plant monopoly
- monopoly and resource allocation

- regulation of monopolies and contestable markets
- other pricing strategies
  - price discrimination: degrees and hurdles
  - two-part tariffs and other strategies

**Review:** Simple monopoly

**Read:** Besanko & Braeutigam Ch. 11.1-11.6 & 12, Pindyck & Rubinfeld Ch. 10 (10.1-10.4 and 10.7) & Ch. 11, Perloff Ch.11, 12; Frank Ch.12.

#### 4.3 Monopolistic competition

- characteristics of monopolistic competition
- equilibrium price and output in the short run and long run
- implications on resource allocation

**Read:** Besanko & Braeutigam Ch. 13.5, Pindyck & Rubinfeld Ch. 12.1, Perloff 13.7, Frank Ch.13.

#### 4.4 Oligopoly

- meaning of oligopoly
- various models of oligopoly:
  - kinked demand
  - collusion and cartel
  - Cournot and Stackelberg
  - Bertrand
  - price leadership or dominant firm

#### 4.5 Game theory and its application

- Game theory
  - Modelling situations (games) when an agent's utility is affected by others' choices
  - Predicting choice (via solution concepts) in games
- Simultaneous move game
  - Modelling: players, normal form, strategy, payoffs etc
  - Solution concepts: dominant strategy equilibria, IESDS, Nash equilibria
- Sequential move games (Perfect information games)
  - Modelling: game tree, extensive form, subgames, strategy
  - Solution concepts: subgame perfect equilibria, backwards induction

**Read:** Besanko & Braeutigam Ch. 13.1-13.4 & 14, Pindyck and Rubinfeld Ch.12.2-12.6 & Ch.13, Perloff Ch. 13,14, Frank Ch.13.  
**Watch:** "A Beautiful Mind"

## 5. Factor Markets

### 5.1 Competitive factor markets

- demand for a factor ( cases of one variable input and several variable inputs )
- supply of inputs to a firm and market supply of inputs
- price and quantity of factor employed

**Read:** Pindyck & Rubinfeld Ch.14.1-14.2, Perloff Ch.5 (5.5), 15 (15.1), Frank Ch.14.

### 5.2 Factor Markets with Monopoly and Monopsony Power

- marginal revenue product
- marginal and average factor cost
- price and quantity of factor employed

**Read:** Besanko & Braeutigam Ch. 11.7, Pindyck and Rubinfeld Ch. 10.5-10.6 & Ch.14.3, Perloff Ch. 15 (15.2, 15.3), Frank Ch.14.

### 5.3 Factor Markets with Monopoly Power of Seller of Input

- monopoly power over the wage rate
- price and quantity of factor employed
- bilateral monopoly

**Read:** Pindyck & Rubinfeld Ch.14.4.

## 6. General Equilibrium Analysis and Welfare Economics

### 6.1 General Equilibrium: consumption, production, and exchange

- welfare criteria
- Pareto optimum and efficiency
- perfect competition and Pareto optimum
- welfare maximization and Pareto optimum conditions

**Read:** Besanko & Braeutigam Ch. 16.1-16.4, Pindyck & Rubinfeld Ch.16 (16.1-16.4, 16.6), Perloff Ch. 10, Frank Ch.16.

### 6.2 Market Failure and Imperfect information

- imperfect competition, externalities, public goods, and asymmetric information
- correction of failure and imperfections: government or private sector

**Read:** Besanko & Braeutigam Ch. 17, Pindyck & Rubinfeld Ch.16 (16.7) & Chs.17-18, Perloff Chs. 18,19, Frank Chs.17-18.

**Watch:** "An Inconvenient Truth", "Inside Job"

**Teaching Plan:**

No.		Date	Topics
1	Wed	11 August 2021	Introduction Application of Demand and Supply concepts: government intervention
2	Fri	13 August 2021	Application of Demand and Supply concepts: government intervention
3	Wed	18 August 2021	Consumer Behavior and Demand Theory: Indifference Curve Analysis
4	Fri	20 August 2021	Consumer equilibrium and Changes in equilibrium
5	Wed	25 August 2021	Applications: vouchers vs income transfers, revealed preferences <b>Quiz 1: Lecture No. 1-4</b>
6	Fri	27 August 2021	Intertemporal consumption
7	Wed	1 September 2021	Intertemporal consumption
8	Fri	3 September 2021	Intertemporal consumption
9	Wed	8 September 2021	Consumption under uncertainty
10	Fri	10 September 2021	Consumption under uncertainty
11	Wed	15 September 2021	Consumption under uncertainty <b>Quiz 2: Lecture No. 5-8</b>
12	Fri	17 September 2021	Production and Costs
13	Wed	22 September 2021	Perfectly competitive markets
14	Fri	24 September 2021	Monopoly
<b>Midterm exam: Saturday, 2 October 2021; 13:00 – 15:30 hrs</b>			
15	Wed	6 October 2021	Monopoly
16	Fri	8 October 2021	Pricing strategies
17	Mon	11 October 2021	Pricing strategies [Make up class: H.M. King Bhumibol Adulyadej The Great Memorial Day*]
	Wed	13 October 2021	**** No class **** H.M. King Bhumibol Adulyadej The Great Memorial Day*
18	Fri	15 October 2021	Monopolistic competition and Oligopoly
19	Wed	20 October 2021	Various models of oligopoly
20	Wed	22 October 2021	Various models of oligopoly
21	Fri	27 October 2021	Game theory and its application

No.		Date	Topics
22	Wed	29 October 2021	Game theory and its application <b>Quiz 3: Lecture No. 14-20</b>
23	Fri	3 November 2021	Factor Markets
24	Wed	5 November 2021	Factor Markets
25	Wed	10 November 2021	Factor Markets
26	Fri	12 November 2021	General Equilibrium Analysis
27	Wed	17 November 2021	General Equilibrium Analysis <b>Quiz 4: Lecture No. 21-27</b>
28	Fri	19 November 2021	General Equilibrium Analysis
29	Wed	24 November 2021	Market Failure and Imperfections
30	Fri	26 November 2021	Market Failure and Imperfections
<b>Final Exam: Friday, 3 December 2021; 09.00 – 12.00 hrs</b>			

## Course Syllabus

### **EE 312 MACROECONOMIC THEORY**

Semester 1/2021 (August 9<sup>th</sup> – December 17<sup>th</sup>, 2021)

1. **Number of credits:** 4 credits (4-0-8)

## 6. Course Description

The model of joint equilibrium in product markets, money markets, and foreign exchange markets (the IS-LM-BP model); changes in equilibrium; product markets and labor markets; the model of aggregate supply and demand in closed and open economies; inflation, unemployment, and the Phillips curve; economic stabilization policies; growth theory, new Keynesian economic theory; the real business cycle theory; applications of Macroeconomic theory to analyze economic situations.

7. **Prerequisites:** a) EE211 and EE212 or b) EE213 and EE214

## 8. Objective of the Course

To provide students with an understanding of macroeconomic theory and its analytical approach to economic system, as well as an ability to apply macroeconomic theory to economic problems and policies.

## 9. Evaluations\*:

Quizzes	15	points (5 quizzes; pick the best 4)
Mid-term exam	40	points
Final exam	45	points
Total	<b><u>100</u></b>	points

<i>Mid-term exam date:</i>	<i>Saturday, October 2, 2021;</i> <i>Time: 13.00 – 15.00 hrs (2.00 hours)</i>
<i>Final exam date:</i>	<i>Friday, December 3, 2021;</i> <i>Time: 13:30 – 16:00 hrs (2.30 hours)</i>

**Remarks:** Evaluation methods and weights are subjected to changed.

**10. Textbooks:**

- Mankiw Gregory “Macroeconomics. Pearson Education, 2016 (M.)
- Froyen Richard. Macroeconomics: Theories and Policies. 10th edition. Pearson Education Limited, 2013. (F.)
- Williamson Stephen D. Williamson. Macroeconomics. 5th edition. Pearson Education Limited, 2018. (W.)

Supplement readings will be posted on the *Google Classroom*.

## 11. Expected Learning Outcomes:

### 11.1) Morality and Ethics

Applicability	Expected Learning Outcomes
●	1.1 Students demonstrate integrity.
○	1.2 Students prioritize social and public benefits over personal ones.
●	1.3 Students are punctual and comply with the code of conduct of the institution and society at large.
○	1.4 Students are responsible and accountable to society, the nation, and the subject of economics.
○	1.5 Students realize the cultural and environmental value of the sustainable society.

### 11.2) Knowledge

Applicability	Expected Learning Outcomes
●	2.1 Students know and understand modern economics principles and theories, and are up to date with new developments.
●	2.2 Students know and understand Thai and global economic structure, and the importance of major international economic events.
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○	2.5 Students are informed about related fields including sociology, business administration, education, law policy, and science.

### 11.3) Intellectual Development

Applicability	Expected Learning Outcomes
●	3.1 Students have developed individual critical thinking.
●	3.2 Students are sufficiently trained in research skills.
●	3.3 Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand causes of current economic problems in Thailand. Based on analysis and synthesis, students demonstrate an ability to propose policy guidelines to resolve problems.

### 11.4) Interpersonal Skills and Responsibilities

Applicability	Expected Learning Outcomes
●	4.1 Students are responsible for assigned tasks and work in groups effectively.
●	4.2 Students have problem-solving skills.
○	4.3 Students show leadership skills and team spirit.
●	4.4 Students are always improving themselves.
○	4.5 Students have good interpersonal skills, adapting and working under different conditions.

### 11.5) Quantitative Analysis, Communication and Information Technology

Applicability	Expected Learning Outcomes
○	5.1 Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.
○	5.2 Students communicate effectively and select appropriate presentation methods.
○	5.3 Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.

**12. Lecture / schedule:**

Topics	Reading
<b>1. Overview and introduction (0.5 lecture)</b>	
1.1) Class overview: <i>logistic information</i>	
1.2) Roadmaps: <i>where we are headed</i>	<i>W. Ch. 1/ Ch. 2</i>
1.3) Measuring macroeconomic activities (self-study)	<i>Self-study Video clip</i>
<b>Part I Closed-economy business cycle fluctuations (9 lectures)</b>	
<b>2. Introduction to business cycle studies and economic fluctuation (1 lecture)</b>	
2.1) What is a business cycle?	<i>W. Ch. 3</i>
2.1.1) Nature of macroeconomic data	<i>M. Ch. 10</i>
2.1.2) Measuring and characterizing business cycles	
2.2) Framework for business cycles theory	
2.2.1) Ingredient of business cycle theories	
2.2.2) Overview of AD-AS framework	
<b>3. The core AD-AS framework (5 lectures)</b>	
3.1) The Classical long-run macroeconomy (1.5 lecture)	<i>F. Ch. 3 - 4</i>
3.1.1) Aggregate production function	<i>M. Ch 3</i>
a) <i>Key properties and Graphical illustration</i>	
b) <i>Law of diminishing marginal product</i>	
3.1.2) Labour market outcome	
a) <i>Labour supply</i>	
b) <i>Labour demand</i>	
3.1.3) Natural level of aggregate variables and Potential output	
3.2) Foundation of aggregate demand theory (0.5 lecture)	<i>Self-study Video clip</i>
3.2.1) Keynesian DAE	<i>F. Ch. 5 - 6</i>
3.2.2) The IS-LM model	
3.3) Foundation of aggregate supply theory (1.0 lecture)	<i>M. Ch. 14</i>
3.3.1) Long-run aggregate supply	
3.3.2) Short-run aggregate supply	
3.4) AD-AS equilibrium and business cycles (2.0 lectures)	
3.4.1) Short-run fluctuations	
a) <i>Shocks and Propagation mechanism</i>	
b) <i>Macroeconomic policy analysis</i>	
3.4.2) Self-adjusting mechanism and Medium-run fluctuations	
a) <i>Swift adjustment process</i>	
b) <i>Gradual adjustment process</i>	
c) <i>Staggered adjustment process</i>	
3.4.3) How well does the AD-AS framework fit the data? (optional)	

Topics	Reading
<b>4. Inflation and business cycles (3 lectures)</b>	
4.1) Some stylized facts of inflation	
4.2) Long-run theory of inflation	<i>M. Ch. 5</i>
4.2.1) Quantity theory of money	
4.2.2) Cost and benefit of inflation	
4.3) Business cycles perspectives of inflation	<i>M. Ch. 14</i>
4.3.1) The Phillips curve and its derivation	
4.3.2) Short-run <i>and</i> Long-run Phillips curve	
4.4) Macroeconomic policy design	
<b>Part II Open-economy business cycle fluctuations (4.5 lectures)</b>	
<b>5. International financial markets (1.5 lectures)</b>	
5.1) Keep tracking in the globally connected economy: <i>international accounts</i>	<i>Self-study video clip</i>
5.1.1) Current account	<i>F. Ch 14</i>
5.1.2) Capital account	
5.1.3) Balance of payments account	
5.2) Foreign exchange market	<i>F. Ch 14</i>
5.2.1) Exchange rate determination: <i>Long-run PPP approach</i>	
5.2.2) Exchange rate determination: <i>Short-run approach</i>	
a) <i>Demand and Supply for foreign currency</i>	
b) <i>Equilibrium exchange rate and Balance of payments</i>	
5.2.3) Exchange rate economics	
a) <i>Flexible exchange rate regime</i>	
b) <i>Fixed exchange rate and Implementations</i>	
c) <i>Exchange rate policies and sterilizations</i>	
<b>6. Framework for open-economy business cycle analysis (3 lectures)</b>	
6.1) An open-economy macroeconomics model: <i>IS-LM-BP framework</i>	<i>F. Ch 15</i>
6.1.1) Open-economy IS curve	
6.1.2) Open-economy LM curve	
6.1.3) The balance of payment curve (BP curve)	
6.2) Disequilibrium and adjustments towards equilibrium	
6.2.1) Adjustments under flexible exchange rate	
6.2.2) Adjustments under fixed exchange rate	
6.3) Macroeconomic shocks and open-economy propagation mechanism	
6.3.1) Origin of the fluctuations	
6.3.2) Spill-over effect and international transmission of shocks	
6.3.3) Equilibrium adjustment under different exchange rate regimes	
6.3.4) The case of flexible exchange rate regime	
6.4) Macroeconomic policies under a small opened economy	

Topics	Reading
6.4.1) Macroeconomic imbalances and policy corrections	
6.4.2) Issues on policy effectiveness	
6.4.3) The impossibility trinity theorem	

**Mid-term exam date:** *Saturday, October 2, 2021;*  
*Time: 13.00 – 15.00 hrs (2.00 hours)*

**Part III: Micro-foundation approach to macroeconomics**

**7. A Closed-Economy One-Period Macroeconomic Model (4 lectures)**

- 7.1) General equilibrium macroeconomy and Circular flow of macroeconomy
- 7.2) Optimizing-agent decision
  - 7.2.1) Households *W. Ch 4*
    - a) *Preferences over consumption and leisure*
    - b) *Choice set and constraint*
    - c) *Work-leisure decision and labor supply*
  - 7.2.2) Firms
    - a) *Production and technology*
    - b) *Profit maximization problem and labour demand*
- 7.3) Competitive equilibrium and Pareto optimality
  - 7.3.1) Government and tax
  - 7.3.2) Equilibrium
  - 7.3.3) Pareto optimality *W. Ch 5*
- 7.4) Model applications *W. Ch 5*
  - 7.4.1) Changes in government spending
  - 7.4.2) Changes in total factor productivity
- 7.5) How well does the model fit the data?

**8. Two-Period model: the consumption-savings decision (3 lectures)**

- 8.1) Credit market and allocation over time *W. Ch. 9*
- 8.2) Preference over life-time consumption
  - 8.2.1) Intertemporal life-time consumption problem
  - 8.2.2) Behaviour of current consumption and its determinants
    - a) *Effect of interest rate on consumption and saving behaviour*
    - b) *Effect of permanent and temporary increases in income*
- 8.3) Government sector and Competitive equilibrium
- 8.4) The Ricardian equivalence theorem

**9. A Real Intertemporal Model with Investment (5 lectures)**

- 9.1) Circular flow of a production economy over time *W. Ch.11*
- 9.2) Optimizing-agent decision under intertemporal environment

Topics	Reading
9.2.1) Consumer's problem a) <i>Current labour supply</i> b) <i>Demand for consumption goods</i>	
9.2.2) Consumer's problem a) <i>Current labour demand</i> b) <i>Investment decision</i>	
9.3) Competitive equilibrium	
9.4) Model applications	
9.4.1) Changes in government spending	
9.4.2) Change in capital stock	
9.4.3) Change in total factor productivity	
<b>10. Long-term Economic Growth (4 lectures)</b>	
10.1) Long-term growth stylized-facts	W. Ch.7
10.2) Growth accounting	
10.3) Solow growth model	W. Ch.8
10.4) Theory confronts with data	
10.5) Income disparities and Growth policies	

**Final exam date:**

*Friday, December 3, 2021;*

*Time: 13:30 – 16:00 hrs (2.30 hours)*

## Course Outline

### EE 320 Introductory Mathematical Economics (046401)

Semester 1/2021

**Number of credits:** 3 credits

#### Course description:

Study of mathematical concepts and tools such as functions, matrices and higher-order derivatives in cases of single and multiple independent variables. Emphasis is on the application of optimization, both with and without constraints, and introductory integral, for understanding relationships of various economic variables and concepts, such as the relationship of aggregate, average and marginal functions. Other topic covered analyses of elasticities, market equilibrium, impacts of taxation and input-output models.

**Prerequisites:** a) EE 211, EE 212 and MA 216 (or MA211)  
or b) EE 213, EE 214 and MA216 (or MA 211)

#### Course objectives:

1. To equip students with essential mathematical concepts and tools in studying economics.
2. To expose students to the application of mathematical concepts in analyzing economic problems.

**Main Text:**

Anin, Aroonruengsawat (2020) *Lecture notes on introductory mathematical economics* (AA)  
 Chiang, A. C. and Wainwright, K. (2005) *Fundamental Methods of Mathematical Economics*, 4<sup>th</sup> edition,  
 McGraw-Hill, Inc., Singapore. (CW)

**Expected Learning Outcomes:****1. Morality and Ethics**

Applicability	Learning Goals
●	1.1 Students demonstrate integrity.
○	1.2 Students prioritize social and public benefits over personal ones.
●	1.3 Students are punctual and comply with the code of conduct of the institution and society at large.
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Applicability	Learning Goals
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Applicability	Learning Goals
●	3.1 Students have developed individual critical thinking.
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Applicability	Learning Goals
●	4.1 Students are responsible for assigned tasks and work in groups effectively.
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### 5. Quantitative Analysis, Communication and Information Technology

Applicability	Learning Goals
●	5.1 Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.
○	5.2 Students communicate effectively and select appropriate presentation methods.
●	5.3 Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.

**Course Outline:**

<b>Topics</b>	
<b>1. Introduction</b> <ul style="list-style-type: none"><li>- Importance and needs to use mathematics in economics.</li><li>- The nature of theory, economic model and mathematics.</li></ul>	CW. Ch. 1 AA
<b>2. Mathematics and Economic Relations</b> <ul style="list-style-type: none"><li>- Relations and functions</li><li>- Types of functions</li></ul>	CW. Ch.2 AA
<b>3. Static and Comparative Static Equilibrium Analysis</b> <ul style="list-style-type: none"><li>- Linear models in economics</li><li>- Simultaneous system of equations</li><li>- Linear equation and graph</li><li>- Breakeven analysis</li><li>- Individual and market demand</li><li>- Individual and market supply</li><li>- Partial market equilibrium</li><li>- Excise tax and market equilibrium</li><li>- Elasticity concept</li><li>- Simple macroeconomic model</li><li>- IS-LM model</li></ul>	CW. Ch. 3  AA
<b>4. Linear Model, Basic Matrix Algebra and Applications</b> <ul style="list-style-type: none"><li>- Terminology (Type of matrix)</li><li>- Matrix operations (add, subtract, multiply)</li><li>- Representation of system of equation by matrix notation</li><li>- Matrix inversion by determinants</li><li>- Determinant and singularity of matrix</li><li>- Cramer's rule</li><li>- Matrix applications in:<ul style="list-style-type: none"><li>- Partial market equilibrium</li><li>- Excise tax and market equilibrium</li><li>- Simple macroeconomic model</li><li>- IS-LM model</li></ul></li></ul>	CW. Ch. 4, 5  AA

<b>Topics</b>	
<p><b>5. Nonlinear Model and Differential Calculus in Economic Theory</b></p> <ul style="list-style-type: none"> <li>- Quadratic theory</li> <li>- Other nonlinear functions</li> <li>- Slope and derivatives of a function</li> <li>- Rule of differentiation</li> <li>- Non differentiable functions</li> <li>- Examples in Economics <ul style="list-style-type: none"> <li>- Derivative and marginality</li> <li>- Relations among the total, the average and the marginal functions</li> </ul> </li> <li>- Elasticity, total revenue and marginal revenue</li> </ul>	<p>CW. Ch. 6, 7, 8</p> <p>AA</p>
<p><b>6. Optimization without Constraints: One Independent Variable Case</b></p> <ul style="list-style-type: none"> <li>- Maxima, minima and inflection point</li> <li>- Convexity and concavity</li> <li>- Maximize profits <ul style="list-style-type: none"> <li>- Competitive market case</li> <li>- Monopoly case</li> </ul> </li> <li>- Effects of taxes <ul style="list-style-type: none"> <li>- Lump-sum tax</li> <li>- Profit tax</li> <li>- Excise tax</li> </ul> </li> <li>- Maximization of tax revenue</li> </ul>	<p>CW. Ch. 9</p> <p>AA</p>
<b>MIDTERM</b>	
<p><b>7. Derivatives of More-Than-One Independent Variable Function</b></p> <ul style="list-style-type: none"> <li>- First-order partial derivatives</li> <li>- Second-order partial derivatives</li> <li>- Differential</li> <li>- Total differential</li> <li>- Total derivatives</li> <li>- Implicit function and its derivative</li> <li>- Examples in economics <ul style="list-style-type: none"> <li>- Partial market equilibrium</li> <li>- Multipliers in macroeconomic models</li> <li>- Utility function</li> <li>- Production function</li> </ul> </li> </ul>	<p>CW. Ch. 7, 8</p> <p>AA</p>

<b>Topics</b>	
<p><b>8. Optimization without Constraint: More-Than-One Independent Variable Cases</b></p> <ul style="list-style-type: none"> <li>- Conditions for maximum or minimum</li> <li>- Third degree price discrimination</li> <li>- Multiplant-firm</li> <li>- Multiproduct-firm</li> </ul>	<p>CW. Ch. 11</p> <p>AA</p>
<p><b>9. Optimization under Equality Constraint</b></p> <ul style="list-style-type: none"> <li>- Lagrange multiplier</li> <li>- Conditions for optimization</li> <li>- Maximize output level subject to cost constraint</li> <li>- Minimize cost subject to output constraint</li> <li>- Minimize utility subject to fixed budget</li> </ul>	<p>CW. Ch. 12</p> <p>AA</p>
<p><b>10. Integration and Its Application</b></p> <ul style="list-style-type: none"> <li>- Terminology in Integration</li> <li>- Rules of Integration</li> <li>- Definite Integration</li> <li>- Applications: <ul style="list-style-type: none"> <li>- Total revenue function from marginal revenue function</li> <li>- Total cost function from marginal cost function</li> <li>- Profit function from MR-MC</li> <li>- Utility function from marginal utility function</li> <li>- Consumption and saving functions from marginal propensity functions</li> <li>- Capital formation and investment functions</li> <li>- Consumer surplus, producer surplus and total surplus</li> <li>- First degree price discrimination</li> <li>- Differential equation (if time allows)</li> </ul> </li> </ul>	<p>CW. Ch. 14</p> <p>AA</p>

Note: The class schedule shown above may be adjusted during the semester as needed.

**Assessment:**

- |                 |      |
|-----------------|------|
| 1. Homework     | 20%  |
| 2. Midterm Exam | 35 % |
| 3. Final Exam   | 45 % |

**Note:** Practice problems for each topic will be posted on the class website. Students are encouraged to practice these exercises by themselves regularly.

**Remarks:**

- ◆ **Mid-Term Examination** (Wednesday, September 29, 2021, 15.00 - 17.00 hrs.)
- ◆ **Final Examination** (Monday, December 13, 2021, 13.30 – 16.00 hrs.)

## **Course Outline**

**Course ID: COURSE TITLE**

**Semester 1/2021 (August 9 – November 27, 2021)**

**Number of Credit:** 3 credits (3-0-6)

**Prerequisite:** EE211, EE212, MA216 (or MA211), and ST216 (or ST211).  
(Credits will not be awarded to students who are taking or have completed EE 425)

**Course Description:** Application of statistical and economic theories in analyzing economic data, with emphases on parameter estimation techniques and applications of simple and multiple regression models to economic analyses. Use of computer application in practice is also covered.

**Course Objectives:** This course provides an introduction to basic results and techniques of econometric theory. The emphasis will be on principles of econometrics and the application of econometric techniques rather than the derivation of theoretical statements. It is expected that at the completion of the course, students will be able to employ econometric investigation in their preparation for writing a seminar paper and to read critically empirical literature.

### **Instructor's Note:**

This is an introductory course for econometric analysis. To understand and be able to apply it effectively, you need to learn some basic theories and the reasoning underlying an estimated equation. Some applied examples will be discussed in class but exercises in homework will provide various examples of econometric application for students. Students are expected to use an econometrics computer package to do the homework. We will primarily use Stata statistical and econometrics software package for computer work in this course. There will be 2-3 STATA workshops in the student computer lab. Each of these workshops will last 1.5 hours. The dates and times will be announced in class accordingly.

Homework will be assigned on a regular schedule. An assortment of assignments based on theory and some computer applications that involve programming. Homework assignments are expected to be handed on time. There will be both online- and paper-based homework. Late submission will be graded on the basis of 50% of the total scores of that assignment. More than two-day late homework will not be accepted. There will be occasional, possibly unannounced, quizzes during the semester. Missed quizzes may not be made up (unless this is the result of an officially excused absence)

### **Main Text:**

1. \*\* Gujarati, D.N., and D.C. Porter, Basic Econometrics. 5th ed., N.Y., McGraw-Hill, 2009.
2. \*\*Wooldridge, J. M. Introductory Econometrics: A Modern Approach. 6th ed. Thompson: South-Western, 2016.

\*\*Main Text

### **Recommended Texts & Materials**

Jame H. Stock and Mark W. Watson, Introduction to Econometrics, 2nd Edition, Boston: Pearson Addison Wesley (2007)

William E. Griffiths, R. Carter Hill and George G. Judge, Learning and Practicing Econometrics, John Willey & Sons (1993 or latest edition)

Joshua D. Angrist and Jörn-Steffen Pischke, Mostly Harmless Econometrics: An Empiricist's Companion, Princeton University Press (2009)

ISBN-13: 978-0-691-12035-5

### **Other teaching materials:**

Teaching notes will be uploaded on Moodle at least 1 days prior to class.

### **Grading Criteria:**

Homework Assignments and Quizzes	20 points
Class Attendances and participations	10 points
Midterm Exam	30 points
Final Exam	40 points

## Expected Learning Outcomes:

### 1. Morality and Ethics

Applicability	Learning Goals
●	1.1 Students demonstrate integrity.
○	1.2 Students prioritize social and public benefits over personal ones.
●	1.3 Students are punctual and comply with the code of conduct of the institution and society at large.
○	1.4 Students are responsible and accountable to society, the nation, and the subject of economics.
○	1.5 Students realize the cultural and environmental value of the sustainable society.

### 2. Knowledge

Applicability	Learning Goals
●	2.1 Students know and understand modern economics principles and theories, and are up to date with new developments.
●	2.2 Students know and understand Thai and global economic structure, and the importance of major international economic events.
●	2.3 Students know and understand instruments of economic analysis.
●	2.4 Students know and understand applied fields in economics, including monetary, public, international, business, natural resource and environmental, industrial, agricultural, cooperative, political, developmental, and entrepreneurial economics as well as agribusiness.
○	2.5 Students are informed about related fields including sociology, business administration, education, law policy, and science.

### 3. Intellectual Development

Applicability	Learning Goals
●	3.1 Students have developed individual critical thinking.
●	3.2 Students are sufficiently trained in research skills.
●	3.3 Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand causes of current economic problems in Thailand. Based on analysis and synthesis, students demonstrate an ability to propose policy guidelines to resolve problems.

#### 4. Interpersonal Skills and Responsibilities

Applicability	Learning Goals
●	4.1 Students are responsible for assigned tasks and work in groups effectively.
●	4.2 Students have problem-solving skills.
○	4.3 Students show leadership skills and team spirit.
●	4.4 Students are always improving themselves.
○	4.5 Students have good interpersonal skills, adapting and working under different conditions.

#### 5. Quantitative Analysis, Communication and Information Technology

Applicability	Learning Goals
●	5.1 Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.
○	5.2 Students communicate effectively and select appropriate presentation methods.
●	5.3 Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.

