

## B.E. Curriculum 2018 (For Student ID64 – ID65)

### Expected Learning Outcomes of B.E. Curriculum 2018

Expected learning outcomes (main category or characteristics)	Subcategories for expected learning outcomes (detailed descriptions)
ELO1 Moral and ethical awareness	ELO 1.1 honesty in thinking, studying, analyzing, behavior, and work performance ELO 1.2 public consciousness valuing public interest over self-interest ELO 1.3 discipline, punctuality, respect and following institutional and societal rules and regulations ELO 1.4 responsibility towards themselves, society, and the nation, as well as dignity in the field of economics ELO 1.5 recognizing the value of art and culture, as well as the environment, for the sake of society life
ELO2 Being well-rounded and knowledgeable	ELO 2.1. knowledge and understanding of economic concepts, theories and their development that have changed due to updated information ELO 2.2. knowledge and understanding of the Thai and international economic and societal structure and/or situation ELO 2.3 knowledge and understanding of fundamental economic instruments ELO 2.4 knowledge and understanding of applied economics (financial, monetary, international, business, resources and environmental, industrial, agricultural, cooperative, political, development, and entrepreneurial economics, as well as agribusiness) ELO 2.5 knowledge in fields related to economics (sociology, anthropology, business administration, education, law, political science, and science)
ELO3 Intellectual skills	ELO 3.1 ability for rational, analytical, and systematic thinking ELO 3.2 capacity for defining educational issues; searching for, collecting, processing, analyzing, synthesizing, and interpreting data; and summarizing issues from diverse data sources ELO 3.3 ability to analyze data and evidence, integrating them with the knowledge to appropriately and creatively suggest solutions for economic and social problems (effective, fair, and suitable for social situations and contexts)
ELO4 Interpersonal skills and responsibility	ELO 4.1 ability to effectively perform work and take responsibility for assigned duties at individual and group levels ELO 4.2 ability to creatively analyze problems individually or with others ELO 4.3 good leadership and teamwork ELO 4.4 continual self-development in knowledge, academic skills, and knowledge exchange with others ELO 4.5 good interpersonal relations, ability to collaborate with others at all levels, and adapt to different situations
ELO5 Numerical, analytical, communication and information technology skills	ELO 5.1 ability to appropriately select and apply related mathematical and statistical techniques for analyzing, processing, and interpreting data; summarizing issues; and suggesting solutions

Expected learning outcomes (main category or characteristics)	Subcategories for expected learning outcomes (detailed descriptions)
	<p>ELO 5.2 ability to effectively communicate through speaking, writing, and selecting presentation format</p> <p>ELO 5.3 ability to appropriately select and use information technologies and communication techniques in collecting, analyzing, processing, interpreting, and presenting data</p>

## Curriculum Structure

The Bachelor of Economics, International Program requires students to register a minimum of 131 credits in accordance with the course structure and requirements as follows:

<b>Block 1) General Education Courses</b>	<b>30</b>	<b>credits</b>
<b>Block 2) Major Area Courses</b>	<b>71</b>	<b>credits</b>
2.1) Compulsory Courses	32	credits
2.2) Compulsory Elective Courses	3	credits
2.3) Cluster-specific Courses	30	credits
2.3.1) Cluster-specific Compulsory Courses	21	credits
2.3.2) Cluster-specific Elective Courses	9	credits
2.4) Seminar	3	credits
2.5) Internship	3	credits
<b>Block 3) Minor Area or Non-Economics Elective Courses</b>	<b>24</b>	<b>credits</b>
<b>Block 4) Free Elective Courses</b>	<b>6</b>	<b>credits</b>

### Block 1 General Education Courses **30 credits**

Students are required to complete a minimum of 30 credits in general education courses in accordance with the following course structure which can be divided into 2 parts.

**Part 1** Core curriculum required by university accounted for total of 21 credits which consists of 9 credits of compulsory courses, 6 credits of compulsory elective courses and 6 credits of any courses in following list.<sup>1</sup>

**Social Science Course** 1 compulsory course (3 credits)

<b>TU100 Civic Engagement</b>	<b>3 (3-0-6)<sup>2</sup></b>
<b>TU101 Thailand, ASEAN, and the World</b>	<b>3 (3-0-6)</b>
TU109 Innovation and Entrepreneurial Mindset	3 (3-0-6)

**Humanity Course** Students must complete at least 1 course (3 credits) in following list

<b>TU102 Socials Life Skills</b>	<b>3 (3-0-6)</b>
TU108 Self-Development and Management	3 (3-0-6)

**Science and Mathematics Course** Students must complete at least 1 course (3 credits) in following list

<b>TU103 Life and Sustainability</b>	<b>3 (3-0-6)</b>
TU107 Digital Skill and Problem Solving	3 (3-0-6)

<sup>1</sup> Subjects with bolded titles are all Gen-Ed part 1 courses that have been currently offered at B.E. international program.

<sup>2</sup> 3 (3 – 0 – 6) is referred to a course with 3 credits, 3-hour lecture, 0-hour laboratory session, and 6-hour self-study.

<b>Language Course</b>	Students are required to complete TU104 and TU105 <sup>3</sup>
TU050 English Skill Development	3 (3-0-6) Credits are not counted
<b>TU104 Critical Thinking, Reading, and Writing</b>	<b>3 (3-0-6)</b>
<b>TU105 Communication Skills in English</b>	<b>3 (3-0-6)</b>
<b>TU106 Creativity and Communication</b>	<b>3 (3-0-6)</b>

**Part 2** Students must collect another 9 credits from the courses specified by the faculty as follows:

- a) EE100 Academic Writing for Economic Issues **or** 3 (3-0-6)
- b) EE200 Data Science for Economic Analysis **or** 3 (3-0-6)
- c) EL296
- d) TU122
- e) TU116
- f) Other courses classified by the university as the Gen-Ed part II subjects

## Block 2 Major Area Courses **71 credits**

Consisting of 5 components including 32 credits of compulsory courses, 3 credits of compulsory elective courses, 30 credits of cluster-specific courses, 3 credits of seminar and 3 credits of internship as follows.

Compulsory courses 32 credits

- a) MA216 (or MA211) and ST216 (or ST211)
- b) EL241 and EL341<sup>4</sup>
- c) EE211; EE212; EE311; EE312; EE320 (or EE421) and EE325 (or EE425)

Compulsory elective courses 3 credits: students are required to complete 3 credits from one of the following courses specified by the faculty.

1. EE404 History of Economic Thought
2. EE406 Contemporary Economic Issues
3. EE460 Thai Economy

**Cluster-specific courses 30 credits** consisting of cluster-specific compulsory courses and cluster-specific elective courses as follows

At least 21 credits of EE-title course with 400-level or above.

At most 9 credits of EE-title course with 300-level or above.

Capstone project 3 credits with 2 options:

- EE4x9 Seminar courses 3 credits or
- EE500 Honors Thesis 3 credits<sup>5</sup>

Internship courses 3 credits

EE300 Internship course 3 credits or

<sup>3</sup>For TU104 and TU105, students can be accredited accordingly to the Thammasat University Division of Academic Affairs Announcement related to the Exemption and Accreditation for Academic Year of 2022.

<sup>4</sup>B.E. students are exempted from taking these two courses, and required to complete other courses to fulfill the credits needed.

<sup>5</sup>To register in EE500, students must earn 3 credits of EE400, and maintain the GPA no less than 3.25

EE366 Local Study and development 6 credits<sup>6</sup>

### Block 3 Minor Area study 24 credits

B.E. students can choose for three types of minor area study. (Your minor area field will be recorded in your transcript.) To obtain the minor area study in such a field, certain requirements must be fulfilled.

#### Minor 1 Finance

To graduate with Finance minor, students are required to earn 24 credits, and maintain the grade point average at least 2.00 with the following course structure:

FN211 Financial Mathematics and Statistics	Compulsory	3 credits	Receive at least C for each course
FN311 Financial Management		3 credits	
FN312 Investment		3 credits	
AC201 Fundamental Accounting		3 credits	
BA291 Introduction to Business	Elective	3 credits	Receive A, B+, B, C+, C, D+, D
FN201 Business Finance		3 credits	
FNXXX (Choose one from FN courses)		3 credits	
FNXXX (Choose one from FN courses)		3 credits	

#### Minor 2 Marketing

To graduate with Marketing minor, students are required to earn 24 credits, and maintain the grade point average at least 2.00 with the following course structure:

MK311 Consumer Behavior	Compulsory	3 credits	Receive at least C for each course
MK312 Brand Management		3 credits	
BA291 Introduction to Business		3 credits	
MK201 Principles of Marketing		3 credits	
MKXXX (Choose one from MK courses)	Elective	3 credits	Receive A, B+, B, C+, C, D+, D
MKXXX (Choose one from MK courses)		3 credits	
MKXXX (Choose one from MK courses)		3 credits	
MKXXX (Choose one from MK courses)		3 credits	

#### Minor 3 Free-cluster

Students can mix and match non-EE courses being offered by B.E. international program, and count the credits towards 24 credits to obtain the free-cluster minor study. However, students may study other courses from no more than 2 field of studies as non-economics elective courses being offered by B.E. program.

