

## 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:

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| Module designation<br>(Tên môn học)   | Aquatic biota and environmental management (EN3051)   |
| Semester(s) in which the module is taught ( Học kỳ giảng dạy)   | 181, 192, 211   |
| Person responsible for the module   | Đào Thanh Sơn   |
| Language (ngôn ngữ)   | Vietnamese and English  |
| Relation to curriculum<br>(Các môn học liên quan)   | Compulsory / elective / specialisation<br>Ecology (EN1005), Chemical analysis (CH1009)<br><br>Names of other study programmes with which the module is shared   |
| Teaching methods<br>(Phương pháp giảng dạy)   | Lecture, seminar, exercise, group discussion, video clip illustration, etc.   |
| Workload (incl. contact hours, self-study hours) (Thời lượng làm việc)                                | (Estimated) Total workload: 91,3 units (1 unit ~ 60 min)<br><br>Contact hours (please specify whether lecture, exercise, laboratory session, etc.): 27 units for lecture (theory), 9 units for seminar during class<br><br>Private study including examination preparation, specified in hours <sup>1</sup> : 30 hours (2 hours per week x 15 weeks in a semester) for individual question & discussion in the office, 12 hours (1.5 working days) for exercise preparation for the whole semester, 32 hours (3 working days) for mid –term test and seminar assessment/grading, 16 hours (2 working days) for final exam assessment/grading, further 15 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)  | 2   |
| Required and recommended prerequisites for joining the module (những yêu cầu kiến thức trước khi học) | N/A   |

<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.

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| <p>Module objectives/intended learning outcomes (Mục tiêu môn học, yêu cầu CDR)</p> | <p><i>Key question: what learning outcomes should students attain in the module</i></p> <p><i>After completing the course, students could (learning outcomes)</i></p> <ul style="list-style-type: none"> <li>- Master the knowledge on environmental parameters relating to the lives of organisms in water bodies</li> <li>- Know the main and important groups of organisms in water bodies</li> <li>- Know how to describe, analyse, and evaluate the environmental data and organisms</li> <li>- Be able to apply the hydrobiological knowledge into the practice</li> <li>- Be able to present, discuss and group working</li> <li>- Master the knowledge on pollutants and their impacts on living things</li> </ul> |
| <p>Content (Nội dung )</p>  | <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:</b> Origin, distribution and characteristics of water bodies</p> <p><b>Chapter 2:</b> Phytoplankton community</p> <p><b>Chapter 3:</b> Zooplankton community</p> <p><b>Chapter 4:</b> Communities of zoobenthos and fish</p> <p><b>Chapter 5:</b> Aquatic macrophytes</p> <p><b>Chapter 6:</b> Pollutants in water environment and aquatic organisms</p> <p><b>Chapter 7:</b> Evaluation, mitigation the pollutants and environmental management</p>   |
| <p>Exams and assessment formats ( Hình thức kiểm tra và thi)</p>                    | <p>assignment, seminar (25 min of presentation; 15 – 20 min for question/ answer): 30%</p> <p>mid-term test (multiple choice, 50 min): 20%</p> <p>final examination (essay, 50 min): 50%</p>   |
| <p>Study and examination requirements (Tỉ lệ đánh giá học tập)</p>                  | <p><i>Requirements for successfully passing the module</i></p> <p><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></p>   |

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| <p>Reading list ( Tài liệu)</p> | <p><i>Main material</i></p> <p>Wetzel, 2001. Limnology: Lake and River Ecosystem. Academic Press</p> <p>Horne, A.J., Goldman, C.R., 1994. Limnology. Mc-Graw-Hill</p> <p><i>Further readings</i></p> <p>O'Sullivan, P.E., Reynolds, C.S., 2003. The lake handbook, Vol. 1: Limnology and limnetic ecology. Blackwell</p> <p>Walker, C.H. et al., 2000. Principles of Ecotoxicology. Taylor &amp; Francis.</p> <p>Đặng Ngọc Thanh, Hồ Thanh Hải, 2007. Cơ sở thủy sinh học. NXB Khoa học Tự nhiên và Công nghệ.</p> <p>Lê Văn Khoa, Nguyễn Xuân Quỳnh, Nguyễn Quốc Việt, 2007. Chỉ thị sinh học môi trường. NXB Giáo dục Hà Nội.</p> <p>Lamb, J.C., 1985. Water Quality and Its Control. John Wiley.</p> <p>O'Riordan, T. (Ed) 1995.</p> <p>Environmental Science for Environmental Management. Prentice Hall.</p> <p>Chorus, I., Bartram, J., 1999. Toxic cyanobacteria in water: a guide to their health consequences, monitoring and management. E &amp; FN Spon.</p> |
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