## **Tentative Class Schedule:**

### **Introduction**

- What is econometrics?
- Methodology of econometrics
- Types of economic data

(Wooldridge, ch.1 or Gujarati, ch. 1)

### **Review of Some Statistical Concepts**

- Random variables and distributions
- Expectation, variance, covariance and correlation
- Estimators and desirable properties of estimators

(Wooldridge, Appendix B or Gujarati, Appendix A, pp.869-912)

### **Simple Regression Models**

- Principle, assumptions and derivation of ordinary least squares (OLS) estimators
- Properties of OLS estimators
- Statistical inference
- Prediction
- Test on individual regression coefficients
- Regression Through the Origin
- Data scaling on OLS statistics
- More on functional forms

**(Wooldridge, ch. 2, ch. 6 (6.1 and 6.2)) or Gujarati, chs. 2 – 6)**

**=====MIDTERM EXAM: September 29, 2021, 15:00-17:00hrs.=====**

### **Multiple Regression Analysis (Estimation)**

- Motivation
- Model and assumptions
- Estimation of parameters and properties of estimators
- Meaning of partial regression coefficients
- Measuring goodness of fit:  $R^2$  and adjusted  $R^2$
- The matrix approach to linear regression model

(Wooldridge, ch. 3 or Gujarati: ch. 7, Appendix B, C)

## **Multiple Regression Analysis (Inference)**

- Sampling Distribution of the OLS estimators
- Test on individual regression coefficients
- Testing the multiple linear restrictions
- Testing the equality of two regression coefficients
- Testing for equality or stability of parameters (Chow test)
- Prediction with general linear model

(Wooldridge, ch. 4 or Gujarati: ch. 8)

## **Dummy Variable Regression Models**

- Describing Qualitative Information
- Models with a single dummy independent variable
- Using dummy variables for multiple categories
- Interactions involving dummy variables

(Wooldridge, ch. 7 or Gujarati: ch. 15)

## **Multicollinearity Problem**

- Nature and Consequences of Multicollinearity
- Detecting Multicollinearity

(Wooldridge, ch. 3 (3.4) or Gujarati, ch. 10)

## **Heteroscedasticity Problem**

- Nature and Consequences of heteroscedasticity for OLS
- Testing for heteroscedasticity
- Remedial measures (weighted least squares estimation)

(Wooldridge, ch. 8 or Gujarati, ch. 11)

## **Autocorrelation Problem**

- Nature and Consequences of Autocorrelation, Serial Correlation
- Testing for Autocorrelation
- Remedial measures

(Wooldridge, ch. 12 (12.1-12.3) or Gujarati, ch. 12)

## **Specification Errors and Data Problems**

- Type of specification errors
- Consequences of specification error
- Tests of specification error
- Errors of measurement

(Wooldridge ch. 9 or Gujarati: ch. 13)

**=====FINAL EXAM: December 13, 2021 (9:00-11:30 hrs.) =====**

### **Remarks:**

- **Mid-Term Examination: Wednesday, September 29, 2021 (15:00-17:00 hrs.)**
- **Final Examination: Monday, December 13, 2021 (9:00-11:30 hrs.)**



**Course Syllabus**  
**EE 376 Economics of Climate Change**  
**Semester 1/2021**

**Number of credits:** 3 credits  
**Prerequisites:** EE 210 or EE 211 or EE 213

**Course Description:**

Basic concepts of climate change relating to environmental economics, efficiency, externalities, and policy instruments. The role of economics in the formation of climate policy. Economic problems of climate change, such as intertemporal decisions, impacts of climate change, cost of mitigation, and adaptation. Thailand and international cooperation and debate in climate policy.

## Lecture Schedule

Date	Topics
1-2	<p><b>1. Introduction to Climate Change Science</b></p> <ul style="list-style-type: none"> <li>• The Earth's climate system</li> <li>• Greenhouse gas (GHGs), global energy balance, and the greenhouse effect</li> <li>• Important GHGs: CO<sub>2</sub> and carbon cycles, other GHGs</li> <li>• Dissenting opinions: the great hoax?</li> </ul> <p><b>Reading:</b> H Ch. 1-4, T Ch. 1, Nordhaus Ch.5, 13-14, 24-25, Incropera Ch. 2-6, 9.</p>
Aug 11-13, 2021	
3-4	<p><b>2. Anthropogenic global warming and consequences</b></p> <ul style="list-style-type: none"> <li>• GHGs concentration and global temperature</li> <li>• Impacts, damages and losses of CC</li> <li>• GHGs data and information</li> <li>• GHGs emission by countries</li> <li>• Share of mitigation responsibility for climate stability</li> </ul> <p><b>Reading:</b> H Ch. 6-7, Incropera Ch. 5, T Ch. 2, IPCC (2013a), Stern Ch. 3-6</p>
Aug 18-20, 2021	
5-6	<p><b>3. Climate Change and Market Failure</b></p> <ul style="list-style-type: none"> <li>• Externalities and carbon pricing</li> <li>• Global commons and Tragedy of Commons</li> <li>• The under provisioning of Public Goods</li> </ul> <p><b>Reading:</b> HR Ch. 3-4, T Ch. 3</p>
Aug 25 - 27, 2021	
7-9	<p><b>4. Carbon Taxes</b></p> <ul style="list-style-type: none"> <li>• Optimum emission</li> <li>• Correction market failure with carbon                             <ul style="list-style-type: none"> <li>○ Single source</li> <li>○ Multiple sources</li> </ul> </li> <li>• Pros and cons of carbon taxes</li> <li>• Carbon tax research</li> </ul> <p><b>Reading:</b> HR Ch. 16, T Ch. 4, Pearce, David (1991) pp. 938-948.</p>
Sep 1-8, 2021	
10 - 12	<p><b>5. Carbon Market or Cap-and-Trade</b></p> <ul style="list-style-type: none"> <li>• Definition and concept of Carbon market</li> </ul>

Date	Topics
Sep 10-17, 2021	<ul style="list-style-type: none"> <li>• Demand and supply of carbon credits <ul style="list-style-type: none"> <li>○ Deriving the demand and supply for carbon credits</li> <li>○ Factors influencing the demand and supply</li> <li>○ Carbon market equilibrium</li> </ul> </li> <li>• Choices of carbon credits allocation and efficiency</li> <li>• Comparison of carbon market and carbon tax</li> <li>• Carbon market research</li> </ul> <p><b>Reading:</b> HR Ch. 16, T Ch. 5</p>
13-14	<p><b>6. Technological Development Policy and mitigation</b></p> <ul style="list-style-type: none"> <li>• Why do mitigation technology grow so slow?</li> <li>• Technology-push vs. Demand-pull debate</li> <li>• Policy for inducing technological change</li> <li>• Costs of low carbon technology and mitigations</li> </ul> <p><b>Reading:</b> Grubb, M. (2004), Goulder and Schneider (1999), T Ch. 5</p>
Sep 22 - 24, 2021	
<b>Midterm exam: Friday October 1, 2021, 12:00 – 14:00</b>	
15-16	<p><b>7. Global Institutions: Kyoto Protocol and Post-Kyoto</b></p> <ul style="list-style-type: none"> <li>• The Intergovernmental Panel on Climate Change (IPCC)</li> <li>• The United Nations Framework Convention on Climate Change (UNFCCC)</li> <li>• Kyoto Protocol</li> <li>• ‘Annex-I’ vs. ‘Non-Annex-I’ countries</li> <li>• Emissions Trading Scheme (ETS), Joint Implementation (JI), and Clean Development Mechanism (CDM) Cooperation failure?</li> <li>• Paris Agreement</li> </ul> <p><b>Reading:</b> Incropera Ch. 8, T Ch. 5</p>
Oct 6 - 8, 2021	
17-20	<p><b>9. International Trade and Climate Change</b></p> <ul style="list-style-type: none"> <li>• Mitigation &amp; competitiveness</li> <li>• Carbon offshoring and Carbon leakages</li> </ul>

Date	Topics
Oct 13-20, 2021	<ul style="list-style-type: none"> <li>• Concepts about GHGs responsibility <ul style="list-style-type: none"> <li>◦ Production-based and consumption-based responsibility</li> </ul> </li> <li>• Carbon leakages and Border-Carbon Adjustment (BCAs) <ul style="list-style-type: none"> <li>◦ Pros and cons of BCAs</li> </ul> </li> <li>• World Trade Organization (WTO) and Climate Change</li> </ul> <p><b>Reading:</b> Incropera Ch. 8, T Ch. 8-9</p>
20-22	<p><b>7. Economic Concepts (III): Social Costs of Climate Change</b></p> <ul style="list-style-type: none"> <li>• Cost-Benefit Analysis (CBA) concept</li> <li>• Social discount rates</li> <li>• Economic assessment of the damages caused by global warming</li> </ul>
Oct 27, 2021 – Nov 3, 2021	<ul style="list-style-type: none"> <li>• The Stern’s Review</li> <li>• The Nordhaus DICE model</li> <li>• Stern vs. Nordhaus debates</li> </ul> <p><b>Reading:</b> FF Ch.6, Stern Ch.6, 9, 12, Nordhaus Ch.15-16, 18</p>
23-24	<p><b>8. Economics of Climate Change Adaptation</b></p> <ul style="list-style-type: none"> <li>• Climate risks</li> </ul>
Nov 5-10, 2021	<ul style="list-style-type: none"> <li>• Climate change adaptation</li> <li>• Economics of technology &amp; adaptation</li> </ul> <p><b>Reading:</b> Stern Ch.5, 18-20, OECD (2015)</p>
25 -27	<p><b>10. Climate Change and Economic Sectors</b></p> <ul style="list-style-type: none"> <li>• Fossil fuel vs. renewable energy</li> <li>• Carbon sink</li> </ul>
Nov 12-19, 2021	<ul style="list-style-type: none"> <li>• Carbon offsets</li> <li>• REDD+</li> <li>• Demand management</li> </ul>
27-28	
Nov 24-26, 2021	<p><b>14. Group project presentation</b></p>
	<p><b>Midterm exam: Wednesday October 1, 2021, 13:30 – 16:00</b></p>

## Evaluation

Midterm Examination	35%
Final Examination	35%
Group project or reports	15%
Assignment and participation	15%

### Group project (15 points): maximum 3 member/group

- Design and print an **A0-sized academic poster** linking climate change issue with a selected topic from the following list. A poster may have a free-style title, but must be informative and comprehensive in its content, and contain some constructive arguments in the analytical part.

#### Topic lists:

Electrical vehicle	Agriculture	Public Transportation	Biotechnology
Solar energy	Fishery	Financial sector	Gender
Hydropower	Livestock	Biodiversity	Poverty
Bio fuel	Energy-intensive industry	Coastal adaptation	Youth
Nuclear power	Real estate	Draught management	Disaster
Wind energy	Aviation	Waste management	Arts and Culture
Risk management	Tourism related services	Disaster management	IT and AI

Evaluation will be based on the ability to arrange data and information with proper visualization and citation, presenting sharp arguments (concise and interesting leading questions and the existing conflicts of viewpoint relevant to the chosen topic) linking the topic with **the economics of climate change mitigation and/or adaptation**, attractive and reader-friendly poster design. The total mark will come from peer evaluation (7 marks) and instructor evaluation (8 marks)

Your oral presentation would take 12 minutes (without any note!) and 3 minutes of Q&A.

<b>Submission date of selected topic:</b>	October 6, 2021
<b>Submission date of the outline:</b>	October 20, 2021
<b>Presentation dates:</b>	November 24 – 26, 2021

**Note:** Please be strictly aware of '*plagiarism rule*' which could bring a zero score for violators.

## Reading lists

- [T] Tantivasadakarn, Chayun (2019) *Economics of Climate Change* (in Thai), Thammasat University Press.
- [FF] Field, B., & Field, M. (2017). *Environmental economics: An introduction* (Seventh ed.). New York, NY: McGraw-Hill Education.
- Grubb, M. (2004). "Technology Innovation and Climate Change Policy: an overview of issues and options." *Keio Economic Studies*, 41(2): 103-132.
- Goulder, L.H., and S.H. Schneider (1999) 'Induced Technological Change and the Attractiveness of CO<sub>2</sub> Abatement Policies,' *Resource and Energy Economics*, Vol. 21, pp. 211-53.
- [HR] Harris, J. M., & Roach, B. (2017). *Environmental and natural resource economics: A contemporary approach*. Routledge.
- [H] Houghton, John (2004) *Global Warming: The Completer Briefing*, 3rd edition, Cambridge University Press.  
<http://www.gci.org.uk/Documents/Global-Warming-the-Complete-Briefing.pdf>
- [Incropera] Incropera, F. P. (2016). *Climate change: a wicked problem: complexity and uncertainty at the intersection of science, economics, politics, and human behavior*. Cambridge University Press. (ห้องสมุดปริทัศน์)
- IPCC (2013a) Summary for Policymakers. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)].
- Milton, E.J., and Euston Quah (2021) *Cost-Benefit Analysis*, Routledge.
- Nordhaus, W. D. (2007). A review of the Stern review on the economics of climate change. *Journal of economic literature*, 45(3), 686-702.
- [Nordhaus] Nordhaus, W. D. (2013). *The climate casino: Risk, uncertainty, and economics for a warming world*. Yale University Press.
- Pearce, David (1991), "The Role of Carbon Taxes in Adjusting to Global Warming," *The Economic Journal*, Vol. 101, No. 407, (Jul., 1991), pp. 938-948.
- [Stern] Stern, N., & Stern, N. H. (2007). *The economics of climate change: the Stern review*. Cambridge University press.
- [TT] Tietenberg, T. H., & Lewis, L. (2016). *Environmental and natural resource economics*. Routledge.

## Additional links:

**Glossary terms:** [https://archive.ipcc.ch/pdf/special-reports/srex/SREX-Annex\\_Glossary.pdf](https://archive.ipcc.ch/pdf/special-reports/srex/SREX-Annex_Glossary.pdf)

## Gas Emissions by Countries and Sectors:

<https://www.wri.org/blog/2020/02/greenhouse-gas-emissions-by-country-sector>

**Global emission:** <https://www.c2es.org/content/international-emissions/>

**NASA:** <https://climate.nasa.gov/evidence/>

**CONTACT INFORMATION**

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BE-Moodle: <http://bemoodle.econ.tu.ac.th/>



# **B.E. International Program**

## Faculty of Economics, Thammasat University



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### **Course Outline**

#### **EE401: POLITICAL ECONOMY**

##### **I. Course Description**

Study different strands of economic thought, and how they explain the structure and evolution of societies. Doctrines taught will include:

- Classical political economy of Adam Smith on the economic impact of self-interest, competition and market efficiency.
- Malthus's population theory and its economic (and environmental) implications.
- Karl Marx's political economy on the exploitation of surplus value, capital accumulation, the reserve army of the unemployed, the impoverishment of the working class, the falling long-term profit rate tendency and the economic crisis. Also study Marxian development in the 20<sup>th</sup> century and the dependency theory.
- Neo-Classical economics, including its views on the business cycle, and its adoption by so many of the other social sciences.
- Keynesian macro-economic analysis, aggregate data, sub-optimal equilibriums, the paradox of thrift, and the role of government in "managing" markets.
- The Austrian economic analysis of the market process, and its methodological attacks on both Keynesian and Neo-Classical Economics
- Public Choice economics, and its attempts to analyze politics using economic tools and logic.
- New Institutionalism, including its views on developmental economics and economic history.

The final three weeks of the semester will be spent analyzing current world issues using the tools developed throughout the class. Issues that will be covered will (depending on events) include

- The great recession of 2008
- The Euro (the EU)
- China's rise, and the Chinese "bubble"
- Japan's Demographics
- Other events depending on circumstances

## II. Evaluation

Three short essays	60	points
Final Exam	40	Points

All but one of the short essays will ask you to critically comment on one of the articles presented in class, where I will be looking to see if you can identify the primary assumptions behind the model. I want you to be able to analyze the models not just mathematically, but logically, to be able to see what was left out in the interests of clarity.

The final essay will ask you to analyze a current issue in Political Economy using one (or more) of the schools of thought presented. Allowable topics include The Great Recession of 2008, the future of the Euro (and the EU), China's property bubble, Japan's Demographics, or other issues that may arise during class.

Depending on class size, the essays may be assigned as group projects or not. I will decide that once I have a better idea of how large the class is. I may also change to 4 slightly shorter essays if the class is small enough.

The final exam will be a three hour exam that covers the topics taught in class.

## III. Course Readings

The course will rely on one primary textbook, but will be supplemented with numerous articles.

Caparosa, James A. and David P. Levine (1993) Theories of Political Economy, Cambridge University Press, Cambridge

Semester Outline:

1. Pre-Classical thinking: God, Mercantilism, Physiocrats
2. Classical thinking: Smith
3. Later Classical thinking
4. Marxism
5. Neoclassical Thought
6. Keynesian thinking
7. The Austrians
8. Neoclassical Thought and the Business Cycle

9. Public Choice Economics
10. New Institutionalism
11. Neoclassical Thought: Extensions
12. Applications: The great recession of 2008
13. Applications: The Euro and the EU

#### **IV: Cheating**

Don't. If you do, and I catch you, you will be reported to the program director for appropriate punishment. At a minimum, you will receive a zero on the exam you are caught cheating on, other punishments include automatically failing the course, and being suspended for one (or more) semesters.

**Extended Course Outline:** To be provided the second day of class, once I know the class size.

**Course Outline**  
**EE 406 Contemporary Economic Issues**  
Semester 1/2021 (10 August – 28 November 2021)

**Number of credits:** 3 credits (3-0-6)

**Course Description:**

EE406 is a general introduction to the subject matter and methods of economics, through the investigation of specific contemporary economic issues such as economic growth, inequality, poverty, and environmental deterioration.

**Course Objectives:**

This course aims to provide students with a general knowledge about “contemporary” economic issues such as that of inequality, poverty, labour market, social welfare, and environmental deterioration. To do so, the course will spend its focus on epidemics, and the significance of its relationship to the economy, politics, as well as historical changes.

The course is therefore naturally quite a departure from orthodox economics – and offer a more interdisciplinary approach to economic analyses. By doing so, this aim to

1. Equip students with tools to understand economic issues using definitions, principles, measurement, and observation;
2. Make students acquainted with economic data such as poverty rate, inequality indicators, labor market statistics, and alternative data;
3. Train students on academic writing and presentation through class assignments and guide the development of research methods.

Specifically, the main approach of this section (046401) is ‘data-driven’. An instructor will introduce the sets of alternative data and research methods. Then, students are encouraged to apply these data and methods to their topics of interest. Hence, all topics of group projects and individual paper are based on students’ preference.

**Prerequisites:** *EE211 and EE212*

**Evaluation:**

Class presentation #1 (group project)	15%
Class presentation #2 (group project)	15%
Class presentation #3 (group project)	15%
Class presentation #4 (group project)	15%
Final paper (individual paper)	30%
Class participation	10%

**Recommended readings:**

All readings for each lecture are listed in the attached sheet.

**Class Policies:**

Attendance is strictly required. It is the responsibility of the students to obtain any information announced in the class. Ignorance of such information due to absence of class is not a valid defense.

If a student has any question about the lecture, it is highly encouraged to raise them in class. Please do not hesitate to consult the lecturer after the class or via appointment.

Students are encouraged to work together and exchange ideas outside of class. However, plagiarism and cheating will be treated seriously with disciplinary actions. Thammasat University and our faculty take academic integrity extremely seriously, and there will be academic consequences if you are found possibly guilty of misconducts. Please refer to the university guidelines if you have any questions.

Any changes to the course outline (if any) will be announced in the class or uploaded on BE-moodle.

## Expected Learning Outcomes:

### 1. Morality and Ethics

Applicability	Expected Learning Outcomes
	1.1 Students demonstrate integrity.
	1.2 Students prioritize social and public benefits over personal ones.
	1.3 Students are punctual and comply with the code of conduct of the institution and society at large.
	1.4 Students are responsible and accountable to society, the nation, and the subject of economics.
	1.5 Students realize the cultural and environmental value of the sustainable society.

### 2. Knowledge

Applicability	Expected Learning Outcomes
	2.1 Students know and understand modern economics principles and theories, and are up to date with new developments.
	2.2 Students know and understand Thai and global economic structure, and the importance of major international economic events.
	2.3 Students know and understand instruments of economic analysis.
	2.4 Students know and understand applied fields in economics, including monetary, public, international, business, natural resource and environmental, industrial, agricultural, cooperative, political, developmental, and entrepreneurial economics as well as agribusiness.
	2.5 Students are informed about related fields including sociology, business administration, education, law policy, and science.

### 3. Intellectual Development

Applicability	Expected Learning Outcomes
	3.1 Students have developed individual critical thinking.
	3.2 Students are sufficiently trained in research skills.
	3.3 Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand causes of current economic problems in Thailand. Based on analysis and synthesis, students demonstrate an ability to propose policy guidelines to resolve problems.

#### **4. Interpersonal Skills and Responsibilities**

Applicability	Expected Learning Outcomes
	4.1 Students are responsible for assigned tasks and work in groups effectively.
	4.2 Students have problem-solving skills.
	4.3 Students show leadership skills and team spirit.
	4.4 Students are always improving themselves.
	4.5 Students have good interpersonal skills, adapting and working under different conditions.

#### **5. Quantitative Analysis, Communication and Information Technology**

Applicability	Expected Learning Outcomes
	5.1 Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.
	5.2 Students communicate effectively and select appropriate presentation methods.
	5.3 Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.

### Teaching Plans

Week	Date	Topic	Class arrangement
1	August 11, 2021	Introduction of Economic Growth	Lecture
	August 13, 2021	Introduction of Economic Growth	Lecture
2	August 18, 2021	Google Trend & Economic Analysis	Lecture & workshop
	August 20, 2021	Google Trend & Economic Analysis	Lecture & workshop
3	August 25, 2021	Google Mobility Index	Lecture & workshop
	August 27, 2021	Google Mobility Index	Lecture & workshop
4	September 1, 2021	Presentation of Assignment #1	Class presentation
	September 3, 2021	Presentation of Assignment #1	Class presentation
5	September 8, 2021	Social Network Analysis	Lecture
	September 10, 2021	Social Network Analysis	Lecture
6	September 15, 2021	Introduction to NodeXL	Lecture & workshop
	September 17, 2021	Introduction to NodeXL	Lecture & workshop
7	September 22, 2021	Presentation of Assignment #2	Class presentation
	September 24, 2021	Presentation of Assignment #2	Class presentation
Midterm-exam week (September 27 - October 3, 2021)			
8	October 6, 2021	Input-Output Table	Lecture
	October 8, 2021	Input-Output Table	Lecture
9-10	October 15, 2021	Network Analysis with Gephi	Lecture & workshop
	October 20, 2021	Network Analysis with Gephi	Lecture & workshop
	October 22, 2021	Network Analysis with Gephi	Lecture & workshop
11	October 27, 2021	Presentation of Assignment #3	Class presentation
	October 29, 2021	Presentation of Assignment #3	Class presentation
12	November 3, 2021	Text Analysis & RapidMiner	Lecture & workshop
	November 5, 2021	Text Analysis & RapidMiner	Lecture & workshop
13	November 10, 2021	Text Analysis & RapidMiner	Lecture & workshop

	November 12, 2021	Satellite Data & GIS	Lecture & workshop
14	November 17, 2021	Satellite Data & GIS	Lecture & workshop
	November 19, 2021	Satellite Data & GIS	Lecture & workshop
15	November 24, 2021	Presentation of Assignment #4	Class presentation
	November 26, 2021	Presentation of Assignment #4	Class presentation

**Course Outline**

**EE409 Seminar in Political Economics and Economic History**

Semester 2/2021-2 (January 10 – May 7, 2022)

**Number of credits:** 3 credits (3-0-6)  
**Lecture Time:** Monday, 9.00 – 12.00 hours  
**Lecture Venue:** Room: TBA , Faculty of Economics  
**Enrollment key #BE Moodle:** 0279 (<http://bemoodle.econ.tu.ac.th/>)

**1) Online Learning Management System: google classroom**

Invitation Link: <https://classroom.google.com/c/NDUwNzIwMjQyNzE5?cjc=kvflp2b>

Passcode: kvflp2b

**2) Online Meeting Platform: Zoom**

Meeting ID: 921 9153 8622

Passcode: 815312

**Instructor:** Asst. Prof. Dr. Thorn Pitidol  
Faculty of Economics, Thammasat University  
Email: thorn@econ.tu.ac.th; Office hours: by appointment  
Line Open Chat for Class:



**Prerequisites** Completion of at least two 400 level or higher courses in the Political Economics and Economic History field.

### **Course Description**

Seminar and research on specific topics in political economy and economic history under supervision and guidance of the lecturer.

### **Objectives**

1. To practice research-related skills including observation, thinking, defining the problem(s) and research question(s), analysis, reading, problem-solving by using relevant conceptual frameworks (from what students have learnt in 4xx and 40x courses), discussion, synthesis and formulation of the answer to the problem/research question, writing and presentation, and comments and critique.
2. To familiarise students to research methodologies in political economy and related fields.
3. To widening perspectives of students on relevant fields of economics through the process of research for possible frontier expansion in the future. Moreover, those skills accumulated throughout the processes could be easily improvised to apply to real-life works.

### **Class Etiquettes**

To prepare the students for the real world working environment — presumably working as economists participating in research and conferences, the following etiquettes shall be strictly obeyed:

Time-keeping and Punctuality: students shall be punctual and must arrive within 10 minutes. Time-keeping is crucial for seminar; taking too long to complete certain tasks means lesser time for others. All presentation shall be no longer than 12 minutes sharp unless indicate otherwise.

Participation: academic advancement relies on contributive and constructive exchange of ideas; participation is essential. All students must participate promptly, either voluntarily or compulsorily. Class participation is compulsory; all students must be in all classes in order to be assessed. Absence of medical reasons is not acceptable unless bed-ridden accompanied by proper documents.

Nuisance: due to the nature of the course, nuisance shall be kept at minimum. Mobile phones and other communication devices shall not be used at all time if it is not for the matter relevant to the study; food and drink are prohibited; entrance to and exit from the room are discouraged except in life-threatening circumstances; conversations not related with the materials discussed are discouraged.

Failure to comply with these will result in the deduction of 10 points for everyone without any notification and, consequently, the grade will be continuously decreased.

### **Assessments**

Since this course is designed for students to integrate their knowledge in the field through research, there is no examination. Assessments are based on the students' ability to conduct research independently under supervision and guidance as well as necessary prerequisites students may need. Assignments would be given throughout the course. All assignments would be marked.

Each student is expected to deliver one independent term paper (the title/topic is subject to the permission from the lecturer; the length of not exceeding 30 A4 pages inclusive) and present it in front of the class (12 mins). Students are also required to submit written comments for friends' proposal and final paper. Other assignments are works that students need to deliver along the path to the finishing of the term paper.

<b>Individual Term Paper</b>	<b>50</b>	<b>percent</b>
Writing	40	percent
Presentation	10	percent
<b>Group Discussion (assignments &amp; participation)</b>	<b>30</b>	<b>percent</b>
<b>Research Proposal</b>	<b>15</b>	<b>percent</b>
<b>Others (Research Outline, Preliminary Results)</b>	<b>5</b>	<b>percent</b>

## Plagiarism Policy

- No student will copy another person's work, partially, substantially, or fully, without giving proper reference and citation.
  - Any writing found to be plagiarised is subject to severe penalties (at least failure of the course) without further notice.
  - It is more important for the writing to reflect students' ability to analyse than for it to be grammatically flawless. A clear and well-organised writing will better express student's idea.
- Failure to comply with this policy will result in no assessment of any kind.

## Organisation of the Classes

Because of the nature of the course, lectures are not essential. Lecturer is now a supervisor and a guide. Therefore, students' self-discipline and independence are utmost important. All deadlines are not negotiable. For the first half of the term (6 sessions), before the midterm examination, students would be trained to come up with individual independent topics. In the second half, students would be more engaged to their topics — despite being independent, their progress must be reported and shared on a regular basis.

## Reading

**Please use USC research guide** “Organizing Your Social Sciences Research Paper” to gain most benefits. Use the link here: <https://libguides.usc.edu/writingguide>

## Suggested readings by topics:

### Democracy

- Becker, Gary S. 1983. “A Theory of Competition Among Pressure Groups for Political Influence.” *The Quarterly Journal of Economics*. 98(3): 371–400.
- Besley, Timothy. 2006. *Principled Agents?: The Political Economy of Good Government*. Oxford, UK: Oxford University Press.
- Besley, Timothy and Stephen Coate. 1997. “An Economic Model of Representative Democracy.” *The Quarterly Journal of Economics*. 112 (1): 85-114.
- De Figueiredo Jr., Rui J. P. 2002. “Electoral Competition, Political Uncertainty, and Policy Insulation.” *The American Political Science Review*. 96(2): 321–33.

