






## รายวิชาเฉพาะที่เกี่ยวข้องกับเป้าหมายการพัฒนาที่ยั่งยืน




















### Specialized Courses Related to the Sustainable Development Goals (SDGs)




Course ID	Course	Course Description	SDGs
SU140	<b>RENEWABLE ENERGY TECHNOLOGY</b> เทคโนโลยีพลังงานทดแทน	Meaning of Renewable Energy, Conversion of Renewable Energy into Thermal and Electrical Energy, Solar Energy, Wind Energy, Hydropower, and Biomass Energy; Case Studies of Renewable Energy Sources; Selection and Management of Renewable Energy.	
SU165	<b>EDUCATIONAL MANAGEMENT FOR SUSTAINABLE DEVELOPMENT</b> การจัดการศึกษาเพื่อการพัฒนาที่ยั่งยืน	Concepts, Policies, and Case Studies on Sustainable Development; the Role of Education in Economic Development, Social Development, Environmental and Community Development.	
SU193	<b>RESILIENT LIVING IN GLOBAL WARMING</b> ตั้งโลกร้อนที่รักษ์	Basic knowledge about greenhouse gas, sources of greenhouse gas emissions, and greenhouse gas estimation. Impacts of greenhouse gas on global warming and climate change. Greenhouse gas reduction and capture. Climate change impact mitigation and adaptation. Applying acquired knowledge to daily life.	




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SU318	<b>ENVIRONMENT, POLLUTION AND ENERGY</b> สิ่งแวดล้อม มลพิษ และพลังงาน	Ecosystems, Water Pollution, Air Pollution, Soil Pollution, Solid Waste, Energy, and Impacts on Global Climate Change.	          
SU319	<b>SCIENCE AND TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT</b> วิทยาศาสตร์และเทคโนโลยีเพื่อการพัฒนาอย่างยั่งยืน	Science and Technology for Creative and Sustainable National Development in Social, Economic, Educational, Public Health, and Environmental Aspects; Learning Science and Technology from Community-Based Resources; Public Communication and Media Production to Demonstrate the Impacts of Science and Technology on Communities.	          
SU321	<b>MATERIALS AND ENVIRONMENTAL IMPACT</b> วัสดุและผลกระทบต่อสิ่งแวดล้อม	Classification of General Materials, Fundamental Properties of Materials, Materials Used in Everyday Products, Waste Management of Materials, and Various Methods of Material Reuse.	    
SU326	<b>MARITIME ZONES AND MARINE AND COASTAL RESOURCES MANAGEMENT</b> เขตทางทะเลและการจัดการทรัพยากรทางทะเลและชายฝั่ง	Marine and Coastal Zones; Geology and Geomorphology of Thai Seas; Sedimentation and Deposition in Marine and Coastal Areas; Coastal Landforms of Thailand; Living and Non-Living Marine and Coastal Resources; Coastal Settlements; Community Public Health Systems in Coastal Areas; Security, Prosperity, Sustainability,	     




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		and Economic Benefits of Thai Seas; and Coastal Zone Management in Thailand.	
SU327	<b>INNOVATION FOR ENERGY AND ENVIRONMENT</b> นวัตกรรมเพื่อพลังงานและสิ่งแวดล้อม	Importance of Energy and Environment; Environmental Impacts of Energy Consumption; Global Warming; Energy Conservation; Examples of Alternative Energy Innovations; and Environmental Quality Standards.	
SU330	<b>AQUATIC RESOURCE CONSERVATION AND MANAGEMENT</b> การอนุรักษ์และการจัดการทรัพยากรน้ำ	Degradation of Water Resources and the Environment; Current Situation of Water Resources; Marine and Coastal Pollution; Endangered Aquatic Species; Conservation and Management of Freshwater and Coastal Resources; Environmental Impact Assessment; Agencies and Organizations for Natural Resource and Environmental Conservation; and Laws and Regulations Related to Water Resource Conservation.	
SU331	<b>FUNDAMENTAL QUATIC ENVIRONMENT MANAGEMENT</b> การจัดการสิ่งแวดล้อมทางน้ำเบื้องต้น	Impacts of Human Activities on Aquatic Animal Populations and the Environment; Water and Sediment Quality Management; Fisheries Resource Management; and Principles of Issue-Based Management.	
SU421	<b>SUSTAINABLE TOURISM INNOVATION</b> นวัตกรรมการท่องเที่ยวอย่างยั่งยืน	Sustainable development goals, tourism for Sustainable development, innovation and sustainability, wellness tourism innovation, local experience tourism innovation, safe and secure	