### Block 4 Free Elective Courses 6 credits

Students may select to study any course that is offering by B.E. international program as free-elective courses at a minimum of 6 credits. The applicable courses also include the language

---

<sup>6</sup> If students select EE366 (6 credits) over EE300 (3 credits), students would require to complete only 6 credits of cluster-specific elective courses

courses. However, all courses included in general education part 1 and part 2 which stated in TU initial code, TU100 - TU156, cannot be used as free-elective courses.

### Suggested course plan (by year)

Course block	Course classification	Year 1	Year 2	Year 3	Year 3 / Summer	Year 4
Block 1: General Education	<i>Part 1</i>	Having passed ALL				
	<i>Part 2</i>	ONE course	ONE course	ONE course		
Block 2: Major area study	<i>Compulsory course</i>	EE211 / EE212 / MA216 / ST216	EE311 / EE312 / EE320 / EE325			
				Choose one from the followings: EE404 / EE406 / EE460		
			ONE non-TU course to substitute EL241	ONE non-TU course to substitute EL341		
	<i>Subfield EE-course</i>		TWO EE-courses	FOUR EE-courses		FOUR EE-courses
	<i>Internship</i>				Recommended period	
	<i>Capstone class</i>					EE4x9 or Honor Thesis
Block 3: Minor area study	<i>FN</i>	AC201	BA291   FN201   FN211	FN311   FN312   Elective FN(1)		Elective FN(2)
	<i>MK</i>		BA291   MK201   MK311	MK312   Elective MK(1)   Elective MK(2)		Elective MK(3)   Elective MK(4)
Block 4 Free Elective	<i>TWO non-TU courses</i>			ONE non-TU course		ONE non-TU course

## Course catalogues

### Major area courses

Courses description	
<b>EE200</b> <b>Data Science for Economic Analysis</b> <b>6</b> Prerequisites: 2nd year student or above.  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.	<b>3 (3.0)</b>
<b>EE300</b> <b>Internship</b> Prerequisites: 2nd year economics student or above (at least 135 working hours)  The student gains experience and improves skills through work assignments in private or public organization. Students must discuss specific learning objectives with the internship coordinator at the beginning of the semester and received approval of their plans in order to register. Every week and at the end of semester, each student prepares a written paper reflecting on the work experience. Student performance is evaluated by the Lecturer who coordinates with the organization.  Note: Evaluation is based on 'Satisfying' (S) 'Unsatisfying' (U) grading.	<b>3 credits</b>
<b>EE400</b> <b>Seminar Honors Thesis</b> <b>6</b> Prerequisites: (a) a minimum of three 400-level (or above level) economics courses and (b) having earned a cumulative GPA of 3.25 or higher at the beginning of the semester enrolled.  A tutorial course designed to enable students developing their own research question for honors thesis. Topics include the introduction to research methodology, how to properly address and formulate some important research questions, the review of literature, data collections and the identification of method used to answer the research question, and the preparation and writing of research proposal. Note: This course is offered only in the first semester of each academic year.	<b>3 (3.0)</b>
<b>EE500</b> <b>Honors Thesis</b> <b>0-6</b> Prerequisites: (a) EE400 or (b) having earned credits from one of the seminar courses offered in any fields, having earned a minimum cumulative GPA of 3.25 at the beginning of the semester enrolled, and with the consent of the assigned advisor  A special topic of individual interest, research paper conducted under the supervision of an assigned advisor.	<b>3 (3)</b>
<b>Field 0: political economics and economic history (field 0)</b>	
<b>EE100</b> <b>Academic Writing for Economic Issues</b> <b>0-6</b> Prerequisites: 2nd year student or above.	<b>3 (3)</b>

Acquire and practice economic academic writing. Topics include literature review, critical reading, paragraph and economic essay writing, citing and referencing, and presentation.

### **EE301**

#### **History of Thai Economy**

**3 (3-0-6)**

**0-6)**

The evolution of Thailand's economic system. The structure of economy and society. The role of government in the Thai economy, starting with the signing of the Bowring Treaty in 1855.

### **EE302**

#### **History of World Economy**

**3 (3-0-6)**

**0-6)**

Analyzing the history and development of world capitalism. The importance of world economy is emphasized by selected topics such as the birth of capitalism, the Industrial Revolution, colonization, the Great Depression of the 1930s, the collapse of the Soviet Union, the development of Chinese and East Asian economies, the Oil Crises, and the World Financial Crises.

### **EE401**

#### **Political Economics**

**3 (3-0-6)** Prerequisites: a) EE210

or b) EE211 and EE212 or c) EE213 and EE214

Analyzing the development of capitalism. Theories and methodology of different schools of Economic thought from classical political economics to Karl Marx's political economics, post-Marxist political economics.

### **EE402**

#### **Institutional Economics**

**3 (3-0-6)**

**0-6)** Prerequisites: EE311

Studying development of institutional economics thought. Analyzing how institutions shape the incentives of economic agents, and how this influences socioeconomic outcomes. Examining factors contributing to the formation and demise of institutions, transactional costs, and changes within institutions. Using mainstream Economics to analyze the political market structure, political phenomena, and rent-seeking behavior as exercised by government bodies. Studying how Special Interest Groups (SIGs) impacts economic policies.

### **EE403**

#### **Law and Economics**

**3 (3-0-6)**

Prerequisites: a) EE210 or b) EE211 and EE212 or c) EE213 and EE214

Thailand's Legal System. The relationship between law, economy, and politics. Applying economic theory to analyze reasons for the existence of property rights, civil, and commercial law. The effects of law on economic behavior and on economic outcomes.

### **EE404**

#### **History of Economic Thought**

**3 (3-0-6)**

Prerequisites: a) EE210 or b) EE211 and EE212 or c) EE213 and EE214

Studying philosophical foundations, main ideas of different schools of economic thoughts, and debates among economists from past to present. Studying socio-economic and important events in history that influence economic ideas.



**EE405****New Political Economy****3****(3-0-6)** *Prerequisites: EE311 and EE312*

Political process as a platform used to formulate and implement economic policies will be extensively discussed. Issues cover political decision making, political institutions, Election, Electoral Rules, redistributive politics, comparative politics, dynamic politics, incentives and behaviors of various agents, i.e., voters, politicians, special interested groups in a political regime. Moreover, Institutional structure of political institutions and its implication on macroeconomic policies will be examined. All issues above have much things to do with institutional design of political structure and incentive mechanism facilitating formation and implementation of good economic policies.

**EE406****Contemporary Economic Issues****3 (3-0-6)** *Prerequisites: EE211 and EE212*

This course 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. The focus also is on how economists address these issues.

**EE409****Seminar in Political Economics and Economic History****3****(3-0-6)** *Prerequisites: Having completed at least two 400-level (or the above level) courses in the field of Political Economics and Economic History, excluding EE400, EE404, EE406 and EE500.*

Seminar and research on specific topics in Political Economics and Economic History under the supervision of the lecturer.

**EE501****Selected Topics in Political Economics 1****3 (3-0-6)***Prerequisites: with the consent of the lecturer.*

Studying selected topics in Political Economics and Economic History to be announced later.

**EE502****Selected Topics in Political Economics 2****3****(3-0-6)** *Prerequisites: with the consent of the lecturer.*

Studying selected topics in Political Economics and Economic History to be announced later.

**Field 1: Economics Theory****EE210****Introductory Economics****3****(3-0-6)** *(For non-Economics majors only; credits will not be awarded to students who are taking or have completed EE211 or EE212 or EE213 or EE214)*

General principles of Microeconomics and Macroeconomics. In the Microeconomics section, topics covered include the supply of and demand for goods, consumer behavior, production and costs, structure and output of production units under perfect and imperfect competitive markets, the concept of market failures, and the role of government intervention. In the Macroeconomics section, topics covered include objectives and problems in Macroeconomics, the determination of national income, money and the banking system, introduction to fiscal and monetary policies used for economic stabilization, and the application of economic indices to

analyze the economic situation. In the international Economics section, topics covered include the importance of international trade and finance, as well as the conflict between free trade and market protection.

### **EE211**

#### **Principles of Microeconomics**

**3 (3-**

**0-6)**

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.