- Osborne, Martin J., and Al Slivinski. 1996. "A Model of Political Competition with Citizen-Candidates." *The Quarterly Journal of Economics*. 111(February): 65–96.
- Boix, Carles. 2003. *Democracy and Redistribution*. New York: Cambridge University Press.
- Acemoglu, Daron, and James A. Robinson. 2006. *Economic Origins of Dictatorship and Democracy*. Cambridge, U.K.: Cambridge University Press.
- Acemoglu, Daron, and James A. Robinson. 2008. "Persistence of Power, Elites, and Institutions." *The American Economic Review*. 98(1): 267–93.
- Lipset, Seymour Martin. 1959. "Some Social Requisites of Democracy: Economic Development and Political Legitimacy." *American Political Science Review*. 53(1): 69-105.
- Lizzeri, Alessandro, and Nicola Persico. 2004. "Why Did the Elites Extend the Suffrage? Democracy and the Scope of Government with an Application to Britain's 'Age of Reform.'" *The Quarterly Journal of Economics* 119(May): 707–65.

### **Inequality**

- Austen-Smith, David, and Michael Wallerstein. 2006. "Redistribution and Affirmative Action." *Journal of Public Economics* 90(10-11): 1789–1823.
- Cameron, David R. 1978. "The Expansion of the Public Economy: A Comparative Analysis." *The American Political Science Review* 72(4): 1243–61.
- Chattopadhyay, Raghavendra, and Esther Duflo. 2004. "Women as Policy Makers: Evidence from a Randomized Policy Experiment in India." *Econometrica* 72(5): 1409–43.
- Goldin, Claudia. 2014. "A Great Gender Convergence: Its Last Chapter," *American Economic Review*, 104(4): 1091-1119.
- Austen-Smith, David, and Michael Wallerstein. 2006. "Redistribution and Affirmative Action." *Journal of Public Economics* 90(10-11): 1789–1823.
- Cameron, David R. 1978. "The Expansion of the Public Economy: A Comparative Analysis." *The American Political Science Review* 72(4): 1243–61.
- Debs, Alexandre and Gretchen Helmke. 2010. "Inequality under Democracy: Explaining the Left Decade in Latin America." *Quarterly Journal of Political Science*. 5(3): 209-241.
- Persson, Torsten, and Guido Tabellini. 1994. "Is Inequality Harmful for Growth?" *The American Economic Review*. 84(3): 600–621.

- Piketty, Thomas. 1995. "Social Mobility and Redistributive Politics." *The Quarterly Journal of Economics* 110(3): 551–84.
- Piketty, Thomas, and Emmanuel Saez. 2007. "How Progressive Is the U.S. Federal Tax System? A Historical and International Perspective." *Journal of Economic Perspectives* 21(1): 3–24.

## Welfare

- Fox Piven, Frances and Richard A. Cloward. 1971. *Regulating the Poor: The Functions of Public Welfare*. New York: Vintage Books.
- Moene, Karl Ove, and Michael Wallerstein. 2001. "Inequality, Social Insurance, Redistribution." *The American Political Science Review* 95(4): 859–74.
- Persson, Torsten, Roland, and Guido Tabellini. 2007. "Electoral Rules and Government Spending in Parliamentary Democracy." *Quarterly Journal of Political Science*. 2(2): 155-188.
- Rodrik, Dani. 1998. "Why Do More Open Economies Have Bigger Governments?" *Journal of Political Economy* 106(5): 997–1032.
- Scheve, Kenneth and David Stasavage. 2010. "The Conscription of Wealth: Mass Warfare and the Demand for Progressive Taxation." *International Organization* 64(4): 529–61.
- Skocpol, Theda. 1992. *Protecting Soldiers and Mothers: The Political Origins of Social Policy in the United States*. Cambridge, MA: Harvard University Press.
- Swenson, Peter A. 2002. *Capitalists Against Markets: The Making of Labor Markets and Welfare States in the United States and Sweden*. New York, N.Y.: Oxford University Press.
- Wallerstein, Michael. 1999. "Institutions and Pay Inequality in Advanced Industrial Societies." *American Journal of Political Science* 43(3): 649–80.

## Corruption

- Bardhan, Pranab. 1997. "Corruption and Development: A Review of Issues." *Journal of Economic Literature*. 35(September): 1320–46.
- Dunning, Thad. 2008. *Crude Democracy*. Cambridge, UK: Cambridge University Press.
- Ferraz, Claudio, and Frederico Finan. 2008. "Exposing Corrupt Politicians: The Effects of Brazil's Publicly Released Audits on Electoral Outcomes." *The Quarterly Journal of Economics*. 123(2): 703–45.

- Rose-Ackerman, Susan. 1999. *Corruption and Government: Causes, Consequences, and Reform*. Cambridge, UK: Cambridge University Press.
- Shleifer, Andrei, and Robert W. Vishny. 1993. "Corruption." *The Quarterly Journal of Economics*. 108(3): 599–617.
- Campos Edgardo J., Donald Lien, and Sanjay Pradhan (1999). "The Impact of Corruption on Investment: Predictability Matters", *World Development*, Volume 27, Issue 6, June 1999, pp. 1059–1067
- Emerson, Patrick M. (2006). "Corruption, competition and democracy", *Journal of Development Economics*, Vol. 81, pp. 193 – 212.
- Gupta, Sanjeev, Luiz de Mello, and Raju Sharan (2000). "Corruption and Military Spending", IMF Working Paper 00/23, Washington DC: IMF
- Jain, A. K. (2001). "Corruption: A Review". *Journal of Economic Surveys*, 15: 71–121.
- Javorcik, Beata S. & Wei, Shang-Jin, (2009). "Corruption and cross-border investment in emerging markets: Firm-level evidence," *Journal of International Money and Finance*, Elsevier, vol. 28(4), pages 605-624
- Lambsdorff, J.G. (2007) .*The institutional economics of corruption and reform*, Cambridge: Cambridge University Press
- Mauro, Paolo (1998). "Corruption and the Composition of Government Expenditure", *Journal of Public Economics*, Vol. 69, pp. 263-279.
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- Murphy, Kevin M., Andrei Shleifer, and Robert W. Vishny (1991). "The Allocation of Talent: Implications for Growth", *Quarterly Journal of Economics*, Volume 106:2, pp. 503-30
- Tanzi, Vito and Davoodi, Hamid R. (2000). "Corruption, Growth, and Public Finances". IMF Working Paper, Vol. , pp. 1-27, 2000

## **Institutions (and Economic History)**

- Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge, UK: Cambridge University Press.
- Olson, Mancur. 1965. *The Logic of Collective Action*. Cambridge, MA: Harvard University Press.
- North, Douglass C., and Barry R. Weingast. 1989. "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England." *The Journal of Economic History*. 49(04): 803–32.
- Przeworski, Adam, Mike Alvarez, José A. Cheihub, and Fernando Limongi. 2000. *Democracy and Development: Political Institutions and Well Being in the World, 1950-1990*. Cambridge, UK: Cambridge University Press.
- North, Douglass C., "Institutions," *The Journal of Economic Perspectives*, 5:1 (Winter 1991), pp. 97-112.
- North, Douglass C., "New Institutional Economics and Development." 1993 working paper (PDF file).
- North, Douglass C., "Economic Performance Through Time," *The American Economic Review*, 84 (June 1994), pp. 359-368.
- North, Douglass C., "Five Propositions about Institutional Change," in *Explaining Social Institutions*, Jack Knight and Itai Sened, eds., University of Michigan Press, 1995, pp. 15-26.
- North, Douglass C., "Understanding Economic Change," in *Transforming Post-Communist Political Economies*, Joan M. Nelson, Charles Tilly and Lee Walker, eds., Washington D. C.: National Academy Press, 1997, pp. 13-18.
- Allen, Douglas W., *The Institutional Revolution: Measurement and the Economic Emergence of the Modern World*, Chicago: University of Chicago Press, 2011.
- Acemoglu, Daron, Simon Johnson and James Robinson, "The Colonial Origins of Comparative Development: An Empirical Investigation," *American Economic Review* 91: 1369-1401, 2001.
- Rodrik, Dani, Arvind Subramanian, and Francesco Trebbi. "Institutions Rule: The Primacy of Institutions Over Geography and Integration in Economic Development," *Journal of Economic Growth* 9 (2): 131-165, 2004.
- Eggertsson, Thrainn. "No Experiments, Monumental Disasters: Why It Took a Thousand Years To Develop a Specialized Fishing Industry in Iceland," *Journal of Economic Behavior and Organization* 30:1, pp. 1-23 ,1996.

- Engerman, Stanley and Kenneth Sokoloff, "Factor Endowments, Institutions, and Differential Paths of Growth Among New World Economies: A View from Economic Historians of the United States," in *How Latin America Fell Behind: Essays on the Economic Histories of Brazil and Mexico, 1800-1914*, edited by Stephen Haber, Stanford University Press, pp. 260-304, 1997.
- Banerjee, Abhijit and Lakshmi Iyer, "History, Institutions and Economic Performance: The Legacy of Colonial Land Tenure Systems in India," *American Economic Review* 95 (4): 1190-1213, 2005.
- Nunn, Nathan, "The Long-Term Effects of Africa's Slave Trades," *Quarterly Journal of Economics* 123 (1): 139-176, 2008.

**Expected Learning Outcomes:**

**1. Morality and Ethics**

Applicability	Learning Goals
●	1.1 Students demonstrate integrity.
○	1.2 Students prioritize social and public benefits over personal ones.
●	1.3 Students are punctual and comply with the code of conduct of the institution and society at large.
●	1.4 Students are responsible and accountable to society, the nation, and the subject of economics.
○	1.5 Students realize the cultural and environmental value of the sustainable society.

**2. Knowledge**

Applicability	Learning Goals
●	2.1 Students know and understand modern economics principles and theories, and are up to date with new developments.
●	2.2 Students know and understand Thai and global economic structure, and the importance of major international economic events.
●	2.3 Students know and understand instruments of economic analysis.
●	2.4 Students know and understand applied fields in economics, including monetary, public, international, business, natural resource and environmental, industrial, agricultural, cooperative, political, developmental, and entrepreneurial economics as well as agribusiness.
○	2.5 Students are informed about related fields including sociology, business administration, education, law policy, and science.

### 3. Intellectual Development

Applicability	Learning Goals
●	3.1 Students have developed individual critical thinking.
●	3.2 Students are sufficiently trained in research skills.
●	3.3 Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand causes of current economic problems in Thailand. Based on analysis and synthesis, students demonstrate an ability to propose policy guidelines to resolve problems.

### 4. Interpersonal Skills and Responsibilities

Applicability	Learning Goals
●	4.1 Students are responsible for assigned tasks and work in groups effectively.
●	4.2 Students have problem-solving skills.
●	4.3 Students show leadership skills and team spirit.
●	4.4 Students are always improving themselves.
●	4.5 Students have good interpersonal skills, adapting and working under different conditions.

### 5. Quantitative Analysis, Communication and Information Technology

Applicability	Learning Goals
●	5.1 Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.
●	5.2 Students communicate effectively and select appropriate presentation methods.
●	5.3 Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.

## Teaching Plan and Class Schedule

Week	Date	Agenda	Assignment
1	10-Jan-22	Introduction - Review of Course and Research Resources. Identification of Topics. Individual Meetings to identify research topics, relevant literature Selection of reading materials for future classes	Read the suggested readings and start thinking about your topic.
2	17-Jan-22		
3	24-Jan-22	Outlining the steps for research and group comment on past papers	Yes – Powerpoint presentation
4	31-Jan-22	Reviewing research question	Yes – Group Discussion
5	7-Feb-22	Literature review – individual consultation	Yes – Group Discussion
6	14-Feb-22	Research methods – individual consultation	Yes – Group Discussion
7	21-Feb-22	Workshop- How to write a good research paper	
8	28-Feb-22	Midterm Week, No Class.	
9	7-Mar-22	Presenting a proposal	Yes - Powerpoint presentation And a proposal paper
10	14-Mar-22	Consultation on progress	Yes – Group Discussion
11	21-Mar-22	Consultation on progress	Yes – Group Discussion
12	28-Mar-22	Presenting preliminary results	Yes – Powerpoint Presentation
13	4-Apr-22	Finalizing paper	
14	18-Apr-22	TBA (maybe Guest Lecturer/consultation)	
15	25-Apr-22	Final Presentation	Submit your draft final
	12-May-22	Submit Your Final Paper	

## ACADEMIC CALENDAR & HOLIDAY SEMESTER 2/2021

Semester 2/2021 (January 10 – May 7, 2022)	
Classes Begin	January 10, 2022
Add-drop period	January 17 - 20, 2022 <i>(from 9.00 AM of January 17 to 10.30 PM of January 20)</i>
Tuition Fee Payment Period	7 December, 2021 - January 23, 2022 <i>(9 AM - 10.30 PM)</i>
<i>Makha Bucha Day*</i>	<i>February 16, 2022</i>
Mid-term Examination Period	February 28 - March 5, 2022
Withdrawal period with "W" on record	March 14 - April 25, 2022 <i>(from 9.00 AM of March 14 to 10.30 PM of April 25)</i>
<i>Chakri Memorial Day*</i>	<i>April 6, 2022</i>
<i>Songkran Festival Day*</i>	<i>April 11 - 17, 2022</i>
<i>Coronation Day*</i>	<i>May 4, 2022</i>
Last day of class for Semester 2/2021	May 7, 2022
Final exam period	May 9 - 12, 17 - 25, 2022
<i>Royal Ploughing Ceremony Day*</i>	<i>May 13, 2022</i>
<i>Visakha Bucha Day*</i>	<i>May 15, 2022</i>
<i>Substitution for Visakha Bucha Day*</i>	<i>May 16, 2022</i>

Remark \* Holiday, No classes during this period



## Course Outline

### EE412 : Macroeconomics Analysis

Semester 2/2021 (January 10<sup>th</sup> – May 7<sup>th</sup>, 2022)

**Number of Credit:** 3 Credits

**Prerequisite:** EE 312 and EE 320 (or EE 421)

**Course Description:** This course is for those undergraduate students who seek to understand advanced macroeconomic tool. The main topics in this course include dynamic macroeconomics and asset price theory that form the insights of various economic policies.

**Course Objectives:** Encourage students to improve their analytical skills.

#### Class Time and Logistic

**Class day:** Wednesday and Friday

**Class time:** 09.30-11.00 AM

**Teaching Materials Platform:** BE Moodle

**Meeting Platform:** Zoom [Meeting ID: 984 8844 0230 Passcode: 746643]

**Zoom Link:** <https://zoom.us/j/98488440230?pwd=NzRVbzRCYlI0MFoxNHdFeUFRNURUZz09>

#### Instructor:

**Name:** Professor Dr. Arayah Preechametta

**Office Hours:** Wednesday and Friday 11.00-12.00 noon

**Email:** arayah@econ.tu.ac.th

**Phone:** 085-0729-566



**Main Text:** Sargent, Thomas J., Dynamic Macroeconomic Theory, Harvard University Press, Cambridge, 1987.

**Recommended Texts & Materials:**

Mankiw, Gregory, N., Macroeconomics, Worth Publishers, New York, 2006.

Romer, David. Advanced Macroeconomics, McGraw-Hill, Singapore, 2000.

**Suggested Readings:**

Blanchard, Olivier, J., and Stanley Fischer, Lectures on Macroeconomics, (Fourth Printing) the MIT Press, Cambridge, 1990.

**Grading Criteria:**

- Homework Assignment and Class Participation (20%)
- Mid-Term Examination (30%): Wednesday, March 2, 2022; 09.00-11.00 AM.
- Final Examination (50%): Tuesday, May 24, 2022; 09.00-12.00 noon.

**Expected Learning Outcomes:** Students will understand complex macro policy.

**Tentative Class Schedule:**

Week/Session	Date	Topics	Instructor
1/1-1/2	12/01/2022 14/01/2022	Introduction: <ul style="list-style-type: none"> <li>- Static analysis</li> <li>- Dynamic analysis</li> </ul>	Arayah
2/1 – 2/2	19/01/2022 21/01/2022	Solving a dynamic problem <ul style="list-style-type: none"> <li>- Traditional method: system of simultaneous equations</li> <li>- Backward recursive method</li> </ul>	Arayah
3/1 – 4/2	26/01/2022 28/01/2022 02/02/2022 04/02/2022	The Bellman's equations and time consistent optimal policies	Arayah

Week/Session	Date	Topics	Instructor
5/1 – 5/2	09/02/2022 11/02/2022	Applications <ul style="list-style-type: none"> <li>- Optimal consumption</li> <li>- Optimal growth</li> </ul>	Arayah
6/1 – 6/2	16/02/2022 18/02/2022	Asset Price: Hall's random walk of theory of consumption	Arayah
7/1 -7/2	23/02/2022 25/02/2022	The random walk theory of stock prices	Arayah
8/1 – 8/2	<b>28/02/2022- 05/02/2022</b>	<b>-----Mid-Term Examination-----</b>	
9/1 - 9/2	09/03/2022 11/03/2022	The random walk theory of stock prices	Arayah
10/1 – 10/2	16/03/2022 18/03/2022	The random walk theory of stock prices	Arayah
11/1 – 12/2	23/03/2022 25/03/2022 30/03/2022 01/04/2022	Lucas's Asset Pricing Function	Arayah
13/1 – 13/2	06/04/2022 08/04/2022	Lucas's Asset Pricing Function and Rational Expectation Equilibrium	Arayah
14/1 – 15/2	20/04/2022 22/04/2022 27/04/2022 29/04/2022	Applications: <ul style="list-style-type: none"> <li>- The term structure of interest rate,</li> <li>- Contingent claims,</li> </ul>	Arayah
16/1 – 16/2	04/05/2022 06/05/2022	<ul style="list-style-type: none"> <li>- The value of a firm</li> <li>- Government debt: the Ricardian Equivalence</li> </ul>	Arayah
	<b>24/05/2022</b>	<b>-----Final Examination-----</b>	

## **Course Outline**

### **EE 416 Behavioral Economics**

Semester 2/2021 (January 10 - May 7, 2022)

**Number of credits:** 3 credits (3-0-6)

Handouts will be posted before classes and the zoom recorded videos, as well as lecture notes, will be posted after each class on google classroom and BE Moodle.

**Prerequisites:** *EE 311*

**Course Description:** Concepts and frameworks in behavioral economics including comparative study of models for decision under uncertainty between mainstream economics and behavioral economics, empirical evidences that support behavioral economics, models that incorporate psychological and sociological factors for consumer and social behaviors, and other topics that the lecturer finds suitable.

## Evaluation:

Midterm Exam:	25%
Final Exam:	40%
Term paper:	25% (maximum of 5 people)
Free-form Project:	10% (maximum of 5 people)
Mid-term examination	<b>Thursday, March 3, 2022; 09.00 – 11.00 AM</b>
Final examination	<b>Tuesday, May 10, 2022; 1.30 – 4.30 PM</b>

## Main Textbooks:

1. Thaler, Richard H., and Cass R. Sunstein. *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press, 2008.
2. Kahneman, D. *Thinking, fast and slow*. New York, NY, US: Farrar, Straus and Giroux, 2011
3. Angner, Erik. *A course in behavioral economics*. Bloomsbury Publishing, 2020.

## Additional Books:

1. Sunstein, Cass R. *Sludge: What Stops Us From Getting Things Done And What To Do About It*. MIT Press, 2021
2. Wendel, Stephen. *Designing for behavior change: Applying psychology and behavioral economics*. O'Reilly Media, 2020.
3. Thaler, R. H. *Misbehaving: The making of behavioral economics*. 2015.
4. Corr, P., Plagnol, A. *Behavioral Economics the basics*. London: Routledge, <https://doi.org/10.4324/9781315391229> ( <https://www.behavioraleconomicsbasics.net/> ), 2019

## Expected Learning Outcomes:

### 1. Morality and Ethics

Applicability	Expected Learning Outcomes
●	1.1 Students demonstrate integrity.
○	1.2 Students prioritize social and public benefits over personal ones.
●	1.3 Students are punctual and comply with the code of conduct of the institution and society at large.
○	1.4 Students are responsible and accountable to society, the nation, and the subject of economics.
○	1.5 Students realize the cultural and environmental value of the sustainable society.

### 2. Knowledge

Applicability	Expected Learning Outcomes
●	2.1 Students know and understand modern economics principles and theories, and are up to date with new developments.
●	2.2 Students know and understand Thai and global economic structure, and the importance of major international economic events.
●	2.3 Students know and understand instruments of economic analysis.
●	2.4 Students know and understand applied fields in economics, including monetary, public, international, business, natural resource and environmental, industrial, agricultural, cooperative, political, developmental, and entrepreneurial economics as well as agribusiness.
○	2.5 Students are informed about related fields including sociology, business administration, education, law policy, and science.

### 3. Intellectual Development

Applicability	Expected Learning Outcomes
●	3.1 Students have developed individual critical thinking.
●	3.2 Students are sufficiently trained in research skills.
●	3.3 Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand causes of current economic problems in Thailand. Based on analysis and synthesis, students demonstrate an ability to propose policy guidelines to resolve problems.

#### 4. Interpersonal Skills and Responsibilities

Applicability	Expected Learning Outcomes
●	4.1 Students are responsible for assigned tasks and work in groups effectively.
●	4.2 Students have problem-solving skills.
○	4.3 Students show leadership skills and team spirit.
●	4.4 Students are always improving themselves.
○	4.5 Students have good interpersonal skills, adapting and working under different conditions.

#### 5. Quantitative Analysis, Communication and Information Technology

Applicability	Expected Learning Outcomes
●	5.1 Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.
●	5.2 Students communicate effectively and select appropriate presentation methods.
●	5.3 Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.

# Topics

## 1. Introduction to Behavioral Economics

- What is behavioral economics?
- What better insight can we get from studying behavioral economics?
- Principles of (Behavioral) Economics

### Reading:

Nudge, Ch. 1

Behavioral Economics(Corr and Plagnol), Ch.1 & 4

Laibson, David, and John A. List. 2015. "Principles of (Behavioral) Economics." *American Economic Review*, 105 (5): 385-90.DOI: 10.1257/aer.p20151047

### Further reading(non-required):

Tversky, A. and D. Kahneman(1974). "Judgement under uncertainty: Heuristics and Biases" *Science*, New Series, Vol. 185, No. 4157, pp. 1124-1131.

Rabin, M. (2013). "An Approach to Incorporating Psychology into Economics," *American Economic Review Papers and Proceedings*, 103(3), 617-22.

DellaVigna, S. (2009). "Psychology and Economics: Evidence from the Field," *Journal of Economic Literature*, 47, 315-372.

Camerer, C. and G. Loewenstein (2004). "Behavioral Economics: Past, Present, Future," in *Advances in Behavioral Economics*, C. Camerer, G. Loewenstein, and M. Rabin, eds., Princeton University Press.

Rabin, M. (1998). "Psychology and Economics," *Journal of Economic Literature*, 36, 11-46.

## 2. Public policy to combat error

- Choice Architecture
- Default option

### Reading:

Nudge, Ch. 4, 5, 11

Behavioral Economics(Corr and Plagnol), Ch. 6

### Further reading (non-required):

Sunstein, C. and R. Thaler (2003). "Libertarian Paternalism Is Not An Oxymoron." *University of Chicago Law Review*, 70, 1159-1202.

O'Donoghue, T. and M. Rabin (2003). "Studying Optimal Paternalism, Illustrated by a Model of Sin Taxes," *American Economic Review (Papers and Proceedings)*, 93, 186-191.

O'Donoghue, T. and M. Rabin (2006). "Optimal Sin Taxes," *Journal of Public Economics*, 90(10-11), 1825-1849.

### 3. Risk preferences

- Prospect theory
- Loss aversion
- The endowment effect
- Probability weighting
- Fourfold patterns of choices under risk
- Applications of Prospect theory

#### Reading:

Thinking Fast and Slow, Ch. 25-30

Nudge, Ch. 1

Behavioral Economics(Corr and Plagnol), Ch.4

#### Further reading(non-required):

Kahneman, D. and A. Tversky, (1979) "Prospect Theory: An Analysis of Decision Under Risk," *Econometrica*, 47, 263-291.

Camerer, C., L. Babcock, G. Loewenstein, and R. Thaler (1997). "Labor Supply of New York City Cabdrivers: One Day at a Time," *Quarterly Journal of Economics*, 112, 407-443.

Bruhin, A., H. Fehr-Duda, and T. Epper (2010). "Risk and Rationality: Uncovering Heterogeneity in Probability Distortion," *Econometrica*, 78, 1375-1412.

### 4. Time preferences

- Present Bias
- Procrastination and Self-control
- Commitment Devices
- Experimental evidences and applications of Time Discounting

#### Reading:

Nudge, Ch. 2, 6, 7

#### Further reading(non-required):

O'Donoghue, T. and M. Rabin (1999). "Doing it Now or Later," *American Economic Review*, 89, 103-124.

O'Donoghue, T. and M. Rabin (2001). "Choice and Procrastination," *Quarterly Journal of Economics*, 116, 121-160.

Laibson, D. (1997). "Golden Eggs and Hyperbolic Discounting," *Quarterly Journal of Economics*, 112, 443-477.

DellaVigna, S. and U. Malmendier (2006). "Paying Not to Go to the Gym," *American Economic Review*, 96(3), 694-719.

Gruber, J. and Mullainathan, S. (2005). "Do Cigarette Taxes Make Smokers Happier?" *Advances in Economic Analysis and Policy*, 5(1), Article 4.

Meier, S. and C. Sprenger (2010). "Present-Biased Preferences and Credit Card Borrowing," *American Economic Journal: Applied Economics*, 2(1), 193-210.

## 5. Projection bias

### Further reading(non-required):

Loewenstein, G., T. O'Donoghue, and M. Rabin (2003). "Projection Bias in Predicting Future Utility," Quarterly Journal of Economics, 118, 1209-1248.

Conlin, M., T. O'Donoghue, and T. Vogelsang (2007). "Projection Bias in Catalog Orders," American Economic Review, 97(4), 1217-1249.

## 6. Attention, Salience, and Memory

### Further reading(non-required):

Chetty, R., A. Looney, and K. Kroft (2009). "Salience and Taxation: Theory and Evidence," American Economic Review, 99(4), 1145-1177.

Lacetera, N., D. Pope, and J. Sydnor (2012). "Heuristic Thinking and Limited Attention in the Car Market," American Economic Review, 102(5), 2206-2236

## 7. The role of cognition and emotion in decision making

- Dual-Process theory
- Emotion and Decision-making

### Reading

Behavioral Economics(Corr and Plagnol), Ch.4

### Further reading(non-required):

Loewenstein, G., T. O'Donoghue, and S. Bhatia (2015). Modeling the interplay between affect and deliberation. Decision 2 (2), 55-81.

Lerner, J. S., Y. Li, P. Valdesolo, and K. S. Kassam (2015). Emotion and Decision Making. Annual Review of Psychology 66 (1), 799-823.

## 8. Social preferences

- Fairness
- Behavioral game theory
- Altruism, Kindness and cooperation
- Charity giving

### Reading:

Misbehaving, Ch. 14 – 15

### Further reading(non-required):

Kahneman D, J. Knetsch, and R. Thaler (1986b). "Fairness as a Constraint on Profit Seeking: Entitlements in the Market," American Economic Review, 76, 728-741.

Kahneman D, J. Knetsch, and R. Thaler (1986a). "Fairness and the Assumptions of Economics," Journal of Business, 59, 285-300.

DellaVigna, S., J. List, and U. Malmendier (2012). "Testing for Altruism and Social Pressure in Charitable Giving," Quarterly Journal of Economics, 127, 1-56.

## 9. Subjective Well-being and Happiness

- Measurement of subjective well-being

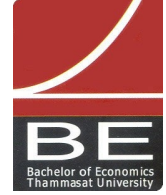
Further reading(non-required): Benjamin, D., O. Heffetz, M. Kimball, and A. Rees-Jones (2012). "What Do You Think Would Make You Happier? What Do You Think You Would Choose?" American Economic Review, 102(5), 2083-2110.

*The topics are subject to change as instructor sees fit when course proceeds.*



# **B.E. International Program**

## Faculty of Economics, Thammasat University



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### Course Syllabus

#### **EE421 Mathematical Economics I**

Semester 2/2021 (January 10 – May 7, 2022)

**Number of credits:** 3 credits (3-0-6)

#### **Course Description**

The application of matrices, Jacobian determinants, derivatives, partial derivatives and optimization, with and without constraints, to explain theories in Microeconomics and Macroeconomics, such as the theory of consumer behavior, The theory of production, equilibrium in goods and factor markets, equilibrium of national income in product and money markets, international trade, comparative static equilibrium analysis, the input-output model, determination of maximum-minimum point and duality of linear programming.

#### **Course Objectives:**

This course aims to provide the foundation of optimization as applied to the theory of Economics. The course covers the optimization of differentiable functions of single and several variables, both with and without constraints. Comparative Static analysis will be discussed with the use of Implicit Function Theorem and Envelope Theorem with matrix differentiation and algebra.

