

## COURSE DETAILS

### 10103 Life Skills

(6 credits)

#### *Course Learning Outcomes*

1. To gain skills in communication, acquiring common knowledge, and using technology in everyday life.
2. To gain skills in thinking, analyzing and problem-solving in various situations.
3. To develop oneself in the areas of morality, ethics and human relations.

#### *Course Description*

To gain necessary life skills in society such as a hunger for knowledge, how to gain knowledge and continuously seek further self-development; be able to use technology efficiently; apply reasoning, analytical thinking, problem-solving, and negotiation skills; learn the principles of self-management, emotional control, and stress management; to develop oneself to have morality, ethics, proper human relationships, manners and etiquette.

### 10111 English for Communication

(6 credits)

#### *Course Learning Outcomes*

1. To be able to use English as a means for communication.
2. To study structures, vocabulary and important English idioms.
3. To equip students with skills in listening, speaking, reading and writing in English for accuracy and appropriateness in various situations

#### *Course Description*

Structure, vocabulary and English idioms used in listening, speaking, reading and writing English for communication.

### 10121 Human Civilization

(6 credits)

#### *Course Learning Outcomes*

1. To have knowledge on Eastern and Western civilization in terms of politics, economy, and society.
2. To understand human civilization in the past which is fundamental of the current civilization.
3. To realize and appreciate the values of human civilization.

#### *Course Description*

Knowledge on Eastern and Western civilization human has created in terms of politics, economy, society, wisdom, arts, as well as science and technology.

### 10131 Human Society

(6 credits)

#### *Course Learning Outcomes*

1. To understand the existence of human community and society.
2. To understand the political, legal, economic and social mechanisms affecting an organization of human society.
3. To promote the responsibility to the society and nation.

**Course Description**

Basic characteristics of being human; cohesion into communities and societies; human distribution and settlements; the components of society; human behavior in society; political, legal, economic and social mechanisms affecting the organization of human society; social problems and methods to solve them; promotion of a good society.

**10141 Science, Technology and Environment for Life****(6 credits)****Course Learning Outcomes**

1. To gain knowledge about the concepts, rules and development of science and technology, and how they influence of thought and human livelihood.
2. To gain knowledge about the evolution of living things and human beings.
3. To understand the relationship between humans, the environment, and the effects of science and technology on the environment.
4. To gain knowledge of the applications of science, technology, and mathematics in daily life.
5. To enhance scientific thinking and awareness of the need for environmental preservation.

**Course Description**

Concepts, theories, critical thinking, rules and development of science and technology; natural history concerning human beings; the parts of the human body; humans and the environment; hygiene and nutrition; the application of science, technology, and mathematics in everyday life.

**10151 Thai Studies****(6 credits)****Course Learning Outcomes**

1. To learn about Thailand's history, society, language and culture.
2. To be able to apply the course knowledge to daily life.
3. To understand and take pride in what it means to be Thai.

**Course Description**

Knowledge about Thai in terms of history, settlement, politics, economy, culture, religion and ritual, language and literature, arts and culture.

**10152 Thailand and the World Community****(6 credits)****Course Learning Outcomes**

1. To be able to gain knowledge on situations, trends and characteristics of economic, social and political relations and changes in the world community which affect Thailand.
2. To gain knowledge on the status of Thailand in the world community.
3. To be able to analyze the problem as a result of globalization in various aspects including political, economical, social and culture and impact on moral and ethic.

**Course Description**

Status of Thailand in social world; dynamic of social changes which affecting Thailand; problems and causes of problems arising as a result of globalization which cause the awareness, knowledge and understanding of the situation; be able to analyze the cause of problem and the impact of Thai society in various aspect including political, economic, social, moral and ethical.

**10161 Thai for Communication****(6 credits)*****Course Learning Outcomes***

1. To be able to use Thai language as a tool for communication.
2. To improve language skill for communicate effectively and creatively.
3. To be able to use language in daily life and to pursuit of knowledge.