### **EE212**

#### **Principles of Macroeconomics**

**3 (3-**

**0-6)**

Indicators, goals, and problems in Macroeconomics. Determination of national income, theories of aggregate consumption and aggregate investment, the accelerator principle, money markets, the theory of supply and demand for money, the joint equilibrium model of product and money markets (IS-LM model), the balance of payments, and fiscal and monetary policies as means to stabilize an economy. Collecting and managing Thai macroeconomic for analyzing economic conditions are introduced.

### **EE213**

#### **Introductory Microeconomics**

**3 (3-**

**0-6)** (For students who are not Economics majors)

Concepts and applications of economic theories regarding fundamental economic problems, price mechanisms, the supply and demand of goods and services, basic theories of consumer behavior, production and costs, and price determination in perfect and imperfect competitive markets. Comparing market performances in resource allocation, basic theories of factor market and market failures.

### **EE214**

#### **Introductory Macroeconomics**

**3 (3-**

**0-6)** (For students who are not Economics majors)

Concepts and application of economic theories involving Macroeconomic indicators; goals and problems in the context of Macroeconomics; determination of national income; money markets, supply of and demand for money; Macroeconomic problems including unemployment, inflation, and deflation, fiscal and monetary policies used for economic stabilization; the balance of payments; foreign exchange market and exchange rate determination; application of economic indicators to analyze economic situations.

### **EE311**

#### **Microeconomic Theory**

**3 (3-0-6)**

*Prerequisites: EE211 (or EE213) and MA216 (or MA211)*

Consumer behavior focusing on indifference curve analysis, intertemporal consumption, consumption and risks. Theory of production and cost, the birth of the firm using information cost, structure and behavior of imperfect competitive markets which are monopoly, monopolistic competition and duopoly markets. Introduction to game theory. Price setting in practice. Price determination in factor markets, general equilibrium analysis, welfare Economics, market failures and measures to correct.

**EE312****Macroeconomic Theory****3 (3)****0-6) Prerequisites:** a) EE211 and EE212 or b) EE213 and EE214

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, micro foundation of macroeconomics focusing on real business cycle model, new classical model, and new Keynesian model; applications of Macroeconomic theory to analyze economic situations.

**EE411****Microeconomic Analysis****3 (3)****0-6) Prerequisites:** EE311 and EE320 (or EE421)

Microeconomic theory with an emphasis on utilizing mathematical tools to analyze economic issues such as consumer behavior, revealed preferences, intertemporal consumption, consumption under risk, theories of production and cost, market structures and behavior of markets, and other topics that the lecturer finds suitable.

**EE412****Macroeconomic Analysis****3 (3)****0-6) Prerequisites:** EE312 and EE320 (or EE421)

Macroeconomic theory with an emphasis on utilizing mathematical tools and dynamic framework to analyze economic issues, such as, general equilibrium and welfare analysis in modern Macroeconomics, analysis of long-term growth, analysis of short-term growth and fluctuations both theoretically and empirically, roles of government in the economy, modern concepts for macroeconomic policy analytical frameworks, and the other topics that the lecturer finds suitable.

**EE415****Game Theory****3 (3)****0-6) Prerequisites:** EE311 and EE320 (or EE421)

The application of game theory with complete and incomplete information including strategic games, Nash Equilibrium, mixed-strategies equilibrium, extensive games, subgame perfect equilibrium, Bayesian games, extensive games of incomplete information, and other topics that the lecturer finds suitable.

**EE416****Behavioral Economics****3 (3)****0-6) Prerequisites:** EE311

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.

**EE511****Selected Topics in Economic Theory****3 (3)****0-6) Prerequisites:** with the consent of the lecturer.

Studying topics in Economic Theory to be announced later.

**EE512****Selected Topics in Economic Theory 2****3 (3-)****0-6) Prerequisites:** with the consent of the lecturer.

Studying topics in Economic Theory to be announced later. Quantitative Economics (Field 2)  
Mathematical Economics

**Field 2: Quantitative economics****EE320****Introductory Mathematical Economics****3 (3-)**

**0-6) Prerequisites:** a) EE211, EE212 and MA216 (or MA211) or b) EE213, EE214 and MA 216 (or MA 211)  
(Credits will not be awarded to students who are taking or have completed EE421)

Applying mathematical concepts and tools such as functions, equations, matrices, univariate and multivariate differential calculus, constrained and unconstrained optimization, and basic integral to understand the relationship between different economic variables and explain concepts of Microeconomic theory and Macroeconomic theory. An emphasis will be placed on relationships between total, average, and marginal functions, the analyses of elasticity, market equilibrium, impacts of taxation, and the basic input-output model.

**EE325****Introductory Econometrics****3 (3-)**

**0-6) Prerequisites:** EE211 (or EE213), EE212 (or EE214), MA216 (or MA211) and ST216 (or ST211) (Credit will not be awarded to students who are taking or have completed EE425)

Applying statistical methods and economic theories to analyze economic data using the simple and multiple regression. Topics also include dummy variable, multicollinearity, heteroscedasticity, autocorrelation, and specification error. This course focuses on how to choose the appropriate tool for an empirical study, with the emphasis placed on using some econometric software.

**EE421****Mathematical Economics 1****3 (3-)**

**0-6) Prerequisites:** MA217 (or MA212) and having completed or currently taking EE311

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.

**EE422****Mathematical Economics 2****3 (3-)**

**0-6) Prerequisites:** EE421 and having completed or currently taking EE312

Applying mathematical tools such as integral calculus, differential equations, difference equations, phase diagram and dynamic optimization such as optimal control theory and dynamic programming to explain dynamic economic phenomena as well as for locate time path and stability of variables in the context of both Microeconomics and Macroeconomics. The study of dynamic input-output models is also covered.

**EE425****Econometrics 1****3 (3-)**

**0-6) Prerequisites:** EE211 (or EE213), EE212 (or EE214), MA216 (or MA211) and ST216 (or ST211)

Applying statistical methods and economic theories to analyze economic data, including simple and multiple regressions; estimation using the ordinary least squares (OLS) hypothesis testing; and dummy variable. This course also examines various problems in regression models, including Multicollinearity, Heteroscedasticity, Autocorrelation, Specification Error, Stochastic Regressors; and some advanced topics in regression method such as Generalized Least Squares (GLS) estimation, System of regressions and Seemingly Unrelated Regression (SUR), Simultaneous Equation System and solving Endogeneity problem with instrumental variables. Trainings in econometrics software.

#### **EE426**

##### **Econometrics 2**

**3 (3-**

**0-6)** *Prerequisites: EE425*

This course covers Maximum Likelihood estimation, panel data model, limited dependent variable model and the introduction to time series data focusing on univariate time series, forecasting, cointegration and error correction model.

#### **EE521**

##### **Selected Topics in Quantitative Economics 1**

**3 (3-**

**0-6)** *Prerequisites: with the consent of the lecturer. Study of topics in Quantitative Economics to be announced later.*

#### **EE522**

##### **Selected Topics in Quantitative Economics 2**

**3 (3-0-6)** *Prerequisites:*

*with the consent of the lecturer. Study of topics in Quantitative Economics to be announced later.*

### **Field 3: Monetary economics**

#### **EE431**

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

**3 (3-0-**

**6)** *Prerequisites: EE311*

Money and capital markets at a micro-level; Financial assets, risks, and risk-bearing; The theory of equilibrium pricing of financial assets; Interest rate determination and structure of interest rates; Asymmetric information in financial markets; The study of financial institutions; Risk management of financial institutions; Behavior of financial institutions; Regulating financial institutions.

#### **EE432**

##### **Monetary Theory and Policy**

**3 (3-**

**0-6)** *Prerequisites: EE312*

The role of money in the economy; studying monetary policy's goals, tools, policy implementations, Transmission mechanisms of Monetary policy; Monetary policy and business cycles; monetary policy framework, exchange rate targeting and inflation targeting; The role of the Central Bank; The interaction between monetary and fiscal policies; The role of monetary policy in the open economy.

#### **EE433**

##### **Asset Pricing Theory**

**3 (3-**

**0-6)** *Prerequisites: EE320 and EE311*

Study concepts and frameworks of asset pricing theory in the intermediate level; the theory of choice under uncertainty; classical asset pricing theory in the discrete time such as the Capital Asset Pricing Model (CAPM), The Arbitrage Pricing Theory (APT), and The Consumption Capital

Asset Pricing Model  
(C-CAPM); Empirical puzzles in asset pricing/returns and proposed resolutions in the literature.

#### **EE434**

##### **Behavioral Finance**

**3 (3-**

**0-6)** *Prerequisites: EE311*

Study concepts and frameworks of behavioral economics that are used to explain observations in the financial sector. Topics of the subject include the Prospect Theory and its implications for investment behaviors, empirical evidences in the financial sector that support the idea of behavioral economics, models that incorporate psychological and sociological factors in explaining asset returns, or other related topics that the lecturer finds suitable.