**Prerequisites:** MA217 (or MA212) and have completed or currently taking EE311

**Text:** Jeffrey Baldani, et. al., *Mathematical Economics*, 2<sup>nd</sup> edition, Dryden 2004.

**Lecture Notes:** Thanet Makjamroen, *Lecture Notes for EE421 Mathematical Economics I*.

**References:**

**Gale** [1960], *The Theory of Linear Economic Models*, McGraw-Hill.

**Jehle** [1991], *Advanced Microeconomics Theory*, Prentice-Hall.

**Sundaram** [1996], *A First Course in Optimization Theory*, Cambridge University Press.

**Simon and Blume** [1994], *Mathematics for Economics*, Norton.

**Sydsaeter and Hammond** [1995], *Mathematics for Economic Analysis*, Prentice-Hall.

**Evaluation:**

Midterm Exam    45% (March 3, 2022; 12.00 – 14.30 hrs.)

Final Exam        55% (May 23, 2020; 09.00 – 12.00 hrs.)

**Topics:**

**Chapter 1    Introduction**

- 1.1 Mathematical Economic Model
- 1.2 Use of Economic Model
- 1.3 An Example of Mathematical Models

**Chapter 2    Calculus of Single Variable**

- 2.1 Derivative
- 2.2 Examples of Derivatives in Economics
- 2.3 Derivatives and Increasing Functions
- 2.4 Second- and Higher-Order Derivatives
- 2.5 Optimization: Single Variable
  - 2.5.1 Necessary Conditions
  - 2.5.2 Sufficient Conditions
- 2.6 Concave and Convex Functions
- 2.7 Differentials

**Chapter 3    Calculus of Single Variable: Applications**

- 3.1 Labor Union
- 3.2 Profit Maximization in Perfect Competition
- 3.3 Profit Maximization of a Monopoly
- 3.4 Taxation on Monopoly
- 3.5 Profit Maximization of Duopoly (Cournot Model)
- 3.6 Balanced-Budget Multiplier

**Chapter 4    Multivariate Calculus**

- 4.1 Partial Derivatives
- 4.2 Second-Order Partial Derivatives and Cross Partial Derivatives

	4.3 Total Differentials
	4.4 Conventions of Matrix Notations for Derivatives of Functions of Several Variables
	4.5 Chain Rules of Composite Functions of Several Variables
	4.6 Directional Derivatives
	4.6.1 First-order Directional Derivatives
	4.6.2 Directional Derivatives and Optimization
	4.6.3 Second-order Directional Derivatives
	4.7 Mean-Value Theorem
	4.8 Taylor's Polynomials and Taylor's Approximation in $\mathbf{R}^n$
	4.9 Implicit Functions and Implicit Function Theorem
	4.10 Level Sets, Tangents and Gradients
	4.11 Homogeneity
<b>Chapter 5</b>	<b>Multivariate Calculus: Applications</b>
	5.1 Balanced-Budget Multipliers in Closed Economy
	5.1.1 Simple Keynesian Model
	5.1.2 IS-LM Model
	5.1.3 Aggregate Demand-Aggregate Supply Model
	5.2 Monetary Policy Effectiveness
	5.2.1 IS-LM Model
	5.2.2 Mundell-Fleming Model with Flexible Exchange Rate
	5.3 Tax Incidence in Supply-Demand Model
<b>Chapter 6</b>	<b>Multivariable Optimization without Constraints</b>
	6.1 Definitions of Extreme Points
	6.2 2-Variable Optimization
	6.3 First-Order Necessary Condition
	6.4 Second-Order Necessary Condition
	6.5 Sufficient Conditions
	6.6 Multivariable Optimization without Constraints
	6.7 First-Order Necessary Condition
	6.8 Second-Order Necessary Condition
	6.9 Sufficient Conditions
	6.10 Test of Definiteness of the Hessian
	6.11 Concavity, Convexity and Optimization
	6.12 Comparative Statics Analysis
<b>Chapter 7</b>	<b>Multivariable Unconstrained Optimization: Applications</b>
	7.1 Competitive Firm Input Choices: Cobb-Douglas Technology
	7.2 Competitive Firm Input Choices: General Production Technology
	7.3 Multiplant Firm
	7.4 Multi-Market Monopoly
	7.5 Statistical Estimation: Linear Regression
<b>Chapter 8</b>	<b>Constrained Optimization: Equality</b>
	8.1 The Lagrangian Method
	8.2 Graphical Interpretation
	8.3 Optimization with $k$ Equality Constraints

	8.4 Second-order Sufficient Conditions
	8.4.1 Bordered Hessian for Single Equality Constraint
	8.4.2 Bordered Hessian for $k$ Equality Constraints
	8.4.3 Test of Bordered Matrix
	8.5 Comparative Static Analysis: Sensitivity Analysis
<b>Chapter 9</b>	<b>Equality Constrained Optimization: Applications</b>
	9.1 Cost Minimization and Conditional Input Demand
	9.1.1 Sufficient Conditions
	9.1.2 comparative Static Analysis
	9.2 Utility Maximization: Log Utility Function
	9.3 Utility Maximization Subject to Budget and Time Constraints
	9.3.1 Sufficient Conditions
	9.3.2 Sensitivity analysis
	9.4 Intertemporal Consumption
	9.4.1 2-Period Case
	9.4.2 $n$ -Period Case
<b>Chapter 10</b>	<b>Inequality Constraints Optimization</b>
	10.1 First-Order Sufficient Conditions: One Inequality Constraint
	10.2 First-Order Sufficient Conditions: Several Inequality Constraints
	10.3 First-Order Sufficient Conditions: Mixed Constraints
	10.4 First-Order Sufficient Conditions: Minimization under Mixed Constraints
	10.5 Second-Order Sufficient Conditions: Mixed Constraints
	10.6 Second-Order Necessary Conditions
	10.7 Comparative Static analysis: Sensitivity Analysis
	10.8 Kuhn-Tucker Formulation
<b>Chapter 11</b>	<b>Inequality Constrained Optimization: Applications</b>
	11.1 Utility Maximization with Two Goods
	11.2 Two Goods Diet Problem: Linear Programming and its Duality
	11.3 Sales Maximization
	11.4 Intertemporal Consumption with Liquidity Constraint
<b>Chapter 12</b>	<b>Sensitivity Analysis and Envelope Theorems</b>
	12.1 The Meaning of the Multipliers
	12.2 The Meaning of Lagrange Multiplier: One Equality Constraint Case
	12.3 The Meaning of Lagrange Multiplier: Several Equality Constraint Case
	12.4 The Meaning of Lagrange Multiplier: Inequality Constraint Case
	12.5 Envelope Theorems
	12.6 Envelope theorem: Unconstrained Case
	12.7 Envelope Theorem: Equality Constraints Case
	12.8 Applications: Shephard's Lemma, Roy's Identity and Demand Function
	12.9 Slutsky's Equation
	12.10 Envelope Theorem: Inequality Constraints Case

**Course Outline**

**EE426 Econometrics 2**

**Semester 2/2020 (January 20 – May 19, 2021)**

**Number of credits**    3 credits

**Course Description:**

This course covers more advanced topics in econometrics for undergraduate level and focuses on both theoretical framework (basic concept) and empirical applications. The first parts introduce panel data models, and further discuss instrumental variables and two stage least squares. We then cover system of regressions and seemingly unrelated regression (SUR). This topic will also link to the topic of simultaneous equation system and its parameter estimation. Then, we turn our attention to exploring qualitative response models using maximum likelihood technique, and conclude by studying time series model.

**Prerequisites:**        *Curriculum 56: EE425 and MA217 (or MA212)*  
                              *Curriculum 61: EE425*

**Course Objectives:**

This course is designed to provide advanced econometrics techniques and enable students to apply econometric tools for economic analysis. Materials in this course will be balanced between theoretical concept and practices with the actual data and econometric software.

<b>Evaluation:</b>	Mid-term examination	30 %
	Final examination	40 %
	Assignment	30 %

**Computer Software:** STATA

## **Course Content:**

### **1. Review Basic Econometrics Concept**

#### Diagnostic Tests

- Its Relative Importance
- Key Diagnostic Tests
  - (a) Heteroskedasticity
  - (b) Residual Normality
  - (c) Functional Form Misspecification Tests
  - (d) Multicollinearity
- Functional Forms of Regression Model
  - (a) Types of Specification Errors
  - (b) Test for Functional Form Misspecification

### **2. Estimation methods**

- 2.1 Least Squares
- 2.2 System Estimation Methods
- 2.3 MLE
- 2.4 GMM

### **3. Limited Dependent Variable Models**

### **4. Panel Data Estimation**

### **5. Time-series Econometrics**

#### **Required Textbooks:**

\*Gujarati, D. (2009). *Basic Econometrics*. 5th ed. Singapore: McGraw-Hill.

Heij, C., deBoer, P., Franses, P.H., Kloek, T., & van Dijk, H.K. (2004). *Econometric Methods with Applications in Business and Economics*. New York: Oxford University Press. (Chapter 4)

Johnston, J., & DiNardo, J. (1997). *Econometric Methods*. 4th ed. Singapore: McGraw-Hill.

#### **Reference Texts:**

Enders, W. (2010), *Applied Econometric Time Series*, 3rd ed. Hoboken, NJ: John Wiley and Sons.

Greene, W.H. (2012). *Econometric Analysis*. 7th ed. Upper Saddle River, NJ: Prentice Hall.

Wooldridge, J.M. (2006). *Introductory Econometrics: A Modern Approach*. 3rd ed. Mason, OH: Thomson-South-Western.

**Expected Learning Outcomes:****1. Morality and Ethics**

Applicability	Learning Goals
●	1.1 Students demonstrate integrity.
○	1.2 Students prioritize social and public benefits over personal ones.
●	1.3 Students are punctual and comply with the code of conduct of the institution and society at large.
○	1.4 Students are responsible and accountable to society, the nation, and the subject of economics.
○	1.5 Students realize the cultural and environmental value of the sustainable society.

**2. Knowledge**

Applicability	Learning Goals
●	2.1 Students know and understand modern economics principles and theories, and are up to date with new developments.
●	2.2 Students know and understand Thai and global economic structure, and the importance of major international economic events.
●	2.3 Students know and understand instruments of economic analysis.
●	2.4 Students know and understand applied fields in economics, including monetary, public, international, business, natural resource and environmental, industrial, agricultural, cooperative, political, developmental, and entrepreneurial economics as well as agribusiness.
○	2.5 Students are informed about related fields including sociology, business administration, education, law policy, and science.

**3. Intellectual Development**

Applicability	Learning Goals
●	3.1 Students have developed individual critical thinking.
●	3.2 Students are sufficiently trained in research skills.
●	3.3 Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand causes of current economic problems in Thailand. Based on analysis and synthesis, students demonstrate an ability to propose policy guidelines to resolve problems.

#### 4. Interpersonal Skills and Responsibilities

Applicability	Learning Goals
●	4.1 Students are responsible for assigned tasks and work in groups effectively.
●	4.2 Students have problem-solving skills.
○	4.3 Students show leadership skills and team spirit.
●	4.4 Students are always improving themselves.
○	4.5 Students have good interpersonal skills, adapting and working under different conditions.

#### 5. Quantitative Analysis, Communication and Information Technology

Applicability	Learning Goals
●	5.1 Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.
○	5.2 Students communicate effectively and select appropriate presentation methods.
●	5.3 Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.

**Course Schedule:**

<b>Week</b>	<b>Content</b>	<b>Chapter</b>	<b>Assign</b>
Week 1 19, 21 Jan 21	Review - Estimation Method – GLS	1-13	
Week 2 26, 28 Jan 21	Estimation Method – System Estimation	18-20	
Week 3 2, 4 Feb 21	Estimation Method – MLE	Heij 4	
Week 4 9, 11 Feb 21	Estimation Method – MLE (Cont.)	Heij 4	
Week 5 16, 18 Feb 21	Estimation Method – GMM	Heij 4	
Week 6 23, 25 Feb 21	Binary Choice Models - Logit-Probit Model	15	
Week 7 2, 4 Mar 21	Panel Data Model	16	
Mid-term 11 Mar 21	<b>Take-home Mid-term Exam</b>		
Week 8 18 Mar 21	Multinomial Data Models	15	
Week 9 23, 25 Mar 21	Multivariate Data Models	15	
Week 10 30 Mar, 1 Apr 21	Limited Dependent Variables Model	15	
Week 11 8 Apr 21	Limited Dependent Variables Model (Cont.)	15	
Week 12 7, 9 Apr 21	Time Series Models – Properties – Unit Root Test	21-22	
Week 13 20, 22 Apr 21	Time Series Models – ARIMA Models – GARCH Models	21-22	
Week 14 27, 29 Apr 21	Time Series Models – VARs	22	
Week 15 4, 6 May 21	Time Series Models – VARs (Cont.)	22	
Week 16 4, 6 May 21	Time Series Models – VARs (Cont.)	22	
Final Exam 28 May 21	<b>Take-home Final Exam</b>		

## Course Syllabus

### **EE 431 Economics of Financial Markets and Institutions**

Semester 1/2021 (August 9 – November 27, 2021)

**1. Number of credits:** 3 credits (3-0-6)

**5. Course description:**

Money and capital markets at the micro level; Financial assets; financial risks and financial risks bearing; Theory of equilibrium pricing of financial assets; the CAPM and APT models; Interest rate structure; bond and equity instruments; Financial derivatives; Asymmetric information in financial market; The study of financial institutions with the emphases on theories regarding the roles and functions of commercial banks; Risk management of financial institutions; Monitoring and controlling of financial institutions; The deposit insurance system and financial institution business from the perspective of industrial economics.

**6. Prerequisite:** EE311

## 7. Objective of the course:

- (1) To provide students with understanding of financial asset characteristics; risk, return and liquidity
- (2) To provide students with understanding of debt market and interest rate at microeconomic level.
- (3) To provide students with understanding of decision process for investment in financial assets at microeconomic level, where investors seek to maximize their expected utility under constraint (combination of risk and returns available in the financial market)
- (4) To provide students with understanding of diversification, degree of risk aversion, risk premium, which are important determinants of the equilibrium price of financial assets in the financial market.
- (5) To provide students with how to derive of equilibrium in the financial market
- (6) To provide students with understanding of asymmetric information problem in the financial market and the role of financial intermediaries
- (7) To provide students with understanding of risk management of financial institutions
- (8) To provide students of understanding of agency problem and excessive risk-taking in the financial market and how to mitigate the situation
- (9) To provide students with understanding of bank's liquidity creation, bank's liquidity problem, bank runs and deposit insurance

## 8. Evaluation

Homework	10%
Quiz	30%
Mid-term exam	25% (Topic 1 – Topic 4)
Final exam	35% (Topic 4 – Topic 8)

**Mid-Term Examination:** 28 September 2021, 9.00 – 11.00 hr.

**Final Examination:** 8 December 2021, 13.30 -16.00 hr.

### Remarks:

1. Evaluation methods are subjected to changed.
2. More information will be announced in the Zoom Class, Google Classroom or Line Official.
3. When doing any essay exam or assignments use graphs, mathematical expressions or else to support your answer where appropriate. Marks depend on quality of explanation.

## 9. Teaching Materials and Resources

### Required Text:

Frederic Mishkin, The Economics of Money, Banking and Financial Markets 9<sup>th</sup> Edition (Pearson, 2009)

Peter D Spencer, The Structure and Regulation of Financial Market (Oxford University Press, 2000)

Copeland, Thomas E. and J. Fred Weston, Financial Theory and Corporate Policy, 4th edition, (Addison-Wesley, 2005)

Diamond(2007), Bank and Liquidity Creation: A Simple Exposition of the Diamond-Dybvig Model, Federal Reserve Bank of Richmond Economic Quarterly.

Diamond(1996) Financial Intermediation and Delegated Monitoring: A Simple Example, Federal Reserve Bank of Richmond Economic Quarterly.

Kent Mathews and John Thompson, The Economics of Banking 2<sup>nd</sup> Edition (John Wiley & Son, 2008)

Bailey R.E., The Economics of Financial Markets, Cambridge University Press (2005)

Remarks: Supplement handouts or reading will be posted on *Google Classroom*.

### Lecture presentation will be provided by the lecturer.

- The lecture presentation is designed to support learning in the class. Therefore, it is not sufficient for the exam.

## 10. Lecture/Schedule

Topics	Reading
<b>Part I : Economic Analysis of Asset Prices</b>	
Topic 1. Financial assets and the overview of financial market (1 time)	FM2009
1.1 Money and functions of money	Ch. 1-3
1.2 Money, Wealth and Income	
1.3 Financial Market and Financial Assets	
1.4 Financial Assets Classified by Information Theory	
1.5 Flows of Funds in The Financial Market	
1.6 Structure of Financial Market	
Topic 2. Debt Market and Structure of interest rates (7 times)	FM2009
2.1 Measuring Interest Rates	Ch.4-6
2.2 Nominal Interest Rates and Real Interest Rates	
2.3 The Behavior of Interest Rates	
2.4 Risk and Term Structure of Interest Rates	
Topic 3. Mean-Variance Analysis (3 times)	Copeland2005 Ch.5
3.1 Measuring Risk and Returns for a Single Asset	
3.2. Measuring Portfolio Risk and Returns	
3.3. Efficient Frontier with Two Risky Assets	
3.4. Efficient Frontier with One Risky and One Risk Free Asset	
3.5. Optimal Portfolio Choice N Risky asset	
3.6. Optimal Portfolio Choice N Risky asset and One Risk Free Asset	
Topic 4: Capital asset pricing model (CAPM) and Arbitrage Pricing Theory (APT) (4 times)	Copeland2005 Ch.6
4.1 Capital Asset Pricing Model	
• Portfolio Diversification and Individual Asset Risk	
• Assumptions	
• The Efficiency of Market Portfolio	
• Derivation of CAPM	
• Properties of CAPM	
4.2 Arbitrage Pricing Theory	
• Arbitrage Opportunity	
• Replicating Portfolio	
• Derivation of Arbitrage Pricing Theory	
Topics	Reading

## Part II : Financial Institution, Financial Market and Asymmetric Information

<b>Topics</b>	<b>Reading</b>
Topic 5. Financial institutions (2 times)	FM2009
5.1 Introduction	Ch.9 -11
5.2 Major risks faced by banks	KM 2008
5.3 Liquidity Management and The Role of Reserve	
5.4 Interest Rate Risk Management	Ch.7
5.5 Credit Risk Management	
5.6 Capital Adequacy Management	
Topic 6. Theory of financial intermediation (5 times)	PS2000
6.1 Introduction	Ch.8
6.2 Shortcomings of direct finance	
6.3 How banks help to resolve the problem?	Diamond (1996)
(a) Confidentiality and The Banking Relationship	
(b) Economies of Scale and Role of Diversification in Banking: Financial Intermediation as Delegated Monitoring	
Topic 7. Convexity, excessive risk, and bank regulation (5 times)	PS2000
7.1 Decision Under Uncertainty	Ch.9
7.2 Agency Cost of Debt Finance: Conflict between a firm's bondholders and stockholders	KM 2008
7.3 Asset Substitutions Problem	Ch.8
7.4 How to solve asset substitution problem?	
7.5 Adverse Selection and Credit Rationing	
Topic 8. Bank runs, systemic risk and deposit insurance (4 times)	Diamond (2007)
8.1 Introduction	
8.2 Demand for Liquidity	
8.3 Bank Liquidity Creation	
8.4 Bank Runs	
8.5 Suspension of Convertibility and Deposit Insurance	
8.6. Note on the optimal level of liquidity	

## 12. Class Policies:

**Any changes** to the course outline (if any) **will be announced in the Zoom Class, Google Classroom or Line Official**. It is the responsibility of the students to obtain any information announced in the class. Ignorance of such information due to absence of class is not a valid defense. If a student has any question about the lecture, please do not hesitate to consult the lecturer during office hours. The lecturer would be pleased to assist. Please make an appointment in advance via email. Please allow enough time (at least 2 working days) for the lecturer to confirm the appointment. I will be available for you only if you confirm such an appointment by emailing back.

Attendance is highly encouraged

Proper manner and courtesy are expected

A student may contact me by sending email.

On the night before a text/exam the cut off for any question is 7.00 pm. via email, I can provide only short answer. If you prefer long answer, please come to visit me by making an appointment.



## Course Outline

### EE432: Monetary Theory and Policy

**Semester 1/2021 (August 9 – November 27, 2021)**

**Number of Credit:** 3 credits (3-0-6)

**Prerequisite:** EE312

### **Course Description:**

This course aims to provide the student with an introduction to the role of money, financial markets, financial institutions and monetary policy in the economy, thus facilitating a solid foundation for further study and enhancing professional capability in the financial services industry.

It will investigate the role of money, theories regarding the supply of and demand for money and the relationship between money, credit and debt will also be emphasized. The course will then study the role of financial markets in the economy with a particular emphasis on bond markets, term structure and their implications. In addition, it will further analyze the evolving roles of central banks and their views regarding execution monetary policy, including recent and historical international policy actions. Both theoretical concept and empirical evidence, especially current economic situations will be used to examine the effects of monetary policies. In terms of theory, this course will adopt macroeconomic model to study the rationale behind monetary policy and provide a thorough understanding of transmission mechanisms and their impacts on macroeconomic variables, specifically economic growth and inflation.

Besides, it will also cover the formulation of unconventional monetary policy, so called quantitative easing, when interest rates approach the zero-lower bound. Another area of study in this course is the consideration of modern monetary theories, particularly, in the context of real business cycle model and the New Keynesian model.

### **Course Objectives:**

1. To develop knowledge and analytic skill to anticipate the central bank's monetary policy reaction on different economic situations.
2. To enhance capability to make a preliminary analysis of novel monetary policy execution together with its associated impacts and determine the appropriate choice of monetary stance.
3. To encourage students to take an active learning approach by reading lecture notes and participating individual assignment, exercise, in-class discussion and peer-to-peer learning.

### **Main Text:**

The primary textbook will be:

Cecchetti, Stephen and Schoenholtz, Kermit. (2020) **Money, banking, and financial markets**. (6th edition). McGraw-Hill.

### **Recommended Texts & Materials:**

Students are required to read all lecture notes presented through virtual classroom.

### **Suggested Readings:**

Students should also study other related teaching materials, including case-based or topic-based articles, news clips and central banks' publications, posted on this subject's moodle platform.

### **Course Evaluation:**

The course will be assessed by active learning approach with a variety of individual learning, including in-class discussion on current economic situation, individual exercise, individual report assignment, online mid-term examination, and online final examination. Students should also follow the current economic situations which will be brought into discussion via the online classes. Besides, the students are encouraged to utilize a web-based platform provided by Mc-Graw Hill Connect <https://connect.mheducation.com>, which linked to our BE-moodle as additional source of learning. The major materials are lecture note presentation provided on BE-moodle and other related materials posted on moodle platform. The assessment criteria are detailed as follow.

1. Attendance and in-class participation	10%
2. Individual exercise	10%
3. Individual report assignment	10%
4. Online mid-term examination	30%
5. Online final examination	40%

### **Grading Criteria:**

A	=	80 and above
B+	=	75 - 79.9
B	=	70 - 74.9
C+	=	65 - 69.9
C	=	60 - 64.9
D+	=	55 - 59.9
D	=	50 - 54.9
F	=	49.9 and below

## Expected Learning Outcomes:

### 1. Morality and Ethics

Applicability	Expected Learning Outcomes
●	1.1 Students demonstrate integrity.
●	1.2 Students prioritize social and public benefits over personal ones.
●	1.3 Students are punctual and comply with the code of conduct of the institution and society at large.
●	1.4 Students are responsible and accountable to society, the nation, and the subject of economics.
○	1.5 Students realize the cultural and environmental value of the sustainable society.

### 2. Knowledge

Applicability	Expected Learning Outcomes
●	2.1 Students know and understand modern economics principles and theories, and are up to date with new developments.
●	2.2 Students know and understand Thai and global economic structure, and the importance of major international economic events.
○	2.3 Students know and understand instruments of economic analysis.
●	2.4 Students know and understand applied fields in economics, including monetary, public, international, business, natural resource and environmental, industrial, agricultural, cooperative, political, developmental, and entrepreneurial economics as well as agribusiness.
○	2.5 Students are informed about related fields including sociology, business administration, education, law policy, and science.

### 3. Intellectual Development

Applicability	Expected Learning Outcomes
●	3.1 Students have developed individual critical thinking.
●	3.2 Students are sufficiently trained in research skills.
●	3.3 Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand causes of current economic problems in Thailand. Based on analysis and synthesis, students

<b>Applicability</b>	<b>Expected Learning Outcomes</b>
	demonstrate an ability to propose policy guidelines to resolve problems.

#### **4. Interpersonal Skills and Responsibilities**

<b>Applicability</b>	<b>Expected Learning Outcomes</b>
●	4.1 Students are responsible for assigned tasks and work in groups effectively.
●	4.2 Students have problem-solving skills.
○	4.3 Students show leadership skills and team spirit.
●	4.4 Students are always improving themselves.
○	4.5 Students have good interpersonal skills, adapting and working under different conditions.

#### **5. Quantitative Analysis, Communication and Information Technology**

<b>Applicability</b>	<b>Expected Learning Outcomes</b>
○	5.1 Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.
○	5.2 Students communicate effectively and select appropriate presentation methods.
○	5.3 Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.

#### **Tentative Class Schedule:**

<b>Week</b>	<b>Topic</b>	<b>Date</b>
1.	Financial instruments, financial markets, and financial institutions (Cecchetti & Schoenholtz Textbook Chapter 3)	14 Aug 2021
2.	Understanding risk (Cecchetti & Schoenholtz Textbook Chapter 5)	21 Aug 2021
3.	The risk and term structure of interest rates (Cecchetti & Schoenholtz Textbook Chapter 7)	28 Aug 2021
4.	The economics of financial intermediation (Cecchetti & Schoenholtz Textbook Chapter 11)	4 Sep 2021

Week	Topic	Date
5.	Depository institutions: banks and bank management (Cecchetti & Schoenholtz Textbook Chapter 12)	11 Sep 2021
6.	Regulating the financial system (Cecchetti & Schoenholtz Textbook Chapter 14)	18 Sep 2021
7.	Central banks in the world today (Cecchetti & Schoenholtz Textbook Chapter 15) & Mid-term exam revision	25 Sep 2021
	Mid-term examination (Online)	2 Oct 2021 9-11 AM
8.	The central bank balance sheet and the money supply process (Cecchetti & Schoenholtz Textbook Chapter 17)	9 Oct 2021
9.	Monetary policy: stabilizing the domestic economy (Cecchetti & Schoenholtz Textbook Chapter 18)	16 Oct 2021
10.	Exchange rate policy (Cecchetti & Schoenholtz Textbook Chapter 19)	28 Oct 2021 (TBC) <i>(Make-up class for the Sat 23 Oct Holiday)</i>
11.	Money growth and money demand (Cecchetti & Schoenholtz Textbook Chapter 20)	30 Oct 2021
12.	Output, inflation, and monetary policy (Cecchetti & Schoenholtz Textbook Chapter 21)	6 Nov 2021
13.	Understanding business cycle fluctuations (Cecchetti & Schoenholtz Textbook Chapter 22)	13 Nov 2021
14.	Modern monetary policy and the challenges (Cecchetti & Schoenholtz Textbook Chapter 23)	20 Nov 2021
15.	Special topic: New Keynesian monetary economics & Final exam revision	27 Nov 2021
	Final examination (Online)	9 Dec 2021 1.30 – 4.00 PM

## Course Outline

### **EE 435 Introductory Financial Econometrics** **Semester 1/2021 (August 9 – November 27, 2021)**

**Number of Credit:** 3 (3-0-6)

**Prerequisite:** EE325 (or EE425) and EE431 (or EE432)

**Course Description:** The application of econometrics method to financial and macroeconomics data, emphasizing at time-series models; Characteristics and properties of financial data; Univariate Time-Series Model; Regression with the long-run relationship and short-run dynamics; Volatility Model; Trainings in statistical software.

**Course Objectives:** This course aims to apply econometric methodology with the economic and financial theory in explaining empirical data, and introduce a more advanced econometrics methodology beyond basic econometrics, especially time series econometrics. The objective is to train students for empirical research. The course focuses mainly on model formulation, parametric estimation method, and applications of the model. Emphasize of the course will be on empirical examples rather than theoretical proof. However, students are all expected to have a good understanding of basic statistics, calculus, and matrix algebra. Thus, students are all responsible for all pre-requisites of the course. This course also aims to have students learn how to use computer software in estimating the econometric models by letting students work on empirical assignments concerning on each topic.

### Main Text:

Brooks, C. (2019). *Introductory Econometrics for Finance*. 4th ed. Singapore: Cambridge University Press.

Heij, C., de Boer, P., Franses, H.P., Kloek, T., & van Dijk, K.H. (2004). *Econometric Methods with Applications in Business and Economics*. New York, NY: Oxford University Press. (Chapter 4)

### Recommended Texts & Materials

Baltagi, B.H. (2008). *Econometric Analysis of Panel Data*. 4th ed. West Sussex, UK: John Wiley & Sons.