***Course Description***

Significance of language, idea and communication; the art of using word, sentence, idiom, phrase; development of listening, speaking, reading and writing skills to communicate effectively and creatively; using Thai language in daily life to pursuit of knowledge and transfer knowledge.

**10162 Chinese for Communication****(6 credits)*****Course Learning Outcomes***

1. To gain knowledge about Standard Chinese phonology, Mandarin phonetic alphabet (Hanyu Pinyin), and be able to write and pronounce the alphabet correctly.
2. To gain knowledge about Chinese characters--as basic words or assembled ones--and sentence structure and grammar for general communication, including practice with writing Chinese characters.
3. To be able to use Chinese in everyday life.

***Course Description***

Standard Chinese phonology, Hanyu Pinyin transcription, basic words, and dialogues for everyday use, structural grammar, and learn and practice writing of 550 Chinese characters.

**10163 Khmer for Communication****(6 credits)*****Course Learning Outcomes***

1. To possess knowledge on the phonology, letters, grammatical structure and basis sentence structure of Khmer.
2. To be able to use basic Khmer for communication in daily life.
3. To possess knowledge on Khmer words used in the Thai language.

***Course Description***

Khmer phonology; the practice of writing the Khmer alphabet; Crieng and Mul alphabets, basic Khmer words used in daily life; grammatical structure and basic sentence structure; listening, speaking, reading and writing skills for communication at the basic level; and Khmer words used in Thai language.

**10164 Social and Culture in the ASEAN Community****(6 credits)*****Course Learning Outcomes***

1. To be able to understand ASEAN background and history.
2. To be able to understand the purpose of the integration of ASEAN member states.
3. To be able to understand social and cultural condition of ASEAN member states.
4. To be able to understand the role and relationship of ASEAN and other nations.

***Course Description***

ASEAN background and history; the integration of ASEAN member states; social and cultural condition of ASEAN member states; the role and relationship of ASEAN and other nations.

**54127 Fundamental of Occupational Health and Environmental Health****(6 credits)*****Course Learning Outcomes***

1. To elucidate principles and basic concepts of occupational health and environmental health works.
2. To acquire basic knowledge and understanding of work safety in industrial hygiene, toxicology, ergonomics, and occupational diseases.
3. To elucidate principles and concepts on management of occupational health and safety.
4. To acquire basic knowledge and understanding of clean water provision, pollution control of water, air, noise, vibration, and ray as well as solid wastes and sewages.
5. To elucidate principles and concepts on food and residential sanitation, management of nuisance and business that might be harmful to health; and environmental health management.

***Course Description***

Concepts of occupational health and environmental health; basic knowledge on work safety; industrial hygiene, toxicology, ergonomics, and occupational diseases; management of occupational health and safety; basic knowledge of clean water provision; pollution control of water, air, noise, vibration, and ray as well as solid wastes and sewages; food and residential sanitation; management of nuisance and business that might be harmful to health; and environmental health management works.

**60370 Agricultural, Natural Resources and Environmental Economics****(6 credits)*****Course Learning Outcomes***

1. To gain knowledge in principle of agricultural economics.
2. To be able to apply the theory of agricultural economics farm management and administration of cooperatives.
3. To be able to explain concepts, theories and economic tools used in natural resources and environmental management.
4. To be able to explain policy issues as well as government measures in natural resources and environmental management.
5. To be able to apply economic theory in natural resource and environmental management.

***Course Description***

Market structure; demand and supply of agricultural products; agricultural business pricing; agricultural loans; agricultural technology changes; agribusiness; agricultural policy; farm Management; government cooperative promotion policy; problems and obstacles of Thai cooperatives.

Introduction to natural resources; economic concepts in natural resource management; optimal use of resources; tax and government tools for resource allocation; project and program analysis; natural resource conservation; interrelationships between natural resources and the environment; problems of Thai resource management; government policy and measures; application of economic theory, natural resource management; basic concepts of environmental economics; the value of the environment; government policies and measures for managing environmental problems.

**90201 Farm Management****(6 credits)*****Course Learning Outcomes***

1. Have basic knowledge about of farm management.
2. Analyze factors related to farm management.
3. Apply knowledge real farm management.