#### **EE435**

##### **Introductory Financial Econometrics**

**3 (3-**

**0-6)** *Prerequisites: EE325 (or EE425) and EE431 (or EE432)*

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.

#### **EE439**

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

**3 (3-**

**0-6)** *Prerequisites: Having completed at least two 400-level (or the above level) courses in the field of Monetary and Financial Economics.*

Seminar and research on topics in Monetary and Financial Economics under the supervision of the lecturer.

#### **EE531 Selected Topics in Monetary and Financial Economics 1**

**3 (3-**

**0-6)** *Prerequisites: with the consent of the lecturer.*

Study of topics in Monetary and Financial Economics to be announced later.

#### **EE532 Selected Topics in Monetary and Financial Economics 2**

**3 (3-**

**0-6)** *Prerequisites: with the consent of the lecturer.*

Study of topics in Monetary and Financial Economics to be announced later.

### **Field 4: Public Economics**

#### **EE340**

##### **Introductory Public Economics**

**3 (3-**

**0-6)** *Prerequisites: a) EE210 or b) EE211 and EE212 or c) EE213 and EE214 (Credits will not be awarded to students who are taking or have completed any 400-level courses in this field.)*

This course introduces students to the basic concepts of public finance, including the principles of the public sector and welfare economics. It provides an overview of the role of government and shows the interaction between the public sector, fiscal institutions and the private economy. Empirical case studies illustrating public policy-making in practice will also be covered.

**EE441****Economics of Public Expenditure****3 (3)****0-6) Prerequisites:** EE212 (or EE214) and EE311

The course covers the role of the government in the allocation of resources for the public sector of the economy. Topics covered will include government (national and local) outlays and budgets, the provisions of public goods and the regulation of market failures. The role of the government's budget processes in providing macroeconomic stability, growth and income redistribution. This analysis also includes fiscal decentralization (the budget allocation of local governments). The application of these tools to selected contemporary topics such as social security, cost-benefit analysis, healthcare and education financing will also be covered.

**EE442****Economics of Public Revenue****3 (3)****0-6) Prerequisites:** EE212 (or EE214) and EE311

The course analyses the structure and composition of government (national and local) revenue, through analysis of tax burden and incidence, and tax effects upon efficiency and equity. The course looks at the empirical effects of tax policies on the economy as a whole, and various individual behaviors such as decisions about work and leisure, tax avoidance and evasion, investment, savings and consumption. The analysis also includes the effects of deficit finance and fiscal decentralization (local revenue, grants and local debt). The application of these tools to selected contemporary topics (social security, healthcare and education financing). Additionally, the class will explore the politics and economics of tax reforms.

**EE443****Public Choice****3 (3)****0-6) Prerequisites:** EE212 (or EE214) and EE311

This course introduces students to the principles of Public Choice Economics, also known as "Politics without the Romance". Using the same core assumptions about Homo Economics that guides our analysis of how individuals and firms act and interact in a market, this class will then explore how those same people act in the public sphere. Topics covered will include the paradox of voting, the voting systems and institutional incentives, bureaucracies, rent-seeking, constitutional economics, and more. Both international and Thai case studies will be used to illustrate the limits of government intervention, and the dangers of "government failure".

**EE444****Welfare Economics and Public Policy****3 (3)****0-6) Prerequisites:** EE311

Welfare economics analyses social welfare, however measured, in terms of the economic activities of individuals in a theoretical society. It is essentially about judging the desirability of social outcomes. Using the normative concept of Pareto efficiency, positive outcomes are considered both in a partial and general competitive equilibrium environment. Much of the lecture time will be devoted to analyzing the relationships among these concepts, to evaluate how the allocation of productive factors contributes to the well-being of citizens, while effecting equity and economic efficiency within an economy.

**EE445****Local Public Finance****3 (3)****0-6) Prerequisites:** EE311

This course critically examines local government fiscal systems. Major topics include: understanding and determining an appropriate division of fiscal responsibilities among levels of government or expenditure assignment; criteria for local revenue assignment including local

levied revenue, central allocation revenue, and intergovernmental finance. The course focuses on economic analysis, but attention is also given to political, institutional and cultural considerations that are critical for effective policy design and implementation.

#### **EE446**

##### **Economic Analysis of Corruption**

**3 (3-**

**0-6)** *Prerequisites: EE311*

Study of corruption by using economic analytical framework both theoretical and empirical methodology. Topics include definition and coverage of corruption, causes of corruption, economic consequences of corruption both on micro and macro levels, public policies and measures in combating corruption. Moreover, roles of private sector, civic society, and international organizations in tackling with corruption including case studies will be discussed.

#### **EE449**

##### **Seminar in Public Economics**

**3 (3-**

**0-6)** *Prerequisites: EE441 and EE442*

Seminar and research on topics in Public Economics under the supervision of the lecturer.

### **Field 5: International Economics**

#### **EE351**

##### **International Economic Cooperation and Trade Negotiations**

**3 (3-**

**0-6)** *Prerequisites: a) EE210 or b) EE211 and EE212 or c) EE213 and EE214*

International trade regulation and control in the form of bilateral and multilateral trade agreements. Types and impacts of economic cooperation. The role of supranational organization such as the World Trade Organization. Disputes in international trade of goods and services as well as investment. Key international trade negotiations for developing countries.

#### **EE451**

##### **International Trade Theory and Policy**

**3 (3-**

**0-6)** *Prerequisites: EE311*

International trade theories. Outcomes from trade, such as production outcome, commodities prices, resource allocation, and prices of the factors of production. Analysis of the policies and regulations in international trade. Economic integration. Foreign investment.

#### **EE452**

##### **International Monetary and Financial Economics**

**3 (3-0-6)**

*Prerequisites: EE312*

The balance of payments adjustment mechanism. Foreign exchange markets. International capital flows. The evolution of an international monetary system. International monetary problems encountered by developing countries, including Thailand. Financial crises as experienced by Thailand and the rest of the world.

#### **EE459**

##### **Seminar in International Economics**

**3 (3-**

**0-6)** *Prerequisites: EE451 and EE452*

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



**EE551****Selected Topics in International Economics 1****3 (3-0-6)** Prerequisites:

with the consent of the lecturer. Study of topics in international Economics to be announced later.

**EE552****Selected Topics in International Economics 2****3 (3-**

**0-6)** Prerequisites: with the consent of the lecturer. Study of topics in international Economics to be announced later.

**Field 6: Development Economics****EE360****Introductory Thai Economy****3 (3-**

**0-6)** Prerequisites: a) EE210 or b) EE213 and EE214 (Only for non-economic major students)

Structure and development of the Thai economy. Development in the agriculture, manufacturing, and service sectors. Linkages between the Thai and world economies. Key economic problems such as poverty and income distribution and their policy resolutions.

**EE361****Economics of CLMV Countries****3 (3-**

**0-6)** Prerequisites: a) EE210 or b) EE211 and EE212 or c) EE213 and EE214

Economic development in the cluster of Cambodia, Laos, Myanmar, and Vietnam (CLMV) countries. The transformation of their economic structure. The roles of public and private institutions along with other economic, social, and political factors that contribute to their economic changes. The relationship between these economies and the world and Thai economies.

**EE362****Contemporary Issues in ASEAN Countries****6**

**credits** Prerequisites: a) 2nd year economics student or above (having completed at least 60 credits); or b) with the consent of the lecturer

The contemporary issues in ASEAN countries. Study various aspects of the overall ASEAN or each country's economy i.e. socio-economic issues, politics, businesses, trade and investment, economic development, finance, etc. Roles of regional organizations, economic interconnection across countries, and linkages with the Thai economy. The learning methods are the active and problem-based learning with some experienced guest speakers, discussion, and field trips visiting public and/or private organization(s) in Thailand and another ASEAN member country, according to the lecturer's announcement.

**EE363****Economics of Selected Countries****3 (3-**

**0-6)** Prerequisites: a) EE210 or b) EE211 and EE212 or c) EE213 and EE214

Economic development in the selected countries according to the lecturer's announcement, possibly in Asia, Europe, Latin America, etc. The transformation of their economic structure. The roles of public and private institutions along with other economic, social, and political factors that contribute to their economic changes. The relationship between these economies and the world and Thai economies.

**EE364****Gender Economics****3 (3-****0-6) Prerequisites:** a) EE210 or b) EE211 and EE212 or c) EE213 and EE214

Evolution of male and female roles in the economic system. Theories of family formation. Differences in gender-related time allocation for market and non-market activities. Supply and demand factors determining gender-related differences in occupation and income, and gender roles switching in occupation. Roles of female in socio-economy and politics. Different effects of policies or welfare programs on gender. Gender in the aging economy. Effects of economic crisis on family and gender in the labor market. Roles of the LGBT in the economy. Gender equality in international criteria, and other interesting issues.

