Module designation	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	Lecture, project, seminar, exam
Workload (incl. contact hours, self-study hours)	Total workload is 91 hours per semester which consists of 100 minutes lectures, 120 minutes structured activities, and 120 minutes individual study per week for 16 weeks.
Credit points	2 SKS (3.2 ECTS)
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	PLO-1 PLO-2 PLO-4 PLO-6 PLO-7 PLO-8 PLO-11
Content	This course discusses the structure and functions of biomolecules, especially carbohydrates, protein and lipids, nucleic acid, coenzyme and vitamin, substances that contribute to the changes of enzyme and its products, as well as metabolism and chemical reaction inside the cell.
Examination forms	Mid-semester exam, final semester exam, case study, team based project.

<table>
<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>Kognitif</td><td>50</td><td>Maximum assessment weight accumulation 50%</td></tr>
<tr><td rowspan="2"></td><td>Mid-semester exams</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>30</td><td></td></tr>
<tr><td>Team Based Project</td><td>20</td><td></td></tr>
<tr><td>Total</td><td>100</td><td></td></tr>
</table></td></tr>
<tr><td>Reading list</td><td>

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. 2022. Harper’s Illustrated Biochemistry. 30th edition. The McGraw-Hill Companies, Inc. New York.
D. Berg, J. M., Tymoczko, J. L., Stryer, L., & Stryer, L. 2019. Biochemistry 9th ed. New York: W.H. Freeman.
E. Lehninger, A. L., Nelson, D. L., & Cox, M. M. 2021. Lehninger principles of biochemistry 8th ed. New York: Worth Publishers.
F. 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.
G. 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.
H. 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.
I. Rakhmawati, A., & Yulianti, E. (2012). Eksplorasi bakteri termofilik pasca erupsi Merapi sebagai penghasil enzim ekstraseluler. Jurnal Saintek, 17(1).
J. Michael B. Smith. 2020 . Biochemistry: An Organic Chemistry Approach. Taylor and Francis.
K. Spencer L. Seager, Michael R. Slabaugh, Maren S.Hansen. 2021. Chemistry for Today: General, Organic,and Biochemistry 10th ed. Cengage Learning.

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