***Course Description***

Management principles and economic principles applied to farm management; factors determined types of farm; management of farm production factors; principles and practices in good farming; starting up a farm business; planning and budgeting a farm; management of farm credits; farm activities record; farm performances analysis; farm product market management; application of knowledge in farm management to agricultural extension and development.

**90204 Fundamental of Agriculture, Natural Resources and Environment****(6 credits)*****Course Learning Outcomes***

1. To provide knowledge of agriculture, natural resources, and the environment.
2. To promote understanding of the relationship among natural resources, the environment and agriculture.
3. To provide technological knowledge related to agriculture, natural resources, and the environment.

***Course Description***

The course outline will cover: Fundamentals of agriculture, natural resources, and environment. Relation of natural resources, environment, and agriculture. Technologies associated with agriculture, natural resources, and the environment.

**90305 Animal Production****(6 credits)*****Course Learning Outcomes***

1. To provide general knowledge of animal production.
2. To provide knowledge about the principles of animal production.
3. To provide knowledge about related factors in animal production.
4. To provide knowledge about the development of livestock production.

***Course Description***

This course will provide general knowledge of animal production that is important to the economy in terms of conditions, potentials, and production systems. The course also will teach about the principles of animal production by discussing about related factors in animal production. These factors include animal breeds and breeding, animal feeds and feeding, animal hygiene and diseases, related technology, processing, marketing, as well as guidelines in developing animal production in Thailand.

**90307 Crop Production****(6 credits)*****Course Learning Outcomes***

1. To provide basic knowledge of entire system of crop production.
2. To provide knowledge of crop production management process.
3. To provide knowledge of adding value, distribution and trading of crop products.

***Course Description***

Basic knowledge of crop production, principles of crop production management, cropping system, concepts of crop production decision, crop production planning and farm layout, inputs management, plant propagation and sapling preparation, soil preparation and crop planting, cultural practice, harvest and post-harvest managements, value adding, distribution and trading of crop products.

**90406 Soil, Water, and Fertilizer Management****(6 credits)*****Course Learning Outcomes***

1. To enable students to explicate knowledge of soil, water, and fertilizer which is related to agriculture.
2. To enable students to explicate soil and water conservations.
3. To provide knowledge about information relating to soil, water, and fertilization for agricultural production and for production problem solving.
4. To enable students to apply information relating to soil, water, and fertilization for agricultural production and problem solving.
5. To enable students to explicate and apply innovation and technology relating to soil, water, and fertilizer to increase efficiency of agricultural production.

***Course Description***

Soil genesis; soil classification and soil survey; importance of soil in crop cultivated and animal feeding; water and water utilization in crop production; fertilizer and fertilizer utilization; problems of soil, water, and fertilizer with agriculture and problem solving; soil and water conservations; information relating to soil, water, and fertilizer and application for agriculture.

**91109 Fundamentals of Agricultural Extension and Development****(6 credits)*****Course Learning Outcomes***

1. To have knowledge and understanding about basic problems, agricultural society conditions, trends and general policies in agriculture.
2. To have knowledge and understanding about concepts, theories, and principles about agricultural extension and development.
3. To have knowledge and understanding about development, extension officers, organizations, agricultural extension and development, and target groups in various areas.

***Course Description***

Farmer society conditions; changes in Thai farmer society and agricultural policies; concepts, philosophies, objectives, theories, and principles of agricultural extension and development; sustainable agricultural development; roles, duties, and human resource development; agricultural extension agencies; farmers, groups, organizations, networks, target institutions, volunteers development in agricultural extension and development; models, channels, communication technology, and agricultural extension and development methods; orientation, follow-up, and evaluation; management and agricultural development projects in urban area, suburban area, and rural area.

**91202 Forest Ecosystem and Management****(6 credits)*****Course Learning Outcomes***

1. To obtain knowledge and comprehension of appropriate composition of natural resource systems and ecological values.
2. To be able to apply ecological principles and practices to the management of natural resources and the environment.
3. To analyze issues of natural resources and ecological values.
4. To obtain diverse types of natural resource management guidelines.