**EE365****Economics of Local Development****3 (3-****0-6) Prerequisites:** a) EE210 or b) EE211 and EE212 or c) EE213 and EE214

Dynamics of local development in rural and urban areas. Economic and social theories regarding communities and collective action of people in communities. Interactions between livelihoods, natural resource capital, cultural and ethnic factors, and their influences on local farm and non-farm economic activities. Responses and adaptation of local communities to development policies. Roles of actors, such as community leaders, government officers, local administrative organizations, academics, and non-governmental organizations in local development. Analysis of capacities and limitations of local communities for collaboration in the allocation of resources and conducting economic activities. Sustainable development in the context of local development. Alternative approaches for local development.

**EE460****Thai Economy****3 (3-****0-6) Prerequisites:** EE311 and EE312

Thai economic structure and how it changes. Economic performance in terms of development and growth. The country's resolutions for poverty eradication, income distribution, economic stability, and quality of life. The process of economic policy formulation in Thailand. Monetary and fiscal policy implementation. National economic and social development strategies and sectoral economic strategies such as the industrial agricultural development. The relationship between the Thai and world economy, the international economic order, and international organizations such as the World Bank, International Monetary Fund (IMF), and the World Trade Organization (WTO).

**EE366****Local Study and Development****6****credits** Prerequisites: EE365 or with the consent of the lecturer. (Theory and Practice hours are at least 270 hours during the summer session)

Field study of key development issues in the selected local area. Analyzing the socio-economic factors, resources, and roles of the stakeholders involving the issues. The action-based learning is supervised by the lecturer.

**Note: Evaluation is based on Satisfying (S) Unsatisfying (U) grading.****EE461****Development Microeconomics****3 (3-****0-6) Prerequisites:** EE311

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.

#### **EE462**

##### **Development Macroeconomics**

**3 (3-**

**0-6)** *Prerequisites: EE312*

Analyzing economic issues in the macroeconomics of developing countries. These include theories and thoughts explaining economic growth; relationship between economic growth and poverty; income distribution; development policies of different countries in the past; and the impact of short-term macroeconomic policies such as stabilization policies, monetary and fiscal policies, exchange rate management, and various factors affecting economic growth e.g. international trade and investment, capital flow, financial crises, social welfare, and structural change.

#### **EE463**

##### **Globalization and International Development**

**3 (3-**

**0-6)** *Prerequisites: a) EE211 and EE212; or b) EE213 and EE214*

Concept and development of globalization in the context of after the World War II. Formation of the New International Economic Order (NIEO). Global organizations. Multinational corporations. International cooperation. Political economy of dependency. Debates on contribution and impacts of globalization on the local economy. Contemporary transnational development issues. Roles of international development organizations e.g. the United Nations, World Bank, International Monetary Fund (IMF), etc., in bridging the global north and the global south or within the south countries through the official development assistance (ODA), development loan, or development projects. Analysis of patterns, factors of success and failures of past international development projects. Basic techniques for development project evaluation.

#### **EE464**

##### **Urban and Regional Economics**

**3 (3-**

**0-6)** *Prerequisites: EE311, EE212 (or EE214), and EE325 (or EE425)*

Topics in urban economics and/or regional economics proposed by the instructors. Examples of possible topics are urbanization, urban land and housing market, urban public goods and service, sustainable and inclusive city development policies, new economic geography, location and cluster theories, regional growth and inequality, basic spatial analysis, geographical information system (GIS) and using GIS related program, special economic zones, current policy issues in urban and regional development, etc.

#### **EE465**

##### **Sustainable Development**

**3 (3-0-6)**

*Prerequisites: EE212 (or EE214) and EE311*

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.

**EE466****Political Economy of Development****3 (3-0-6)** Prerequisites:*a) EE211 and EE212; or b) EE213 and EE214*

Analyzing politics of economic development, especially the interrelationship between political and economic spheres. Special emphasis will be given on political factors which determine economic development paths and performances; political regimes, state and its structures; institutions and institutional changes; the roles and failures of the state, market and civil society; governance and corruption; politics of economic reforms; geography and resource curse, and etc. These might include issues and topics such as politics of industrialization, democracy and inequality and poverty, international politics of development, etc.

**EE467****Project Evaluation and Economic Valuation Techniques****3 (3-****0-6)** Prerequisites: *(a) EE212 and EE311 or (b) EE214 and EE311 and having completed at least one 400-level course in field 3 to field 9*

Study welfare economic foundations of economic project evaluation. Study project evaluation methodologies, including Cost-Benefit Analysis (CBA), Cost Effectiveness Analysis (CEA) and Multi-Criteria Analysis (MCA); as well as project evaluation criteria, e.g., Net Present Value (NPV), Internal Rate of return (IRR), etc. Study quantitative techniques for economic valuation, including market-based techniques, hedonic pricing method, travel cost method, contingent valuation method, choice modeling, benefit transfer, value of statistical life, etc.

**EE468****Integrated Public Economics****3 (3-0-6)**

Prerequisites: *EE311 and having completed at least two 400-level (or above level) courses in Political Economics or Public Economics or Development Economics.*

The integration of theories and concepts in public economics, institutional economics, development economics, and political economy; Enhancing students' ability to link and apply economic theories in this subject area to analyze situations and problems arising in Thailand or in the world economy; Encouraging students to learn through case studies of current situations, with the emphasis on causes, nature, and effects of the problems; Promoting students to use economic and related social science theories to explain and analyze the roles of the market, public sector, and community in solving problems; Encouraging students to recognize the roles of institutional factors underlying the economic and political phenomena, as well as understanding the importance of culture and history.

**EE561****Selected Topics in Development Economics 1****3 (3-****0-6)** Prerequisites: *with the consent of the lecturer. Studying topics in Development Economics to be determined later.*

Development Economics (Field 6) EE469 Seminar in Development Economics 3 (3-0-6)

Prerequisites: Having completed at least two 400-level (or the above level) courses in Development Economics, excluding EE460 and EE468. Seminar and research on topics in Development Economics under the supervision of the lecturer.

**EE562****Selected Topics in Development Economics 2****3 (3-****0-6)** Prerequisites: *with the consent of the lecturer.*

Studying topics in Development Economics to be determined later.

**Field 7: human resource, natural resource and environmental economics**

**EE375****Applied Economics for Natural Resources and Environment****3 (3-**

**0-6) Prerequisites:** EE210 or EE211 or EE213 (credits will not be awarded to students who are taking or have completed any 400-level courses in this subfield.)

The relationship between economic growth, natural resources allocation and environmental problems. Basic economic theories used for analysis and application in natural resources management and environmental problems. The roles of government, community, and business sectors to control and solve problems in natural resource and environmental exploitation at local, national, and global levels. Concept of sustainable development. Concept of environmental justice. Basic concepts and methodologies in economic valuation of natural resources and environment.

**EE376****Economics of Climate Change****3 (3-**

**0-6) Prerequisites:** EE210 or EE211 or EE213

Basic scientific knowledge on climate change. Greenhouse gas emissions and climate change mitigation. Concept of market failure and economic measures to support climate mitigation and technological development. Impacts of these measures on the economy, international trade and investment. Economics of climate change adaptation. International climate negotiation and cooperation.

**EE471****Labor Economics****3 (3-**

**0-6) Prerequisites:** EE311

Studying the supply and demand of labor in the short-term and long-term, wage determinations as well as improving labor quality through education and human capital training. Labor migration, wage structure, wage differentials in the labor market, job search, unemployment, and the role of labor unions will be covered. The role of government in the labor market as employer or regulator. Social security, discrimination in the labor market will be discussed.

**EE470****Seminar in Human Resources Economics****3 (3-**

**0-6) Prerequisites:** Having completed at least two 400-level (or the above level) courses in Human Resource Economics.

Seminar and research on topics in human resource Economics under the supervision of the lecturer.

**EE472****Economics of Population and Family****3 (3-**

**0-6) Prerequisites:** EE311 or EE312

Processes generating change in size and structure of population and family through reproduction, death and migration. Factors causing these changes. The impact of demographics and family variables on the economy at the micro and macro levels. Economic of marriage and Economic of household or family will be included.

**EE473****Economics of Education****3 (3-**

**0-6) Prerequisites:** EE311

Principles of investment in education, measuring return on education, theory of human capital and choice theory explaining educational investment will be discussed. Principles of investment in on-the-job training, analyzing educational impact on key economic variables such as wages throughout the entire working period, growth in the wage rate, job switching, and expansion of the economy as a whole will be covered. Evaluating efficiency and equality in governmental budget allocation within the educational system.

