



Program: Bachelor of Economics (English Program)  
Degree Conferred: Bachelor of Economics (English Program)  
B.Econ.  
Credits Required: at least 130 credits

## The Number of Credits

In order to graduate from the Bachelor of Economics Program in Economics, students are required to complete at least 130 credits.

## Curriculum Structure

<b>(1) General Education</b>	<b>at least</b>	<b>30</b>	<b>credits</b>
<b>In five themes:</b>			
- Wellness		6	credits
- Entrepreneurship		3	credits
- Language and Communication		13	credits
- Thai Citizen and Global Citizen		5	credits
- Aesthetics		3	credits
<b>(2) Department Requirement</b>	<b>at least</b>	<b>94</b>	<b>credits</b>
- Core courses		66	credits
- Electives courses	at least	28	credits
<b>(3) Free Electives</b>	<b>at least</b>	<b>6</b>	<b>credits</b>

## Courses

<b>(1) General Education</b>	<b>at least</b>	<b>30</b>	<b>credits</b>
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<b>1.1 Wellness Theme</b>	<b>6</b>	<b>credits</b>
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- 01175xxx Physical Education	1	credit
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And students are required to enroll in additional 5 credits of Wellness courses from the General Education field.

<b>1.2 Entrepreneurship Theme</b>	<b>3</b>	<b>credits</b>
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Students are required to enroll in 3 credits of the Entrepreneurship courses from the General Education field.

<b>1.3 Language and Communication Theme</b>	<b>13</b>	<b>credits</b>
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- Thai Language	3	credits
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Students are required to enroll in 3 credits of Thai language course from the Language field.

- Information/Computer	1	credit
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Students are required to enroll in 1 credits of Information/Computer course from the General Education field.

- Language electives (one language)	at least 9	credits
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Students are required to enroll in at least 9 credits of foreign Language courses from the Language field. All 9 credits must be of the same language.



2.2.1.2) Students choose 6 credits from groups other than their major group. For Economic elective courses (2.2.1), students must choose at least 6 credits from these following courses

1.) Economics of Development and Planning		
01101313	Economic History	3
01101314	Economic Development	3
01101315	Rural Economics	3
01101316	Urban Economics	3
01101411	Economic Planning	3
01101412	Regional Economics	3
01101413	Project Preparation and Evaluation	3
01101414	Economic Administration	3
01101415	Economic Development of ASEAN Countries	3
01101416	Economics of Poverty and Inequality	3
01101417	Comparative Economic Development	3
01101418	Comparative Economic Systems	3
2.) Business Economics		
01101321	Financial Business Economics	3
01101421	Business Economic Forecasting	3
01101422	Economics of Financial Risk Management	3
01101423	Marketing Business Economics	3
01101424	Business Economics of Strategy	3
01101425	Business Economic Ethics	3
01101426	Real Estate Business Economics	3
3.) Human Resources and Industrial Economics		
01101331	Economics of Industrial Organization	3
01101332	Economics of Human Resources	3
01101333	Logistic Management Economics	3
01101334	Intermediate Transportation Economics	3
01101335	Labour Market Analysis	3
01101336	Economics of Renumeration	3
01101431	Economics of Industrialization	3
01101432	Game Theory and Its Applications in Industrial Economics	3
01101433	Labour Economics	3
01101434	Public Utilities Economics	3
01101435	International Transportation	3
4.) International Economics		
01101441	International Trade Policy	3
01101442	Economics of International Competition	3
01101443	Theory of International Finance	3
01101444	International Finance Policy	3
01101445	Economics of International Investment	3
01101446	Economics of International Integration	3

5.) Monetary Economics and Public Finance		
01101451	Monetary Theory and Policy	3
01101452	Financial Market Theory	3
01101453	Economics of Monetary Fluctuations	3
01101454	Financial Institutions and the Economy	3
01101455	Fiscal Theory and Policy	3
01101456	Economics of Government Expenditure	3
01101457	Economics of Government Revenue	3
01101458	Wealth Theory	3
6.) Natural Resources and Environmental Economics		
01101361	Natural Resource Economics	3
01101362	Environmental Economics	3
01101363	Economic Development and Natural Resources Utilization	3
01101461	Economic Valuation Techniques of Natural Resources and Environment	3
01101462	Energy Resources Economics	3
01101463	Ecological Economics	3
7.) Quantitative Economics		
01101373	Mathematical Economics III	3
01101471	Mathematical Programming for Economic Applications	3
01101472	Operations Research for Economic Applications	3
01101473	Input - Output Analysis	3
01101474	Econometrics II	3
01101475	Mathematical Economics IV	3
01101476	Microeconometrics	3
01101477	Application of Computer Program for Economic Analysis	3
8.) Economic Theory		
01101382	Microeconomics III	3
01101383	Macroeconomics III	3
01101481	Welfare Economics	3
01101482	Economic Growth and Stability	3
01101483	Political Economics	3
01101484	Contemporary Political Economics	3
01101485	Buddhist Economics	3

**2.2.2 Non - Economic electives                      6                      credits**

Students choose 6 credits from one field outside of the Economics program.