***Course Description***

The course outline will cover: Fundamentals of ecology and natural resources. Composition of forest ecosystems and other natural resources. Ecological value. Ecosystem management concept. Application of ecological principles to different types of management. Forest resource assessment.

**91307 Agricultural Community Development****(6 credits)*****Course Learning Outcomes***

1. To have knowledge and understanding about concepts, philosophy, principles and processes in agricultural community development.
2. To have knowledge and understanding and to analyze community development policies.
3. To have knowledge and understanding about groups and target departments related to agricultural community development.
4. To have knowledge and understanding about models, methods, follow-up and evaluation in agricultural community development.
5. To have knowledge about problems and trends in agricultural community development.

***Course Description***

Concepts and theories about human and community; agricultural community dynamic; concepts, philosophy, principles, and processes of agricultural community development; study and analysis about agricultural community; policies related to community development; groups and target departments related to agricultural community development; models, method, follow-up and evaluation of agricultural community development; changes in agricultural community; problems and solutions in agricultural community development; strategic direction of Thai agricultural community development in the future.

**91324 Fundamentals of Forestry Extension for Environment****(6 credits)*****Course Learning Outcomes***

1. To obtain knowledge and comprehension of forestry extension principles for the environment.
2. To obtain knowledge and comprehension of forestry extension processes, techniques, and methods for the environment.
3. To obtain knowledge and comprehension about different approaches of forestry extension development for the environment.
4. To obtain knowledge and comprehension about forestry extension policy and administration for the environment.

***Course Description***

The course outline will cover: Philosophy, objectives, principles, and methods of the extension. The social condition and behavior of the target person, the role and personality of the officer. Tools and technologies for forestry extension. Relevant public and private organizations. Issues, and trends in forestry extension for the environment.

**91326 Agroforestry****(6 credits)*****Course Learning Outcomes***

1. To gain knowledge and comprehension about land use principles, for crop production and animal production in the agroforestry system.
2. To acquire knowledge and comprehension about the consideration and selection of trees and crops and/or livestock adapted to the agroforestry system.
3. To describe the relationship among Agroforestry system components.
4. To describe the ecological balance and plant physiology.
5. To be able to apply knowledge in the planning and design of agroforestry farm based on local conditions.

***Course Description***

The course outline will cover: Principal of agroforestry. Composition and classification. Ecological perspectives of Agroforestry systems. The ecological and physiological relationship among trees and crops and/or livestock in the Agroforestry systems. The environmental impact of the Agroforestry. Agroforestry management. The Agroforestry planning and design. Production management in Agroforestry systems.

**91353 Agricultural Extension and Development for Sustainable Development****(6 credits)*****Course Learning Outcomes***

1. To have knowledge and understanding about the development of sustainable agricultural systems.
2. To have knowledge and ability to manage sustainable agricultural resources.
3. To have knowledge and ability in integrating agricultural systems for sustainability.
4. To have knowledge and ability in agricultural extension on the management of integrated aspects of agricultural systems.

***Course Description***

Sustainable development concepts for soil, water, and forests; Protection and adaptation for natural changes; principles of agricultural system management; crop production; animal production; integrated marine animal breeding; models for new era of agricultural works; agroforestry system management; agricultural logistics; exquisite agriculture; contract farming; agricultural mechanization in agricultural extension and development; impact assessment from farming for sustainable development.

**91357 Fundamentals of Environment****(6 credits)*****Course Learning Outcomes***

1. To obtain knowledge and comprehension about the fundamentals and different aspects of environment.
2. To obtain knowledge and comprehension of the environmental dynamic process and sustainability.
3. To obtain knowledge and comprehension about the theory of integration and cohabitation of the environment.
4. To obtain knowledge and comprehension of the interactions between the environment and society.

***Course Description***

The course outline will cover: Fundamentals of environment. Role and function of environment affecting the ecological and social systems The dynamic and process of environment that influences environmental sustainability. Environmental conservation. Environmental management tools.



