



Degree Level  Bachelor's  Grad.Dip.  Master's  Higher Grad.Dip.  Doctoral  
 TQF2 Bachelor of Science Program in Environmental Science (International Program)

Mahidol University International College  
 Science Division

### MU Degree Profile



<b>Undergraduate Program</b>	
<b>1. Program Title</b>	
(Thai) หลักสูตรวิทยาศาสตรบัณฑิต สาขาวิชาวิทยาศาสตร์สิ่งแวดล้อม (หลักสูตรนานาชาติ)	
(English) Bachelor of Science Program in Environmental Science (International Program)	
<b>2. Degree Title</b>	
(Thai) วิทยาศาสตรบัณฑิต (วิทยาศาสตร์สิ่งแวดล้อม)	
(English) Bachelor of Science (Food Science and Technology)	
<b>Program Overview</b>	
Type of Program	Bachelor's Degree (International Program), Academic Program
Number of Credits	No less than 184 credits
Duration of Program/ Program Cycle	Four-Year Program
Program Status and Schedule of Program Start Dates	Revised Program 2018 Program start: Trimester I, Academic Year 2018
Degree Offered	One degree of one major
Institution Offering Degree (collaboration with other institutions)	Mahidol University
Organization Certifying the Standards of the Program	-
<b>Specific Data of the Program</b>	
Purpose / Goals / Objectives	<b>Goals</b> To produce science graduates who are innovative, ethical and professional.



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	<p><b>Objectives</b> To produce graduates with consultancy, research and service skills adaptable to addressing a variety of environmental issues.</p> <ol style="list-style-type: none"> <li>1) To provide comprehensive knowledge and skills in environmental science by international standards</li> <li>2) To provide a laboratory/field environment and operating tools/software from a wide variety of disciplines</li> <li>3) To provide independent scientific and technical research on environmental issues</li> <li>4) To provide students an opportunity for entrepreneurship or to conduct research independently</li> <li>5) To formulate and implement solutions to problems of sustainable development, through the use of analytical skill and theoretical knowledge</li> <li>6) To adapt to change and being lifelong learning.</li> </ol>
<p>Distinctive Features</p>	<p>The principal aim of environmental graduate level degree program in the discipline of Environmental Science is to train and develop, well equipped and highly skilled man power to tackle the growing environmental and developmental problems and changes arising from the transition to a sustainable society with MU graduate attributes.</p>
<p>Academic System (semester/trimester/quarter system)</p>	<p>Trimester system</p>
<p><b>Advancement Path of the Graduates</b></p>	
<p>Career Opportunities</p>	<ol style="list-style-type: none"> <li>1) Graduates can work as instructors or teaching assistants in the field of Environmental Science at any academic institute.</li> <li>2) Graduates can work as instructors in the field of Environmental Science at any international schools.</li> <li>3) Graduates can work in Academic research and Development departments of any company or</li> </ol>



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	<p>manufacturer dealing in Environmental products.</p> <p>4) Graduates can work in operator or service assurance positions.</p> <p>5) Graduates can work as academic research assistants in research institutes or on research programs/projects either in Thailand or abroad.</p> <p>6) Graduates can work in scientific instruments trading and services in both private and governmental sectors.</p> <p>7) Graduates can become the owner of companies that sell products and/or services in the field of Environmental Science, Environmental Biology, Ecology and Conservation, Ecotourism, etc.</p>
<p>Further Study after graduation</p>	<p>1) Graduates can continue their studies for a higher degree in any field of Environmental Science.</p> <p>2) Graduates can continue their studies for a professional degree in the related fields such as Environmental Science, Environmental Biology, Ecology and Conservation, Ecotourism, etc.</p>
<p><b>Educational Philosophy in Program Management</b></p>	
<p>Program Philosophy</p>	<p>We proudly strives to raise each student to the greatest level they are personally capable of achieving. The program provides new generation of graduates who have the moral consciousness in natural resources and environmental conservation with basic knowledge in technology and skills to wisely use natural resources in their home country and in the world for sustainable social development. Being an interdisciplinary field of knowledge, environmental science includes programmes with multidisciplinary scope in which the graduates will learn to address the challenges of maintenance of environmental integrity for sustainable development goals in relation to human activities.</p>