#### **EE475**

##### **Natural Resource Economics**

**3 (3-)**

**0-6) Prerequisites:** EE311

Economic theories and tools used for natural resource allocation. Concepts of scarcity and economic rent of natural resources. Allocation of natural resource among current users as well as intertemporal allocation. Market failure due to deficiencies in the property rights system. Government policies and tools for natural resource management and their impacts.

#### **EE474**

##### **Health Economics**

**3 (3-)**

**0-6) Prerequisites:** EE311 or EE312

Economic thought about health and health care services. Supply of and demand for health care. Market failure in the health care market and government intervention. Health insurance, fiscal policy on public health, factors of health service production, and efficiency and equality in the health care system. Evaluation of health care projects, asymmetric information in health insurance, health economics at the Macro level. Health service system reform in Thailand and abroad.

#### **EE477**

##### **Energy Economics**

**3 (3-)**

**0-6) Prerequisites:** EE311

Factors influencing energy resource production, processing, transportation and demand. Substitution among different energy resources. The importance of energy to the economy and the impacts of energy on the environment. The energy market structure and prices of different types of energy, along with problems in global oil pricing and the role of OPEC. Governmental policy on the provision, production and use of energy, including price regulation and provision, production, and efficient use. The use of alternative energy to replace fossil fuel. International cooperation and agreements related to energy sector. Each topic will include the discussion of case studies from Thailand, in order to encourage better understanding of situation and problems in the Thai context.

#### **EE476**

##### **Environmental Economics**

**3 (3-)**

**0-6) Prerequisites:** EE311

The concepts of sustainable development, efficient production, efficient consumption and market failure. The concepts of efficiency and effectiveness of policies, measures, and tools to control and solve environmental problems. Environmental risk assessment. Economic valuation and environmental impact assessment of development projects. Concept of environmental justice. Issues related to international environmental cooperation and agreements, including the effects on trade and investment.

**EE571****Selected Topics in Human Resource Economics 1****3 (3-****0-6)** *Prerequisites: with the consent of the lecturer.*

Studying selected topics in Human Resource Economics to be determined later.

**EE479****Seminar in Natural Resources and Environmental Economics****3 (3-**

**0-6)** *Prerequisites: Having completed at least two 400-level (or the above level) courses in Natural Resource Economics, and Environmental Economics Seminar and research on topics in Natural Resources and Environmental Economics under the supervision of the lecturer.*

**EE572****Selected Topics in Human Resource Economics 2****3 (3-****0-6)** *Prerequisites: with the consent of the lecturer.*

Studying selected topics in Human Resource Economics to be determined later.

**EE573****Selected Topics in Natural Resources and Environmental Economics 1****3 (3-****0-6)** *Prerequisites: with the consent of the lecturer.*

Studying selected topics in Natural Resource and Environmental Economics to be determined later.

**EE574****Selected Topics in Natural Resources and Environmental Economics 2****3 (3-****0-6)** *Prerequisites: with the consent of the lecturer.*

Studying selected topics in Natural Resource and Environmental Economics to be determined later.

## Field 8: Industrial Economics

**EE381****Economics of Transportation****3 (3-****0-6)** *Prerequisites: EE210 or EE211 or EE213*

The role of transportation in the domestic and international economy. How transportation affects the location of businesses and production sites. Criteria and economic reasons for transportation pricing. Private and social costs related to transportation. How urban transportation is affected by expansion. Problems and policies related to investment in urban transportation.

**EE380****Introduction to Industrial Economics****3 (3-0-6)**

*Prerequisites: EE210 or EE211 or EE213 (credits will not be awarded to students who are taking or have completed any 400-level courses in this field.)*

The importance of the economy's industrial sector. Relationship between industrial sector and other sectors, on the domestic and international level. Studying market structure, conduct, and competitiveness of the industrial sector. Government policy, the legal system, and their effects on industrial development.

**EE382****Economics of Services Sector****3 (3-)****0-6) Prerequisites:** a) EE210 or b) EE211 and EE212 or c) EE213 and EE214

Organization and components of service sector in an economy. Importance of service sectors. Applying economic and management aspects to selected service sectors, for example telecommunication and broadcasting, tourism, transportation, health and wellness, wholesale and retail trades. Case studies in the service sector relating to development and inclusive growth.

**EE383****Cultural Economics****3 (3-)****0-6) Prerequisites:** a) EE210 or b) EE211 and EE212 or c) EE213 and EE214

Economic aspects of arts, cultural heritages, art creators and performers as well as creative economy; Economic evaluation on arts and cultural heritages; Economic development based on arts and culture heritages; Practical problems of arts and cultural heritage management; and Economic measures promoting artworks and creative economy.

**EE481****Industrial Economics****3 (3-0-6)***Prerequisites: EE311*

This course studies behaviors of firms under imperfectly competitive markets. It covers the structure-conduct-performance (SCP) paradigm, which examines the relationship among market structure, firms' conducts and their performance. It also covers firms' decision on operation, resource allocation, as well as firm's strategic actions. Price theory and game theory will be used to analyze issues such as pricing, research and development, advertising, and firms' decision under imperfect information

**EE482****Industrialization: Role of Public and Private Sectors****3 (3-)****0-6) Prerequisites:** EE312

Study of Economic theories relating to Industrial development. The importance of the industrial sector and industrial development for Thailand's economic system. Evolution of industrial policy in Thailand. The role of public and private sectors in the industrial development as well as in developing new economy such as knowledge-based economy, digital economy, service economy and so on.

**EE483****Economics of Regulation and Competition****3 (3-)****0-6) Prerequisites:** EE311

Study of regulatory theories, competition policies, together with their economic rationales. Study of approaches, methods, instruments and impact assessment of regulation and competition policies. Study of regulatory institutions, governance and performance. Study of case studies from the developed and developing countries.

**EE484****Empirical Industrial Organization****3 (3-)****0-6) Prerequisites:** (a) EE311 and EE325 (or EE425) or (b) with the consent of the lecturer.

Empirical approach in industrial economics and application of 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.

#### **EE485**

##### **Economics of Innovation**

**3 (3-**

**0-6) Prerequisites:** EE311

Study of innovation, technological change, and intellectual property, including the industrial organization and performance of high-technology industries and firms. Topics include the standard modern economic aspects of innovation both at micro and macro levels; modern intellectual property rights; innovation examples from agriculture, energy, pharmaceuticals, software, and electronics; innovation and market structure; legal and economic issues of intellectual property rights; science and technology policy; patent values and the return on R&D investment; intellectual property issues arising from direct and indirect network externalities, and globalization; the contributions of innovation and diffusion to economic growth; the roles of the public and private sectors; public policy and incentive structure for research and innovation. Methods of analysis are both theoretical and empirical, econometric and case study.

#### **EE486**

##### **Business Economics**

**3 (3-**

**0-6) Prerequisites:** EE311, EE312 and EE325 (or EE425)

Theories and tools applicable for analysis of business problems and solutions, such as the application of economic concepts to forecast economic and industrial conditions, determination of business strategy, and decision-making.

#### **EE581**

##### **Selected Topics in Industrial Economics 1**

**3 (3-**

**0-6) Prerequisites:** with the consent of the lecturer.

Studying topics in Industrial Economics to be determined later.

#### **EE582**

##### **Selected Topics in Industrial Economics 2**

**3 (3-**

**0-6) Prerequisites:** with the consent of the lecturer.

Studying topics in Industrial Economics to be determined later.

### **Field 9: Agricultural Economic**

#### **EE390**

##### **Introduction to Agricultural Economics**

**3 (3-**

**0-6) Prerequisites:** EE210 or EE211 (or EE213)

The role of agriculture in economic development. Structure and structural change of agricultural economy. Production, market, and price of agricultural product. Agricultural institutions. The relationship between agriculture and the natural resource and environmental problems. Agricultural development policies in Thailand.

#### **EE491**

##### **Agricultural Production and Policy**

**3 (3-**

**0-6) Prerequisites:** EE311

Agricultural production. The cost of producing agricultural products in short-term and long-term. Market structure of the factors of production. Farm production and investment decision at risk. Technological changes, productivity, and efficiency in agricultural production. The roles and influence of institutions such as land ownership, credit system, the cooperative system, and governmental policies affecting agricultural production.

