

## Example form for Module Handbook (Đề cương tổng quát môn học)

A **Module Handbook** or collection of module descriptions that is also available for **students to consult** should contain the following information about the individual modules:

Module designation (Tên môn học)	Ecology (EN1005)
Semester(s) in which the module is taught ( Học kỳ giảng dạy)	142, 143, 151, 152, 161, 162, 171, 172, 181, 182, 201, 211
Person responsible for the module	Đào Thanh Sơn
Language (ngôn ngữ)	Vietnamese and English
Relation to curriculum (Các môn học liên quan)	Compulsory / elective / specialisation Environmental Toxicology  Names of other study programmes with which the module is shared Chương trình thuộc Khoa Quản lý công nghiệp, và Bảo dưỡng Công nghiệp
Teaching methods (Phương pháp giảng dạy)	Lecture, lesson, seminar, braining storming, group discussion, video clip illustration, etc.
Workload (incl. contact hours, self-study hours) (Thời lượng làm việc)	(Estimated) Total workload: 137,2 units (1 unit ~ 60 min)  Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 42 units for lecture (theory), 9 units for seminar during class  Private study including examination preparation, specified in hours <sup>1</sup> : 45 hours (3 hours per week x 15 weeks in a semester) for individual question & discussion in the office, 16 hours (2 working days) for exercise preparation for the whole semester, 40 hours (5 working days) for mid –term test and seminar assessment/ grading, 24 hours (3 working days) for final exam assessment/ grading, further 20 working days for material/ reference reading for updating the syllabus and lecture contents, 30 working days for experiment/ study for self enhancement on the teaching qualification (experiences and skills)
Credit points (số tín chỉ)	3
Required and recommended prerequisites for joining the module (những yêu cầu kiến thức trước khi học)	N/A
Module objectives/intended learning outcomes (Mục tiêu môn học, yêu cầu CDR)	Key question: what learning outcomes should students attain in the module After completing the course, students could (learning outcomes) - Gain the basic knowledge on ecology and environment, and the transformation of energy and materials in ecosystems - Be able to analyze and predict the ecological alteration upon human impacts - Be able to improve the sof skills (present, discuss and work together,...)

<sup>1</sup> When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content (Nội dung )	<p><i>The description of the contents should clearly indicate focus areas and the level of difficulty.</i></p> <p>Introduction to the course</p> <p><b>Chapter 1: Introduction to ecology – General definitions</b></p> <p>Basic definitions</p> <p>History of ecology</p> <p>Ecology and its applications on environmental protection and human lives</p> <p>Methods in ecological studies</p> <p><b>Chapter 2: Environmental parameters: the limit factors of ecosystem</b></p> <p>Environment and ecofactors</p> <p>Influences of environmental factors on organisms and their adaptation</p> <p>Reaction of organisms to the environmental parameters</p> <p>Relationship between the different organisms in ecosystem</p> <p><b>Chapter 3: Autecology, polupation and community ecology</b></p> <p>Biological cycles</p> <p>Population</p> <p>Community</p> <p>Case studies of experts about ecology</p> <p><b>Chapter 4: Ecosystem</b></p> <p>Definition and components of an ecosystem</p> <p>Ecosystem function</p> <p>Ecosystem statuses</p> <p>Ecosystem characteristics</p> <p>Distribution of ecosystem lattitudely</p> <p>Geo-che-biological cyclcles</p> <p>Organic decomposition and function of micro-organisms</p> <p><b>Chapter 5: Ecotoxicology</b></p> <p>Environmental degradation and ecological succession.</p> <p>Eutrophication</p> <p>Ecology and environment of wetland</p> <p>Challenges and ecological and environmental risks worldwide</p> <p><b>Group presentation / report</b></p>
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Exams and assessment formats ( Hình thức kiểm tra và thi)	assignment, seminar (25 min of presentation; 15 – 20 min for question/ answer): 30% mid-term test (multiple choice, 50 min): 20% final examination (assay, 80 min): 50%
Study and examination requirements (Tỉ lệ đánh giá học tập)	<i>Requirements for successfully passing the module</i> <i>Students must have a final grade of 50% or higher to pass; the final exam must be graded of not less than 3/10.</i>
Reading list ( Tài liệu)	<p><i>Main material</i></p> <p>Peter Stiling, 2002. Ecology: theories and application, 4<sup>th</sup> Edition. Prentice-Hall of India Private Limited. New Delhi.</p> <p><i>Further readings</i></p> <p>Robert Wetzel, 2001. Limnology : lake and river ecosystems, 3<sup>rd</sup> edition. Academic Press, San Diego</p> <p>Walker, C.H., Hopkin, S.P., Sibly, R.M., Peakall, D.B., 2006. Principles of Ecotoxicology. CRC Press, Taylor &amp; Francis Group, U.S.</p> <p>Nguyễn Văn Tuyên, 1998. Ecology and Environment. Educational Publishing House of Hochiminh City.</p> <p>Vũ Trung Tạng, 2007. Fundamental of Ecology. Educational Publishing House of Hanoi.</p> <p>Lê Văn Khoa, Nguyễn Xuân Quýnh, Nguyễn Quốc Việt, 2007. Biological indicators for environment. Educational Publishing House of Hanoi.</p> <p>Đỗ Hồng Lan Chi, Bùi Lê Thanh Khiết, Đào Thanh Sơn, 2015. <i>Độc học Sinh thái</i>. NXB ĐHQG TP.HCM</p>