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<p>Strategy/ Practice in teaching and learning</p>	<p>The emphasis in environmental sciences is designed to provide environmental graduates with specialized coursework in this area. This emphasis area concentrates on the relationship between sustainability and environmental resource management to include managing economic, social and ecological systems with and external to an organizational entity in order for it to sustain both itself and the system it exists within.</p>
<p>Strategy/Practice for Evaluating Learning Outcomes of Students</p>	<p>Different methods of formative and summative evaluation are used, for example written examination, practical test, presentation, class participation and project-based learning. Rubrics based on the objectives of the course are used to score the students' achievement. Students receive grades according to the criteria stated in Mahidol University's regulations on undergraduate studies as well as MUIC's regulations and/or announcements.</p>
<p><b>Competencies Enhanced to the Students of the Program</b></p>	
<p>Generic Competence</p>	<p><b>Innovativeness</b></p> <ul style="list-style-type: none"> <li>• Implement scientific processes to draw conclusions from quantitative and qualitative data</li> <li>• Critical reading of scientific literature</li> <li>• Able to formulate lines of enquiry that drive problem solving</li> </ul> <p><b>Ethicality</b></p> <ul style="list-style-type: none"> <li>• Demonstrate moral and appropriate behavior</li> <li>• Systematic, logical and global thinking</li> </ul> <p><b>Professionality</b></p> <ul style="list-style-type: none"> <li>• Make relevant scientific observations and ask pertinent scientific questions</li> <li>• Independently acquiring information</li> <li>• Able to comprehend and follow technical procedures</li> <li>• Possess information technology and management</li> </ul>



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	<p>skills</p> <ul style="list-style-type: none"> <li>• Oral communication in a concise manner</li> <li>• Time management</li> <li>• Technical writing</li> <li>• Accountability</li> <li>• Collaborate with members of the team</li> </ul>
<p>Subject-specific Competence</p>	<p><b>Innovativeness</b></p> <ul style="list-style-type: none"> <li>• Transfer specific knowledge across disciplines to innovation</li> </ul> <p><b>Ethicality</b></p> <ul style="list-style-type: none"> <li>• Recognize ethical issues in Environmental science</li> <li>• Apply accepted ethical standards to resolve issues</li> </ul> <p><b>Professionality</b></p> <ul style="list-style-type: none"> <li>• Comprehend discipline-specific knowledge</li> <li>• Able to use environmental science equipment, tools and software</li> <li>• Data collection and management skills in field and lab, including electronic resources</li> <li>• Identify environmental hazards affecting air, water and soil quality, biodiversity and natural resources.</li> <li>• Carry out lab safety, field study safety, and data security</li> <li>• Evaluation and interpretation of the scientific literatures</li> <li>• Management of scientific data using reference management program</li> <li>• Confidentiality of data</li> </ul>



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### Learning Outcomes of the Graduates

PLOs

At the end of studying in the program, successful students will be able to:

PLO1 Critical Thinking: demonstrate critical thinking skills in relation to environmental sciences.

PLO2 Communication: demonstrate knowledge and application of communication skills and the ability to write effectively in a variety of contexts.

PLO3 Interdisciplinary Synthesis: demonstrate an ability to integrate the many disciplines and fields that intersect with environmental concerns.

PLO4 Ecological Literacy: demonstrate an awareness, knowledge, and appreciation of the intrinsic values of ecological processes and communities.

PLO5 Sustainability: Create alternative solutions to environmental issues focusing on sustainability through research projects interdisciplinary.

PLO6 Innovation Initiative: demonstrate an ability understanding a problem and delivering solutions consistently, deliberately and methodically.