**(3) Free Electives    at least    6                      credits**

## Study Plan

<b>1<sup>st</sup> Year, 1<sup>st</sup> Semester</b>		<b>Credits</b>
01101171	Mathematical Economics I	3
01101181	Microeconomics I	3
	<i>General Course: Aesthetics</i>	
011255101	Man and Sea	3
	<i>General Course: Thai Citizen and Global Citizen</i>	
01999032	Thai Studies	3
	<i>General Course: Language and Communication</i>	
01999021	Thai Language for Communication	3
01355112	Foundation English II	3
	<b>OR</b>	
01355113	Foundation English III	3
	<i>General Course: Wellness</i>	
01175121	Basketball for Health	1
	<b>OR</b>	
01175165	Weight Training for Health	1
	<b>Total</b>	<b>19</b>

<b>1<sup>st</sup> Year, 2<sup>nd</sup> Semester</b>		<b>Credits</b>
01101182	Macroeconomics I	3
01101272	Economic Statistics I	3
	<i>General Course: Entrepreneurship</i>	
01132101	Modern Entrepreneur	3
	<i>General Course: Thai Citizen and Global Citizen</i>	
01999111	Knowledge of the Land	2
	<i>General Course: Language and Communication</i>	
01418111	Computer Applications	1
01355113	Foundation English III	3
	<i>General Course: Wellness</i>	
01387101	The Art of Living with Others	3
01175112	Badminton for Health	1
	<b>OR</b>	
01175114	Table Tennis for Health	1
	<b>Total</b>	<b>19</b>

<b>2<sup>nd</sup> Year, 1<sup>st</sup> Semester</b>		<b>Credits</b>
01101251	Money and Banking	3
01101271	Mathematical Economics II	3
01101281	Microeconomics II	4
01130102	Accounting for Non-Accountant	3
	<i>Language Course</i>	
01355206	Technical English	3
	<b>OR</b>	
01355202	Fundamental English Writing	3
	<i>General Course: Wellness</i>	
01175112	Badminton for Health	1
	<b>OR</b>	
01175114	Table Tennis for Health	1
	<b>Total</b>	<b>17</b>

<b>2<sup>nd</sup> Year, 2<sup>nd</sup> Semester</b>		<b>Credits</b>
01101221	Managerial Economics	3
01101232	Introductory Transportation Economics	3
01101261	Introduction to Natural Resources and Environmental Economics	3
01101282	Macroeconomics II	4
01101371	Economics Statistics II	3
	<i>Physical Education Activity: Wellness</i>	
01175112	Badminton for Health	1
	<b>OR</b>	
01175114	Table Tennis for Health	1
	<b>Total</b>	<b>17</b>

<b>3<sup>rd</sup> Year, 1<sup>st</sup> Semester</b>		<b>Credits</b>
01101311	Economics of Development and Planning	3
01101341	International Economics	3
01101351	Public Finance	3
01101372	Econometrics I	4
01101381	History of Economic Thought	3
	<i>Non-Economics Elective Course</i>	3
	<b>Total</b>	<b>19</b>

<b>3<sup>rd</sup> Year, 2<sup>nd</sup> Semester</b>		<b>Credits</b>
01101231	Labour and Industrial Economics	3
01101312	Thai Economy	3
01101491	Research Methods in Economics	3
	<i>1 Major and 1 non-Major Economics Elective Courses</i>	6
	<i>Non-Economics Elective Course</i>	3
	<b>Total</b>	<b>18</b>

<b>4<sup>th</sup> Year, 1<sup>st</sup> Semester</b>		<b>Credits</b>
01xxx497	Seminar	1
	<i>2 Major and 1 non-Major Economics Elective Courses</i>	9
	<i>Free Elective Course</i>	3
	<b>Total</b>	<b>13</b>

<b>4<sup>th</sup> Year, 2<sup>nd</sup> Semester</b>		<b>Credits</b>
	<i>2 Major Economics Elective Courses</i>	6
	<i>Free Elective Course</i>	3
	<b>Total</b>	<b>9</b>

When deciding on *Major or non-Major* students should keep in mind that they need to fulfill 16 credits requirement for major and 6 credits requirement for non-major Economics electives. Students may enroll in other courses in addition to those mentioned here. However, they should not exceed 22 credits per semester.