**91363 Forest Resource Management****(6 credits)*****Course Learning Outcomes***

1. To obtain knowledge and comprehension of forest resource management concepts.
2. To obtain knowledge and comprehension of forest resource management in the environmental aspects.
3. To obtain knowledge and comprehension of forest resource management in the social aspects.
4. To obtain knowledge and comprehension of forest resource management in the economic aspects.
5. To be able to apply knowledge for sustainable forest management.

***Course Description***

The course outline will cover: Introduction to forestry, and conservation of forest resources and environment Concepts of forest resource management in environmental, social, and economic aspects. Fundamental of forest resource management, to be applied in sustainable forest management.

**91364 Watershed Management****(6 credits)*****Course Learning Outcomes***

1. To obtain knowledge and comprehension of watershed ecosystems.
2. To describe the relationship between diverse environmental factors within watershed ecosystems.
3. To be able to apply knowledge for sustainable watershed management.

***Course Description***

The course outline will cover: Watershed ecosystems. Watershed analysis. Watershed assessments. The influence of forests on watershed resources, and meteorological-hydrological characteristics. The impact of climate change on watershed resources. Principles of Land use. Watershed management technologies and tools. Watershed management principles and practices. Conservation of watershed resources. Integrated watershed management.

**91365 Environmental Management****(6 credits)*****Course Learning Outcomes***

1. To obtain knowledge and comprehension of participatory forest management for the environment at different levels.
2. To obtain knowledge and comprehension of integrated management of forest and environment.
3. To obtain knowledge and comprehension of forest management in relation to society and economy.
4. To be able to apply knowledge in integrated forest environmental management.

***Course Description***

The course outline will cover: Introduction to forest environment. The relationship of forests and the environment. Principles of forest environmental management. Aspect of the forest environment and management. Environmental pollution and management. Forest environment survey and assessment. Forest environment ass. Appropriate and sustainable integrated forest environmental management at different levels. Participatory forest environmental management.

**91366 Forest Resources Management for Economic****(6 credits)*****Course Learning Outcomes***

1. To obtain knowledge and comprehension of principles of forest investment and analysis, and forest evaluation.
2. To be able to apply knowledge for commercial forest plantations management.

3. To obtain knowledge and comprehension about ecotourism and recreation in forest land and natural attractions.
4. To be able to apply knowledge to sustainable management of ecotourism and recreation in forest land and natural attractions.

***Course Description***

The course outline will cover: Forest Investment and Marketing. Investment analysis and forest evaluation. Fundamentals of forest plantation. Silvicultural practices. Forest plantation management planning. Forest plantation management tools and technologies. Sustainable forest management standards. Concepts and principles of ecotourism and recreation in forest land and natural attractions. Ecotourism and recreation management. Sustainable ecotourism and recreation development.

**91427 Community Forestry**

**(6 credits)**

***Course Learning Outcomes***

1. To obtain knowledge and comprehension of the background, concepts, principles, and the importance of community forestry.
2. To obtain knowledge and comprehension of community forestry approaches.
3. To be able to apply appropriate knowledge and technology for successfully community forestry operation.

***Course Description***

The course outline will cover: Principles and concepts of community forestry. Community organizations and stakeholders. Community study and analysis. Development of community forestry organizations and networks. Participatory forest resource management planning. Techniques and tools for community forestry. Community forests and management.

**91428 Laws Pertaining to Forest Resources and Environment**

**(6 credits)**

***Course Learning Outcomes***

1. To obtain basic knowledge and comprehension of the laws and the legal process.
2. To obtain knowledge and comprehension of forest resource and environmental laws.
3. To obtain knowledge and comprehension of the use of laws in forest resources and environmental development practices.

***Course Description***

The course outline will cover: Introduction to law and legal process. The relation between the law and the management of forest resources and the environment. Principles and concepts of forest and environmental resource management as reflected in Thailand's legal system. Laws in relation to forest resources and environmental management, and international laws.

