

Module designation	Phytopharmaceuticals
Semester(s) in which the module is taught	Odd
Person responsible for the module	Dr. Evy Yulianti S.Si., M.Sc., Drs. Sudarsono M.Si., Dra. Ratnawati M.Sc.
Language	Bahasa Indonesia
Relation to curriculum	Elective
Teaching methods	Lecture, lesson, 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	
Content	This course provides material on the development of medicinal plant utilization in Indonesia, various plants as sources of natural ingredients for medicine, active plant compounds, and the pharmacological benefits and bioactivity mechanisms of active compounds.
Examination forms	Mid semester exam, final semester exam, case study, team based project.

Study and examination requirements	The final mark will be weight as follow:			
	NO	Assessment Techniques	Percentage Weight Assessment (%)	Information
	1	Cognitive	40	Maximum assessment weight accumulation 50%
		Mid Semester Exam	20	
		Final Semester Exam	20	
	2	Participatory	60	Maximum assessment weight accumulation 50%
		Case Study	30	
		Team Based Project	30	
		Total	100	

Reading list	A. Hussein, R., & A. El-Anssary, A. (2019). Plants Secondary Metabolites: The Key Drivers of the Pharmacological Actions of Medicinal Plants. In Herbal Medicine. IntechOpen. https://doi.org/10.5772/intechopen.76139 B. Anggraito, Y. U., Susanti, R., Iswari, R. S., Yuniastuti, A., Lisdiana, Nugrahaningsih, Habibah, N. A., Bintari, S. H., & Dafip, M. (2018). Metabolit Sekunder pada Tanaman. Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Negeri Semarang C. Croteau, R., Kutchan, T. M., & Lewis, N. G. (2015). Biochemistry & Molecular Biology of Plants (B. Buchanan, W. Gruissem, & R. L. Jones, Eds.; 2nd ed.). John Wiley & Sons, Inc. D. Hakim, L. (2015). Rempah Dan Herba Kebun-Pekarangan Rumah Masyarakat: Keragaman, Sumber Fitofarmaka dan Wisata Kesehatan-kebugaran (Vol. 1). Diandra Creative E. Handayani, S., Arty, I. S., Budimarwanti, C., Theresih, K., Yulianti, E., & Khairuddean, M. (2021). Preparation and antimicrobial activity analysis of organic soap bar containing gnetum gnemon peel extract. Molekul, 16(3), 224–232. https://doi.org/10.20884/1.jm.2021.16.3.800 F. Yulianti, E., Sunarti, & Wahyuningsih, M. S. H. (2021). The effect of Kappaphycus alvarezii fraction on plasma glucose, Advanced Glycation End-products formation, and renal RAGE gene expression. Heliyon, 7(1), e05978. https://doi.org/10.1016/j.heliyon.2021.e05978 G. Yulianti, E., Sunarti, & Wahyuningsih, M. S. H. (2022). The effect of Kappaphycus alvarezii active fraction on oxidative stress and inflammation in streptozotocin and nicotinamide-induced diabetic rats. BMC Complementary Medicine and Therapies, 22(1). https://doi.org/10.1186/s12906-021-03496-8
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