# Course Descriptions

Courses available for the economics - major students can be categorized into 8 groups as follows:

## 1. Economics of Development and Planning

01101311	Economics of Development and Planning Pre : 01101281 and 01101282 Meaning and measurement of economic development. Characteristics of developing economies. Internal and external economic factors and others which significantly influencing economic development. Obstacles to economic development. Case study of economic development and planning in Thailand by focusing on characteristic, process and other relevance.	3
01101312	Thai Economy Pre : 01101281 and 01101282 Basic structure of Thai Economy and its current performance.	3
01101313	Economic History Pre : 1) 01101181 and 01101182 or 2) 01101101 The evolution in economic and social structure of the developed region. Analysis of problems in economic and political system from feudalism, mercantilism, industrial revolution, up to World War II.	3
01101314	Economic Development Pre : 01101311 General theory of development and underdevelopment. Economic growth models. Agricultural and economic development. Industrial development. Human resource development. Saving - investment and economic development. Monetary and fiscal policies for developing countries. Role of foreign trade on economic development. Foreign aid and investment.	3
01101315	Rural Economics Pre : 01101182 or 01101101 Roles of rural area in economic development. Socio-economic characteristics of rural capital formation, production, marketing, and consumption. Roles of government and private sector in the development of rural economic structure. Trends of economic growth. Economic structural change and approaches to rural economic development in Thailand. Field trip required.	3
01101316	Urban Economics Pre : 01101281 and 01101282 Urban development, urban spatial structure and choosing the location of households and firms. Using the tools of economics to analyze urban issues, environment, local government finance, and remedial policies to solve these issues. Roles of community and government in urban development. Field trip required.	3
01101411	Economic Planning Pre : 01101311 Role, rationale and types of economic planning. Planning process. Uses of mathematical and statistical models in economic planning. Macro and sectoral planning models. Community planning. Economic planning of Thailand.	3



01101412	<p>Regional Economics <span style="float: right;">3</span>  Pre : 01101281 and 01101282</p> <p>Hierarchy of regional economic activities between regions. Theories explaining regional disparity. Various techniques for analyzing interregional economic relationship. Location theory. Theories on regional mobilization. Analysis of factor of production and output. Measures to solve region disparity. Field trip required</p>
01101413	<p>Project Preparation and Evaluation <span style="float: right;">3</span>  Pre : 01101311</p> <p>Project preparation with emphasis on economic and social aspects. Economic and financial analysis of project. Identification and analysis of project benefits and costs. Project implementation. Project selection criteria.</p>
01101414	<p>Economic Administration <span style="float: right;">3</span>  Pre : 01101281 and 01101282</p> <p>Concept and principle government's economic administration. Economic and social development plan. Structuring of the economic development organizations, the impact of monetary and fiscal policy, and politics on the country's economic administration.</p>
01101415	<p>Economic Development of ASEAN Countries <span style="float: right;">3</span>  Pre : 01101281 and 01101282</p> <p>Characteristics and economic structure. Economic development. Obstacles, planning and policies in stimulating economic development of ASEAN countries</p>
01101416	<p>Economics of Poverty and Inequality <span style="float: right;">3</span>  Pre : 01101182 or 01101101</p> <p>Definition and characteristics of poverty and inequality. Their causes and resulting problems. Measurement of poverty. Policies and measures to overcome such problems with emphasis on the case of Thailand. Field trip required.</p>
01101417	<p>Comparative Economic Development <span style="float: right;">3</span>  Pre : 01101181 and 01101182 or 01101101</p> <p>Comparison of the evolution of economic development, economic structure, social structure and political structure of countries and regions.</p>
01101418	<p>Comparative Economic Systems <span style="float: right;">3</span>  Pre : 01101282 or 01101101</p> <p>Comparison of theories and practice of capitalism, socialism and other economic systems. Focusing on organization administration, institutions, values, objectives, and behaviour of each economic system.</p>