Berndt, E.R. (1991). *The Practice of Econometrics: Classic and Contemporary*. New York: Addison-Wesley Publishing. (Chapter 2)

Enders, W. (2014). *Applied Econometric Time Series*. 4th ed. New York: John Wiley & Sons.

Greene, W.H. (2008). *Econometric Analysis*. 6th ed. Upper Saddle River, NJ: Prentice Hall.

Hamilton, J.D. (1994). *Time Series Analysis*. Princeton, NJ: Princeton University Press.

Johnston, J., & DiNardo, J. (1997). *Econometric Methods*. 4th ed. Singapore: McGraw-Hill.

Ruud, P.A. (2000). *An Introduction to Classical Econometric Theory*. New York: Oxford University Press.

### Suggested Readings:

### Grading Criteria:

1. Assignments	20%
2. Group Projects	12%
3. Group Workshop	13%
4. Midterm Exam	25%
5. Final Exam	<u>30%</u>
	<u>100%</u>

### Expected Learning Outcomes:

#### 1. Morality and Ethics

Applicability	Learning Goals	Expected Learning Outcomes
●	1.1 Students demonstrate integrity.	Learn how to make interpretation of the estimated results without bias.
●	1.2 Students prioritize social and public benefits over personal ones.	Learn how to make interpretation of the estimated results without bias.
●	1.3 Students are punctual and comply with the code of conduct of the institution and society at large.	Submit Assignments on time.

●	1.4 Students are responsible and accountable to society, the nation, and the subject of economics.	Learn how to make interpretation of the estimated results without bias.
○	1.5 Students realize the cultural and environmental value of the sustainable society.	Learn how to make interpretation of the estimated results without bias.

## 2. Knowledge

Applicability	Learning Goals	Expected Learning Outcomes
●	2.1 Students know and understand modern economics principles and theories, and are up to date with new developments.	Learn how to construct econometric models based on economic and financial theories.
●	2.2 Students know and understand Thai and global economic structure, and the importance of major international economic events.	Learn how to construct econometric models based on economic and financial theories.
○	2.3 Students know and understand instruments of economic analysis.	Learn how to construct econometric models based on economic and financial theories.
●	2.4 Students know and understand applied fields in economics, including monetary, public, international, business, natural resource and environmental, industrial, agricultural, cooperative, political, developmental, and entrepreneurial economics as well as agribusiness.	Learn how to construct econometric models based on economic and financial theories.
○	2.5 Students are informed about related fields including sociology, business administration, education, law policy, and science.	Learn how to construct econometric models based on economic and financial theories.

## 3. Intellectual Development

Applicability	Learning Goals	Expected Learning Outcomes
●	3.1 Students have developed individual critical thinking.	Learn how to make discussion based on estimated results.
●	3.2 Students are sufficiently trained in research skills.	Learn how to make discussion based on estimated results.
●	3.3 Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand causes of current economic problems in Thailand. Based on analysis and synthesis, students demonstrate an ability to propose policy guidelines to resolve problems.	Learn how to make discussion based on estimated results.

#### 4. Interpersonal Skills and Responsibilities

Applicability	Learning Goals	Expected Learning Outcomes
●	4.1 Students are responsible for assigned tasks and work in groups effectively.	Work on group project and workshop.
●	4.2 Students have problem-solving skills.	Work on group project and workshop.
○	4.3 Students show leadership skills and team spirit.	Work on group project and workshop.
●	4.4 Students are always improving themselves.	Work on group project and workshop.
○	4.5 Students have good interpersonal skills, adapting and working under different conditions.	Work on group project and workshop.

#### 5. Quantitative Analysis, Communication and Information Technology

Applicability	Learning Goals	Expected Learning Outcomes
○	5.1 Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.	Learn how to apply econometric model in answering research questions.
○	5.2 Students communicate effectively and select appropriate presentation methods.	Learn how to apply econometric model in answering research questions.
○	5.3 Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.	Learn how to apply econometric model in answering research questions.

## Class Schedule:

Week	Date	Content	Reading	Activity (Due)
1	10/8/2021	<u>Review Least Squares Estimation Method</u> - Ordinary Least Squares Estimation Method	Ch 1-2	
	12/8/2021 (Clip)	<u>Review Least Squares Estimation Method</u> - Least Squares Estimation – Matrix Approach - Generalized Least Squares Estimation Method	Ch 3-4	
2	17/8/2021	<u>Application of Simple Regression Model</u> Capital Asset Pricing Model <u>Application of Multiple Regression Model</u> Fama-French Three Factor Model	Handout	Q&A
	19/8/2021	<u>Application of Dummy Variable Technique</u> Calendar Effect in Stock Market <u>Workshop:</u> <u>Database – Eikon &amp; Datastream (By Dr.Jutamas)</u>	Handout	WS1
3	24/8/2021	<u>Simultaneous Equation Model</u> Simultaneous Biased	Ch 6	Q&A (Assign 1)
	26/8/2021	<u>Simultaneous Equation Model</u> Indirect Least Squares (ILS) Two Stage Least Squares (2SLS) Three Stage Least Squares (3SLS)	Ch 6	WS2
4	31/8/2021	<u>Maximum Likelihood Estimation (MLE) Method</u> Concept	Heij 4	Q&A (Assign 2)
	2/9/2021	<u>Maximum Likelihood Estimation (MLE) Method</u> Computation Inferential Statistics	Heij 4	WS3
5	7/9/2021	<u>Limited Dependent Variable Models</u> Logit & Probit Model – Concept	Ch 11	Q&A
	9/9/2021	<u>Limited Dependent Variable Models</u> Logit & Probit Model – Inferential Statistics	Ch 11	WS4 (Project 1)
6	14/9/2021	<u>Panel Data Models</u> Characteristic of Data and Problems. Model with Heteroscedasticity, Autocorrelation and Cross-sectional Correlation.	Ch 10	Q&A (Assign 3)
	16/9/2021	<u>Panel Data Models</u> Fixed Effects Models. Random Effects Models.	Ch 10	WS5
7	21/9/2021	Univariate Time Series Models Stationary vs Nonstationary	Ch 5	Q&A (Assign 4)
	23/9/2021	Univariate Time Series Models (cont.) Integrated Series	Ch 5	WS6
8	28/9/2021 9:00-14:00	<b>Take-Home Midterm Exam</b> (Week 1 – 6)		

Week	Date	Content	Reading	Activity (Due)
9	5/10/2021	<u>Univariate Time Series Models</u> (cont.) Unit Root Test	Ch 5	Q&A
	7/10/2021	<u>Time Series Models</u> (cont.) Cointegration & Error Correction Models	Ch 5	WS7
10	12/10/2021	<u>Univariate Time Series Models</u> (cont.) ARIMA Model – Estimation	Ch 5	Q&A (Assign 5)
	14/10/2021	<u>Univariate Time Series Models</u> (cont.) ARIMA Model – Forecast	Ch 5	WS8
11	19/10/2021	<u>Modelling Volatility and Correlation</u> Autoregressive Conditional Heteroscedasticity (ARCH), ARCH-M	Ch 8	Q&A (Assign 6)
	21/10/2021	<u>Modelling Volatility and Correlation</u> (cont.) Generalized Autoregressive Conditional Heteroscedasticity (GARCH) EGARCH	Ch 8	WS9
12	26/10/2021	<u>Multivariate Time Series Models</u> Vector Autoregressive (VARs) Model – Concept	Ch 6	Q&A (Assign 7)
	28/10/2021	<u>Multivariate Time Series Models</u> (cont.) Vector Autoregressive (VARs) Model – Procedure	Ch 6	WS10
13	2/11/2021	<u>Multivariate Time Series Models</u> (cont.) Impulse Response Analysis	Ch 6	Q&A (Project 2)
	4/11/2021	<u>Multivariate Time Series Models</u> (cont.) Orthogonal Impulse Response Analysis	Ch 6	WS11
14	9/11/2021	<u>Multivariate Time Series Models</u> (cont.) Forecast Error Variance Decomposition	Ch 6	Q&A (Assign 8)
	11/11/2021	<u>Modelling Long-run Relationships in Finance</u> Engle Granger Cointegration Test	Ch 7	WS12
15	16/11/2021	<u>Modelling Long-run Relationships in Finance</u> (cont.) Johansen Cointegration Test	Ch 7	Q&A (Assign 9)
	18/11/2021	<u>Modelling Long-run Relationships in Finance</u> (cont.) Vector Error Correction Models (VECM)	Ch 7	WS13
16	23/11/2021	<u>Additional Time Series Models</u>	Handout	Q&A (Assign10)
	25/11/2021	<u>Additional Time Series Models</u> (cont.)	Handout	Q&A
	<b>Wed. 8/12/2021 13:30-18:30</b>	<b>Take-Home Final Exam</b> (Week 7 – 16)		

**Remarks:**

- ◆ Mid-Term Examination (Tuesday, September 28, 2021, 09.00 - 15.00 hrs.)
- ◆ Final Examination (Wednesday, December 8, 2021, 13.30 – 18.30 hrs.)

## Course Outline

### **EE439: Seminar in Monetary and Financial Economics**

**Semester 2/2021 (January 10<sup>th</sup> – May 7<sup>th</sup>, 2022)**

**Number of Credit:** 3 credits (3-0-6)

**Prerequisite:** EE431 and EE432

We assume that students possess the minimum prerequisites above and that students have strong interest in conducting research in the area of monetary and financial economics. Students should have no trouble with basic econometrics (e.g. multivariable OLS).

#### **Course Description:**

Seminar and research on specific topics in monetary and financial economics under supervision and guidance of the lecturer.

#### **Course Objectives:**

The main objective of this course is to get students to think critically and research systematically on the current issues in monetary and financial economics, which may include central banking, financial markets, capital flows and exchange rate, and selected topics on financial crises. Students are expected to proactively read on current issues, dynamically participate in class discussion, and conduct your own independent research. The course is designed such that students would apply economic theories and quantitative analyses to real-world questions of modern-day monetary and financial economics. The ultimate goal of the course is to effectively transition students into a role of an active monetary and/or financial economist.

### **Main Text:**

No textbook required; Reading list will be provided in the first meeting.

### **Suggested Readings:**

Online economist articles including: <http://voxeu.org>  
<https://project-syndicate.org>  
<https://www.pier.or.th/>

### **Grading Criteria:**

Seminar	35%	
Leading discussion	20%	
(overall understanding / presentation skills)		
Participating in class discussions	15%	
Research Paper	75%	
Proposal	10%	
1st Result Presentation	10%	
Final Presentation	20%	
(Overall understanding of issue / discussion of methods and results / presentation skills, Q&A)		
Final draft	30%	

Grade assignments follow the Thammasat grading system.

## Potential Topics for Discussions:

- The revival of inflation: how should the central bank respond?
- Financial markets in the midst of COVID-19 pandemic
- Central banks' unconventional responses to COVID-19
- Unwanted and unintended consequences of low-for-long interest rates and quantitative easing
- Redistributive impact of monetary policy
- The interactions between financial cycles and business cycles
- The future of money under the rapid growth of cryptocurrencies, stablecoins and CBDCs
- The future of finance: new players, new functions, new risks
- Climate change: implications on monetary policy and finance

## Tentative Class Schedule:

Meeting	Date	Topics
1	Jan 15	Introduction and preliminary discussions
2	Jan 22	Research Methods
3	Jan 29	Lecture: "a monetary lifeline: central banks' crisis response"
4	Feb 5	Class cancelled
5	Feb 12	<b>Proposal Presentation (Session 1)</b> – Student's presentation of proposal <b>Proposal Presentation (Session 2)</b> <i>Submission deadline for written proposal: Monday, Feb 14</i>
6	Feb 19	Discussions of selected topics (1)
7	Feb 26	Discussions of selected topics (2)
	Mar 5	No class – Mid-term Examination
8	Mar 12	Class cancelled
9	Mar 19	Discussions of selected topics (3)
10	Mar 26	Discussions of selected topics (4)
11	Apr 2 9am-noon 1-4pm*	<b>First-Result Presentation (Session 1)</b> – Students presenting preliminary results <b>First-Result Presentation (Session 2)</b>
	Apr 9	Discussions of selected topics (5)
12	Apr 16	No Class – Songkran Day Festival
13	Apr 23	Discussions of selected topics (6)
14	Apr 30	Class cancelled
15	May 7 9am-noon 1-4pm*	<b>Final Presentation Day (Session 1)</b> – Students presenting their research <b>Final Presentation Day (Session 2)</b>
		<b>Final Research Paper due date</b> <i>Submission deadline for final paper: Friday, May 27</i>

## Class Policies:

Seminar and leading the discussions: Class participation is mandatory. A group of 3 students together will take turn in leading 1-hour class discussions plus 30-minute Q&A session on the topics of student's interest (see the list of topics above). The leading students are required to read at least 3 academic papers and must understand the theoretical underpinnings of these papers. Moreover, each student will also be assigned to comment (peer feedback) on other student's presentation.

Research paper: Students are required to write a research paper, either individually or in pair, by employing appropriate econometric tools. The research paper will be graded at three different stages: on the proposal, on a presentation of first results, and on the final presentation and final draft. Evaluation of the research paper is based on originality, effort, preparedness, cohesiveness of ideas, and analytical ability. In addition, students' discussion of peers' works during their presentation will count towards their participation score.

By registering for this class, students agree to accept all course requirements, deadlines, and other procedures outlined in this syllabus, and in class discussions. There will be no discussions, pleas, or arguments about these aspects of the administration of the course under any circumstances.



# B.E. International Program

Faculty of Economics, Thammasat University



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Course Outline  
for  
EE 442 Economics of Public  
Revenue

**Number of credits: 3 credits (3-0-6)**

**Lecture Time:**

**Course Description:** The analysis of the structure and composition of government revenues; Theory of taxation; Tax burden; Tax incidence; Taxation and efficiency; Taxation and equity; The effects of taxation on individual decision to perform economic activities, such as working, saving, investment and risk bearing. The difference between tax avoidance and tax evasion; The definition and effects of public debts on fiscal decentralization to local government; The study and analysis of the revenue structure; Subsidies allocation criteria and the effects of subsidies given to local governments on economic activities and social welfare; The analysis of tax reform and comparative studies of international experiences in tax reform.

**Prerequisites:** Prerequisites: EE212 (or EE214) and EE311. The course will require basic and intermediate micro-economics.

### Main Textbook:

The main textbook for the course will be,

Rosen, Harvey, and Gayer, Ted, *Public Finance*.

Additionally, students can supplement their reading with

Stiglitz, J., *Economics of the Public Sector*, W.W. Norton & Company 3rd ed., 1999.

Additionally, there will be supplemental reading throughout the semester, drawn from current literature, which will be used to illustrate the principles taught in class. These readings will be posted to moodle (moodle code 3571), and will be available on my website.

### Other Recommended Books:

Gruber, J., *Public Finance and Public Policy*, Worth Publishers 2nd ed. 2007.

Parthasarathi Shome, Ed, *IMF Tax Policy Handbook*, Fiscal Affairs Department, IMF, Washington D.C., 1995.

### Other Readings:

(I will post links to some of these, or the articles, on google classrooms) These readings may be referred to in class, I will announce before the class. For the Thai articles, I will be reading through a translation program, so be warned....

Vito Tanzi, and Howell H. Zee, Tax Policy for Emerging Market: Developing Countries, IMF Working Paper, March 2000.

Roy Bahl, and Richard Bird, Tax Policy in Developing Countries: looking Back and Forward, Working Paper Series, Joseph L. Rotman, School of Management, University of Toronto, May 2008.

Alan J. Auerbach, and James R. Hines Jr., Taxation and Economic Efficiency, NBER, February 2001.  
Richard Bird, and Eric M. Zolt, Introduction to Tax Policy Design and Development, World Bank, May 2003.

Varunyuwattana, Sakon and Duangmanee Laovakul, "Progress of Fiscal Decentralization in Thailand," in *Impacts & Challenges of Decentralization Policy towards Democratization and Development (A Comparative Perspective between Thailand and Indonesia)*, Proceeding in International Joint Seminar, Yogyakarta, Indonesia: Laboratory of Governmental Studies, University of Muhammadiyah, 2010.

Some optional Thai articles (I have read software generated translations of these, but claim no great knowledge of them) include

### Teaching Plan and Class Schedule

Date	Topic	Readings
Week 1	Section I	Stiglitz, chapter 1 Rosen and Gayer, chapter 1

Date	Topic	Readings
Week 2	Section 2 (Tools of Positive and Normative Analysis)	Rosen and Gayer, chapter 2-3
Week 3	Section 3 (Introduction to Taxation)	Rosen and Gayer, chapter 4,5 and 6 (selected readings) Stiglitz, chapter 17
Week 4	Section 4 (Thailand Revenue Structure)	
Week 5 and 6	Section 5 (Tax Incidence)	Rosen and Gayer, chapter 14 Stiglitz, chapter 18 and 23, p. 648-659
Week 7	Section 6 (Taxation and Economic Efficiency)	Rosen and Gayer, chapter 15 Stiglitz, chapter 19 and 23, p. 518-532
March 4	Midterm Exam	
Week 8	Section 7 (Optimal Taxation)	Rosen and Gayer, chapter 16
Week 9	Section 8 (Personal Income Tax)	Rosen and Gayer, chapter 17 Stiglitz, chapter 22
Week 10	Section 9	Rosen and Gayer, chapter 18
Week 11	Section 10 (Corporate Income Tax)	Rosen and Gayer, chapter 19 Stiglitz, chapter 23 6
Week 12	Section 11 (Tax Avoidance)	Rosen and Gayer, chapter 14, p. 349-354. Stiglitz, chapter 24
Week 13	Section 12 (Public Debt)	Stiglitz, chapter 28
Week 14	Section 13 (Tax Reform)	Rosen and Gayer, chapter 21 Stiglitz, chapter 25
Week 15	Section 14: Final Thoughts	Rosen and Gayer, chapter 22.
May 1	Final Exam Review	TBA
May 16	Final Exam	

#### Course Evaluation:

Type of evaluation	Evaluation Method	Evaluation date
Midterm Exam	40%	Tuesday, 8 March, 11:00 – 12:30

<b>Type of evaluation</b>	<b>Evaluation Method</b>	<b>Evaluation date</b>
Final Exam	50%	Friday, May 30, 9:00 – 12:00
Class Attendance/Discussion	10%	



# B.E. International Program

## Faculty of Economics, Thammasat University



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### Course Outline for EE449 Seminar in Public Economics

**Course Description:** The course will build upon previous work done in political economy, for students to produce a directed research paper on the topic.

**Prerequisites:** Completing at least two 400 level courses in the public Economics field

**Prerequisites:** EE 401 Political Economy. The course will require basic and intermediate micro-economics. Knowledge of Marxists economics, Public Choice Economics, and New Institutional Economics is helpful, but not required.

#### **Main Textbook:**

The main textbook for the course will be,

Rosen, Harvey, and Gayer, Ted, *Public Finance*, 9th edition, 2010.

Mansfeld, Harvey; *Theories of Political Economy*, 1989

Additionally, students can supplement their reading with

Additionally, there will be supplemental reading throughout the semester, drawn from current literature, which will be used to illustrate the principles taught in class. While I will present the first two readings, subsequent readings will be identified by the students in consultation with me.

#### **Other Recommended Books:**

Gruber, J., *Public Finance and Public Policy*, Worth Publishers 2nd ed. 2007.

Olsen, Mancur, *The Logic of Collective Action*, 1965

Olsen, Mancur, *The Decline and Fall of Nations*, 1982

North, Douglass, *Structure and Change in Economic History*

Galbraith, John, Any of his books

Buchanan, James and Gordon Tullock, *The Calculus of Consent*

#### **Other Readings:**

(I will post links to some of these, or the articles, on my website) These readings may be referred to in class, I will announce before the class. For the Thai articles, I will be reading through a translation program, so be warned....

**Moodle Code:** The course Moodle Code is 2774

**Important Dates:**

- Session begins: August 17, 2015
- Adding or Dropping Course: August 17 - 31, 2015
- Mid-term Examination: None
- Course Withdrawal with “W”: October 21 - 26
- Last day of class: December 4
- Final Examination: None

**Teaching Plan and Class Schedule**

Date	Topic	Readings
Week 1 August 17-21	<b>Section I Broad Overview</b>	
Week 2 August 24-28	<b>Section 2 Hayek</b>	<b>The Uses of Information in Society 1945</b>
Week 3 August 31 – September 4	<b>Section 3 Marx</b>	<b>Chapter 10 from “History of Economic Thought” (provided in class)</b>
Week 4 September 7 -11	<b>Section 4 Fukuyama</b>	<b>The End of History and the Last Man 1989</b>
Week 5 September 14-18	<b>Section 5 Research Methodologies</b>	
Week 6 September 21-25	<b>Section 6 Student Identified Readings</b>	<b>TBA</b>
Week 7 September 28 – October 2	<b>Midterm Week</b>	
	<b>Section 7 Student Summaries of Readings Due</b>	
Week 9 October 5-9	<b>Section 8 Student Presentations Begin</b>	
Week 10 October 19 - 23	<b>Section 9 Student Presentations Continue</b>	
Week 11 October 26 - 30	<b>Section 10 Topic Discussions</b>	
Week 12 November 2 - 6	<b>Section 11 Paper Outline Due, Discussions (separate for each student)</b>	

Date	Topic	Readings
Week 13 November 9 - 13	<b>Section 12 Paper Outline Due, Discussions (separate for each student)</b>	
Week 14 November 16 - 20	<b>Section 13</b>	
Week 15 November 23 - 27	<b>Section 14: Draft papers due</b>	
Week 16 November 30 – December 4	<b>Final Review</b>	
	<b>Final Papers Due</b>	

**Course Evaluation:**

Type of evaluation	Evaluation Method	Evaluation date
Class Participation	15%	
Class Discussion	15%	
Final Paper	70%	

## Course Outline

### EE 451 International Trade Theory and Policy

Semester 1/2021 (Aug 9 – Nov 27, 2021)

**Number of credits**     3 credits

**Prerequisite:** EE311

#### Evaluation:

Quizzes and assignment	15%
Group project or reports	15%
Midterm Exam	35%
Final Exam	35%

#### Group project (15 points): maximum 3 members/group

- Design and print an **A0-sized academic poster** related to international trade policies. A poster may have a free-style title, but must be informative and comprehensive in its content, and contain some constructive arguments in the analytical part.

#### Suggested topic lists:

Doha Round of WTO	CPTPP	RCEP	BIMSTEC
BREXIT	Rules of Origin	US.-China trade conflict	Tariff waters
Intellectual property rights issues	Government procurement	Transparency, Anticorruption and Competition	Illicit products
Compulsory licensing	Food security and GMO products	Maximum residue limit and trade	Pesticides ban policies
Ban on Ractopamine used in pork	Quarantine and tourism industry	Sin taxes and trade in sin products	Climate change and Border carbon adjustment

International trade of waste and recycling	Greenfield and brownfield investments	CITES and Trade in Endangered Species	Nagoya Protocol
IUU fishing	GSP	Fairtrade products	Movement of natural person
COVID-19 and global supply chains	Transfer pricing	Digital Trade and competition policy	Commercial presence

Evaluation will be based on the ability to arrange data and information with proper visualization and citation, presenting sharp arguments (concise and interesting leading questions and the existing conflicts of viewpoint relevant to the chosen topic), attractive and reader-friendly poster design. The total mark will come from classmate evaluation (4 marks), Facebook likes (4 marks) and instructor evaluation (7 marks)

Your oral presentation would take 8 minutes (without any note!) and 2 minutes of Q&A.

**Submission date of selected topic:** Wed 6 October, 2021

**Submission date of the outline:** Wed 20 October, 2021

**Presentation dates:** 24 – 26 November, 2021

**Note:** 1. Please be strictly aware of ‘*plagiarism rule*’ which could bring a zero score for violators.

2. The poster must contain major references used, names of the team members, and the statement “This poster is a part of the learning exercises of EE 451: International Trade Theory and Policy, B.E., T.U.”.

**Main text:**

Feenstra, R.C. and A.M. Taylor (2012), *International Economics*, Worth Publishers, New York. (2nd edition), Palgrave-Macmillan. (FT)

**Alternative texts:**

Appleyard, D.R.; A.J. Field, Jr.; and S.L. Cobb (2016) *International Economics*, 9th ed., McGraw-Hill: Singapore. (AF)

Krugman, P.R.; Obstfeld, M.; and Marc Melitz (2017) *International Economics: Theory and Policy*, Global Edition, 11th edition, Pearson, New York. (KOM)

Markusen, J.R.; James R. Melvin; William H. Kaempfer and Keith E. Maskus (1995) *International Trade: Theory and Evidence*, McGraw-Hill, New York. (MMKM)

van Marrewijk, Charles (2017). *International Trade and the World Economy*. Oxford University Press: Oxford. (M)

Salvatore, Dominick (2016) *International Economics*, 11th ed., Prentice Hall International Editions, London. (S)

Other supplements as assigned in class

### Interactive Excel Exercises:

There will be 10 Interactive Excel Exercises located in  
<http://econ.tu.ac.th/archan/Chayunt/Site/EE451.html>  
and <https://www.facebook.com/AjarnChayun>

Each exercise contains a mathematical model in which the user can change some parameters that determine the behavior of model to change the equilibrium results and answer accompanies questions. Each exercise also includes a short explanation worksheet to help the user to understand the underlying theory related to the exercise.

