Module designation	Laboratory Work in Evolution
Semester(s) in which the module is taught	Odd/5th
Person responsible for the module	Paramita Cahyaningrum Kuswandi, Ph.D. and Ahmad Kamal Sudrajat, M.Pd.
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 170 minutes of lab work per week for 16 weeks.
Credit points	1 SKS (1,64 ECTS)
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	PLO-3 PLO-4 PLO-6 PLO-8 PLO-10
Content	This course discusses the study of evolutionary processes in living organisms and their environment. Topics covered include the origin of the universe, the evolution of Earth and its environment, particularly seawater, patterns of human and primate evolution, patterns of mammal evolution, patterns of reptile and amphibian evolution, patterns of bird and fish evolution, and patterns of invertebrate evolution. This course also covers the process of fossilization and methods for determining the age of fossils, studies of Sangiran and its ancient formations, and the migration and spread of Homo erectus worldwide. Students also analyze evolutionary evidence in museums. Field activities involve direct observation of evolutionary evidence in the field.
Examination forms	Presence, task, final semester exam, case study, team based project.

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<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="3"></td><td>Presence</td><td>5</td><td></td></tr>
<tr><td>Task</td><td>15</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>20</td><td></td></tr>
<tr><td>Team Based Project</td><td>30</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. Crawford, G. W., Haviland, W. A., Fedorak, S. 2015. Human Evolution and Prehistory 2nd ed. Canada: Nelson Education Limited.
B. Gadow, H. F. 2014. The Evolution of the Vertebral Column: A Contribution to the Study of Vertebrate Phylogeny. United Kingdom: Cambridge University Press.
C. Simanjuntak, T. 2020. Manusia-manusia dan peradaban Indonesia. Indonesia: Gadjah Mada University Press.
D. Pertiwi, K. R. 2014. Penerapan Teknologi DNA dalam Identifikasi Forensik. Jurnal Ilmiah WUNY, 16(4).
E. Simanjuntak, T. Budiman. 2011. Kehidupan purba Sangiran. Indonesia: Pusat Penelitian dan Pengembangan Arkeologi Nasional, Badan Pengembangan Sumberdaya Kebudayaan dan Pariwisata, Kementerian Kebudayaan dan Pariwisata.
F. Farquhar, R. M., York, D. 2013. The Earth's Age and Geochronology. United Kingdom: Elsevier Science.
G. Jackson, R., Wasserman, S. A., Reece, J. B., Urry, L. A., Minorsky, P. V., Campbell, N. A., Cain, M. L. (2014). Campbell Biology. United Kingdom: Pearson.
H. Darwin, C. 1959. Origin of the Species, by means of Natural Selection. London.
I. Paleontology Team. 2015. Early Vertebrae Evolution. University of Alberta.
J. Clarkson, E. N. K. 2013. Invertebrate Palaeontology and Evolution. Germany: Wiley.
K. Cain, M. L., Wasserman, S. A., Urry, L. A., Reece, J. B., Minorsky, P. V. 2020. Campbell Biology. United Kingdom: Benjamin Cummings.

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