**91463 Information Systems and Research for Forest Resources and Environment Management**

**(6 credits)**

***Course Learning Outcomes***

1. To obtain basic knowledge and comprehension about information systems of forest resources and environmental management.
2. To be able to apply knowledge of information systems, and develop the data collection to manage forest resources and the environment.

3. To acquire basic knowledge and comprehension of the research foundations, to interpret research results for forestry resources and environmental management.

***Course Description***

The course outline will cover: Fundamentals of forest and environmental resource information systems, role and importance. Application of information systems in forest and environmental resources management. Research principles. Statistics for research. Research on forest and environmental resources management.

**91465 Agro-Tourism Management**

**(6 credits)**

***Course Learning Outcomes***

1. Have general knowledge of agro-tourism management.
2. Have knowledge of factors relating to feasibility analysis, planning, and evaluation of agro-tourism management.
3. Have knowledge of various organizations relating to agro-tourism management.
4. Have ability in the way of agro-tourism management and promotion at community and national levels.

***Course Description***

Meaning and importance of agro-tourism; evolution, concepts, theories, and principles relating to agro-tourism management; models and characteristics of agro-tourism management; factors relating to agro-tourism; feasibility analysis, planning, and evaluation of agro-tourism management; organizations relating to agro-tourism management; a case study of organizations relating to agro-tourism management; the way of agro-tourism management and promotion at community, regional and national levels.

**91467 Professional Experience in Forest Resources and Environment Management**

**(6 credits)**

***Course Learning Outcomes***

1. To be able to apply forestry and environmental knowledge for efficient forest resources and environmental management.
2. To strengthen administration and planning capacity for forest resource and environmental management.
3. To be able to apply legislation and regulations knowledge for forest resource and environmental management.
4. To inculcate morals and ethics, professional ethics in forest resources and the environmental management.

***Course Description***

The course outline will cover: Applying forestry and environmental knowledge into practice with an emphasis on administration and planning for the efficient of forest resources and environmental development, in accordance with relevant laws and regulations. Preliminary research study. Applying case studies and model scenarios to address forest resources and environmental management issues. Professional ethics related to forest resource and environmental management, and group activities for morals and ethical development.

**92116 Fundamentals of Co-operatives**

**(6 credits)**

***Course Learning Outcomes***

1. To give knowledge about the meaning, ideology, principles and co-operatives practice.
2. To give knowledge about the history of co-operatives.
3. To give knowledge about the operational structure, administration of each type of co-operative and professional ethics of co-operatives.

4. To give knowledge of economic, social and cultural factors related to co-operative development and co-operative movement.

***Course Description***

General economic and social conditions; formation of co-operatives; meaning, general principles, structures, objectives, functions, establishment, and management of co-operatives; government and co-operatives; co-operatives laws; the national economic and social development plan with respect to co-operatives; finance and financial problems; general policies in developing co-operatives; factors affecting co-operatives; problems in the operation of co-operatives and their solutions.

**92117 Co-operatives for Social and Economic Development**

**(6 credits)**

***Course Learning Outcomes***

1. To give knowledge concepts and philosophy of principles of urban and rural society development as well as policy, direction and strategy of economic and social development.
2. To give knowledge and understanding factors involved the development, the potency of co-operative development and urban and rural development.
3. To give knowledge and understanding the strategy of co-operative development as a part of national economic and social development.

***Course Description***

Concepts, philosophy, and principles of social, urban, and rural development as well as direction and strategies of development, the environment of society, factors involved the development, the direction and potency of social, urban, and rural development as well as the strategy of co-operatives for social and economic development.

**92311 Strategic for Co-operatives Management**

**(6 credits)**

***Course Learning Outcomes***

1. To give knowledge understanding of co-operative management concepts.
2. To give knowledge understanding of concepts about co-operative management strategic.
3. To be able to apply strategic management concepts for cooperative management based on ideology, principles, methods, co-operatives and morality, ethics.

***Course Description***

Concepts of co-operative management strategic co-operative management, concept strategic analysis strategic planning, practice, control and strategic evaluation based on ideology, principles, co-operative methods ethics and the application of strategic co-operative management at various levels.