### Topics:

1. Introduction 1.5 hr.
  - 1.1. Merchandise Trade and Trade in Services
  - 1.2. The Purpose of International Economic Theories and PoliciesRead: FT ch.1, AF ch. 1, M ch. 1, KOM ch. 1-2, MMKM ch. 1, S ch. 1
  
2. Early Trade Theories and The Classical Trade Theory 6 hr.
  - 2.1. Mercantilism
  - 2.2. Adam Smith and Absolute Advantage
  - 2.3. David Ricardo and Comparative Advantage
    - (a) Assumptions
    - (b) Production Possibility Frontiers
    - (c) Gains from Trade
  - 2.4. Measuring trade advantage: The Balassa Index
  - 2.5. Extensions and Tests of the Classical Trade ModelRead: FT ch 2-5, AF ch. 2-4, M ch. 2-3, KOM ch 3, MMKM ch. 7 and 14.3, S ch. 2  

P. Krugman, “Ricardo’s difficult idea” at  
<http://web.mit.edu/krugman/www/ricardo.htm>

Laursen, Keld (2015) “Revealed Comparative Advantage and the Alternatives as Measures of International Specialisation” Eurasian Business Review. 5: 99-115.  
[https://www.researchgate.net/publication/289126100\\_Revealed\\_Comparative\\_Advantage\\_and\\_the\\_Alternatives\\_as\\_Measures\\_of\\_International\\_Specialisation](https://www.researchgate.net/publication/289126100_Revealed_Comparative_Advantage_and_the_Alternatives_as_Measures_of_International_Specialisation)
  
3. Neoclassical Trade Theory 4 hr.
  - 3.1. Basic Tools
    - (a) The Theory of Consumer Behavior
    - (b) The Production Theory
    - (c) The Edgeworth Box Diagram and The Production Possibility Frontier
  - 3.2. Gains from Trade in Neoclassical Theory
    - (a) Autarky Equilibrium
    - (b) Production and Consumption Gains from Trade
  - 3.3. Offer Curves and Terms of Trade [Chacholiades, M. (1990) *International Economics*, ch. 6]

Read: AF ch. 5-7, M ch. 4-6, KOM ch 3, MMKM ch. 2-5, S ch.3-4

4. Factor Endowments and the Heckscher-Olin Model 8 hr.

- 4.1. Assumptions
- 4.2. Factor Abundance
- 4.3. Commodity Factor Intensity
- 4.4. The Heckscher-Olin Theorem
- 4.5. The Factor Price Equalization Theorem
- 4.6. Stolper-Samuelson Theorem
- 4.7. Rybczynski Theorem
- 4.8. Empirical Tests of the Heckscher-Olin Theorem
  - (a) The Leontief Paradox
  - (b) Suggested Explanations for The Leontief Paradox

Read: FT ch. 4, AF ch. 8-9, M ch. 7, KOM ch 5, MMKM ch. 8-9 and 14.4, S ch. 5

4.9. Specific-Factors Model: a short run version of H-O model

Read: FT ch 3, S ch. 5, AF ch. 8, MMKM ch. 9, KOM ch 4

+++++ **Midterm** +++++

5. Alternative Theories and Intra-Industry Trade 6 hr.

- 5.1. Intra-Industry Trade
- 5.2. The Product Cycle Theory
- 5.3. The Kemp Model and external economies of scale
- 5.4. Krugman model and internal economies of scale with imperfect competition

Read: ST ch. 6, AF ch. 10, M ch. 9-10 and 15, KOM ch 7-8, MMKM ch. 11-13, S ch.6

6. International Factor Movement 3 hr.

- 6.1. Capital Movement
- 6.2. Labor Movement

Read: FT ch. 5, AF ch. 12, KOM ch. 8, S ch.12

7. Trade Policy 9 hr.

- 7.1. Arguments for Protection
- 7.2. Import Tariffs and non-tariff barriers under perfect competition
  - (a) Measurement of Tariffs and Effective rate of protection
  - (b) Import tariffs for a small country
  - (c) Import tariffs for a large country
  - (d) Import quotas
  - (e) Production Subsidies
  - (f) Export Taxes and Subsidies
- 7.3. Import tariffs and quotas under imperfect competition

Read: FT ch. 8-10, AF ch. 13-16, M ch. 8 and 11, KOM ch 9-10, MMKM ch. 8.5, 15-16, S ch. 8-9

- 7.4 Other policies: Environment, standards  
 Read: FT ch. 11, KOM ch 12
8. International Trade Institution and Economic Integration 4.5 hr.  
 8.1. World Trade Organization  
 8.2. Types of Economic Integration  
 8.3. The Static Effects  
     (a) Trade Creation and Trade Diversion  
     (b) The Second Best Theory  
 8.4. The Dynamic Effect  
 8.5. Regional Trade Agreements: AFTA and AEC, APEC, ASEM  
 Read: ST ch. 11, AF ch. 18, M ch. 12-13, S ch. 9-10, KOM ch 10 and 11, MMKM ch.18
9. Economic Growth and International Trade 3 hr.  
 9.1. Classifying the Trade Effects of Economic Growth  
 9.2. Sources of Growth and the Production-Possibilities Frontier  
 9.3. Factor Growth, Trade and Welfare  
     (a) The Small-Country Case and the Rybczynski Theorem  
     (b) The Large-Country Case  
 Read: AF ch. 11, M ch. 16, KOM ch 11, MMKM ch. 8.5 and 23, S ch.7

Class No.	Date	Topic
1	Wed 11 Aug	Introduction, Mercantilism,
2	Fri 13 Aug	Adam Smith and Absolute Advantage, David Ricardo and Comparative Advantage
3	Wed 18 Aug	Ricardian model and Comparative Advantage
4	Fri 20 Aug	Ricardian model and Comparative Advantage
5	Wed 25 Aug	Neoclassical Trade Theory: Basic tools <b>Quiz 1:</b> Ricardian model
6	Fri 27 Aug	Neoclassical Trade Theory: Gains from Trade
7	Wed 1 Sep	Neoclassical Trade Theory: Offer Curves and Terms of Trade
8	Fri 3 Sep	Factor Endowments and Heckscher-Olin Model (H-O) <b>Quiz 2:</b> Basic tools and Grains from Trade
9	Wed 8 Sep	Factor Endowments and Heckscher-Olin Theorem
10	Fri 10 Sep	H-O model and The Factor Price Equalization Theorem
11	Wed 15 Sep	H-O model and Stolper-Samuelson Theorem
12	Fri 17 Sep	H-O model and Rybczynski Theorem
13	Fri 22 Sep	Specific-Factors Model
14	Wed 24 Sep	Specific-Factors Model+ <b>Quiz 3:</b> H-O Theorem
15-16	<b>Sep 27 – Oct 3</b>	<b>Midterm week, no class</b>
<b>Midterm: Friday 1 October, 2021, 9:00 – 11:00</b>		
17	Wed 6 Oct	Introduction to Intra-Industry Trade
18	Fri 8 Oct	The Kemp Model and External Economies of Scale
	Wed 13 Oct	H.M. King Bhumibol Adulyadej The Great Memorial Day. *** No class ***
19	Fri 15 Oct	Krugman model
20	<b>Mon 18 Oct (make up)*</b>	Krugman model
21	Wed 20 Oct	Trade Policy: Arguments for Protection

<b>Class No.</b>	<b>Date</b>	<b>Topic</b>
22	Fri 22 Oct	Measurement of Tariffs and Effective rate of protection <b>Quiz 4: Alternative trade model</b>
23	Wed 27 Oct	Import tariffs for a small and large country
24	Fri 29 Oct	Import quotas, Other non-tariff barriers
25	Wed 3 Nov	Other non-tariff barriers
26	Fri 5 Nov	Import Tariffs and quotas under imperfect competition
27	Wed 10 Nov	Trade and Environment <b>Quiz 5: Tariffs and non-tariff barriers</b>
28	Fri 12 Nov	World Trade Organization
29	Wed 17 Nov	World Trade Organization
30	Fri 19 Nov	Economic Integration and Regional Trade Agreements
31	Wed 24 Nov	Economic Integration and Regional Trade Agreements
32	Fri 26 Nov	Poster presentation 1
33	Wed 12 May	Poster presentation 2
<b>Final Examination: Friday, 17 December, 2020, 13:30-16:00 hrs.</b>		

\*To be confirmed

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## Course Outline

### EE459: SEMINAR IN INTERNATIONAL ECONOMICS

Semester 2/2021 (January 10<sup>th</sup> – May 7<sup>th</sup>, 2022)

**Number of Credit:** 3 credits

**Prerequisite:** EE 451 and EE 452

#### Course Description:

Seminar and research on topics in International Economics under the lecturer's supervision.

#### Course Objectives:

The main objective of this course is to enable students to apply their knowledge of international economics to conduct their empirical research papers. Students must conduct research independently, present their research papers, discuss and comment on research papers of their classmates/other papers published in journals.

**Main Text:**

Booth, W. C., Colomb, G. G., & Williams, J. M. (2008), *The craft of research*, Chicago: University of Chicago Press.

Greenlaw, S. A. (2006), *Doing economics: A guide to understanding and carrying out economic research*, Boston, MA: Houghton Mifflin.

**Recommended Texts & Materials:**

Appleyard, D.R., and Field A.j. (2017), *International Economics*, 9<sup>th</sup> edition, Singapore: McGraw Hill

Koop, G. (2013), *Analysis of economic data*, Chichester: Wiley.

Strunk, W. and White, E. (1990), *The Elements of Style*, Boston, MA: Pearson Education

Wooldridge, J. (2015), *Introductory econometrics: A modern approach*, Toronto: Nelson Education.

**Suggested Readings:**

Korwatanasakul, U. and Paweenawat, S.W. (2021) "Trade, Global Value Chains and Small and Medium-Sized Enterprises in Thailand: A firm-level panel analysis," In Shujiro Urata (Ed.), *Enhancing SME Participation in Global Value Chains*. Chapter 5, Pages 166–191, Tokyo: Asian Development Bank Institute

Myat Ko, K., Rangkakulnuwat, P., and Paweenawat, S.W. (2015), "The Effect of International Trade on Labor Demand in ASEAN5," *Economics Bulletin*, 35(2): 1034–1041

Paweenawat, S.W. (2019), "Foreign Direct Investment and Wage Spillover in Thailand: Evidence from Firm-Level Panel Data," *International Journal of Social Economics*, 46(10): 1198–1213

Paweenawat, S.W. "The Impact of Global Value Chain Integration on Wages Evidence from Matched Worker-Industry Data in Thailand," *Journal of the Asia Pacific Economy* (Forthcoming 2022)

Xaypanya, P., Rangkakulnuwat, P., and Paweenawat, S.W. (2015), "The Determinants of Foreign Direct Investment in ASEAN: The First Differencing Panel Data Analysis," *International Journal of Social Economics*, 42(3): 239–250

### Grading Criteria:

The assessments are based on the students' ability to conduct research independently under the instructor's supervision. Assignments will be given throughout the course to build up students' research skills and guide their research.

Summary of one published article (Present#1)	10%
Literature Review (Present#2)	10%
Research Outline	10%
Research Proposal (Present#3)	20%
Research Progress (Present#4)	10%
Research paper (Present#5)	30%
Referee Report	10%

### Expected Learning Outcomes:

This course is designed for students to integrate their knowledge in international economics through research. At the end of the semester, each student is expected to deliver one independent term paper, present this research paper, and comment/provide referee reports on their classmates' papers.

### Tentative Class Schedule:

Date	Tentative Topic and Class Activity
10 Jan 2022	Introduction, Course description, Research in Economics
17 Jan 2022 24 Jan 2022	Present #1 – Summary of one published article
31 Jan 2022	Writing Research Proposal
7 Feb 2022 14 Feb 2022	Present #2 – Literature review
21 Feb 2022	Submitting research outline & discussing with instructor
7 Mar 2022 14 Mar 2022	Present #3 – Research Proposal
21 Mar 2022	Writing Research Paper

Date	Tentative Topic and Class Activity
28 Mar 2022 4 April 2022	Present #4 – Research Progress
18 April 2022	Presenting and commenting research paper
25 April 2022 2 May 2022	Present #5 – Research paper and referee report



## Course Outline

### EE461 Development Microeconomics

Semester 2/2020 (January 20 – May 19, 2021)

Number of credits: 3 credits (3-0-6)

## Course Description

Concepts and measurements of poverty and inequality. The theories of justice for analyzing public policies related to these issues. Microeconomic theories related to household decisions and behaviors, as well as market failures in developing countries. Public policies on development issues such as health; education; population; workforce allocation of households in agriculture and non-agriculture sectors, as well as formal and informal sectors; migration; entrepreneurship of the households; households' financial and risk management tools; microfinance; innovations and other interesting issues related to poverty reduction, etc.

Prerequisites: EE311

## Course Objectives:

Since this course covers many topics in development microeconomics in theories and empirical studies, it requires some background knowledge in microeconomics, some concepts of macroeconomics, and econometrics. Besides textbooks, students will have to read articles from journals, present their research project, and review current issues and articles to develop their skills in analysis, presentation, and criticizing in development economics. Students are also encouraged to participate in discussion and questioning in class, as well as try to keep updating current studies in development economics.

## Evaluation:

Assignments:	10%
Research project:	25%
Midterm Exam:	25%
Final Exam:	40%

Midterm and final exams will be take-home exams. Date and time will be as originally scheduled in the midterm and final periods (as stated below). Midterm and final exams are subject to the student ethical code guided by the university regulation.

Mid-term Exam:	<b>Thursday, March 11, 2021; 12.00 (noon) - 2.00 PM</b>
Final Exam:	<b>Tuesday, May 25, 2021; 09.00 AM - 12.00 (noon)</b>

## Readings:

In this course, we use both textbooks, journal articles, papers, and books as our reading materials.

### 1. Main textbook:

Taylor, J. Edward and Travis J. Lybbert. (2020). **Essentials of Development Economics**, Third Edition. University of California Press. [TL]

You can find book information:

<https://www.ucpress.edu/book/9780520343580/essentials-of-development-economics-third-edition>

<http://www.rebeltext.org/development/index.html>

## 2. Additional textbooks:

Ray, Debraj. (1998). **Development Economics**. Princeton University Press.

Banerjee, Abhijit V. and Esther Duflo. (2011). **Poor Economics: a radical rethinking of the way to fight global poverty**. Public Affairs

Todaro, Michael P. and Stephen C. Smith. (2012). **Economic Development**, 11<sup>th</sup> Edition.

Deaton, Angus. (1997). **The Analysis of Household Surveys: A Microeconomic Approach to Development Policy**. The Johns Hopkins University Press.

You can download the World Bank published version here:

<http://documents.worldbank.org/curated/en/1997/07/694690/analysis-household-surveys-microeconomic-approach-development-policy>.

## 3. Papers/articles/books:

Please find the list of papers/articles that we use as a reference for each topic in corresponding outline below.

## 4. Suggested additional readings:

Mullainathan, Sandhil and Eldar Shafir. (2013). **Scarcity: Why Having Too Little Means So Much**, Times Books.

Banerjee, A. and E. Duflo. (2019). **Good Economics for Hard Times: Better Answers to Our Biggest Problems**. United States: [PublicAffairs](#). November 12, 2019. [ISBN 978-1-61039-950-0](#)

Sen, Amartya. (1999). **Development As Freedom**. New York :Anchor Books.

5.

interesting blogs

<http://blogs.worldbank.org/> (There are many blogs under the World Bank blogs)

<http://blogs.adb.org/>

<http://chrisblattman.com/>

**\*\* The reading list might be updated during the semester.**

## Course Outline:

### Topic 1 What development economics is all about?

- Evolution of development economics
- Economic development: overview&data basic

readings \* TL, chapter 1  
\* Ray Ch. 2 & Appendix 2  
\* World Bank database

### Topic 2 What work and what doesn't?

- Randomized Control Trials (RCTs)
- The selection problem
- Causal identification
- Cost-benefit analysis
- Lab and natural experiment

Readings: TL, chapter 2

Banerjee, Abhijit V. and Esther Duflo. (2011). **Poor Economics: a radical rethinking of the way to fight global poverty.** Public Affairs

Duflo, Esther, Rachel Glennerster, and Michael Kremer. (2007). **Using Randomization in Development Economics Research: a Toolkit.** Centre for Economic Policy Research, Discussion Paper No. 6059

### Topic 3 Poverty

- Conceptual issues and poverty measures
- The economic lives of the poor
- Poor but rational
- Poverty and scarcity: a behavioral approach
- Poverty Trap

Readings: TL, chapter 4

Ray Ch 8.2, 8.3

Banerjee, Abhijit V. and Esther Duflo. (2007). *The economic lives of the poor. Journal of Economic Perspectives*, 21(1): 141-167.

Banerjee, Abhijit V. and Esther Duflo. (2011). *Poor Economics: a radical rethinking of the way to fight global poverty*. Public Affairs

Duflo, Esther. (2003). *Poor but rational?*

Mullainathan, Sandhil and Eldar Shafir. (2013). *Scarcity: Why Having Too Little Means So Much*. Times Books.

Michael R. Carter & Christopher B. Barrett (2006). *The economics of poverty traps and persistent poverty: An asset-based approach*. *The Journal of Development Studies*, 42:2, 178-199, DOI: [10.1080/00220380500405261](https://doi.org/10.1080/00220380500405261)

### Topic 4 Economic Inequality and Income Distribution

- Measurement of income inequality
- The U hypothesis relating income inequality and economic development
- Inequality, savings, income, and growth
- Inequality, capital markets, and development
- Redistribution

Readings: Ray Ch 7.2.2, 7.2.4, 7.2.8, 7.2.9

TL, chapter 5

corecon.org [unit 19](#)

## Topic 5 Human Development: Education

- Economic impact of education
- Recent research on schooling in developing countries

Readings: TL, chapter 6

Duflo, Esther. (2001). **Schooling and labor market consequences of school construction in Indonesia: Evidence from an unusual policy experiment.** *The American Economic Review*, 91(4): 795–813.

Psacharopoulos, G. and Patrinos, Harry A. (2004). **Returns to investment in education: a further update.** *Education Economics*, 12(2): 111–134.

Evans, David K. and Anna Popova. (2016). **What Really Works to Improve Learning in Developing Countries? : An Analysis of Divergent Findings in Systematic Reviews.** The World Bank Research Observer

Muralidharan, Karthik, Abhijeet Singh, and Alejandro J. Ganimian (2019). **Disrupting Education? Experimental Evidence on Technology-Aided Instruction in India.** *American Economic Review* 2019, 109(4): 1426–1460

## Topic 6 Human Development: Health

- Health and education
- The impact of price on take-up and use of preventive health products
- Saving for health expenditures

Readings: Abdul Latif Jameel Poverty Action Lab (J-PAL). (2018). **The impact of price on take-up and use of preventive health products.** J-PAL Policy Insights. Last modified May 2018. <https://doi.org/10.31485/pi.2270.2018>

Dupas, Pascaline, and Jonathan Robinson. (2013). **Why Don't the Poor Save More? Evidence from Health Savings Experiments.** *American Economic Review* 103 (4): 1138-1171.

## Topic 7

### Human Development: Gender

- Gender inequality at the start of the 21<sup>st</sup> century
- Gender and household resource allocation
- Research on promoting gender equality

#### Readings:

Chang, Wei, Lucía Díaz-Martin, Akshara Gopalan, Eleonora Guarnieri, Seema Jayachandran, and Claire Walsh (2020). **What works to enhance women's agency: Cross-cutting lessons from experimental and quasi-experimental studies.** J-PAL Working Paper.

Nava Ashraf, Natalie Bau, Corinne Low, Kathleen McGinn. (2020). **Negotiating a Better Future: How Interpersonal Skills Facilitate Intergenerational Investment.** *The Quarterly Journal of Economics*, Volume 135, Issue 2, May 2020, Pages 1095–1151, <https://doi.org/10.1093/qje/qjz039>

Diva Dhar, Tarun Jain & Seema Jayachandran. (2019). **Intergenerational Transmission of Gender Attitudes: Evidence from India.** *The Journal of Development Studies*, 55:12, 2572-2592, DOI: [10.1080/00220388.2018.1520214](https://doi.org/10.1080/00220388.2018.1520214)

## Topic 8

### Agriculture

- How agriculture is different
- The Agricultural Household Model and Development policy

#### Readings:

TL, chapter 9

## Topic 9

### Consumption smoothing, Savings, Credit, and Insurance

- Consumption smoothing
- Saving behavior and permanent income hypothesis
- Rural credit markets
- Formal credit and insurance rationing
- Rural household's risk management

## Readings:

TL, chapter 12

Ray Ch 14.1-14.3

Deaton, A. (1997). **The Analysis of Household Surveys: A Microeconometric Approach to Development Policy**, Chapter 6

Paxson, Christina H. (1992). **Using weather variability to estimate the response of savings to transitory income in Thailand.** *The American Economic Review*, 82(1): 15–33.

Besley, T. J. (1995). **Savings, credit and insurance.** *Handbook of Development Economics Volume 3A*. J. Behrman and T. Srinivasan. Amsterdam, Elsevier Science.

Karlan, Dean and A. L. Ratan. (2014). **Saving by and for the poor: a research review and agenda.** *Review of Income and Wealth* 60(1): 36–78.

Townsend, R. M. (1995). **Financial systems in Northern Thai villages.** *Quarterly Journal of Economics* 110(4): 1011-1046.

Jonathan Morduch. (1999). **The microfinance promise.** *Journal of Economic Literature*, 37(4): 1569–1614.

J-PAL and IPA Policy Bulletin. 2015. **Where Credit is Due.** Cambridge, MA: Abdul Latif Jameel Poverty Action Lab and Innovations for Poverty Action.

Banerjee et al. (2014). **The miracle of microfinance? Evidence from a randomized evaluation**

Siamwalla, A., Chirmsak Pinthong, Nipon Poapongsakorn, Ploenpit Satsanguan, Prayong Nettayarak, Wanrak Mingmaneeakin, & Yuavares Tubpun. (1990). **The Thai Rural Credit System: Public Subsidies, Private Information, and Segmented Markets.** *The World Bank Economic Review*, 4(3), 271-295. Retrieved March 27, 2020, from [www.jstor.org/stable/3989878](http://www.jstor.org/stable/3989878)

Stiglitz, J., & Weiss, A. (1981). **Credit Rationing in Markets with Imperfect Information.** *The American Economic Review*, 71(3), 393-410. Retrieved March 28, 2020, from [www.jstor.org/stable/1802787](http://www.jstor.org/stable/1802787)

Dercon, S. (2002). **Income Risk, Coping Strategies, and Safety Nets.** *The World Bank Research Observer*, 17(2), 141-166. Retrieved January 17, 2021, from <http://www.jstor.org/stable/3986329>

Chantararat, Sommarat. (2015). **Index-based risk financing and development of natural disaster insurance programs in developing countries.** PIER Discussion paper no.10

## Topic 10 Entrepreneurship

- Entrepreneur's characteristics in developing countries
- Bottlenecks for entrepreneurship in developing countries
- Transformations in the Thai rural labor market

**Readings:** Djankov, S., Qian, Y., Roland, G., and Zhuravskaya, E. (2006). **Who Are China's Entrepreneurs?**. *The American Economic Review*, 96(2): 348-352.

Schoar, Antoinette. (2010). **The Divide between Subsistence and Transformational Entrepreneurship**. NBER Innovation Policy and the Economy.

Poapongsakorn, Nipon. (1994). **Transformations in the Thai Rural Labor Market**. *Development or Deterioration? Work in Rural Asia*, Chapter 6. Edited by Bruce Koppel, John Hawkins and William Jams.

Lathapipat, Dilaka and Thitima Chucherd. (2013). **Labor market functioning and Thailand's competitiveness**. BOT Symposium 2013.

## Topic 11 Corruption

- Rent seeking and government failure
- Corruption and monitoring

**Readings:** Shleifer, A. and Vishny, Robert W. (1993). **Corruption**. *The Quarterly Journal of Economics*, 108(3): 599-617.

Olken, Benjamin A. (2007). **Monitoring corruption: Evidence from a field experiment in Indonesia**. *Journal of Political Economy*, 115(2): 200-249.

## Topic 12 Climate change

- Poverty and environment
- Climate change and the poor

**Readings:** Reardon, Thomas and Vosti, Stephen A. (1995). **Links Between Rural Poverty and the Environment in Developing Countries: Asset Categories and Investment Poverty.** *World Development* 23(9): 1495-1506.

Hallegatte, S. et al. (2016). **Shock Waves: Managing the impacts of Climate Change on Poverty.** International Bank for Reconstruction and Development / The World Bank.

Felkner, John, Kamilya Tazhibayeva, and Robert Townsend. (2009). **Impact of Climate Change on Rice Production in Thailand.** *American Economic Review*, 99 (2): 205-10. DOI: 10.1257/aer.99.2.205

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### Expected Learning Outcomes:

#### 1. Morality and Ethics

Applicability	Expected Learning Outcomes
●	1.1 Students demonstrate integrity.
●	1.2 Students prioritize social and public benefits over personal ones.
●	1.3 Students are punctual and comply with the code of conduct of the institution and society at large.
●	1.4 Students are responsible and accountable to society, the nation, and the subject of economics.
○	1.5 Students realize the cultural and environmental value of the sustainable society.

## 2. Knowledge

Applicability	Expected Learning Outcomes
●	2.1 Students know and understand modern economics principles and theories, and are up to date with new developments.
●	2.2 Students know and understand Thai and global economic structure, and the importance of major international economic events.
○	2.3 Students know and understand instruments of economic analysis.
●	2.4 Students know and understand applied fields in economics, including monetary, public, international, business, natural resource and environmental, industrial, agricultural, cooperative, political, developmental, and entrepreneurial economics as well as agribusiness.
●	2.5 Students are informed about related fields including sociology, business administration, education, law policy, and science.

## 3. Intellectual Development

Applicability	Expected Learning Outcomes
●	3.1 Students have developed individual critical thinking.
●	3.2 Students are sufficiently trained in research skills.
●	3.3 Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand causes of current economic problems in Thailand. Based on analysis and synthesis, students demonstrate an ability to propose policy guidelines to resolve problems.

## 4. Interpersonal Skills and Responsibilities

Applicability	Expected Learning Outcomes
●	4.1 Students are responsible for assigned tasks and work in groups effectively.
●	4.2 Students have problem-solving skills.
○	4.3 Students show leadership skills and team spirit.
●	4.4 Students are always improving themselves.
○	4.5 Students have good interpersonal skills, adapting and working under different conditions.

### 5. Quantitative Analysis, Communication and Information Technology

Applicability	Expected Learning Outcomes
○	5.1 Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.
○	5.2 Students communicate effectively and select appropriate presentation methods.
○	5.3 Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.

## **Course Outline**

### **EE463 GLOBALIZATION AND INTERNATIONAL DEVELOPMENT**

**Semester 1/2021 (August 9 – November 27, 2021)**

**Number of Credit : 3 (Three)**

**Prerequisites : EE211 and EE212; or EE213 and EE214**

#### **Course Description**

This course discusses concepts and development of globalization in the context of post-World War II and the formation of the New International Economic Order. As countries move along their development trajectories, activities and linkages intensify, spurring complex interrelationships and interdependencies, thereby leading to a globalized world. These processes create not only new opportunities but challenges as well.

The course will be divided in three sections. The first section will provide an overview of economic development theories, how globalization and international economic development are linked together and compare economic development trends across low-, middle- and high-income countries. Thereafter it will look at the role of the state, market and civil society in economic development and how international organizations and cooperation agencies interact with domestic institutions in determining the economic outcome. It will further look at demographic trends and discusses poverty and inequality and their causes. The second section will highlight issues and policy dimensions of various key development sectors such as agriculture; education and health; urban and rural development; and international trade and capital flows; as well as cross-cutting areas such as environment, climate change, and gender. Other topics that will be discussed are foreign direct investments and international capital flows; the roles of international development organizations e.g. the United Nations, World Bank, International Monetary Fund IMF and bilateral development agencies in bridging the divide between the “north”, or developed countries, and the “south”, or developing countries, through official development assistance; and patterns, factors of success and failures of past international development assistance. In the third and final section, students will form groups to discuss development issues learned in class and discuss these in detail, which will be presented towards the end of the course.

#### **Course Objective**

The objective of this course is to understand the process of economic development; the contribution of key development sectors; roles of government, the private sector and other stakeholders; and how globalization affects and is affected by economic development along with the issues that arise and policy responses to the issues.

**Main Text** : Perkins, D., S. Radelet, D. Laundauer, & S. Block. 2013.  
*Economics of Development, 13<sup>th</sup> ed.* W.W. Norton & Co.: NY.

**Additional Readings** : Will be provided/announced through BE Moodle

## Grading Criteria

The final grade will not rest on one or two activities, but rather, on how many points will be accumulated throughout the semester. Course requirements include participation (including virtual attendance, quizzes, and contribution to class discussions); group presentation on a particular topic learned in class; issue paper relating to coursework; and midterm and final exams. Details of each requirement will be discussed during class and announced in BE Moodle. Late submission of assignments/exam: up to 30 minutes a penalty of 10%, up to 60 minutes a penalty of 25%. The weights of each of these items are as follows, and will be factored in towards the final grade:

- Participation	15%
- Group presentation	15%
- Issue paper	15%
- Midterm exam	25%
- Final exam	30%

## Grade conversion

Numerical grades will be converted to letter grades as follows:

- >85–100	A
- >80–85	B+
- >70–80	B
- >65–70	C+
- >60–65	C
- >55–60	D+
- >45–55	D
- 45 and below	F

## Class Policy and Expectations

In adherence with the latest Thammasat University Announcements (issued on Jun 1st 2021), all BE classes in semester 1/2021 will be conducted by remote learning. Zoom will be used as the online meeting platform, while communication, announcements and grade posting will be on BE Moodle. At the beginning of each class, some time will be spent using the lecture format highlighting the key issues, but students will spend the rest of the time of the time engaging in discussions that support or confront the materials extracted from the required reading, for which students are expected to read ahead and be prepared. To obtain attendance credit, students are required to turn on the computer screens for the first 15 minutes of class. For any further clarifications and/or queries, students may either e-mail or set up an appointment with the lecturer.

### **Expected Learning Outcomes:**

It is expected that by the end of the course, students will have a good understanding of (i) how and why countries economically grow and develop; (ii) how globalization and development are linked and impact each other; (iii) key economic development sectors, their role in economic development and government policies to address the issues that arise; and (iv) the role of international aid organizations, financing institutions and private capital in shaping the economic development of a country.

