THE MODULE HANDBOOK

Magister Biology Study Program
FACULTY OF BIOLOGY

MOLECULAR DEVELPOMENTAL BIOLOGY

Course code	BIMB202113
Course level	Magister
Semester/ term	Odd/Even
Course coordinator(s)	Dr. Bambang Retnoaji, S.Si., M.Sc.
Lecture(s)	1. Dr. Bambang Retnoaji, M.Sc. 2. Dr. biol.hom., Nastiti Wijayanti, M.Si. 3. Dr. Slamet Widiyanto, M.Sc. 4. Dr. med.vet. drh. Hendry T.S.S.G. Saragih, M.P.
Language	Indonesia and English (if there is/are foreign student(s))
Classification within the Curriculum	Elective course
Teaching format/ class hours per week during the semester	This course is organized into 1 class and planned to have 14 teaching weeks and 2weeks of examination.
Workload	Estimated working hour: 2 credits of theory and 1 credit of laboratory work.
Credits	2-1 credits
Requirements	-
Program Learning Outcome	KN1 The graduates are **demonstrating knowledge and comprehend** biological theories, includes all aspects of biological studies at various levels in the organization of life **(Knowledge)**; GS1 The graduates are **able to develop logical, critical, systematic, and creative thinking** through scientific concept and research (**General Skills**); SS1 The graduates are **able to conduct research** in the field of biology independently or in groups, and able to solve various biological-related problems (**Specific Skills)**;
Course Learning Outcome	CPMK 1. Students are able to understand the structure and function of cellscomponent in animals' tissues and organ. CPMK 2. Students are able to understand the process of reproduction anddevelopment of animal embryos CPMK 3. Students are able to master macroscopic and microscopic observationtechniques. CPMK 4. Students are able to understand research related to the structure andfunction of tissues and the process of organizing organs in animal bodies.

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<tr><td>Course Description</td><td>The Molecular Developmental Biology course provides an understanding of Animal development with a special emphasis on the molecular genetic basis for developmental events. The topic of this course discusses the cells and tissues that make up organs in the animal body, how complex multicellular organisms with various shapes and types of cells emerge from a single cell. The lecture topic includes an explanation of the processes of reproduction and animal development, the stages of organ formation, and the mechanisms for regulating the process of organ formation.</td></tr>
<tr><td>Assesments</td><td>
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<tr><th>Assessment components</th><th>Percentage</th><th>CPMK 1</th><th>CPMK 2</th><th>CPMK 3</th><th>CPMK 4</th></tr>
<tr><td>Assigment</td><td>30%</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Journal Review and presentation</td><td>20%</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Midterm exam</td><td>25%</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Final exam</td><td>25%</td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Study Media</td><td>This course provides a complete picture of how organisms are formed starting from the process of forming sex cells or gametogenesis to the formation of functional organs in a hierarchical and coordinated unit in one metabolic process.</td></tr>
<tr><td>Literature</td><td>1. Developmental Biology, 10th ed, Scot Gilberth
2. https://embryology.med.unsw.edu.au/embryology/index.php/Animal_Development</td></tr>
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