



**Universitas Gadjah Mada**

Faculty of Pharmacy

Doctoral Study Program in Pharmaceutical Science

**Advanced Herbal Medicine (3,34 ECTS/ 2 CSU)**

Code/Status	FAS3220106/Compulsory
Module designation	Doctoral Study Program in Pharmaceutical Science
Semester(s) in which the module is taught	1
Person responsible for the module	Prof. Dr. apt. Erna Prawita Setyowati, MSi. Prof. Dr. apt. Subagus Wahyuono, MSc. Prof. Dr. rer. nat. apt. Triana Hertiani, MSi. Dr.rer.nat. apt. Yosi Bayu Murti, MSi. Dr. apt. Andayana Puspitasari, MSi. Dr. rer. nat. apt. Nanang Fakhrudin, MSi.
Language	Indonesian
Teaching methods	100 minutes/weekly and 14 weeks during the semester
Workload (incl. contact hours, self-study hours)	100 minutes of in-class lectures
Credit points	3,34 ECTS/2 CSU
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	Students demonstrate proficiency in understanding chemotypic phenomena, particularly in the isolation, elucidation, and standardization of natural medicine. They are adept at evaluating strategies pivotal to the discovery and development of such medicine. Furthermore, their expertise extends to mastering the principles of cutting-edge technology employed in the production of natural medicine, highlighting a comprehensive grasp of both the theoretical and technological facets of this field.
Content	This course discusses the development and application of natural medicine with pharmacognosy and phytochemical approaches. The field of study of this course includes aspects of drug discovery from natural ingredients and the development of natural drug preparations.
Examination forms	



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Study and examination requirements	A-E. Exam or task in the form of a project/case based exam 100%
Reading list	<b>Main</b> <ol style="list-style-type: none"><li>1. Vogel, H.G., (Ed.), 2016, Drug Discovery and Evaluation, 4<sup>nd</sup> edition, Springer-Verlag, Berlin.</li><li>2. Atta-ur-Rahman and Choudhary, M.I., 2005, Bioassay Techniques For Drug Development, Harwood Academic Publishers, Singapore.</li><li>3. Dewick, PM, 2009, Medicinal Natural Product, A Biosynthetic Approach 3rd Edition, John Wiley &amp; Sons Ltd</li><li>4. Steven M. Colegate and Russell J. Molyneux, 2007, Bioactive Natural Products : detection, isolation, and structural determination 2nd ed, CRC Press</li><li>5. Related research paper</li></ol>
Date of last amendment	<b>Aug 1, 2023</b>