### **Tentative Class Schedule**

<b>Date/Week</b>	<b>Topic</b>	<b>Reading Materials</b>
<u>9 August: Introduction</u>	<ul style="list-style-type: none"> <li>- Course objectives and requirements</li> <li>- Expectations of the course</li> <li>- Scope and coverage</li> </ul>	Course syllabus
<u>16 August: Globalization and Development</u>	<ul style="list-style-type: none"> <li>- What is economic growth? development?</li> <li>- Development &amp; globalization: trends and linkages</li> <li>- Trajectories of low- middle- and high-income countries</li> </ul>	Perkins, Ch 1, 2, 3
<u>23 August: Theories of Economic Growth</u>	<ul style="list-style-type: none"> <li>- Linear stages-of-growth</li> <li>- Structural change</li> <li>- Neoclassical economic growth model</li> </ul>	Perkins, Ch 4
<u>30 August: States, Markets; Demographics</u>	<ul style="list-style-type: none"> <li>- Role of the state and the market</li> <li>- Market and command economies</li> <li>- Population trends and issues; demographic transition</li> </ul>	Perkins, Ch 5 & 7
<u>6 September: Poverty and Inequality</u>	<ul style="list-style-type: none"> <li>- Causes of poverty: structural and absolute</li> <li>- Measurement of poverty and inequality</li> <li>- Trends and issues</li> <li>- Poverty reduction strategies</li> </ul>	Perkins, Ch 6
<u>13 September: Agriculture and Development</u>	<ul style="list-style-type: none"> <li>- Agricultural production, growth and structural transformation</li> <li>- The Green Revolution</li> <li>- Agriculture and poverty alleviation</li> <li>- Issues: land reform, global food crisis</li> </ul>	Perkins, Ch 16 & 17

<p><u>20 September: Human and Social Development</u></p> <ul style="list-style-type: none"> <li>- Human capital and productivity</li> <li>- Issues, trends and policies in the education sector</li> <li>- Issues, trends in global health; policies in the health sector</li> </ul>	<p>Perkins, Ch 8 &amp; 9</p>
<p><u>27 September: Midterm Exam</u></p>	
<p><u>4 October: Urban and Rural Development</u></p> <ul style="list-style-type: none"> <li>- Role of cities and rural areas</li> <li>- Challenges of urbanization</li> <li>- The rural transition</li> <li>- Urban-rural linkages</li> </ul>	<p>Steinberg and Hakim Ch 1 &amp; 2</p>
<p><u>11 October: Sustainable Development and Climate Change</u></p> <ul style="list-style-type: none"> <li>- Economic growth vs environmental sustainability</li> <li>- Market failures and government policies</li> <li>- Global warming and climate change</li> <li>- Climate change adaptation and mitigation</li> </ul>	<p>Perkins, Ch 20</p>
<p><u>18 October: Gender and Development</u></p> <ul style="list-style-type: none"> <li>- Why gender matters</li> <li>- Gender inequality and mainstreaming</li> </ul>	<p>ADB: Gender and Development</p>
<p><u>25 October: No Classes (substitution King Chulalongkorn's birthday)</u></p>	
<p><u>1 November: International Trade and Development</u></p> <ul style="list-style-type: none"> <li>- Trends and patterns</li> <li>- Tariffs, subsidies and trade barriers</li> <li>- Improving balance of trade</li> </ul>	<p>Perkins, Ch 18 &amp; 19</p>
<p><u>8 November: Foreign Aid and Foreign Direct Investment</u></p> <ul style="list-style-type: none"> <li>- Multilateral organizations and financial institutions</li> <li>- Bilateral institutions</li> <li>- Foreign borrowing and debt repayments</li> <li>- Multinational corporations and foreign direct investments</li> <li>- Capital flows: issues and challenges</li> </ul>	<p>Perkins, Ch 13 &amp; 14</p>
<p><u>15 November: Group Presentations</u></p>	
<p><u>22 November: Wrap up</u></p>	

## **Course Outline**

### **EE465: SUSTAINABLE DEVELOPMENT**

**Semester 2/2021 (January 10<sup>th</sup> – May 7<sup>th</sup>, 2022)**

**Number of Credit:** 3 (3-0-6)

**Prerequisite:** EE212 (or EE214) and EE311

#### **Course Description:**

Development of sustainable development approach under context of socio-politico-economic development at different levels. Sustainable development crises at global level and in Thailand. Definitions and fundamental ideas regarding Sustainable Development and contemporary debates. Other approaches related to sustainable development and their critiques, such as Gross National Happiness (GNH), Sufficiency Economy Philosophy, Green Growth, etc. Economic theories related to sustainable development, such as the analysis of externalities, public goods, common-pool resources, ecological economics, Green Economy, and economic measures for sustainable development. Policies and indicators related to sustainable development at global level, particularly the Sustainable Development Goals (SDGs). Challenges and obstacles to achieve sustainable development.

#### **Course Objectives:**

1. Obtaining a better understanding of the concepts of development and sustainable development, and issues of sustainable development challenges.
2. Learning to critique mainstream economics and alternative views of economics to the achieving of sustainable development.
3. Learning and practicing analytical economic frameworks for sustainable development.
4. Understanding in more details on Sustainable Development Goals (SDGs), its challenges and obstacles, and roles and best practices of different stakeholders in achieving the SDGs.
5. Practicing academic and analytical skills related to sustainable development, such as critical thinking, system thinking, policy analysis, communicating sustainability.

### **Main Text:**

Sachs, Jeffrey D. 2015. *The Age of Sustainable Development*. New York, NY: Columbia University Press.

Raworth, Kate. 2018. *Doughnut Economics*. London, England: Random House Business Books.

### **Suggested Readings:**

Brandon, Alec, John A. List, Robert D. Metcalfe, Michael K. Price, and Florian Rundhammer. 2019. "Testing for Crowd out in Social Nudges: Evidence from a Natural Field Experiment in the Market for Electricity." *Proceedings of the National Academy of Sciences of the United States of America* 116 (12): 5293–98.

Carlsson, Fredrik, and Olof Johansson-Stenman. 2012. "Behavioral Economics and Environmental Policy." *Annual Review of Resource Economics* 4 (1): 75–99.

Dodds, Felix, David Donoghue, and Jimena Leiva Roesch. 2016. *Negotiating the Sustainable Development Goals*. London, England: Routledge.

Kanie, Norichika, and Frank Biermann, eds. 2018. *Governing through Goals : Sustainable Development Goals as Governance Innovation*. Earth System Governance. London, England: MIT Press.

Kotchen, Matthew J., and Kathleen Segerson. 2019. "On the Use of Group Performance and Rights for Environmental Protection and Resource Management."

- Proceedings of the National Academy of Sciences of the United States of America* 116 (12): 5285–92.
- Monkelbaan, Joachim. 2019. *Governance for the Sustainable Development Goals: Exploring an Integrative Framework of Theories, Tools, and Competencies*. Springer, Singapore.
- Ostrom, Elinor. 1990. *Governing the Commons*. Cambridge University Press.
- Polasky, Stephen, Catherine L. Kling, Simon A. Levin, Stephen R. Carpenter, Gretchen C. Daily, Paul R. Ehrlich, Geoffrey M. Heal, and Jane Lubchenco. 2019. "Role of Economics in Analyzing the Environment and Sustainable Development." *Proceedings of the National Academy of Sciences of the United States of America* 116 (12): 5233–38.
- Shogren, J. F., and L. O. Taylor. 2008. "On Behavioral-Environmental Economics." *Review of Environmental Economics and Policy* 2 (1): 26–44.
- Walker, Julia, Alma Pekmezovic, and Gordon Walker. 2019. *Sustainable Development Goals: Harnessing Business to Achieve the SDGs through Finance, Technology and Law Reform*.
- Wright, Diana, and Donella H. Meadows. 2009. *Thinking in Systems*. London, England: Earthscan.

Further suggested readings will be provided in classes.

### Grading Criteria:

#### **1. Midterm Examination (Take-home) 20 points**

Providing the questions: Thursday, February 24, 2022, 11.00 AM

Submission: Thursday, March 3, 2022: deadline 11.00 AM

#### **2. Final Examination (Take-home) 30 points**

Providing the questions: Tuesday, May 3, 2022, 11.00 AM

Submission: Tuesday, May 10, 2022: deadline 4.30 PM

#### **3. Assignment 1: Sustainability Challenges 20 points**

Group of 3-4 students

Select 1 topic from the following list:

- Ending Extreme Poverty
- Social Inclusion
- Education for All

- Health for All
- Food Security
- Resilient Cities
- Climate Change
- Saving Biodiversity and Protecting Ecosystem

Prepare a 10-minute presentation of the selected topic. The expected topics include:

- Nature of the problem (what is it? What is going on?)
- What are the possible/plausible causes?
- How is it interconnected with other sustainability aspects (social, economic, environmental, and human rights)?
- Reviewing of the existing solutions.

Present the output in week 7

Submit through Google Classroom assignment (everyone)

#### **4. Assignment 2: ESG Best Practices private sector      20 points**

Group of 3-4 students (same group from assignment 1)

Select 1 sector from the following list

Prepare a 10-minute presentation of ESG/Sustainability Best Practices of companies in the selected sector, linking them to the SDGs.

Present the output in week 16 and 17

Submit through Google Classroom assignment (everyone)

<b>Industry Group</b>	<b>Sector</b>
<b>Agro &amp; Food Industry</b>	Agribusiness
	Food & Beverage
<b>Consumer Products</b>	Fashion
	Home & Office Products
	Personal Products & Pharmaceuticals
<b>Financials</b>	Banking
	Finance & Securities
	Insurance
<b>Industrials</b>	Automotive
	Industrial Materials & Machinery
	Packaging
	Paper & Printing Materials
	Petrochemicals & chemicals

Industry Group	Sector
	Steel & Metal Products
<b>Property &amp; Construction</b>	Construction Materials
	Construction Services
	Property Development
	Property Fund & REITs
<b>Resources</b>	Energy & Utilities
	Mining
<b>Services</b>	Commerce
	Health Care Services
	Media & Publishing
	Professional Services
	Tourism & Leisure
	Transportation & Logistics
<b>Technology</b>	Electronic Components
	Information & Communication Technology

### 5. Class Review (5 times x 2 points)

**10 points**

Select one topic in that section you think the most interesting, explaining briefly about the topic and why it is interesting to you.

Write down 500-word class review.

Please provide a title, author (your name), student ID.

Submission dates are provided in the tentative class schedule below

### Expected Learning Outcomes:

1. Students understand the concepts of sustainable development and issues of sustainable development challenges.
2. Students obtain knowledge and able to practice analytical economic frameworks for sustainable development.
3. Students understand more details on Sustainable Development Goals (SDGs), its challenges and obstacles, and roles and best practices of different stakeholders in achieving the SDGs.
4. Students develop academic and analytical skills related to sustainable development, such as critical thinking, system thinking, policy analysis, communicating sustainability.

**Tentative Class Schedule:**

<b>Week</b>	<b>Topic</b>	<b>Remarks</b>
1	<b>I. Overview of Sustainable Development</b> <ul style="list-style-type: none"> <li>History of economic development and the need for sustainable development</li> <li>Concept of Sustainable Development and related concepts</li> <li>Overview of the Sustainable Development Goals (SDGs)</li> </ul>	
2		
3	<b>II. Economics for Sustainable Development</b> <ul style="list-style-type: none"> <li>Role of (mainstream) economics in Sustainable Development</li> <li>Jeffrey Sachs's Clinical Economics</li> <li>Kate Raworth's Doughnut Economics</li> <li>Thailand's BCG policy</li> <li>Sufficiency Economy Philosophy</li> </ul>	Submit Section 1 Class Review
4		
5		
6		
7	<b>Presentation: Sustainability Communication</b>	Submit Section 2 Class Review
8	<b>Midterm Exam</b> Providing the questions: <ul style="list-style-type: none"> <li>Thursday, February 24, 2022, 11.00 AM</li> </ul> Submission: <ul style="list-style-type: none"> <li>Thursday, March 3, 2022: deadline 11.00 AM</li> </ul>	
9	<b>III. Economic Theories for Sustainable Development</b> <ul style="list-style-type: none"> <li>How do we allocate limited resource overtime?</li> <li>How do communities solve common-pool resource and public goods problem?</li> <li>Behavioral Economics, Policy, and Institutional Design for Sustainable Development.</li> </ul>	
10		
11	<b>IV. Sustainable Development Goals (SDGs)</b> <ul style="list-style-type: none"> <li>The MDGs and the SDGs</li> <li>SDG structure and principles</li> <li>SDG indicators</li> <li>Governance for SDGs</li> <li>Finance for Development</li> <li>Trade and Development</li> </ul>	Submit Section 3 Class Review
12		
13		
14	<b>Songkran Week</b>	
15	<b>V. Private Sectors and Sustainable Development</b> <ul style="list-style-type: none"> <li>SDGs actions in Private Sector</li> <li>SDG Compass</li> <li>Green Washing / SDG Washing</li> </ul> <b>ESG Best Practice: Private Sector</b>	Submit Section 4 Class Review
16		
17	<b>Review and prepare for the Final Exam</b>	Submit Section 5 Class Review



## Course Outline

EE469 Seminar in Development Economics/

EE470 Seminar in Human Resources

Semester 2/2021 (January 10<sup>th</sup> – May 7<sup>th</sup>, 2022)

**Number of Credit:** 3 credits (3-0-6)

**Prerequisite:**

EE469: Completion at least TWO 400 level courses in Development Economics; Except EE460 and EE468.

EE470: Completion at least two 400-level (or the above level) courses in Human Resource Economics.

**Course Description:**

Seminar and research on topics in development economics/ human resource Economics under the supervision of the lecturer

**Course Objectives:**

- 1) To promote better understanding of contemporary issues in development economics;
- 2) To equip students with analytical framework and research skills required for deeper understanding of the dynamism economic development;
- 3) To provide opportunities for students to conduct research on current development issues of interest under lecturer's supervision.

**Main Text: None**

### Recommended Texts & Materials

#### *Recommended Books on Writing:*

There is no required text for this class, but the following books are recommended.

- McClosky, D.N. 2000. *Economical Writing*.
- Thomson, W. 2001. *A Guide for the Young Economist: Writing and Speaking Effectively about Economics*. [H62 .T52, SOC H 2011 640694]

#### *Suggested Textbooks on Development Economics:*

- Perkin, D. H., Radelet, S., Lindauer, D. L., & Block, S. A. *Economics of Development*. Any Edition. [ECON HC 2013 634323, HC59.7 .E335 (2006, 2001)]
- Todaro, M., & Smith, S. (2011). *Economic Development*. Any Edition. [HD82 .T598 (2009, 2006, 2000, 1997, 1994)]
- Ray, Debraj. (1998). *Development Economics*. [HD75 .R39]
- Handbook of Development Economics. (5 volumes.)

## *Data/Information Sources:*

### *Websites/Blogs*

- World Bank <http://www.worldbank.org/>
- World Bank Blog <http://blogs.worldbank.org/> ;  
<http://blogs.worldbank.org/impactevaluations/>
- International Monetary Fund <http://www.imf.org/>
- Center for Global Development <http://www.cgdev.org/>
- Center for Economic Policy Research <http://www.cepr.net/>
- Peterson Institute for International Economics <http://www.iie.com/>
- Asian Development Bank [www.adb.org](http://www.adb.org)
- World Trade Organization [www.wto.org](http://www.wto.org)
- National Bureau of Economic Research <http://www.nber.org/>

### *Data and Reports*

- World Development Indicators <http://data.worldbank.org/data-catalog/world-development-indicators>
- [World Development Reports](#)
- World Factbook <https://www.cia.gov/library/publications/the-world-factbook/>
- International Financial Statistics <http://elibrary-data.imf.org/finddatareports.aspx?d=33061&e=169393>
- Penn World Tables <http://www.ggdnc.net/pwt>
- Demographic and Health Surveys <https://dhsprogram.com/>
- Living Standards Measurement Study  
<https://www.worldbank.org/en/programs/lsm>
- Multiple Indicator Cluster Surveys <https://mics.unicef.org/>

## Assessment

Referee Report	20 %	<i>[Due February 13]</i>
Presentations and Class Participation	10 %	
Research Paper	70 %	
Research Proposal	20%	<i>[Due March 4]</i>
Progress Report I	10%	<i>[Due March 13]</i>
Progress Report II	10%	<i>[Due April 3]</i>
Draft Final Report	10%	<i>[Due May 1]</i>
Final Report	20%	<i>[Due May 16]</i>

### *Referee Report*

Students are asked to write a referee report, which is a summary and critique of a journal article of their own choosing (under the instructor's guidance). This article should be used as the main reference for the research paper. The referee report should be 1.5-space with 12 font size, and it should not exceed 2 pages (excluding reference page).

### *Presentations and Class Participation*

Students will present their assigned articles, referee reports, research proposals, progress reports, and draft final reports to class. Other students are encouraged to ask questions and provide constructive comments to the presenter.

For selected articles, students are required to read the assigned readings before coming to class, discuss the readings, and contribute useful comments.

### *Research Paper*

Research paper will be assessed based on five components.

1. *Research Proposal*: Topic, statement of problem, objective, literature review, data, and methodology
2. *Progress Report I* = Research Proposal (revised) + Descriptive Statistics
3. *Progress Report II* = Progress Report I (revised) + Preliminary Results
4. *Draft Final Report* = Progress Report II (revised) + Conclusion & Discussion
5. *Final Report* = Draft Final Report (revised)

For each component of the research paper, students are required to submit their draft to the instructor and their assigned discussant 2 days prior to their presentations in class. Failing to do so may result in some partial score deductions.

**\*\*\* Students must submit all reports via google classroom.**

Tentative Class Schedule:

Week	Date	Topic and Activity
1	10 January	- Introduction - Course overview
2	17 January	- Research methodology - Literature review and references
3	24 January	- Data sources - Library sources and reference style - Submit 1-2 tentative research topics by email
4	31 January	- Present and discuss on assigned journal articles - Submit "search results" (with abstract) of at least 10 papers by email
5	7 February	- Students present main reference papers (referee reports) and exchange ideas - Submit research topic and referee reports
6	14 February	- Writing a research proposal
7	21 February	- Present research proposal - Critique each other's work and exchange ideas - Submit comments on colleague's proposal by email
8		<b>MIDTERM WEEK</b>
9	7 March	- Discuss on-going research with instructor
10	14 March	- Present progress report I - Critique and exchange ideas - Submit comments on colleague's progress by email
11	21 March	- Follow up with research progress - Individual discussion [Onsite Group]
12	28 March	- Follow up with research progress - Individual discussion [Online Group]
13	4 April	- Present progress report II - Critique and exchange ideas - Submit comments on colleague's progress by email

14	18 April	- Follow up with research progress - Individual discussion [Onsite Group]
15	25 April	- Follow up with research progress - Individual discussion [Online Group]
16	2 May	- Present draft final report - Critique and exchange ideas

Note:

1. The class schedule shown above may be adjusted during the semester as needed.
2. Class presentations will be conducted **online** only.



## Course Syllabus

### **EE 475 Natural Resource Economics**

Semester 2/2020 (January 20 – May 19, 2021)

**Number of credits:** 3 credits (3-0-6)

#### **Course Description:**

The concepts of scarcity and economic rental of important natural resources and problems with these resources. Economic theories and tools used in natural resource management, including allocation among current users as well as inter-temporal allocation. Market failure due to deficiencies in the property rights system. Government natural resource policy and measuring its impact on the use of all kinds of natural resources.

**Prerequisites:** EE311

#### **Course Objectives:**

1. To provide students with economic theories for analyzing natural resource issues, especially scarcity and economic rents, intra- and inter- temporal allocation and utilization, market failures arising from resource characteristics and property rights system, and institutional arrangement for sustainable natural resource use

2. To study specific natural resource topics, in particular, depletable resources (minerals) ; recyclable resources (minerals, papers, bottles, e-waste); replenishable but depletable resources (water); a locationally fixed but multi-purpose resource (land), Storable, renewable resources (forests); Common-pool resources (fisheries)

## **Evaluation**

### **Group Assignments (Group of 3-4 students)**

- |   |     |
|---|-----|
| 1. Situation of your natural resource topic       | 20% |
| 2. Recent research of your natural resource topic | 10% |

### **Individual Assignments**

- 4 quizzes throughout the semester (every 4 weeks) 40%

### **Final Evaluation**

- Term Paper 40%

### **The Flip Classroom: Group Assignments (20%)**

The students will form a group of 4-5 students. Then each group has to select a natural resource topic for their assignments. Each group will work on a topic different from the other groups. The topics are the followings:

1. Energy
2. Recyclable Resources
3. Water
4. Land
5. Forest
6. Fisheries

### **Group Assignment 1 (20 %): Situation of your natural resource topic**

Each resource topic has 4 classes, covering a period of 2 weeks. In the first class of that topic, the group has to present the status of that resource in the global and Thailand context. The missions of your group are the followings:

- Provide basic understanding of your natural resource topic to your classmate.
- Illustrate the current status and trends in the past 5 or 10 years of the natural resource both in the global and Thailand context.
- Identify major challenge(s) of the natural resource.

For this assignment, your group has to do the followings

Tasks	Submission	Marks
1. Create an <b>outline</b> for the presentation and assign the sub-topic(s) to the group members	<b>Submit on Wednesday, 1 week before your presentation</b> in the Google Classroom	
2. Each member writes <b>an essay for your responsible sub-topic</b> <ul style="list-style-type: none"> <li>• Specification: <ul style="list-style-type: none"> <li>○ Word limit: n/a</li> <li>○ Font: Times New Roman 12</li> <li>○ Space 1</li> </ul> </li> <li>• In-text citation and reference</li> </ul>	Submit before/on the day of presentation <b><u>before your presentation starts</u></b> in the Google Classroom	10% (Different mark for each member of the group)
3. The group creates a presentation.	Submit before/on the day of presentation <b><u>before your presentation starts</u></b> in the Google Classroom	10% (Same mark for the whole group)
<b>4. The Presentation</b>	The group present the presentation to the class.  See the presentation date in the teaching plan below.	

### Group Assignment 2 (10 %): Article Review

In the last class of the natural resource topic, each member of the group has to find one recent academic paper (within the last 10years), read, and write a summary and comment that paper, as well as present it to the classmate.

For this assignment, your group has to do the followings

Tasks	Submission	Marks
1. <u>Help each other</u> find a <b>recent academic paper</b> (within 5-7 years) <b>for each member of the group.</b>	<b>Submit <u>as a group</u> on Friday, 1 week before your presentation</b> in the Google Classroom	

Tasks	Submission	Marks
<ul style="list-style-type: none"> <li>• <b><u>The topic must be related to your natural resource topic, and economics, development, policies, or sustainability.</u></b></li> <li>• It must be a paper from academic journal only. (Please try searching it in Google Scholar, Science Direct or other academic journal databases)</li> <li>• <b><u>Papers from scientific or other technical disciplines are not acceptable.</u></b></li> <li>• If the papers of any members of the group do not meet the above requirement, you need to find new papers and everyone in the group is deducted 1% each time.</li> </ul>		
<p>2. Each member writes Maximum TWO A4 pages, covering the following issues:</p> <ul style="list-style-type: none"> <li>• Summarize your paper (no more than 1 A4 page).</li> <li>• 3 important things you learn from the paper.</li> <li>• Specification: <ul style="list-style-type: none"> <li>○ Font: Times New Roman 12</li> <li>○ Space 1</li> </ul> </li> </ul>	<p>Submit <b>on the day</b> of the presentation.</p> <p>Submit it in the Google Classroom</p>	<p>10% (Different mark for each member of the group)</p>

### **Quizzes (40%)**

Approximately every 4-5 weeks, there will be a quiz, account for 10%. In total there will be 4 quizzes. Each quiz will cover the content of the previous 4 weeks. The quiz will be conducted in class and will be announced in advance.

The expected dates for the quizzes are presented in the table below.

### **Term Paper (40%)**

Term paper is designed to be the final evaluation, replacing the final exam. The expectation for the paper is high.

The theme of the term paper is “**Challenges, best practice, and policy recommendations**”.

#### **Expected Output:**

- An essay of 3,000 words (+/- 500 words) (excluding reference), with proper in-text citation and reference at the end.
- The essay should show high-level of effort and quality, and good command of English.
- The essay should review acceptable sources of knowledge, utilize at least 1 framework or theory from our classes.

#### **Steps during the semester:**

1. **Submit: Essay title, Outline and Annotated bibliography** on Wednesday March 11, 2021 (by midnight)
  - **The Essay Title** should represent the key message of the essay.
  - **The Outline** should present topics and sub-topics of the essay with 1-2 sentences explanation of the content to be included in each topic and sub-topic.
  - **Annotated Bibliography:**
    - o Student has to find 10 sources of knowledge, with acceptable quality.
    - o Source of knowledge with acceptable quality refers to academic article, research report, international organization report and publication, government agency report and publication, non-governmental organization (NGOs) report and publications, respectable news agencies and magazines. They can be online source.
    - o Write down the source in the format of citation (Chicago style).
    - o Write key message from each source in 1 paragraph.
    - o See more examples in Google Classroom

2. **Submission of the term paper:** June 1, 2021 (by midnight)

Specification:

- Font: Times New Roman 12 pts.
- Space: 1.5
- Margin: Normal
- No cover, forward, table of content
- In-text Citation and Reference must be used correctly throughout the essay.
- Student must check for plagiarism in TurnItIn system before submission. Please check how to check for plagiarism here: <https://library.tu.ac.th/th/academic-support/plagiarism-checker-turnitin>
- Class ID and Class Enrollment Key for TurnItIn will be announced in Google Classroom.

**Students have to submit the followings in the Google Classroom:**

- The Term Paper
- Originality Report from TurnItIn system. Please check the instruction for students here: [https://library.tu.ac.th/sites/default/files/2018-11/%E0%B8%84%E0%B8%B9%E0%B9%88%E0%B8%A1%E0%B8%B7%E0%B8%AD%E0%B8%81%E0%B8%B2%E0%B8%A3%E0%B9%83%E0%B8%8A%E0%B9%89%E0%B8%87%E0%B8%B2%E0%B8%99%20TURNITIN%20%E0%B8%AA%E0%B8%B3%E0%B8%AB%E0%B8%A3%E0%B8%B1%E0%B8%9A%E0%B8%99%E0%B8%B1%E0%B8%81%E0%B8%A8%E0%B8%B6%E0%B8%81%E0%B8%A9%E0%B8%B2%202018\\_0.pdf](https://library.tu.ac.th/sites/default/files/2018-11/%E0%B8%84%E0%B8%B9%E0%B9%88%E0%B8%A1%E0%B8%B7%E0%B8%AD%E0%B8%81%E0%B8%B2%E0%B8%A3%E0%B9%83%E0%B8%8A%E0%B9%89%E0%B8%87%E0%B8%B2%E0%B8%99%20TURNITIN%20%E0%B8%AA%E0%B8%B3%E0%B8%AB%E0%B8%A3%E0%B8%B1%E0%B8%9A%E0%B8%99%E0%B8%B1%E0%B8%81%E0%B8%A8%E0%B8%B6%E0%B8%81%E0%B8%A9%E0%B8%B2%202018_0.pdf)

## Teaching Plans

Week	Topics	Remarks
Week 1 Jan 20	<b>- Relationship between Human and Environment</b> <b>- The Economic Approach to Natural Resource Management</b> - Static Efficiency - Scarcity Rent	T*-Ch.2; HO*-Ch.1; TD*-Ch. 1-4
Jan 22		
Week 2 Jan 27	- Market failures - Government Failure - Problem of Public Goods - Common-pool resource management, and community-based natural resource management.	T*-Ch.3, 5; TD*-Ch.6 O*-Ch.1
Jan 29		
Week 3 Feb 3	- Dynamic Efficiency and Sustainable Development - Depletable resources allocation	T*-Ch. 3-4, 6; TD*-Ch.6, 7
Feb 5		
Week 4 Feb 10	<b>- Energy use, global warming, and air pollution:</b> Current Situation	Group Presentation
Feb 12	<b>Energy use, global warming, and air pollution:</b> Application of economic theories to the resource problems	#Quiz 1 T*-Ch.7; TD*-Ch.11
Week 5 Feb 17	<b>Energy use, global warming, and air pollution:</b> Specific theories for Energy Resources	T*-Ch.7; TD*-Ch.11
Feb 19	<b>Energy use, global warming, and air pollution:</b> Article Review Presentations	Group Presentation
Week 6 Feb 24	<b>Recyclable Resources and waste management:</b> Current Situation	Group Presentation
Feb 26	<b>Recyclable Resources and waste management:</b> Application of economic theories to the resource problems	T*-Ch.8; TD*-Ch.12 Additional readings
Week 7 Feb 3	<b>Recyclable Resources and waste management:</b> Specific theories for recyclable resources	T*-Ch.8; TD*-Ch.12 Additional readings
Mar 5	<b>Recyclable Resources and waste management:</b> Article Review Presentations	#Quiz 2 Group Presentation
Week 8 Mar 10	<b>Midterm Week</b>  <b>Term Paper:</b> Submit Essay Title, Outline and Annotated bibliography on Wednesday March 11, 2021 (by midnight)	
Mar 12		
Week 9 Mar 17	<b>Water Resource:</b> Current Situation	Group Presentation

<b>Week</b>	<b>Topics</b>	<b>Remarks</b>
Mar 19	<b>Water Resource:</b> Application of economic theories to the problems	T*-Ch.9; TD*-Ch.9 Additional readings
Week 10 Mar 24	<b>Water Resource:</b> Specific Theories for Water Resources Water Allocation Board Game	T*-Ch.9; TD*-Ch.9 Additional readings
Mar 26	<b>Water Resource:</b> Article Review Presentations	Group Presentation
Week 11 Mar 31	<b>Land:</b> Current Situation	Group Presentation
April 2	<b>Land:</b> Application of economic theories to the problems (April 6 is a public holiday. Make-up class is to be announced.)	T*-Ch.10; HO*-Ch.3 Additional readings
Week 12 Apr 7	<b>Land Use, Agricultural Policies, and the Environment</b>	T*-Ch.10; HO*-Ch.3 Additional readings
Apr 9	<b>Land:</b> Article Review Presentations	Quiz 3 Group Presentation
Week 13 Apr 14 Apr 16	<b>Songkran Week</b> Apr 12-18, 2021	
Week 14 Apr 21	<b>Forest and Biodiversity Conservation:</b> Current Situation	Group Presentation
Apr 23	<b>Forest and Biodiversity Conservation:</b> Application of economic theories to the problems	T*-Ch.12; TD*-Ch. 10 Additional readings
Week 15 Apr 28	<b>Forest and Biodiversity Conservation:</b> Specific Theories for Forest Resources	T*-Ch.12; TD*-Ch. 10 Additional readings
Apr 30	<b>Forest and Biodiversity Conservation:</b> Article Review Presentations	Group Presentation
Week 16 May 5	<b>Fishery resources:</b> Current Situation	Group Presentation
May 7	<b>Fishery resource:</b> Application of economic theories to the problems	T*-Ch.13 Additional reading
Week 17 May 12	<b>Fishery resource:</b> Specific theories for forest resources	T*-Ch.13 Additional reading
May 14	<b>Fishery resource:</b> Article Review Presentations	Quiz 4 Group Presentation
	<b>Term Paper Submission</b> June 1, 2021 (by midnight)	

## Reading list

### Main text

Tietenberg, Tom, and Lewis, Lynne (2011). Environmental and Natural Resource Economics. 9th Edition, MA: Pearson [T]

Tisdell, Clement, A., (2010). Resource and Environmental Economics: Modern Issues and Applications. Singapore: World Scientific. [TD]

### Recommended Readings

Harwick, John M. And Olewiler, Nancy D. (1998). The Economics of Natural Resource Use. 2nd Edition, MA: Addison-Wesley. [HO]

Field, Barry C. (2008). Natural Resource Economics. 2nd Edition, Illinois: Waveland Press. [F]

Ostrom, Elinor (1990). Governing the Commons. Cambridge University Press. [O]

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## Course Outline

### EE481: INDUSTRIAL ECONOMICS (SECTION: 046402)

Semester 1/2021 (August 9 – November 27, 2021)

**Number of Credit: 3**

**Prerequisite: EE 311**

**Course Description:** study the behaviors of firms in imperfectly competitive markets on how to set the pricing and non-pricing strategies under different environments, such as different market structure, different technologies, and different government regulations. The methodology used mainly is based on the applied game theory under asymmetric information.

