Module Handbook

Module designation	Evolution (course code MPB 2111)
Semester(s) in which the module is taught	2
Person responsible for the module	*Siti Ifadatin, M.Si, Irwan Lovadi, PhD*
Language	*Bahasa Indonesia*
Relation to curriculum	***Compulsory***
Teaching methods	*lecture*
Workload (incl. contact hours, self-study hours)	*(Estimated) Total workload: 170 minutes x 2 unit x 16 = 10,880 minutes (181 hours)* *Contact hours (please specify whether lecture, exercise, etc.):* *lecture: every Thursday, 09:30 - 11:10 (class A)* *every Wednesday, 07:30 – 09:10 (class B)* *Private study including examination preparation, specified in hours[1]: 180 minutes x 16 session = 2,880 minutes (48 hours)*
Credit points	*2 unit*
Required and recommended prerequisites for joining the module	*General Biology (course code MPB 1100)*
Module objectives/intended learning outcomes	***General skills**: Mastering and being able to apply biological science and other scientific fields that support the development of biological science* ***First specific skill**: Able to think critically, creatively and innovatively in biological science and other scientific fields and entrepreneurship*

[1] When calculating contact time, each contact hour is counted as a full hour because the organisation of the schedule, moving from room to room, and individual questions to lecturers after the class, all mean that about 60 minutes should be counted.

Content	*Students can understand the definition, history, development and debate of evolutionary theory, Darwin's view of descent with modification, adaptation and natural selection, scientific evidence of evolution (fossil record, homology, biogeography), the history of life on earth, population variation, population evolution, Hardy Weinberg equilibrium principle, mutation, genetic drift, gene flow, natural selection, sexual selection, diploidy, balancing selection, on the origin of species, species concept, speciation, adaptive radiation, phylogeny and tree of life, evolution of biodiversity microbes, fungi, plants, and animals*.
Examination forms	*Written test*
Study and examination requirements	*Re-registration and 75% attendance*.
Reading list	1) *Campbell NA. Reece JB, Mitchell LG. 2017. Biology 11thed. Pearson Education Inc. New York*. 2) *Futuyma DJ. 2005. Evolution. Sinauer Associates Inc. Publishers. Sunderland, Massachusetts U.S.A*.