## 2. Business Economics

01101221	<p>Managerial Economics <span style="float: right;">3</span>  Pre : 01101181 and 01101182</p> <p>Application of economic theories and quantitative tools to firm's decision process. Analyses of demand, cost, profit, pricing, and investment criteria. Analyses of aggregate demand, aggregate supply, economic stabilization, and economic policies for business decision making. Application of international economics for management.</p>
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01101321	<p>Financial Business Economics <span style="float: right;">3</span>  Pre : 01101251  Business finance and its role in the economy, the impact of monetary policies on business, financial statements, cost of capital and structure of the capital the short - term and long - term financing.</p>
01101421	<p>Business Economic Forecasting <span style="float: right;">3</span>  Pre : 01101371  Basic business economic forecasting, model selection for forecasting, forecasting with multiple regression, time - series decomposition, choosing forecasting techniques.</p>
01101422	<p>Economics of Financial Risk Management <span style="float: right;">3</span>  Pre : 01101171, 01101181 and 01101182  Financial risk and its effect on business and economy. The use of derivatives in financial risk management. Forward contracts, futures, options, and swap. The analysis of benefits and concerns from risk management.</p>
01101423	<p>Marketing Business Economics <span style="float: right;">3</span>  Pre : 01101281  The role of marketing, marketing process, analysing the marketing environment, consumer behavior, marketing research and information, estimating and forecasting market demand, identifying market segments and selecting market targets, production and costs, market structure and designing marketing strategies, pricing, managing marketing channels, marketing promotion and international marketing.</p>
01101424	<p>Business Economics of Strategy <span style="float: right;">3</span>  Pre : 01101181 and 01101182  Economics and strategy. Business firm operation in the modern economy. Economic concepts for strategy. Economic and public policies affecting strategic management and business policy. Analysis of macroeconomic environment. Industry analysis and business strategy. Business organization analysis and strategy.</p>
01101425	<p>Business Economic Ethics <span style="float: right;">3</span>  Pre : 01101181 and 01101182  The relationship between business economics and social ethics. Developments of social ethics from personal to organization and institutional levels. Ethics, efficiency, and the market system. Ethical responsiveness to business and economic stakeholders. Ethical issues related to politics and socio - economics, economic policy, environment, human rights and corporate good governance. Trend of social ethical standard and its application for business and economic developments.</p>
01101426	<p>Real Estate Business Economics <span style="float: right;">3</span>  Pre : 01101181 and 01101182  Demand and supply of real estate sector. Analyses of real estate markets. Real estate development and investment. Real estate business sector and economic system. Economic factors affecting real estate business sector. Real estate business sector and economic and public policies.</p>

### 3. Human Resources and Industrial Economics

- 01101231 Labour and Industrial Economics 3  
Pre : 01101182 and 01101281  
Definitions, categories and components of labour. Supply and demand for labour. Labour market. Employment and wage determination. Role of labour in industrial economy. Structure of industrial economy. Importance of industrial development and factors affecting industrial development. Study of industrial organization. Relationships among structure, conduct, and performance, with the interaction from basic conditions and government policies. Theories and policies of labour and industrial development.
- 01101232 Introductory Transportation Economics 3  
Pre : 01101181 and 01101182  
Meaning and scope of transportation economics, significance and role of transport system in the economy. Economic characteristics of road, rail, air, water, and pipeline transportation. Fundamental theories of transportation economics. Government transport policy, rules, regulations, and legal issues. Contemporary Thai transportation problems and development. Field trip required.
- 01101331 Economics of Industrial Organization 3  
Pre : 01101231  
Economic principles applied in industrial organization. Relation among market structure, conduct and performance. Firm behavior and performance. Game theory, advertising, research and development, market barrier to entry, integration and merger of firms, pricing strategies, market strategies, role of information, and government intervention.
- 01101332 Economics of Human Resources 3  
Pre : 01101231  
Theories and concepts in economics of human resources. Investment in human resources. Education. Training. Migration and health. Government policies on human resource. Manpower planning and human resources management. Human resources and globalization.
- 01101333 Logistic Management Economics 3  
Pre : 01101232  
Principles of traffic control and their application in commerce and industry. Managing transportation business and physical distribution of raw materials and finished goods. Location theory. Warehouse management and inventory control. Field trip required.
- 01101334 Intermediate Transportation Economics 3  
Pre : 01101232  
Transportation demand and supply estimation. Transportation cost and its determinants. Transportation rate and pricing. Location Economics. General transportation planning processes. Transportation system analysis and evaluation of urban transportation.

