Module designation	Laboratory Work in Biochemistry
Semester(s) in which the module is taught	Odd/1st
Person responsible for the module	Dr. Evy Yulianti, M.Sc. and Dr. Astuti MP.
Language	Bahasa Indonesia
Relation to curriculum	Compulsory
Teaching methods	Lab works, project, seminar, exam
Workload (incl. contact hours, self-study hours)	Total workload is 46 hours per semester which consists of 170 minutes lab work per week for 16 weeks.
Credit points	1 SKS (1.6 ECTS)
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	PLO-1 PLO-2 PLO-4 PLO-5 PLO-6 PLO-7 PLO-8 PLO-9 PLO-11
Content	This course discusses qualitative and quantitative tests of carbohydrates, protein, lipid, vitamin, and digestive enzyme activities.
Examination forms	Task, 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="2"></td><td>Task</td><td>20</td><td></td></tr>
<tr><td>Final Semester Exam</td><td>30</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>10</td><td></td></tr>
<tr><td>Team Based Project</td><td>40</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. Lieberman, M. and Peet A. 2018. Marks' basic medical biochemistry: a clinical approach. 5th edition. WoltersKluwer. Philadelphia.
B. Nelson, D. L. and Cox,M. M. 2017. Principles of Biochemistry. 7th edition. W. H. Freeman and Company.New York.
C. Murray, R.K., Bender D. A., Botham, K.M., Kennelly, P.J., Rodwell V. W., Weil, P. A. 2009. Harper’s Illustrated Biochemistry. 28th edition. The McGraw-Hill Companies, Inc. New York.
D. Lehninger, A. L., Nelson, D. L., & Cox, M. M. 2000. Lehninger principles of biochemistry. New York: Worth Publishers.
E. Yulianti E, Sunarti, Wahyuningsih MSH. The effect of Kappaphycus alvarezii fraction on plasma glucose, Advanced Glycation End-products formation, and renal RAGE gene expression. Heliyon. 2021 Jan 19;7(1):e05978. doi: 10.1016/j.heliyon.2021.e05978. PMID: 33521358; PMCID: PMC7820565.
F. Umniyatie, S., Rakhmawati, A., & Yulianti, E. (2016). The optimation of cellulase enzyme of mold isolated from agriculture land in wukirsari after merapi eruption. Jurnal Sains Dasar, 4(1). doi:https://doi.org/10.21831/jsd.v4i1.8445.
G. Pramiadi, D., Yulianti, E., & Rakhmawati, A. (2015). Isolasi dan uji aktivitas enzim lipase termostabil dari bakteri termofilik pasca erupsi Merapi. Jurnal Sains Dasar, 3(1). doi:https://doi.org/10.21831/jsd.v3i1.2780.
H. Rakhmawati, A., & Yulianti, E. (2012). Eksplorasi bakteri termofilik pasca erupsi Merapi sebagai penghasil enzim ekstraseluler. Jurnal Saintek, 17(1).
I. Michael B. Smith. 2020 . Biochemistry: An Organic Chemistry Approach. Taylor and Francis.
J. Spencer L. Seager, Michael R. Slabaugh, Maren S.Hansen. 2016. Chemistry for Today: General, Organic,and Biochemistry. Cengage Learning.

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