



UNIVERSITAS NEGERI YOGYAKARTA

FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF SCIENCE EDUCATION

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Bachelor od Education in Science

MODULE HANDBOOK

Module name:	History of Science
Module level, if applicable:	Undergraduate
Code:	IPA6231
Sub-heading,if applicable:	-
Classes, if applicable:	-
Semester:	5 th (fifth)
Module coordinator:	Prof. Dr. Zuhdan Kun Prasetyo, M.Ed
Lecturer(s):	Widodo Setiyo Wibowo, M.Pd,
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory Course
Teaching format / class hours per week during the semester:	100 minutes lectures and 120 minutes structured activities per week.
Workload:	Total workload is 90.67 hours per semester which consists of 100 minutes lectures and 120 minutes structured activities, and 120 minutes individual study per week for 16 weeks.
Credit points:	2 (3 ETCS)
Prerequisites course(s):	-
Targeted learning outcomes:	After accomplishing this course students are able to: CO1. show independency and responsibility in carrying out individual tasks and group assignments CO2. review development implication or implementation of science and technology CO3. describe thinking/ approaches, methods, inventions and their implication in the field of astronomy, physics, chemistry, biology, geology and mathematics toward civilization development or human culture during

		science development history																						
Content:	This course studies development of science during world civilization change, start from early science era, science in Greece, China, Hinduism-India, Islam-Arabian, Rhome (middle century), Renaissance and science revolution, 17-18 th Century Science, 19 th -21 st century science, through the context, methods, concepts or principle of science in the field of astronomy, physics, chemistry, biology, geology and mathematics and also the implication toward human social-culture life.																							
Study/exam achievements:	<p>Attitude assessment is carried out at each meeting by observation and / or self-assessment techniques using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude.</p> <p>The final mark will be weight as follow:</p> <table border="1"> <thead> <tr> <th>No</th> <th>CO</th> <th>Assessment Object</th> <th>Assessment Technique</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td rowspan="4">1</td> <td rowspan="4">CO1, CO2 and CO3</td> <td>a. Individual Assignment</td> <td rowspan="4">Presentation, Project, and written test</td> <td>20%</td> </tr> <tr> <td>b. Group Assignment</td> <td>20%</td> </tr> <tr> <td>c. Mid</td> <td>30%</td> </tr> <tr> <td>d. Final Exam</td> <td>30%</td> </tr> <tr> <td colspan="3">Total</td> <td>100%</td> </tr> </tbody> </table>				No	CO	Assessment Object	Assessment Technique	Weight	1	CO1, CO2 and CO3	a. Individual Assignment	Presentation, Project, and written test	20%	b. Group Assignment	20%	c. Mid	30%	d. Final Exam	30%	Total			100%
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1	CO1, CO2 and CO3	a. Individual Assignment	Presentation, Project, and written test	20%																				
		b. Group Assignment		20%																				
		c. Mid		30%																				
		d. Final Exam		30%																				
Total			100%																					
Forms of media:	Board, LCD Projector, Laptop/Computer																							
Literature:	<p>A. Ronan, C.A. (1982). <i>Science: Its History and Development among The World's Cultures</i>. New York: Facts on File Publications.</p> <p>B. Williams, H.S. & Williams, E.H. (NY). <i>A History of Science</i>.</p> <p>C. Bunch, B. & Hellemans, A. (2004). <i>The History of Science and Technology</i>. Boston: Houghton Mifflin Co.</p> <p>D. Zhmud, Leonid. (2006). <i>The Origin of the History of Science in Classical Antiquity</i>. New York: Walter de Gruyter.</p> <p>E. Waller, John. (2002). <i>Fabulous Science; Fact and Fiction in the History of Scientific Discovery</i>. New York: Oxford Univ. Press.</p>																							

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12
CO1		✓										
CO2									✓			
CO3				✓	✓	✓	✓					