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		tourism innovation, gastronomic and local ingredients tourism innovation, cultural and entertainment tourism innovation.	
261 413	<b>SUSTAINABLE ARCHITECTURAL DESIGN I</b> การออกแบบสถาปัตยกรรมที่ยั่งยืน 1	Studio work on sustainable architectural design projects to demonstrate an understanding of principles underlying climate-sensitive design, energy-conscious design and environment-friendly design.	
261 414	<b>SUSTAINABLE ARCHITECTURAL DESIGN II</b> การออกแบบสถาปัตยกรรมที่ยั่งยืน 2	Continuation of Sustainable Architectural Design 1 with emphasis on using computer programmes for modeling and analysing environmental influence in the process of building design; computer modeling software for studying heat transfer, air flow, and lighting, as well as simulating energy performance of buildings.	
456 611	<b>PARADIGMS OF DEVELOPMENT EDUCATION FOR SUSTAINABLE DEVELOPMENT</b> กระบวนการพัฒนาศึกษาเพื่อการพัฒนาที่ยั่งยืน	Synthesis of basic knowledge about development studies; discussion of the development education paradigm driven from the science of development to the modernization of mainstream development and to the learning science of development; science of creating new knowledge to develop alternative trends towards sustainable development.	
464 674	<b>RECREATION AND CONSERVATION TOURISM FOR SUSTAINABLE DEVELOPMENT</b>	Concepts and theories of recreation, conservation tourism, and sustainable development; management of infrastructure, energy systems,	

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	นันทนาการกับการท่องเที่ยวเชิงอนุรักษ์ เพื่อการพัฒนาอย่างยั่งยืน	and waste treatment systems at local and regional levels for sustainable development.	
469 102	<b>LIFELONG LEARNING AND SUSTAINABLE DEVELOPMENT</b> การเรียนรู้ตลอดชีวิตกับการพัฒนาที่ยั่งยืน	Development of lifelong learning concepts, nonformal education, continuing education and adult education, concepts, principles and goals of sustainable development, concepts and strategies to promote lifelong learning for sustainable development.	   
714 332	<b>SUSTAINABLE FARM BUSINESS MANAGEMENT</b> การจัดการธุรกิจฟาร์มอย่างยั่งยืน	Concepts of Sustainable Farm Business Management; Application of Economic and Management Principles in Farm Enterprises; Farm Business Analysis and Planning; Measurement of Business Performance; Financial Management in Farm Businesses; Management under Risk and Uncertainty; and Corporate Social and Environmental Responsibility.	    
714 373	<b>SUSTAINABLE MANAGEMENT OF ENERGY CROPS</b> การจัดการพืชพลังงานอย่างยั่งยืน	Types, Cultivation, and Distribution of Energy Crops; Economic Importance of Various Energy Crops; and Utilization of Energy Crops for Business Purposes with Consideration of Energy, Food, and Environmental Security.	   
763 338	<b>SUSTAINABLE CULTURAL TOURISM MANAGEMENT</b> การจัดการการท่องเที่ยวเชิงวัฒนธรรมอย่างยั่งยืน	Meanings, values, and formats of cultural tourism; problems and causes of the cultural tourism management in the past; laws and organizations related to the cultural conservation; goals of cultural resource management, operating	    