#### **EE492**

##### **Agricultural Marketing and Policy**

**3 (3-)**

**0-6) Prerequisites:** EE311

The role and importance of the price of agricultural products. Characteristics of demand and supply responses of agricultural products. Price elasticity of demand, income elasticity of demand, and cross-price elasticity of agricultural products. Price adjustment across time and place. Storage and seasons of agricultural products. Analysis of pricing policy. Marketing channels and the effectiveness of marketing. Domestic and international agricultural marketing. The agricultural futures market. The governmental intervention. Trade barriers. Agricultural products in the international trade negotiation. International agricultural marketing and foreign pricing policies that affect the developing countries.

#### **EE493**

##### **Institutional Economics of Agriculture**

**3 (3-)**

**0-6) Prerequisites:** EE311

The fundamental concept of institutional economics on economic and agricultural development. History of agricultural development thoughts. Roles of government policy, market, domestic and global regulation, and community and civil society in agricultural development. Social capital and farmer cooperation. Political dimension of agricultural policy formation. Role of culture and cultural change on mode of production. Role of technological change in transforming the agricultural institutions.

#### **EE494**

##### **Food Economics and Policy**

**3 (3-)**

**0-6) Prerequisites:** EE311

Concepts and frameworks of understanding the food system in developing countries and the world. Food market and food supply chain. Consumer behavior in food market. Food industrialization. Modern and local food system. Food in development policy and targets e.g. food access, food security, nutrition program, etc. Impacts of public policies or climate change on food security. Current issues on food policy e.g. food safety, organic market, GMOs, etc.

#### **EE495**

##### **Economics of Agribusiness**

**3 (3-)**

**0-6) Prerequisites:** EE311

Role and importance of agribusiness in the economy. Economic tools for agribusiness decision making. Analysis of agribusiness strategies, such as raw material procurement, processing and storage, production innovation, grading and labelling, business integration, etc. Policy and current issues regarding agribusiness.

#### **EE499**

##### **Seminar in Agricultural Economics**

**3 (3-)**

**0-6) Prerequisites:** EE491 and EE492

Seminar and research on topics in agricultural economics under the supervision of the lecturer.

**EE494****Food Economics and Policy****3 (3-****0-6)** *Prerequisites: EE311*

Concepts and frameworks of understanding the food system in developing countries and the world. Food market and food supply chain. Consumer behavior in food market. Food industrialization. Modern and local food system. Food in development policy and targets e.g. food access, food security, nutrition program, etc. Impacts of public policies or climate change on food security. Current issues on food policy e.g. food safety, organic market, GMOs, etc.

**EE591****Selected Topics in Agricultural Economics 1****3 (3-****0-6)** *Prerequisites: the consent of the lecturer.*

Studying topics in Agricultural Economics to be determined later.

**EE592****Selected Topics in Agricultural Economics 2****3 (3-****0-6)** *Prerequisites: the consent of the lecturer.*

Studying topics in Agricultural Economics to be determined later.

**Other Compulsory Courses****EL241 English for Economists 1****3 (3-****0-6)** *Prerequisite: EL172 or TU105*

This course aims to develop an understanding of the language of economics in English through listening to lectures, exploring reading texts, and discussing contemporary economic issues. At this level, students are presented with the relevant academic vocabulary and study skills associated with English for economics including note taking, paraphrasing and engaging in group discussions about basic economic issues. Students develop skills in describing economic trends and making predictions, note taking, and communicating economic debates.

**EL341 English for Economists 2****3 (3-****0-6)** *Prerequisite: EL241*

This course aims to build on the skills learnt in EL241 towards a higher-level understanding of how professionals communicate about economics. Students are encouraged to be critical of current global events and decision making as well as learn how to communicate their own opinions. Advanced speaking and writing skills are developed and evaluated in the form of written reports and academic presentations.

**MA216 Calculus for Social Science 1****3 (3-****0-6)**

Limits and continuity of one variable functions, derivatives of algebraic functions and transcendental functions, implicit differentiation, higher order derivatives, Roll's theorem, the mean value theorem, applications of derivative for determining limits and maximum and minimum of functions, differentials and its applications, antiderivatives, indefinite integrals and integration, definite integrals and application of area solving, functions of several variables, limits and continuity of functions of several variables, partial derivatives, the chain rule, total differential and its applications.

**Note: There is no credit for students who are currently taking or have earned credits of MA111 or MA211 or MA218 or AM101**

**ST216 Statistics for Social Science 1**

**3 (3-**

**0-6)** *No credits for students who passed or studying TU 155*

Introduction to descriptive statistics; index numbers; unconditional and conditional probability; random variables and probability distribution; unconditional and conditional expectations; elementary sampling and sampling distribution; estimation and hypotheses testing for one population; statistical package results interpretation.

**TU 050 English Skill Development**

**3 (3-**

**0-6)** *\*Credits are not counted\** Practice basic skills for listening, speaking, reading, and writing in English through an integrated method. Students will acquire a basis to continue to study English at a higher level.

**General Education Part 1**

**TU101 Social Science**

**Thailand, ASEAN, and the World**

**3 (3-**

**0-6)**

Study of significant phenomena around the world, in the ASEAN region and in Thailand in terms of their political, economic and sociocultural dimensions. This is done through approaches, theories and principles of social science research via discussion and raising examples of situations or people of interest. The purpose of this is to create a perspective of diversity, to understand the complexity of global interrelationships, to build a global mindset and to be able to challenge old paradigms and open up a new, broader worldview.

**TU100 Social Science**

**Civic Engagement**

**3 (3-**

**0-6)**

Instillation of social conscience and awareness of one's role and duties as a good global citizen. This is done through a variety of methods such as lectures, discussion of various case studies and field study outings. Students are required to organise a campaign to raise awareness or bring about change in an area of their interest.

**TU102 Humanities**

**Social Life Skills**

**3 (3-**

**0-6)**

Holistic health care, addressing the physical ,emotional ,social ,and spiritual needs ,which is considered. Important skills for success in leading a happy life in society. Students learn to develop their ability in physical health care to manage stress, build emotional security, understand themselves and adapt to psychological, emotional and social problems. Students also learn to understand the meaning of aesthetics, experiencing and appreciating the relationship between art and humanity in different fields, namely visual arts, music, performing arts and architecture.

**TU103 Sciences and Mathematics**

**Life and Sustainability**

**3 (3-**

**0-6)**

This course provides an introduction to the importance of life-cycle systems perspectives in understanding major challenges and solutions to achieving more sustainable societies in this changing world. Students will learn about the relationship between mankind and the

environment in the context of energy and resource use, consumption and development, and environmental constraints. Furthermore, an examination of social conflict and change from the life-cycle perspective will be used to develop an understanding of potential solution pathways for sustainable lifestyle modifications.

**TU104 Critical Thinking, Reading, and Writing**

**3 (3-**

**0-6)**

Development of critical thinking through questioning, analytical, synthetic and evaluation skills. Students learn how to read without necessarily accepting all the information presented in the text, but rather consider the content in depth, taking into account the objectives, perspectives, assumptions, bias and supporting evidence, as well as logic or strategies leading to the author's conclusion. The purpose is to apply these methods to students' own persuasive writing based on information researched from various sources, using effective presentation techniques.

**TU105 Communication Skills in English**

**3 (3-**

**0-6)**

Development of English listening, speaking, reading and writing skills, focusing on the ability to hold a conversation in exchanging opinions, as well as reading comprehension of academic texts from various disciplines related to students' field of study.

**TU106 Creativity and Communication**

**3 (3-**

**0-6)**

Creative thought processes, with critical thinking as an important part, as well as communication of these thoughts that lead to suitable results in social, cultural and environmental contexts, at personal, organizational and social levels

### Non-EE Courses

Course code	Course title	Prerequisites	Course description	Remarks
AC201	Fundamental Accounting		The basic principles, concepts, and procedures for collecting and recording accounting information; preparation and analysis of financial reports; accounting cycle; accounting and disclosure for assets, liabilities, and owners' equity	Required for minor in Finance
BA291	Introduction to Business		The course aims to provide a comprehensive introduction to the key operations of business, namely finance, accounting, marketing, human resource and production management, and management information system, placed within organizational, forms of businesses, environmental, legal and managerial context. Underlying business concepts will be discovered through the study of real-world examples and fundamental business plans.	Required for minor in Finance or Marketing
ER211	Introduction to Entrepreneurship		Concepts of entrepreneurship, theoretical applications of entrepreneurship, a start-up business or a new business development venture, analysis and evaluation of business opportunities, feasibility study, business planning design and business plan development.	
MK201	Principle of marketing		The course introduces the definition of marketing and its importance as a vital business function. Topics include evolution of marketing, influences of marketing on economics and the society, marketing environment, consumer behavior, segmentation, targeting, positioning, optimal marketing mix for businesses of various sizes and consumers with distinct levels of technology accessibility, introductory marketing management, and ethics of marketers.	Required for minor in Marketing
MK311	Consumer Behaviors	MK201	A study of concepts and theories being employed to understand consumer behavior. Topics include both traditional thinking, which emphasizes psychological and behavioral theories such as perceptions, attitudes or social groups, as well as alternative theories from sociology and anthropology, which emphasizes understanding consumer from social and cultural dimensions such as a theory of symbolic consumption. This course also covers an analysis of changes in consumer behavior, particularly in a dynamic digital society.	Required for minor in Marketing
MK312	Brand Management	MK312	The course will introduce students overall responsibility and tasks of a brand manager. Topics include new product development and launching, brand design and architecture, brand positioning, brand strategy and marketing programs, growing	Required for minor in Marketing