**92320 Co-operatives Operational and Management**

**(6 credits)**

***Course Learning Outcomes***

1. To give students knowledge and understanding the definition and importance of business administration as well as Ideology principle and co-operative practices.
2. To give students the knowledge and understanding principles and co-operatives organization and management.
3. Able to apply the knowledge for co-operatives organization and management.

**Course Description**

The Principle of co-operatives management; management process; managerial responsibilities in organizing, implementing, planning, co-ordinating, controlling, marketing management production and operation financial management and accounting and human resource management in co-operative promoting inspection monitoring development of co-operative and co-operative management.

**93337 Crop Improvement and Plant Propagation****(6 credits)****Course Learning Outcomes**

1. To give students knowledge and understanding of the principles and methods of crop breeding and propagation.
2. To enable students to choose the best varieties of crops to match their locality and market demand, and to conserve good varieties.
3. To enable students to apply their knowledge for business.

**Course Description**

Importance and types of crop varieties; characteristics of good varieties; crop breeding methods; selection of appropriate varieties; maintenance of good lines; crop propagation methods; seed technology, tissue culture and biotechnology; commercial application of crop improvement and plant propagation knowledge.

**93354 Feeds and Feeding****(6 credits)****Course Learning Outcomes**

1. To provide knowledge about feeds and its nutrients.
2. To provide knowledge about the nutrient requirements of domestic animals.
3. To select and use suitable feedstuffs for domestic animals.
4. To provide knowledge about feed production processes.
5. To provide knowledge about animal feeding.

**Course Description**

This course will teach about feeds and its nutrients, nutrient requirements of domestic animals, feedstuffs, feed production processes, and animal feeding.

**93461 Animal Products and Marketing Management****(6 credits)****Course Learning Outcomes**

1. To provide knowledge about the management of animal products and the processing that add values to livestock products.
2. To provide knowledge about the markets of animal products and its marketing management.

**Course Description**

This course will teach about the management of important animal products and by-products, the processing that add value to the products from livestock, its markets and marketing management as well as trade regulations and conditions.

**93462 Swine and Poultry Production Management****(6 credits)****Course Learning Outcomes**

1. To provide knowledge about the swine production management.
2. To provide knowledge about the poultry production management.
3. To apply the obtained knowledge in swine production.

4. To apply the obtained knowledge in poultry production.

#### ***Course Description***

This course will cover the lessons about the production systems, planning procedures, and management in swine production, starting from the management of production factors to the launching of products to the markets.

The course will also cover the lessons about the production systems, planning procedures, and management in poultry production, starting from the management of production factors to the launching of products to the markets.

### **93463 Ruminant Production Management**

**(6 credits)**

#### ***Course Learning Outcomes***

1. To provide knowledge about the ruminant production management.
2. To apply the obtained knowledge in ruminant production management.

#### ***Course Description***

The course will cover the lessons about the production systems, planning procedures, and management in ruminant production, starting from the management of production factors to the launching of products to the markets.

### **93467 Fruit Production Management**

**(6 credits)**

#### ***Course Learning Outcomes***

1. To provide knowledge and understanding of fruit production management.
2. To provide knowledge and ability in fruit produce decision according to potential and business environment.
3. To provide knowledge and ability in using technology for fruit production suitable to environment and conservation.

#### ***Course Description***

This course will provide knowledge of fruit, Types of fruit tree, production management concepts, marketing, production factors, production process management, production techniques and postharvest practices. Decision and using technology for economic importance fruit trees production in Thailand to suit the production environment and environmental conservation are according to potential of business.

### **93471 Sustainable Agriculture**

**(6 credits)**

#### ***Course Learning Outcomes***

1. To provide students with basic knowledge about sustainable agriculture.
2. To provide knowledge in term of forms, principles, and elements of various sustainable agriculture systems.
3. To provide knowledge in all part of the management of various sustainable agriculture systems and understand in case study.