**Course Objectives:** Students should be able to set the optimal strategies of firms under different circumstances in the imperfectly competitive markets.

**Main Text:**

Carlton and Perloff, Modern Industrial Organization, fourth edition, Pearson Education Limited, 2015.

Drucker, P., Theory of the Business, Harvard Business Review Classics, 2017.

Rasmusen, Eric, Games & Information, third edition, Blackwell Publishers Ltd., 2001.

Tirole, Jean, Industrial Organization, The MIT Press, 1989.

**Recommended Texts & Materials**

Allen F., “Reputation and Product Quality”, the Rand Journal of Economics, 15 No.3, pp.311-327,1984.

Dixit, A., “A Model of duopoly suggesting a theory of entry barriers”, the Bell Journal of Economics, 10 No.1. pp. 20-32, 1979.

Kreps and Wilson, “Reputation and Imperfect Information”, Journal of Economic Theory, 27, pp. 253-279, 1982.

**Suggested Readings:**

Harvard Business Review, various issues

**Grading Criteria:**

Mid-term examination (October 1 <sup>st</sup> . 12.00-14.00)	30
Term Paper (December 10 <sup>th</sup> . 16.30)	30
Final examination (December 1 <sup>st</sup> . 13.30-16.00)	40

**Expected Learning Outcomes:** Every student should understand the basic knowledge on business strategic planning

## Tentative Class Schedule:

Week		Topics	
1		Introduction to industrial Economics: Methodology	
2		Drucker's Theory of Business	
3		M. Potter on "What is Strategy?"	
4		Market and Market Analysis	
5		Asymmetric Information Game Theory	
6		Oligopoly Models	
7		Product Quality and Price signaling	
8		Vertical and Horizontal Product Differentiation	
9		Advertising	
10		Entry and Accommodation	
11		Vertical integration and Vertical Restriction	
12		Horizontal Integration and Collusion	
13		Disruptive Technology and Intellectual Property Rights Protection	
14		Reputation, Limit Pricing, and Predation	
15		Government Regulation: Competition Policy	



## Course Outline

### EE484 Empirical Industrial Organization

Semester 2/2021 (Jan10 – May 7, 2022)

**Number of credits:** 3 credits

#### **Course description:**

The empirical approach in industrial economics and applying econometric analysis in industrial economics theory, i.e., Estimation of demand and production functions, Measurement of market power, Analysis of Firm's strategic behavior, Vertical and horizontal competition, Firm's entry decisions, contract, and learning. Measurement of firm performance by efficiency and productivity indicators.

#### **Prerequisite:**

*(a) EE311 and EE325 (or EE425) or (b) with the consent of the lecturer.*

#### **Course objective:**

- a) Understand the main features of empirical models of demand, production function, price and quantity competition, and market entry.
- b) Know how to use market data to estimate the parameters of these empirical models and interpret the economic implications of these estimations.
- c) Have enough programming experience using Stata and practical experience using actual data to work in a research project in empirical I.O.

## Course Narratives:

I.O. studies how markets work, how firms compete or collude with each other, and how these interactions determine profits and consumer welfare. I.O. emphasizes the interdependence in the decisions of firms operating in a market. For instance, when a firm decides to open a new store, it should consider how other firms in the market will respond by changing their prices, advertising, closing stores, or opening new ones. These interdependences underlie firms' decisions and market competition.

Over the last two decades, research in I.O. has become predominantly empirical. I.O. economists use data on consumers' and firms' decisions to measure consumer demand, firm productivity, and profitability. They apply these measurements to understand firms' strategies and analyze how government regulations affect market competition and social welfare. Recently, the increasing availability of rich and detailed data on consumers' and firms' choices ("big data") has significantly impacted this field by generating new types of empirical questions requiring new models and methods.

Empirical I.O. emphasizes the importance of combining data, economic models, and appropriate econometric techniques to answer empirical questions. In terms of models and econometric methods, four main workhorses concentrate most of the research in this field: (i) production functions and the measurement of firm productivity; (ii) demand models and the estimation of consumer preferences; (iii) models of price and quantity competition; and (iv) models of market entry and innovation, both static and dynamic. This course is organized around these essential models.

Econometrics and data analysis are fundamental tools for the modern economist of the 21st Century. We will review and apply standard econometric models and methods such as the linear regression model, instrumental variables estimation, and discrete choice models. Students will gain practical experience working with economic data and using the STATA Data Analysis and Statistical Software package.

## Textbook and References:

- [ABBP] Akerberg, D., L. Benkard, S. Berry, and A. Pakes (2006): "Econometric Tools for Analyzing Market Outcomes," *Handbook of Econometrics*, volume 6.
- [A.G.] Aguirregabiria, V. (2021): Book Project: "Empirical Industrial Organization: Models, Methods and Applications." Available at the course website.
- [ASL] Aguirregabiria, V., and M. Slade (2017): "Empirical Models of Firms and Industries," *Canadian Journal of Economics*, 50(5), 1445-1466.
- [ASU] Aguirregabiria, V. and J. Suzuki (2016): "Empirical Games of Market Entry and Spatial Competition in Retail Industries," *Handbook on the Economics of Retail and Distribution*, Chapter 9, pp 201-233. Emek Basker (editor). Edward Elgar Publishing.
- [B.R.] Berry, S., & Reiss, P. (2007): "Empirical Models of Entry and Market Structure," in *Handbook of Industrial Organization*, Volume 3, 1845-1886.
- [M.S.] Shum, M. (2016). *Econometric Models for Industrial Organization* (Vol. 3). World Scientific.
- [N.E.] Nevo, A. (2011): "Empirical Models of Consumer Behavior," *Annual Review of Economics*, 3, 51-75.
- [R.W.] Reiss, P., and Wolak, F. (2007): "Structural Econometric Modeling: Rationales and Examples from Industrial Organization," in *Handbook of Econometrics*, Volume 6, pp. 4277-4415.

## LIST OF TOPICS

[1] Introduction to the Course. [2] Measuring Productivity. Estimation of Production Functions. [3] Measuring Consumer Preferences. Estimation of Demand of Differentiated Products [4] Competition in Prices and Quantities. [5] Empirical Models of Market Entry

## Lecture Schedule

(This schedule is subject to change. Please see Google Classroom for changes to dates, etc.)

Week	Date	Topics and Readings
1	January 12, 2022 January 14, 2022	[1] Introduction to the Course 1.1. Measuring and explaining market power 1.2. Data in Empirical IO 1.3. Structural models in Empirical Industrial Organization: An Example 1.4. An overview of the rest of the course
2	January 19, 2022 January 21, 2022	[2] Measuring Productivity. Estimation of Production Functions 2.1 Introduction 2.2. Simultaneity Problem
3-4	January 26, 2022 January 28, 2022 February 2, 2022 February 4, 2022	[2] Measuring Productivity. Estimation of Production Functions 2.3 Dynamic Panel Data Methods 2.4. Control function methods
5	February 9, 2022 February 11, 2022	[2] Measuring Productivity. Estimation of Production Functions 2.5. Application.
6	February 18, 2022	[3] Measuring Consumer Preferences. Estimation of Demand of Differentiated Products 3.1. Introduction
7	February 23, 2022 February 25, 2022	[3] Measuring Consumer Preferences. Estimation of Demand of Differentiated Products

Week	Date	Topics and Readings
		3.2. Demand systems in product space 3.3 Demand systems in characteristics space 3.4. Application
<b>8</b>	<b>MIDTERM EXAM</b>  <b>TBA</b>	
<b>9-10</b>	March 9, 2022 March 11, 2022 March 16, 2022 March 18, 2022	[4] Competition in Prices and Quantities 4.1. The Conjectural Variation Approach
<b>11-12</b>	March 23, 2022 March 25, 2022 March 30, 2022 April 1, 2022	[4] Competition in Prices and Quantities 4.2. Testing static oligopoly models (Genesove and Mullin: RAND 1998) 4.3. Nevo on Cereals (Nevo, 2001)
<b>13</b>	April 8, 2022	[5] Empirical Models of Market Entry 5.1. Some general ideas
<b>14</b>	April 20, 2022 April 22, 2022	[5] Empirical Models of Market Entry 5.2. Bresnahan and Reiss (JPE, 1991)
<b>15</b>	April 27, 2022 April 29, 2022	[5] Empirical Models of Market Entry 5.3. Empirical Models of Market Entry with Heterogeneous firms
<b>16</b>	May 4, 2022 May 6, 2022	<b>Student Presentations</b>

Week	Date	Topics and Readings
		<b>FINAL EXAM</b> <b>TBA</b>

**Assessment**

Class participation		10 %
Presentation		10 %
Joint paper		30 %
Mid-term exam	~~~~~	20 %
Final exam		30 %

**Class Participation (and attendance)**

Students should read before class and bring a copy of the reading to the class. Students are encouraged to contribute answers, comments, and questions actively. *If a student is absent from more than two classes, marks will be deducted from her or his participation mark.*

**Joint Essay and Presentation**

Each group will consist of 3 students. Each group will research the topic and present findings in November. After receiving comments from the instructor at the end of the presentation, the group will revise and finalize the paper and submit it within one week after the student presentation. Details about the topics and the format of the paper will be provided on Google Classroom. A hard copy should be submitted in class, and the soft copy must be submitted to the instructor's email address.

**Collaboration Policy:** Discussion and exchanging ideas and works are essential to student project work. Students and their teams are encouraged to consult and discuss the projects with student classmates and share resources and codes. However, the student should ensure that any working student submits for evaluation is the result of student work and reflects their integrity. Students should also understand and practice the standard citation practices, and please cite any books, articles, websites, lectures, etc., that have helped the student with their work. If the students receive any help with their work (e.g., feedback on drafts, help with code, or programming), they must also acknowledge and give credit to this assistance.

**Remarks:**

- .. Mid-Term Examination      TBA
- .. Final Examination        TBA



## Course Outline

### EE489 Seminar in Industrial Economics

Semester 1/2021 (August 9 – November 27, 2021)

**Number of Credit:** 3 credits (3-0-6)

**Prerequisite:** Having completed at least two 400-level (or the above level) courses in field of Industrial Economics

#### Course Description:

Seminar and research on topics in industrial economics with the lecturer's guidance.

#### Course Objectives:

1. To develop research skills including of identifying research questions and its significance, reviewing literature related to the research topic, designing research methodologies and conducting research, analyzing and discussing research results together with reviewing and criticizing peers' research works. This course also aims to develop communication skills in both writing and oral presentation.
2. To learn to conduct a systematic and original research on students' topic of interest and to develop economic analysis skills and critical thinking needed for future self-learning and development.

#### Textbooks & Materials:

##### Economic Theories:

Church, J. & Ware, R. (2000). *Industrial organization: A strategic approach*. Boston: McGraw Hill.

Laffont, J.J. & Tirole J. (1993). *A theory of incentives in procurement and regulation*. Massachusetts: The MIT Press.

Motta, M. (2004). *Competition Policy: Theory and Practice*. Cambridge: Cambridge University Press

Pepall, L., Richards, D.J. & Norman. G. (2004). *Industrial Organization: Contemporary Theory and Practice*. South-Western College Publishing.

Shy, O. (1995). *Industrial Organization*. Massachusetts: The MIT Press.

Tirole, J. (1990). *The Theory of Industrial Organization*. Massachusetts: The MIT Press.

*Handbook of Industrial Organization*, Volumes I, II, and III, North-Holland.

### **Econometrics:**

Davis, P. & Garcés , E. (2009). *Quantitative Techniques for Competition and Antitrust Analysis*. Princeton University Press.

Greene, W.H. (2018). *Econometric Analysis*. New Jersey: Pearson Education.

Gujarati, D.N. (2015). *Econometrics by Example*, Red Globe Press.

Shum, M. (2016). *Econometric Models for Industrial Organization*. World Scientific Lecture Notes in Economics.

Train, K.E. (2009). *Discrete Choice Methods with Simulation*. Cambridge: Cambridge University Press,.

Wooldridge, J. (2010). *Econometric Analysis of Cross-Section and Panel Data*. Massachusetts: The MIT Press.

**Note:** Students will be given some suggested readings and materials on how to do a successful research project throughout this course.

### **Teaching and Learning Approach:**

#### **1. Lectures**

The objectives of classroom lectures are to equip the students with a good research practice, to provide step-by-step guidance to conduct their research projects in topics of interest, to highlight contentious aspects of research process and to effectively manage a research project. Lecturing also includes training session for citation, referencing and checking plagiarism.

#### **2. Research**

Since this course focuses on industrial economic issues, research topic of student's interest should be related to industrial economics and/or industrial policies.

Students will conduct research project and submit research report or article, of which the **elements** are:

0. Abstract
1. Introduction
  - 1.1 Significance of Problem
  - 1.2 Research Objective
  - 1.3 Research Scope
2. Literature Review (Theories and/or Empirical Studies)
3. Analytical Framework and/or Research Methodology
  - 3.1 Analytical or Conceptual Framework
  - 3.2 Research Methodology and Data Sources
4. Result of Study
5. Conclusion and Policy Implications
  - 5.1 Conclusion
  - 5.2 Policy Implications
  - 5.3 Limitation of Study
  - 5.4 Future Study
6. References
0. Appendix (if available)

To write a clear and original research paper, students will practice reviewing and summarizing related literature concisely, citing the previous research papers carefully in students' research report and in a list of references and using footnote where necessary. Students have to follow the 6th edition of American Psychological Association style (APA Style 6th Edition) for referencing.

Throughout the semester, students will be assigned tasks as following.

**Task 1:** Students will choose any topics of interest, identify its significance and refine research objectives and scopes. Students will conduct a survey of previous studies and review literature. To accomplish this task, students will submit "Introduction and Literature Review" in no more than 10 A4 pages together with a list of reference.

**Task 2:** Students develop analytical framework and research methodology and submit "Research Proposal" composing of element 1-3 in no more than 15 A4 pages together with a list of reference. Approval of research topic and proposal by instructors is required before conducting research.

**Task 3:** Students conduct research independently under instructor's supervision and consultation. Students will apply the statistical techniques or econometric methods with data available and will analyze results of study. Submission of "Draft Final Report (or Article)" will be composed of element 1-6 in no more than 30 A4 pages.

**Task 4:** Students improve the report from comments and discussion in their seminar. Submission of "Final Report (or Article)" will be composed of element 0-6 in no more than 35 A4 pages with the aim of publishing the paper in academic journal.

**Note:** Paper length includes text, tables, figures, notes and etc. Date of submission of each task will be announced in the class.

**Task 1-4** shall be submitted in **electronic files both in Word Document and PDF format** via Google Classroom.

According to **code of ethics** of "**Thailand and The World Economy**" journal, in this course students must

- ensure that the submitted report comprises original work by the students, with proper citations and sufficient details.
- ensure the report does not plagiarize other works, contain data fabrication and/or falsification, have duplicate submissions, ghost authors or contain citation manipulation.

**Any violation of code of ethics will result in no assessment of any kind in that task.**

### **3. Seminar**

Student presentations are required along with submission of Task 1-3. Students will learn how to present their research works in seminar and conference **within time limit** and to discuss their works with the instructor and other students. Students will develop communication and presentation skills. All students must attend and participate in every seminar to exchange contributive and constructive idea, comment and advice.

**Presentation 1:** Introduction and Literature Review (10 minutes)

**Presentation 2:** Research Proposal (15 minutes)

**Presentation 3:** Draft Final Report or Article (20 minutes)

**Note:** Students must prepare their presentations in advance. They are free to choose the presentation software. However, they have to submit electronic file in PDF format to the instructor before their seminar via Google Classroom. Date and time slot of each presentation shall be scheduled and announced in the class.

Students will be assigned to play a **discussant's** role and to practice writing up **discussion report**.

**Grading:**

	<b>Score (%)</b>
Task 1 and Presentation 1	15
Task 2 and Presentation 2	20
Task 3 and Presentation 3	25
Task 4	30
Class participation and discussion	10
<b>Total</b>	100

**Note:** Deadline of submission of each task and presentation is 14.00 pm on the specified dates. Any late submission will result in deduction of 2% of final score a day.

**Expected Learning Outcomes:**

**1. Morality and Ethics**

<b>Applicability</b>	<b>Learning Goals</b>
●	1.1 Students demonstrate integrity.
○	1.2 Students prioritize social and public benefits over personal ones.
●	1.3 Students are punctual and comply with the code of conduct of the institution and society at large.
●	1.4 Students are responsible and accountable to society, the nation, and the subject of economics.
○	1.5 Students realize the cultural and environmental value of the sustainable society.

**2. Knowledge**

<b>Applicability</b>	<b>Learning Goals</b>
●	2.1 Students know and understand modern economics principles and theories, and are up to date with new developments.
●	2.2 Students know and understand Thai and global economic structure, and the importance of major international economic events.
●	2.3 Students know and understand instruments of economic analysis.
●	2.4 Students know and understand applied fields in economics, including monetary, public, international, business, natural resource and environmental, industrial, agricultural, cooperative, political, developmental, and entrepreneurial economics as well as agribusiness.
○	2.5 Students are informed about related fields including sociology, business administration, education, law policy, and science.

### 3. Intellectual Development

<b>Applicability</b>	<b>Learning Goals</b>
●	3.1 Students have developed individual critical thinking.
●	3.2 Students are sufficiently trained in research skills.
●	3.3 Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand causes of current economic problems in Thailand. Based on analysis and synthesis, students demonstrate an ability to propose policy guidelines to resolve problems.

### 4. Interpersonal Skills and Responsibilities

<b>Applicability</b>	<b>Learning Goals</b>
●	4.1 Students are responsible for assigned tasks and work in groups effectively.
●	4.2 Students have problem-solving skills.
●	4.3 Students show leadership skills and team spirit.
●	4.4 Students are always improving themselves.
●	4.5 Students have good interpersonal skills, adapting and working under different conditions.

### 5. Quantitative Analysis, Communication and Information Technology

<b>Applicability</b>	<b>Learning Goals</b>
●	5.1 Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.
●	5.2 Students communicate effectively and select appropriate presentation methods.
●	5.3 Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.

## Tentative Class Schedule:

Week	Activities	Submission
1	Lecture: - Introduction to EE489 - Frontier research in industrial economics and policy Research: Task 1 Training session: Citation, referencing and checking plagiarism	-
2	Lecture: - How to develop research question and objectives from topics of interest. - Literature search and review techniques - Journal of Economic Literature (JEL) classification Research: Task 1	Topics of Interest
3	Research: Task 1 (Cont.) Seminar: Presentation 1	Presentation 1
4	Lecture: - Developing analytical framework - Selecting research methodology - Data source and usage Research: Task 2	Introduction and Literature Review
5	Lecture: - Reporting results of study Research: Task 2 (Cont.)	-
6	Research: Task 2 (Cont.) Seminar: Presentation 2	Presentation 2
7	Research: Task 2 (Cont.) and Task 3 (Data collection) with Consultation	Research Proposal
8	<b>Midterm Week</b> Research: Task 3 (Data collection and conduct research)	-
9	Research: Task 3 with Consultation	-
10	Lecture: - Writing a concise conclusion and giving policy recommendation - Identifying limitation of study and suggesting future study - How to write an abstract Research: Task 3 with Consultation	-

<b>Week</b>	<b>Activities</b>	<b>Submission</b>
11, 12	Research: Task 3 with Consultation	-
13	Lecture: - Role of discussant - Writing discussion report Research: Task 3 with Consultation	Draft Final Report
14	Seminar: Presentation 3 Research: Task 4 with Consultation	Presentation 3 Discussion Report
15	Seminar: Presentation 3 Research: Task 4 with Consultation	-
16	Research: Task 4 with Consultation	-
<b>28 November 2021: Submission of Final Report or Article</b>		

## **Course Outline**

### **EE531 : Selected Topics in Monetary and Financial Economics I**

#### **‘ Banking Management & Fintech ‘**

**Semester 2/2021 (January 10<sup>th</sup> – May 7<sup>th</sup>, 2022)**

**Number of Credit:** 3

**Prerequisite:** FN201 Business Finance

#### **Course Objective:**

**The course is designed to build your understanding on financial institution management and ‘Fintech’ (Financial Technology), the new disruptive innovations in financial services.** The course is designed for students in pursuit of career in financial institutions as well as consultants or startups in financial technology industry.

#### **Course Description:**

The first part of the course will delve into financial institutions with the focus on economics of management of financial institutions. It will provide practical know-how that will be useful for the Thai context, including market landscape, practices and regulations. The topics cover 1) overview of market landscape and key products; 2) analysis of balance sheet and income statement; 3) asset-liability management and liquidity reserve; 4) interest rate risk management; 5) measurement of credit risks, economic capital, risk-adjusted loan pricing; 6) capital adequacy and Basel regulatory framework; 7) recent developments in global regulation including Basel III and macro-prudential policy; and 8) role of financial institutions in monetary policy transmissions.

The second part of the course will focus on the recent innovations in financial services of Fintech. It will cover Fintech topics: 1) current ecosystem in developed and emerging markets, 2) key Fintech solutions: payments and distributed ledger technology, crowdfunding & P2P lending and robo advisor 3) data analytics and AI, 4) blockchain and smart-contract, 5) crypto/digital-currencies and central bank digital currency (CBDC) 5) decentralized finance (Defi) and tokenization and 6) alternative credit scoring and digital lending. This part of the course will provide interactive learning experiences, which will empower you with the knowledge you need to explore and build the future of transactions and financial technology.



The following list is a preliminary list of topics for the course. This list does not infer timeline. Deviations and adjustments will occur during the course.

### 1. Current Global Fintech Landscape and Ecosystem

- *Fintech: On the Brink of Further Disruption*, Deloitte Financial Advisory Netherlands, 2020
- *World Fintech Report*, Capgemini Research Institute, 2020
- *Beyond Fintech: A Pragmatic Assessment of Disruptive Potential in Financial Services*, World Economic Forum 2018

### 2. Data Analytics and AI

- *The New Physics of Financial Services: Understanding How Artificial Intelligence is Transforming the Financial System*, World Economic Forum, 2018
- *Bank 4.0: Banking Everywhere, Never At A Bank*, King Brett, Wiley, 2019

### 3. Key Fintech Solutions: Payments & Distributed Ledger Technology, Crowdfunding & P2P Lending, and Robo Advisor

- *The Future of Financial Infrastructure: How Blockchain Can Reshape Financial Services*, World Economic Forum, 2016
- *Lending Crowdfunding: Principles and Market Development*, Ziegler & Shneor, Cambridge Centre for Alternative Finance, 2020
- *The Business Models and Economics of Peer-to-Peer Lending*, Milne & Parboteeah, European Credit Research Institute, 2016
- *China's Fintech Explosion: Disruption, Innovation and Survival*, Hsu & Li, Columbia University Press, 2020

### 4. Blockchain and Smart Contract

- *Digital Finance: Security Tokens and Unlocking the Real Potential of Blockchain*, Hines Baxter, Wiley, 2021
- *Mastering Blockchain: A Deep Dive into Distributed Ledgers, Consensus Protocols, and Smart Contracts*, Bashir Imran, Packt Publishing, 2020
- *Blockchain and Corporates: Transparency in the New Making*, Deutsche Bank Research, 2020
- *The Real Business of Blockchain*, Harvard Business Review, 2020

### 5. Crypto/ Digital currency

- *Mastering Blockchain: Unlocking the Power of Cryptocurrencies and Smart Contracts*, Lantz & Cowley, O'Reilly, 2021
- *Investing in Cryptocurrency*, Morgan Stanley Wealth Management, 2021
- *Crypto: A New Asset Class*, Goldman Sachs, 2021

### 6. Central Bank Digital Currency (CBDC)

- *The Macroeconomics of Central Bank Issued Digital Currencies*, Barrdear & Kumhof, Bank of England, 2021
- *Central Bank Digital Currencies: Putting A Big Idea into Practice*, Carsten Agustin, Bank of International Settlement, 2021
- *The Way Forward for Retail Central Bank Digital Currency in Thailand*, Bank of Thailand, 2021
- *International Implications of China's Central Bank Digital Currency*, Duffie Darrell, Stanford University, 2021

### 7. Decentralized Finance (DeFi)

- *Decentralized Finance: On Blockchain and Smart Contract-based Financial Markets*, Schar Fabian, 2020
- *Mastering Defi*, Mihajlovic Marko, 2021
- *Decentralized Finance Policymaker Toolkit*, the Wharton Blockchain and Digital Asset Project, 2021
- *Financial Contagion*, Allen and Gale, Journal of Political Economy, 2000
- *Liquidity Shortages and Banking Crises*, Diamond & Rajan, NBER, 2002
- *A Defi Bank Run: Iron Finance, IRON Stablecoin and the Fall of Titan*, Saengchote Kanis, Chulalongkorn Business School, 2021

### 8. Alternative Credit Scoring and Digital Lending

- *The Global Covid-19 Fintech Market Rapid Assessment Study*, Cambridge Centre for Alternative Finance, 2021
- *The 2<sup>nd</sup> Global Alternative Finance Market Benchmarking Report*, Cambridge Centre for Alternative Finance, 2021
- *Digital Lending: A \$1 Trillion Opportunity Over The Next 5 Years*, The Boston Consulting Group, 2018
- *Fintech and Big Tech Credit: A New Database*, Cornelli et al., Bank of International Settlement, 2020

## First Part Topics: Understanding Financial Institutions

The following list is a preliminary list of topics for the course. **Will not be able to cover all topics, should interest of the class is veered towards more of the Fintech part.**

**1. Introduction (SC 1, 2, 7)**

- Roles and importance of commercial banks
- Putting banks in context of global financial crises

**2. Getting to Know Thai Banks**

- Thai banking landscape and major players
- Organization, structure, regulations
- Key products/services

**3. Understanding Banks via Financial Statements**

- Analysis of banks' balance sheets and income statements
- Measuring and evaluating performance of banks

**4. Typology of Risks in Commercial Banks (SC 7, 13)**

- Introduction to credit, market & operational risks
- Off-balance sheet risks (e.g. pre-settlement risk)

**5. Asset-Liability Management & Interest Rate Risk (SC 8, 9)**

- Term structure, yield curve & duration of assets and liabilities
- Strategic management of balance sheet via gap analysis
- Hedging interest rate risk using derivatives

**6. Measuring Credit Risk (SC 11)**

- Lending processes and policies, basic credit analysis
- Probability of default measurement: credit scoring, Moody's KMV
- Economic capital framework: loan loss provision, unexpected loss
- Loan pricing via risk adjusted return on capital (RAROC)

**7. Liquidity and Source of Fund Management (SC 12, 18, 19)**

- Measuring liquidity risk
- Case Study on Bank Run: Northern Rock during 2008 credit crisis
- Bank runs, BOT's standing facilities, DPA (deposit insurance)
- Managing liquid assets & risk-return tradeoff for liquid assets
- Choices of liability structure & source of funds
- Thai banks' practices: liquidity reserve and source of fund

**8. Capital Adequacy: Regulatory & Internal Model (SC 20)**

- Roles of capital as buffer to insolvency risk
- Regulatory approach to capital requirement: Basel I, Basel II
- Internal risk based approach to capital: a reprise on economic capital
- Raising capital to meet requirement from internal and external sources.

**9. Recent development in global regulatory framework (referred readings)**

- Basel III on liquidity risk, capital requirement, counterparty credit risk
- Macroprudential policy as a new tool of central banks

**10. Systemic Risk and Financial Interconnectedness (referred readings)**

- Understanding global financial institutions' interconnectedness
- Implication of interconnectedness on systemic risk and contagion in recent crises