Course code	Course title	Prerequisites	Course description	Remarks
			and sustaining brand equity, brand audit, and brand health check.	
MK316	Distribution channel management	MK201	A study of distribution channel systems for traditional and modern trade, their roles, constraints on their management, and their integration into marketing strategy. Analysis of dynamic market factors, design and distribution of channels for effective and efficient management distribution networks, and strategic deployment of multi-channel marketing decisions to gain competitive advantages. Focus is on the roles, attitudes, and behavior of channel members, dimensions of channel power, management of channel conflict, channel incentive programs, coordination of channel relationships, and management of indirect channels. Particular attention is paid to the development, control, and evaluation of a distribution channel in both consumer and business markets.	Elective courses in Marketing
MK317	Integrated marketing communication	MK312	With an increasingly diverse consumer lifestyle and advanced communication technology, this course is designed to develop concepts, principles, and approach of integrated marketing communications in order to answer the marketing challenge. The content covers integrated marketing communications plan in terms of message and contact point (digital and physical) integration, and evaluation, based on the understanding of consumer and brand, especially brand positioning.	Elective courses in Marketing
MK319	Digital marketing	MK312	Digital marketing strategy course is to educate students to understand how to applying digital technologies to craft marketing strategy in responding consumer and business market in digital era. The content of this course contains four parts that are issue and challenges of digital technologies in marketing competitive landscape, leveraging digital technologies to gain competitive advantage, digital marketing strategy formulation, and designing metrics to measure the success of digital marketing strategy.	Elective courses in Marketing
MK321	Entrepreneurial Marketing		A study of key entrepreneurial marketing theories, concepts, and strategies that can be applied to both established and new ventures operating in fast-changing, volatile business environments. The course begins with a discussion of the evolution of the interface between marketing and entrepreneurship and continues with an	Elective courses in Marketing

Course code	Course title	Prerequisites	Course description	Remarks
		MK312	exploration of the underlying elements of entrepreneurial marketing. The main emphasis of this course is on how to proactively identify, evaluate, and exploit market opportunities in order to acquire and retain profitable customers. The course also puts emphasize on the concept of effectual perspective of entrepreneurship. Through a series of hands-on case studies, students will learn how to formulate entrepreneurial marketing strategies using innovative approaches to risk management, resource leveraging, and value creation.	
MK322	Retail management	MK311	A study of retail business management, shopper behavior and market competition to determine effective retailing strategy and retail marketing mix, in order to compete in the retail business, covering on-site, online, and omni retail. The content covers location selection, organization and human resources management, supply chain for retail management, merchandise planning, purchasing system, retail pricing, and promotion program, as well as store management, store design, store layout and product display.	Elective courses in Marketing
MK326	International marketing	MK201	A study of concepts and ways in doing international marketing including exporting, importing, foreign direct investment, globalization and factors affecting international marketing. The course covers how to gain consumer insights across international markets and translate them into appropriate marketing programs. By acting as an international marketing manager, students should be able to understand the linkages of the dynamic international environments, international opportunities, and international marketing strategies through assignments, case studies, and group projects	Elective courses in Marketing
MK395	Special Topics in marketing 1	Marketing major, third-year student status or approved by the instructor	Philosophy, concepts, principles, tools, innovations, recent trends, and recent developments in Marketing that benefit students' thinking and future careers	Elective courses in Marketing
MK495	Special Topics in marketing 2	Marketing major, fourth-year student status or approved by the instructor	Philosophy, concepts, principles, tools, innovations, recent trends, and recent developments in Marketing that benefit students' thinking and future careers.	Elective courses in Marketing



<b>Course code</b>	<b>Course title</b>	<b>Prerequisites</b>	<b>Course description</b>	<b>Remarks</b>
FN201	Business Finance	AC201	The basic principles of financial management for business; the responsibilities of financial managers; maximization of enterprise value; financial analysis, cash flow analysis, financial planning, fundamental analysis on risk, return, and asset pricing models, time value of money, working capital policies, capital budgeting, financing mix, short-term and long-term financing, and the costs of capital.	Required for minor in Finance
FN211	Financial Mathematics and Statistics		Essentials of statistics and mathematics for financial applications; basic statistics, the concept of risk and return, probability, regression analyses, basic calculus (e.g. introduction to derivatives, integration, and integral), optimization, and basic matrices.	Required for minor in Finance
FN281	Personal Finance		The determination of optimal financial objectives in accordance with various stages of individual life cycle; personal financing and spending, personal financial planning and control, savings and efficient investments, appropriate credit usage, personal tax planning, and income tax payment, benefits of saving and individual's quality of life: health care, leisure, free-time productivity, financial planning after retirement	Elective courses in finance
FN282	Wealth management		Evaluations of potential customers, personal tax planning, life-cycle investing, measurement of risk of and return on financial assets, portfolio theory, portfolio optimization, investment policy statements, investments in real estate investment trusts, performance evaluation of mutual funds, retirement planning, wealth transfers, heritage, donations, new issues in wealth management.	Elective courses in finance
FN311	Financial Managements	FN201 and FN211	Theoretical concepts of corporate financial management applied to resolve financial problems and issues encountered by management in the real world of business; the management of asset structure and financial mix; the application of financial models and instruments on managing the assets, liabilities and equities, valuation, the costs of capital, capital structure, capital budgeting under risk, leasing, the concepts of agency problems and corporate governance.	Required for minor in Finance
FN312	Investments	FN201 and FN211	Valuation methods for fixed income instruments, equity instruments, options, and futures contracts; risk and return measurement of individual securities and portfolios, the determinants of risk and return.	Required for minor in Finance

<b>Course code</b>	<b>Course title</b>	<b>Prerequisites</b>	<b>Course description</b>	<b>Remarks</b>
FN313	International finance	FN201, FN211 and EC214 (EE212)	The financial management for international business and its international economic environment: international monetary system, the balance of current account, the balance of payment, the foreign exchange market; the application of financial instruments and derivatives in the international financial risk management, the roles of international financial institutions, such as the International Monetary Fund (IMF), the World Bank, and international financial corporations.	Elective courses in finance
FN332	Credit management	FN311	The importance and types of credit; loan decision processes of both corporate and financial intermediaries; techniques for analyzing and evaluating credits, the determination of credit lines and optimal interest rates, methods of evaluating loan proposals, debt restructuring and debt management, computerized database systems in credit analysis.	Elective courses in finance
FN411	Derivative analysis	FN312	Fundamental principles of derivatives, including futures, forward contracts, options, warrants, swaps, and real options, derivatives pricing models, strategies for speculating or hedging.	Elective courses in finance
FN424	Investment Banking	FN311	Investment banking business; principles of value creations for firms and investors by mergers and acquisitions and business reorganizations; variety of investment banking activities, debt restructuring, initial public offering, and venture capital; applications of financial management and cases both in Thailand and abroad	Elective courses in finance
FN451	Equity analysis	FN312	An analysis and evaluation of equity instruments; economic, industry and company analyses, various approaches in security valuation: discounted cash flows, relative valuation, technical analysis, quantitative securities analysis, portfolio performance evaluation.	Elective courses in finance
FN452	Portfolio management	FN312	Theory and practice of modern portfolio management, portfolio construction, portfolio performance evaluation, bond portfolio management, and new developments in asset management, e.g. Black-Litterman model, factor investing, etc. Financial modeling using actual market data in Excel program.	Elective courses in finance
OM201	Operations Management		Study of concepts, techniques and tools to design, analyze, and improve core operational capabilities, and their application to a broad range of industries. Topics include operations strategy, productivity, product/service design, process design, quality management, inventory management, project management, supply	Elective courses in business

<b>Course code</b>	<b>Course title</b>	<b>Prerequisites</b>	<b>Course description</b>	<b>Remarks</b>
			chain management, operational performance measurement and operations for sustainability.	
HR201	Modern management and Entrepreneurship		Management and entrepreneurship concepts, evolution of management, roles and skills of managers, types and characteristics of entrepreneurs, planning, organizing, human resource management, leading, controlling, managerial decision making, ethics, and use of various management tools in the digital era.	Elective courses in business