



UNIVERSITAS NEGERI YOGYAKARTA

FACULTY OF MATHEMATICS AND SCIENCE
DEPARTMENT OF BIOLOGY EDUCATION

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Bachelor of Science in Biology

MODULE HANDBOOK

Module name:	Ichthyology
Module level, if applicable:	Undergraduate
Code:	BIM 6252
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	Even
Module coordinator:	Rizka Apriani Putri, M.Sc,
Lecturer(s):	Rizka Apriani Putri, M.Sc,
Language:	Bahasa Indonesia
Classification within the curriculum:	Elective Course
Teaching format / class hours per week during the semester:	100 minutes lectures, 120 minutes structured activities, and 120 minutes individual study per week
Workload:	Total workload is 91 hours per semester which consists of 100 minutes lectures, 120 minutes structured activities, and 120 minutes individual study per week for 16 weeks.
Credit points:	2 SKS (31 ECTS)
Prerequisites course(s):	General Biology , Vertebrate Biology
Program Learning Outcomes	PLO 4. Comprehensively mastering Biology (core biology) to solve problems in the field of Biology (problem-solving) and to underlie the concepts of related sciences PLO 6. Being adaptive, creative, innovative in applying the concepts of Biology and other related fields PLO 9. Being able to work and create jobs/being an entrepreneur in the field of Biology

	PLO 11. Possessing scientific skills to support the ability to speak in local, national, and international forums																				
Course Outcomes	<p>After taking this course, the students have ability to:</p> <p>CO 1. Master the general concepts and terminology in Ichthyology</p> <p>CO 2. Understand the general form, function, diversity and systematics of fishes</p> <p>CO 3 . Explain morphological and physiological adaptations of fishes and their role in their habitat</p> <p>CO 4 . Understand the biogeography and evolution of fishes</p> <p>CO 5 . Summarize and interpret scientific literature in Ichthyology</p>																				
Content:	This course provides an introduction to fish biology and covers the following topics: diversity, systematics, functional anatomy, physiology, ecology, evolution and conservation																				
Study / exam achievements:	<p>The final mark will be weight as follow:</p> <table border="1"> <thead> <tr> <th>No</th> <th>CO</th> <th>Assessment Object</th> <th>Assessment Technique</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CO1 to CO5</td> <td>Observed attitudes , knolwedge, and skills</td> <td>Survey, test, rubrics and manuals</td> <td>60%</td> </tr> <tr> <td>2</td> <td>Review session</td> <td></td> <td></td> <td>40%</td> </tr> <tr> <td colspan="4" style="text-align: right;">Total</td> <td>100%</td> </tr> </tbody> </table>	No	CO	Assessment Object	Assessment Technique	Weight	1	CO1 to CO5	Observed attitudes , knolwedge, and skills	Survey, test, rubrics and manuals	60%	2	Review session			40%	Total				100%
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Total				100%																	
Forms of media:	Multimedia																				
Reference:	<p>A. Moyle, P and J Cech Jr, 2004, Fishes: An introduction to Ichthyology. 5th edition Pearson Prentice Hall.</p> <p>B. Helfman, G., Collette, B., Facey, D. and Bowen, B. 2009. The Diversity of Fishes, Second Edition. Wiley-Blackwell Publishers.</p> <p>C. Kardong, K.V., 2019, Vertebrates : Comparative Anatomy, Function, Evolution 8th Ed. McGraw Hill Education, New York</p> <p>D. Hickman, C. P. et al. ,2017, Integrative Principles of Zoology 17th Ed, McGraw Hill Education, New York</p>																				

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11
CO1				✓		✓					✓
CO2				✓		✓					✓
CO3				✓		✓			✓		✓
CO4				✓		✓			✓		✓
CO5				✓		✓			✓		✓