



**Course TITLE: Sustainable Utilization and Conservation of Natural Environment
and Resources in Modern World**

Instructor: Phusit Horpet

Title/Position : Lecturer

Institution : Walailak University



Course Overview:

This course is aimed at preparing applied science and technology students (i.e. engineering, architecture) to improve their knowledge and understanding of basic concepts of sustainability, ecology and conservation biology. Practical applications of ecological theories and solving potential environmental problems and conservation issues related to their fields of interests (ie marine debris, water management issues); providing environmental good/best practices from ASEAN, ASIA and around the world.

By the end of the course, students will be able to:

- 1) Understand main concepts of sustainability, ecology and conservation biology
- 2) Understand related concepts, theories, tools, issues and solutions
- 3) Apply knowledge to their field of study effectively

Present selected academic topic verbally.

Session 1	150 minutes	<ol style="list-style-type: none">1. Course Overview2. Man vs Nature3. Natural Environment and Resources
Session 2	150 minutes	<ol style="list-style-type: none">1. Basic concepts of Ecology and Ecosystem2. Biosphere Ecosystems
Session 3	150 minutes	<ol style="list-style-type: none">1. Ecosystem Thinking2. Ecological Engineering<ul style="list-style-type: none">• Design• Monitoring• Construction



Session 4	150 minutes	<ol style="list-style-type: none">1. Biodiversity and its importance<ul style="list-style-type: none">• Biodiversity and Ecosystem Services• Ecosystem Health
Session 5	150 minutes	<ol style="list-style-type: none">1. Biodiversity Crisis2. Rare Species and Extinction3. Report on Progress of Written Assignment
Session 6	150 minutes	<ol style="list-style-type: none">1. Ecosystem Problems and Solution<ul style="list-style-type: none">• Anthropogenic causes<ul style="list-style-type: none">- Marine debris- Other environmental issues• Natural causes
Session 7	150 minutes	<ol style="list-style-type: none">1. TEST 12. Submission on Assignment
Session 8	150 minutes	<ol style="list-style-type: none">1. Sustainable Utilization and Conservation of Natural Resources<ul style="list-style-type: none">• Ecosystem-Based Approach• Precautionary Approach• Community-Based / Local-Participation Approach
Session 9	150 minutes	<ol style="list-style-type: none">1. Policy and Protected Areas2. Good/Best Environmental Practice from ASEAN, ASIA and around the World3. Progress Report on Group Presentation
Session 10	150 minutes	<ol style="list-style-type: none">1. Ecotourism2. Marine Ecotourism
Session 11	150 minutes	<ol style="list-style-type: none">1. Group Presentation2. Wrap up the course
Session 12	150 minutes	<ol style="list-style-type: none">1. Test 2

Grading:

(Attendance 10 %; Classroom Quiz 10 %; Assignments 20 %; Presentation 20 %; Exam 40%)
Lecture, Discussion, Case-study, Tutorial and Presentation