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		procedures and evaluation of management results, and cultural resource development under the sustainable development approach.	
763 474	<b>ENERGY, ENVIRONMENTAL AND CLIMATE CHANGE</b> พลังงาน สิ่งแวดล้อม และการเปลี่ยนแปลงสภาพภูมิอากาศ	Association between energy, environment, and climate change; zero waste concepts and philosophy for sustainable development; recycling; value management and sustainable consumption; global warming, and international cooperation.	
763 485	<b>INNOVATION FOR SUSTAINABLE COMMUNITY MANAGEMENT</b> นวัตกรรมเพื่อการจัดการชุมชนอย่างยั่งยืน	Meanings and significance of community innovation; adjustment of local wisdom, resources, and technology to be benefit sustainable community management with the linkage to successful national development strategies; transfer of development knowledge and experiences to other communities for further learning and expansion.	
763 487	<b>SUSTAINABLE DEVELOPMENT</b> การพัฒนาอย่างยั่งยืน	Concepts and methods of sustainable development; transparent developmental forms of politics, economy, society, and environment, and appropriate methods used to cope with different levels of the future changes including the globalization affecting development effort.	

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767 474	<b>KNOWLEDGE MANAGEMENT FOR SUSTAINABLE DEVELOPMENT</b> การจัดการความรู้เพื่อการพัฒนาที่ยั่งยืน	Concepts and theories of knowledge management, process of community development as society of learning, knowledge-based creation by integrating of social capital, local wisdom and international wisdom, for sustainable development of local community.	
784 523	<b>PLANING FOR SUSTAINABLE TOURISM DEVELOPMENT</b> การวางแผนพัฒนาการท่องเที่ยวอย่างยั่งยืน	Study of theories, principles, and processes of tourism planning and development; management of tourist attractions and tourism resources; development of infrastructure and public utilities for tourism; types and facilities for tourism at community and regional levels; development of natural and man-made tourist attractions; tourism resource planning, surveying, development, and assessment from various perspectives; approaches for conservation and protection of tourism resources from degradation; sustainable tourism practices in tourism and related businesses; and the roles of government and private sectors in promoting sustainable tourism development.	
512 476	<b>CLIMATE CHANGE AND VEGETATION</b> การเปลี่ยนแปลงสภาพภูมิอากาศและพืชพรรณ	Climate and climate change. Vegetation types and distribution. Effects of climate change on forest growth and productivity. Changes in phenology and composition of plant communities.	

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		Forest carbon sequestration and emission under climate change.	
516 201	<b>CLIMATE CHANGE AND MITIGATION STRATEGIES</b> การเปลี่ยนแปลงสภาพภูมิอากาศและกลยุทธ์การบรรเทาผลกระทบ	Basic knowledge about climate change science. Natural and anthropogenic causes of climate change. Exchanges, sources and sinks of greenhouse gases. Assessment of greenhouse gas emissions from human activities. Impact of climate change on ecosystem and human health. Climate change adaptation and mitigation. International legal and policy framework for climate change.	
516 270	<b>ENVIRONMENTAL ECOLOGY</b> นิเวศวิทยาสิ่งแวดล้อม	Nature and scope of ecology. Physical environment. Ecology of individuals. Population ecology. Ecological interactions. Communities and major ecosystems. Regional ecology and biomes. Current ecological issues. Global Climate Change. Applications of ecology to environmental problems and development projects.	
516 271	<b>ENVIRONMENTAL ECOLOGY LABORATORY</b> ปฏิบัติการนิเวศวิทยาสิ่งแวดล้อม	Experiments related to the contents in 516 270 Environmental Ecology. Field trips required.	
516 496	<b>SUSTAINABLE ENVIRONMENTAL REMEDIATION</b> การฟื้นฟูสิ่งแวดล้อมอย่างยั่งยืน	Environmental contamination problems. Treatment technologies. Remediation plans taking into consideration the impacts on the environment, society and circular economy. Case studies.	