01101335	Labour Market Analysis Pre : 01101231 Overview of labour market analysis. Critical issue of labour market. Factors affecting the labour market. Determination of wage and employment. Analysis of unemployment problems. Relation between wage and unemployment. Information system of labour market. Roles of government and unions in labour market. Policies to solve unemployment problems. Analysis of international labour migration.	3
01101336	Economics of Renumeration Pre : 01101231 Wage theory and labour welfare for industrial enterprises. Problems and issues in wage determination. Government policy and practice on wage determination and labour welfare. Theoretical issues and forms of collective bargaining. Strategies and practice in collective bargaining by group and by individual.	3
01101431	Economics of Industrialization Pre : 01101231 Economics principles for industrialization, establishing industrial enterprise industrial, growth and development. Factors contributing to industrial growth and development, industrial competitive advantage analysis, industrial promotion policy design and evaluation.	3
01101432	Game Theory and Its Applications in Industrial Economics Pre : 01101231 Basic concepts of game theory. Static games. Solution techniques for solving static games. Dynamic games. Repeated games. Games with imperfect information. Game applications under oligopoly. Location model. Entry deterrence. Principal-Agent problem. Signaling.	3
01101433	Labour Economics Pre : 01101231 Theory of labour supply and demand. Wage determination and employment in various labour markets. Job search theories. Wage theories. Unemployment. Labour management. Labour organizations. Labour relation system. Theory of conflict and conflict resolution. Government policies related to labour. Law related to labour relation. Field trip required.	3
01101434	Public Utilities Economics Pre : 01101261 The evolution and development of public utilities, its laws and regulations. Management, accounting and statistical control. Forecasting and planning. Rate determination. Cost analysis. Government role in public utilities investment, particularly in Thailand.	3
01101435	International Transportation Pre : 01101232 or 01101101 Role of transportation in international goods and passenger movement. Operations of international air and ocean transportations. Organizations and associations controlling international transportation to raise efficiency. Problems and suggested solution. Field trip required.	3

#### 4. International Economics

- 01101341 International Economics 3  
Pre : 01101281  
Basic theory and policy of international trade. The effect of international trade. Import tariff and export tax and their effects on the economy. Basic theory and policy of international finance, exchange rate, balance of payments, and international monetary system. The relationship between internal and external economy. International economic integration and foreign investment.
- 01101441 International Trade Policy 3  
Pre : 01101282  
Basic theory of international trade policy, both export and import. Objectives of the policy. Tariff and non - tariff trade barriers. The efficiency and distribution effect of export promotion, import substitution and other measures. The methodology of measuring effective rate of protection. Roles of the General Agreement on Tariff and Trade (GATT) in promoting free trade. Roles of the United Nations Conference on Trade and Development (UNCTAD) in protecting the developing countries interest. A policy to raise the bargaining power of exporting countries. Price and income stabilization policy.
- 01101442 Economics of International Competition 3  
Pre : 01101341  
The role of international competition and international competition environment under globalization. The integration of economics theories and practices in international trade, investment, finance and economic integration. Economic policies for international competition. International price and non-price competition. Global supply chain and multinational corporations. Factors determining national competitiveness. International competitive strategy. The impact of international competition on world economy, developed countries, developing countries and transition economies. International competition policy of Thailand and other countries. The future trend of international competition.
- 01101443 Theory of International Finance 3  
Pre : 01101282  
Theory of international finance, exchange rate system, foreign exchange market, balance of payments and an analysis of the relationship between national economy and balance of payments. International monetary system. Internal and external balance. Foreign aid and loan.
- 01101444 International Finance Policy 3  
Pre : 01101282  
Balance of payments. An analytical framework for the flexibility of foreign debt service. Macroeconomic and international monetary measures and policies for internal and external balance. The evolution and experience of the international monetary system up to Bretton Woods. Roles of the International Monetary Fund. Problems of foreign debt repayment among developing countries.

01101445	Economics of International Investment Pre : 01101341 Types of international investment and theories explaining causes. The economic effects of international investment on home and host countries. Measures for promoting foreign investment. Multinational corporations and government and international organization policies.	3
01101446	Economics of International Integration Pre : 01101341 Basic theory of economic integration, stage of international integration and theory of customs union. Welfare and dynamic effects of the international integration. The impact on the international trade and monetary policy. Conditions of integration success. The European Union and ASEAN experience.	3

