



THE MODULE HANDBOOK

FACULTY OF BIOLOGY

Histology

Module code	BIO 30704
Module level	2 nd year of Undergraduate Program in Biology
Abbreviation, if applicable	-
Sub-heading, if applicable	-
Courses included in the module, if applicable	-
Semester/term	Odd and Even
Module coordinator(s)	Dr. Bambang Retnoaji, M.Sc.
Lecture(s)	1. Dr. Bambang Retnoaji, M.Sc. 2. Dr. med.vet., drh. Hendry T.S.S.G. Saragih, M.P. 3. Luthfi Nurhidayat, S.Si., M.Sc.
Language	Indonesia
Classification within the Curriculum	Elective course
Teaching format/class hours per week during the semester	This course is organized into one class and planned to have 14 teaching weeks and 2 weeks of examination.
Workload	Estimated working hour: 10,5 hours/week.
Credit points	2-1 credits
Requirements	Animal Structure and Development (BIO 20701)
Learning goals/competencies	<ol style="list-style-type: none">1. Knowledge and understanding<ol style="list-style-type: none">a. Upon completion of this course, students will be able to Define and describe the histological characteristics of normal cells, tissues and organ system. Describe the subunits of each component and their role in its function.b. Describe the structural characteristics of the four basic tissue types.c. Describe the functional capabilities of each tissue type and relate them to the structure.d. Define and discuss the basic histological structure of some systems.2. Ability/intellectual skill<ol style="list-style-type: none">a. Correlate between histological structure & function of any cell or tissue.b. Select appropriate methods to reveal specific microscopic features of cells and tissues.



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- c. Diagnose slides different from those seen during his course but of the same organs or tissues previously studied.
- d. Identify and differentiate between different types of tissues and organ system.
- e. Differentiate between different tissues and organs in histological slide seen under the microscope.
- f. Differentiate analyze between normal and abnormal Structure.

3. Practical skill

- a. Construct research proposal.
- b. Adopt and develop research method and techniques related to animal histology.
- c. Designing research in the field of animal histology
- d. Handle instruments used to prepare and study histological specimens.
- e. Handle the histological glass slides and examine them using the maximum microscopic facilities. Identify various types of stains & micro techniques.

4. Managerial and transferable skill

- a. Describe the methods of studying cells and tissues.
- b. Mention and describe the different types of tissue
- c. Mention and describe the specific characteristic of cell components in relation to the functions of each component.
- d. Demonstrate knowledge of the structure and function of the body and its major organ systems and of the molecular and cellular mechanisms

5. Attitude

- a. work in team works.
- b. Appreciate the importance of life long learning and show a strong commitment to improve knowledge.
- c. Use the sources of information to remain current with advances in knowledge and practice
- d. Practicing rule, regulation and etic in scientific activities and daily life

Content

Animal Histology cover the microscopic structure and function of Animal cells and tissues that make up the organ systems. The organization of cells and tissues are correlated with organ or system function within animal body. The primary objective of the course is to provide a basic knowledge of cell structure and function, the organization of cells into tissues, and the organization of tissues into organs. In the lectures, the normal microscopic structure of cells, tissues and organs of the body are described. The Topic of the lecture will be mainly on: four basic tissues, organ system such as: nervous



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	<p>system, lymphatic, endocrine, digestive, respiratory, excretory, reproductive and integument system, respectively. Also, the differential characteristics of these structures are considered and the relationships of structure and function are emphasized. Students should be able to differentiate the various histological structures from each other and also recognize those variations in structure of the system organs. In achieving this objective, students will be prepared for designing research project related to structure and function of animal system.</p>
Study/exam achievements	<ol style="list-style-type: none">1. Theory<ol style="list-style-type: none">a. Midterm: 40%b. Final examination: 40%c. Quiz: 5%d. Term paper: 15%2. Laboratory work<ol style="list-style-type: none">a. Pretest: 15%b. Weekly reports: 30%c. Laboratory work: 15%d. Laboratory work examination: 40%
Forms of media	White board, notebook, specimen, LCD
Literature	<ol style="list-style-type: none">1. Junqueira, L.C. and J. Carneiro. 2005. Basic Histology: Text and Atlas. 11th edition. McGraw-Hill Companies, Inc.2. Leeson, C. R., T. S. Leeson, dan A. A. Paparo. 1990. Buku Ajar Histologi (Terj.). Edisi Kelima. Penerbit Buku Kedokteran EGC. Jakarta.3. Slomianka, L. Blue Histology. School of Anatomy and Human Biology. The University of Western Australia. Stevens, A. and J. Lowe. 2004. Human Histology. 2nd Edition. Mosby. UK.4. http://www.lab.anhb.uwa.edu.au/mb140/.