Module designation	Microtechniques
Semester(s) in which the module is taught	Odd/5th
Person responsible for the module	drh. Tri Harjana, MP.
Language	Bahasa Indonesia
Relation to curriculum	Compulsory
Teaching methods	Lecture, project, seminar, exam
Workload (incl. contact hours, self-study hours)	Total workload is 46 hours per semester which consists of 50 minutes lectures, 60 minutes structured activities, and 60 minutes individual study per week for 16 weeks
Credit points	1 SKS (1.6 ECTS)
Required and recommended prerequisites for joining the module	General Biology
Module objectives/intended learning outcomes	PLO-1 PLO-2 PLO-5 PLO-6 PLO-8 PLO-9 PLO-11
Content	This course discuss about a variety of simple laboratory equipment both made of metal and glass and how to use them, the introduction and handling of chemicals, safety and security in the laboratory, how to work in the laboratory, the introduction of the microscope and its maintenance, the manufacture of wholemount preparations, squash, pollen, cuticles and diatoms, and how to measure microscopic objects.
Examination forms	Presence, task, quiz, mid semester exam, final semester exam, case study, team based project.

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<tr>
<td>Study and examination requirements</td>
<td>The final mark will be weight as follow:
<table>
<tr><th>NO</th><th>Assessment Techniques</th><th>Percentage Weight Assessment (%)</th><th>Information</th></tr>
<tr><td>1</td><td>Cognitive</td><td>50</td><td>Maximum assessment weight accumulation 50%</td></tr>
<tr><td rowspan="4"></td><td>Presence</td><td>5</td><td></td></tr>
<tr><td>Task</td><td>5</td><td></td></tr>
<tr><td>Quiz</td><td>5</td><td></td></tr>
<tr><td>Mid-semester exams</td><td>10</td><td></td></tr>
<tr><td></td><td>Final Semester Exam</td><td>25</td><td></td></tr>
<tr><td>2</td><td>Participatory</td><td>50</td><td>Maximum assessment weight accumulation 50%</td></tr>
<tr><td rowspan="3"></td><td>Case study</td><td>25</td><td></td></tr>
<tr><td>Team Based Project</td><td>25</td><td></td></tr>
<tr><td>Total</td><td>100</td><td></td></tr>
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<td>Reading list</td>
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A. Ciptono., Harjana, Tri. 2015. Embryonic Developemntal Anomaly Identification of Giant Mimi-Mintuno (Tachuleus gigas) During Artificial Incubation Period in the Vial Bottles. Jurnal Sains Dasar. Vol.4 No. 1.
B. Ratnawati, 2002. The Morphological Range, Structural Transition and Evolution of Stomatal Protection Mechanisms in Some Selected Proteaceae. Master Thesis. University of Tasmania, Hobart, Australia.
C. Ratnawati, 2000. Report on JICA Training in Tokyo Gakugei University. Tokyo, Japan.
D. Koesmadji Wirjosoemarto, dkk., 2000. Teknik Laboratorium. Jurusan Pendidikan Biologi, FMIPA, UPI, Bandung.
E. Yeung E.C.T., Stasolla C., Sumner M.J., Huang B.Q. 2015. Plant Microtechniques and Protocols. Springer International Publishing Switzerland.
F. Kiernan J.A. 2015. Histological and Histochemical Methods (Theory and Practice) 5th ed. Scion Publishing Ltd.

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