## 5. Monetary Economics and Public Finance

01101251	Money and Banking Pre : 01101182 Functions and types of money. Credit and credit-instruments. Commercial banks. Central bank and other financial institutions. Financial market. International finance and the international financial institutions. Basic monetary theories and policies. Field trip required.	3
01101351	Public Finance Pre : 01101182 and 01101281 Role of government in the economy. Government expenditure and its effect. Government budget. Taxation. Public debt. Local government finance. A general view of fiscal policy.	3
01101451	Monetary Theory and Policy Pre : 01101251 Monetary theories. The impacts of monetary variables on price, employment, income, interest and international balance of payment. Monetary policy for economic stabilization. Internal monetary policy.	3
01101452	Financial Market Theory Pre : 01101251 Functions and roles of financial markets in an economy. The importance of saving and investment. Demand and supply of financial funds. The nature of money and capital markets. The nature and types of securities in the markets: flow - of - fund account. Theory of interest rate and prices of securities. The investment decision rules. The monetary and fiscal policy and financial markets. Money markets and securities exchange in Thailand. Field trip required.	3
01101453	Economics of Monetary Fluctuations Pre : 01101251 Monetary fluctuations and causes. Its impact on the efficiency of resources utilization, income distribution, and economic development. Monetary stabilization policy.	3

01101454	Financial Institutions and the Economy Pre : 01101251 Main characteristics of financial institutions in Thailand. Their behavior and role in mobilizing and distributing financial fund. Impact on monetary variables and economic development. The international financial institutions and their role in Thailand. Field trip required.	3
01101455	Fiscal Theory and Policy Pre : 01101351 Economics of public activities including the analysis of government functions, expenditures, as well as alternative means of obtaining revenue. Government policies for economic stabilization and growth. The relationship between monetary policy and fiscal policy. Public debt and policies for managing public debt.	3
01101456	Economics of Government Expenditure Pre : 01101351 Government expenditure. Theories of Public goods. Goals of Government in production and income distribution. Project appraisal in government budgeting. Impact of government expenditure. State enterprises. Field trip required.	3
01101457	Economics of Government Revenue Pre : 01101351 Government revenue budget. Principles of Taxation. Tax incidence and effect of taxation. Tax structure in Thailand and other countries. Taxation and economic problems. Income from state enterprises. Income from sales of assets and services. Other miscellaneous sources of revenue. Public debt. Treasury accounts.	3
01101458	Wealth Theory Pre : 01101251 Birth of wealth and its impact on an economy. Types of wealth: money wealth in barter, commodity money, and fiat money economy, nonmonetary wealth and its components. Wealth and consumer behavior. Wealth in macroeconomic models analysis.	3

## **6. Natural Resources and Environmental Economics**

01101261	Introduction to Natural Resource and Environmental Economics Pre : 01101281 Relationship between human, natural resources and the environment; classification and principle of utilization of natural resources; economic growth, quality of natural resources and the environment; consumption, production and environmental impacts on quality of life; solving and mitigation of the natural resource and environmental utilization problems; natural resource and environmental situations and management in Thailand.	3
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01101361	<p>Natural Resource Economics 3</p> <p>Pre : 01101261</p> <p>Natural resources as production factors and consumption goods; resource depletion and scarcity; conservation and sustainable resource uses; principles, guidelines and economic tools for natural resource management in both market and non-market system. Field trip required.</p>
01101362	<p>Environmental Economics 3</p> <p>Pre : 01101261</p> <p>Welfare economics; market and market failures; externalities and public goods; carrying capacity of natural resources and the environment; the problem of natural resources depletion and pollutions; effects of pollutions on quality of life; principles, guidelines and economic tools in solving environmental problems. Field trip required.</p>
01101363	<p>Economic Development and Natural Resources Utilization 3</p> <p>Pre : 01101261</p> <p>Concepts and theory of economic development ; natural resources and the environment as factors of production and waste assimilating sources: the material balance model principle and toxic wastes discharged into the atmosphere; resources depletion ; cause of pollutions; status of Thailand's and the world's vital natural resources and the environment; impacts of natural resources and the environment deterioration; guidelines for natural resources development and corrective measures to cope with natural resources and the environment deteriorations. Field trip required.</p>
01101461	<p>Economic Valuation Techniques of Natural Resources and Environment 3</p> <p>Pre : 01101261</p> <p>Value in economic context, market failure in valuation, benefit and cost in market and non-market economy. Principles and concepts of resources and environmental valuations; economic concepts related to natural resources and environmental valuation, preliminary - valuation techniques. Application and problems of valuation techniques used in Thailand.</p>
01101462	<p>Energy Resources Economics 3</p> <p>Pre : 01101261</p> <p>Definitions and types of energy in various forms; applications of economic concepts to energy topics and environmental impacts due to energy consumption and production; energy price determination mechanism; public policies in managing energy utilization and environmental impact mitigation. Field trip required.</p>
01101463	<p>Ecological Economics 3</p> <p>Pre : 01101261</p> <p>Relationship between economic system and natural ecosystem over time and space. Concept of sustainability, justice, intergenerational equity, irreversibility of environmental change, and uncertainty.</p>



