

Module Handbook

Modul Name	Micro techniques
Modul Level	Bachelor
Abbreviation, if applicable:	BIU 301
Sub---heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester	Odd (5 th Semester)
Module Coordinator	Prof. Hery Purnobasuki, Ph.D
Lectures	Dr. Dwi Winarni, M.Si.
Language	Bahasa Indonesia
Classification within the curriculum:	Compulsory Course / Elective Studies
Teaching format/ class hours per week during semester	150 minutes/week
Workload per semester	50 min lecture + 50 min structural assignment + 50 min self-assignment x 13 weeks; total 1950 min = 32.5 hours 32.5/25 = 1.3 ECTS
Credit point	1
Requirements	Animal Histology, Plant Anatomy
Learning goals/competencies	<p>General Competence (Knowledge) Students are able to compare the various methods of histological preparation for animal and plant properly.</p> <p>Specific Competence</p> <ol style="list-style-type: none"> 1. Understanding the role of micro technique in studying biology 2. Students are able to understand the methods of creating microscopic sample, in a good order. 3. Students are able to understand the function , usage, and method of fixation very well. 4. Students are able to understand the fixation agents and fixation mixture, correctly. 5. Students are able to understand the process of creating cutting samples, correctly 6. Students are able to understand microtome technique very well. 7. Students are able to understand the problems that might occur during cutting samples making process, as well as how to handle those problems correctly. 8. Students are able to understand the coloring process of a tissue sample 9. Students are able to understand the histochemistry coloring process. 10. Student are able to understand the finishing process, correctly
Content	Introduction, techniques and processing for histological permanent preparations with paraffin method; techniques to overcome errors in production of histological preparation; staining for animal and plant tissue by histochemical, immunohistochemically, and lectins.
Soft skill Attribute	discipline and argumentation

Study/ exam achievements	<p>Students are considered to be competent and pass if at least get 40% of maximum. Final score (NA) is calculated as follow: Paper project (15%), quiz (15%), mid exam (30%), final exam (30%), and soft skill (10%)</p> <p>Final index is defined as follow:</p> <p>A : 75 - 100 AB : 70 - 74.99 B : 65 - 69.99 BC : 60 - 64.99 C : 55 - 59.99 D : 40 - 54.99 E : 0 - 39.99</p>
Form of media	LCD
Learning Method	Class and discussion
Literature	<ol style="list-style-type: none"> a. Bancroft, John.D dan Cook, Harry C. 1984. Manual of Histological Techniques. New York: Churchill Livingstone. b. Gunarso W, 1998. Mikroteknik. Bahan Ajar Pusat antar Universitas Ilmu Hayati. IPB, Bogor. c. Kiernan, J.A. 1990. Histological and Histochemical Methode. Pergamon Press. 2 nd Oxford England. d. Suntoro, S. Handari. 1983. Metode Pewarnaan. Jakarta: Penerbit Bhratara Karya Aksara e. .Sally J. Naish. 1989. Imunochemical taining Methode. DAKO Corp. California.
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