#### ***Course Description***

The origin and development of Sustainable Agriculture meaning and Importance, Conceptual framework, Basic principles general principles Approach to components of the feasibility of sustainable agricultural conditions. Forms, principles, and components of various sustainable agriculture systems Sustainable agriculture management and case studies such as shifting cultivation system management and case studies.



Integrated Agricultural System Management and case example Agroforestry system management and case studies Management of natural agriculture and case studies Agricultural Management, New Theory, and Case Examples Sophisticated agriculture management and case studies Organic farming management and case studies and the management of agriculture that is more than organic agriculture and example cases, etc.

#### **94329 Fundamentals of Agribusiness and Entrepreneurship**

**(6 credits)**

##### ***Course Learning Outcomes***

1. In order to have knowledge and understanding of agribusiness and agribusiness management.
2. In order to have knowledge and understanding about agribusiness entrepreneurship.
3. In order to be able to apply knowledge to agribusiness and entrepreneurship.

##### ***Course Description***

The concept and importance of agribusiness; agribusiness system from the production factor business, agricultural production business, agricultural processing business and agricultural products distribution business; including support in the operation of agricultural business; concept of agribusiness management; organization and organizational behavior in agribusiness; Human Resource Management in agribusiness.

The concept and importance of entrepreneurship; types of entrepreneurs in agribusiness; entrepreneurship strategy creativity and the adaptation of agribusiness to change; modern business; characteristics of agribusiness operations in Thailand and abroad and having good governance and ethics in agribusiness operations.

#### **94431 Agricultural Marketing Management**

**(6 credits)**

##### ***Course Learning Outcomes***

1. To give students knowledge and understanding of marketing principles and agricultural marketing management.
2. To give students knowledge and understanding of marketing planning and determining agricultural marketing strategies.
3. To enable students to apply their knowledge to agricultural marketing management.

##### ***Course Description***

Principles of agricultural marketing; the marketing system; agricultural marketing policies and measures; roles and functions of marketing; the marketing process including marketing analysis, planning, market segmentation, targeting and positioning; marketing mix strategies; marketing implementation and controls; and guidelines to develop agricultural marketing management.

#### **94463 Accounting and Finance in Agribusiness**

**(6 credits)**

##### ***Course Learning Outcomes***

1. To gain knowledge of business accounting.
2. To gain knowledge of financial management.
3. To enable to apply knowledge gained to operations in agribusiness.

##### ***Course Description***

Concepts of accounting; accounting records; financial reports; financial statement analysis and tax accounting for agribusiness.

Concepts of financial management; financial markets and institutions; financial plan; current assets and non-current assets management; capital acquisition; financial structures and cost of capital; financial control; credit management in agribusiness.

**94464 Management of Logistics and Supply Chains in Agribusiness****(6 credits)*****Course Learning Outcomes***

1. To give students knowledge and understanding of logistics management.
2. To give students knowledge and understanding of supply chain management.
3. To enable students to apply knowledge gained to agribusiness operation.

***Course Description***

Concepts of basic constructs being management factors supporting logistics and supply chain activities and operations; customer requirements and services, procurement and delivery, inventory management, warehousing, multimodal transportation, supplier and customer relationships, network design, performance measurements, related information systems, competitive status and potential evaluation for business capacity building in response to customer requirements, increasing safety and confidence, and resulting in cost reduction depending on logistics activities.

**94465 Agribusiness and Entrepreneurial Development****(6 credits)*****Course Learning Outcomes***

1. To give students knowledge of agribusiness development and entrepreneurial management.
2. To enable students to determine appropriate strategies and methods for agribusiness development and entrepreneurial management.
3. To enable students to apply the knowledge to develop business models and agribusiness development plan.

***Course Description***

Concepts of agribusiness development and entrepreneurial management leading to competitive advantage; development of business models for agricultural goods and services; agribusiness development strategies; research and development; utilizations of innovations in agribusiness; knowledge management; entrepreneurship development including entrepreneurial orientation and competence; development of organizational culture and leadership to bring agribusiness to sustainable growth.

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