## 7. Quantitative Economics

01101171	<p>Mathematical Economics I <span style="float: right;">3</span></p> <p>Methods and principles of mathematics for economists. Functions, graphs, equations, system of equations, matrices, limits and continuity, of function derivatives and antiderivatives, integrations.</p>
01101271	<p>Mathematical Economics II <span style="float: right;">3</span></p> <p>Pre : 01101181, 01101182 and 01101171</p> <p>The use of mathematical techniques as a tool to explain microeconomic and macroeconomic concepts by applying calculus and matrix algebra to economic problems, both static and comparative static. The use of simple mathematical models.</p>
01101272	<p>Economic Statistics I <span style="float: right;">3</span></p> <p>Methods and principles of statistics for economists, comprised of descriptive statistics, graphical and tabular presentations, measures of central tendency, measures of variation, probability theory, probability distributions, random sampling, distributions sampling, and index number, with emphasis on economic applications.</p>
01101371	<p>Economic Statistics II <span style="float: right;">3</span></p> <p>Pre : 01101181, 01101182 and 01101172</p> <p>An introduction to statistics as a tool to analyze economics data through interval estimation, hypothesis testing, statistical inference about means and proportions of two economics populations, inferences about economics population variances, tests of goodness of fit and independence, analysis of variance and experimental design in economics, nonparametric methods for economics, statistical methods for quality control in economics, and sample survey in economics.</p>
01101372	<p>Econometrics I <span style="float: right;">4</span></p> <p>Pre : 01101371</p> <p>Relationships between economic variables. Properties of estimators. Simple and multiple regression theories and its application. Diagnostic testing for regression. Definition and detection of multicollinearity, autocorrelation and heteroscedasticity. Selection of functional form. Regression modeling with dummy variables. Estimation with simultaneous equation system. Cointegration.</p>
01101373	<p>Mathematical Economics III <span style="float: right;">3</span></p> <p>Pre : 01101271</p> <p>Integral calculus, differential equations, and difference equations in economic dynamics. Linear programming and its applications in economics.</p>
01101471	<p>Mathematical Programming for Economic Applications <span style="float: right;">3</span></p> <p>Pre : 1) 01101181, 01101182 and 01101271 or 2) 01101101 and 01101271</p> <p>Concepts and theories of linear and nonlinear programming for economic applications.</p>

01101472	<p>Operations Research for Economic Applications <span style="float: right;">3</span>  Pre : 01101281, 01101282 and 01101271  Analysis of economic problems by using mathematical methods, linear programming, and queuing methods. Decision under uncertainty.</p>
01101473	<p>Input - Output Analysis <span style="float: right;">3</span>  Pre : 01101281, 01101282 and 01101271  Concepts and theories of input - output analysis. Its application to economic problems.</p>
01101474	<p>Econometrics II <span style="float: right;">3</span>  Pre : 01101372  Simultaneous - equations estimation, types of equation systems, identification problems, problems of contra - assumptions, ordinary least squares, maximum likelihood estimation, K - class estimators, and lagged variables. Econometric forecasting.</p>
01101475	<p>Mathematical Economics IV <span style="float: right;">3</span>  Pre : 01101373  Covering the concepts from Mathematical Economics which are missing from Mathematical Economics I, II, and III, in a way which strengthens the students' formal reasoning and prepares them for advanced economic theory including set, logic, proof, metric space and consumer choices, sequences and series of economic variables, utility function and continuity.</p>
01101476	<p>Microeconometrics <span style="float: right;">3</span>  Pre : 01101372 or 01422341  The use of Probit Model, Logit Model, Tobit Model, Multinomial Logit Model, Ordered Probit Model, Sample selection Model and Duration Analysis to analyze microeconomic data.</p>
01101477	<p>Application of Computer Program for Economics Analysis <span style="float: right;">3</span>  Pre : 01101271 or 01422372  Using computer program in statistical estimation, hypothesis testing, regression analysis, co-integration analysis, forecasting, inventory control, linear programming, transportation problem, and input-output table analysis.</p>

## 8. Economic Theory

01101181	<p>Microeconomics I <span style="float: right;">3</span>  Meaning, nature and methods of economic study. Economic problems. Functioning of the economy. Demand, supply, price, elasticity of demand and supply, application of demand and supply. Consumer behaviour and utility. Production and cost, short - run cost and long-run cost, production in the long-run and the very long - run concerning progress and pollution. Price determination in different types of market, application of price theory. Income distribution, determination of wage, interest, and return on investment; poverty and inequality.</p>
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01101182	<p>Macroeconomics I</p> <p>National income account. Determination of national income. Business cycle and national income fluctuations. Theories and measures of fiscal policies. Money and banking, monetary and income analysis. International trade and finance. Unemployment, inflation, economic growth and development. Comparative economic systems.</p>	3
01101281	<p>Microeconomics II</p> <p>Pre : 01101181</p> <p>Microeconomic principles concerning economic functioning of free-trade economic system in dealing with basic economic problems. Demand, supply, market equilibrium. Theories of consumer, production and cost. The analysis of government policies under perfectly competitive market. Principles of price and quantity determination of goods and services in different types of market. Determination of factor prices. Principles of resource allocation. Market failure.</p>	4
01101282	<p>Macroeconomics II</p> <p>Pre : 01101182</p> <p>National income account. The measurement of macroeconomic variables. Determination of equilibrium national income in closed and open economy. Multiplier. Equilibrium in the goods market, financial market and aggregate demand curve. Equilibrium in the labor market and aggregate supply curve. Analysis of the relationship among the goods market , the financial market the labor market and general equilibrium in the economy. The relationship between unemployment and inflation. Growth theories. Expectation. The open economy. Monetary and fiscal policies.</p>	4
01101381	<p>History of Economic Thought</p> <p>Pre : 01101282</p> <p>History of the evolution of economic thoughts since the time of Bible, Greek, Roman, and Medieval up to Mercantilism, Physiocrats, Classical School, Socialism, Keynes, Neoclassical, and Contemporary Schools.</p>	3
01101382	<p>Microeconomics III</p> <p>Pre : 01101281</p> <p>Mathematical analysis of consumer behavior theory, production and cost theory, market price determination theory, general equilibrium theory, welfare economics and economic model.</p>	3
01101383	<p>Macroeconomics III</p> <p>Pre : 01101282</p> <p>Mathematical analysis in determining national income, equilibrium in demand, and supply side of the economy, static equilibrium model, wage determination and unemployment, monetary and fiscal policies, international revenue policies and balance of payments, inflation, relationship between wage, price, and output and economic growth.</p>	3
01101481	<p>Welfare Economics</p> <p>Pre : 01101281</p> <p>Concept and basic proposals for economic welfare. Theory of welfare economics and social optimum. The application of welfare policy for social and state enterprises.</p>	3

01101482	Economic Growth and Stability Pre : 01101282 Dynamic theories in economics, business cycle, and growth models. Policy impact on economic growth acceleration and stability.	3
01101483	Political Economics Pre: 1) 01101181 and 01101182 or 2) 01101101 Basic concepts of philosophy, politics, and society. Expansion of the economy, steps of socio-politico-economic evolution process. Structure of socio-politico-economic system. Patterns of society's production. Mechanism of economic functioning in the perspective of Marxian economics and politics together with those of Lenin, Mao, and other great local and foreign economists.	3
01101484	Contemporary Political Economics Pre: 1) 01101181 and 01101182 or 2) 01101101 Methodology for socio-politico-economic operation and application, including evolution of operation guidelines of Marxist, Lenin, and other similar schools of economics. Their applications in underdeveloped countries, with particular reference to Thailand's conditions and problems by emphasizing on comparative analysis with present economic concept.	3
01101485	Buddhist Economics Pre : 01101181 and 01101182 A comparative analysis of mainstream economic principles and the concept of human behavior in Buddhism: production and consumption. An application of Buddhist economics to development economics, human resource economics, natural and environmental economics, and other branches of economics. Sufficient economy. Green economy. Alternatives in solving economic problems and crises from Buddhist economic perspectives.	3

### **9. Research methods, selected topics, seminar, and special problems courses**

01101491	Research Methods in Economics Pre : 01101281 , 01101282 and 01101371 Principle and procedure of economic research. Research methodology, problem identification, hypothesis testing, data collecting, data processing, data analyzing, and research conclusion. Computer usage in economic research.	3
01101496	Selected Topics in Economics Selected topics in economics at the bachelor's degree level. Topics are subject to change each semester.	3
01101497	Seminar Presentation and discussion on interesting topics in economics at the bachelor's degree level.	1
01101498	Special Problems Study and research in economics at the bachelor's degree level and compile into a written report.	3