

UNDERGRADUATE PROGRAM IN COMPUTER SCIENCE
DEPARTMENT OF COMPUTER SCIENCE AND ELECTRONICS
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
UNIVERSITAS GADJAH MADA

Module name	Network and Mobile Programming
Module level	Undergraduate
Code	MII-2606
Courses (if applicable)	Network and Mobile Programming
Semester	Spring (Genap)
Contact person	I Gede Mujiyatna S.Kom., M.Kom.
Lecturer	I Gede Mujiyatna S.Kom., M.Kom.
Language	Bahasa Indonesia and English
Relation to curriculum	<ol style="list-style-type: none"> 1. Undergraduate degree program, elective, 6th semester. 2. International undergraduate program, elective, 6th semester.
Type of teaching, contact hours	<ol style="list-style-type: none"> 1. Undergraduate degree program: lectures, < 60 students, 2. International undergraduate program: lectures, < 30 students.
Workload	<ol style="list-style-type: none"> 1. Lectures: 3 x 50 = 150 minutes per week. 2. Exercises and Assignments: 3 x 60 = 180 minutes (3 hours) per week. 3. Private study: 3 x 60 = 180 minutes (3 hours) per week.
Credit points	3 credit points (sks).
Requirements according to the examination regulations	A student must have attended at least 75% of the lectures to sit in the exams.
Recommended prerequisites	Programming I, Computer Networks

Learning outcomes and their corresponding PLOs	<table border="1"> <thead> <tr> <th data-bbox="358 254 444 331">LO</th> <th data-bbox="444 254 1235 331">Description</th> <th data-bbox="1235 254 1430 331">Supported PLO</th> </tr> </thead> <tbody> <tr> <td data-bbox="358 331 444 527">LO1</td> <td data-bbox="444 331 1235 527">be able to explain the basic concepts needed to follow this course, especially those related to networks, communication protocol, and programming.</td> <td data-bbox="1235 331 1430 527">PLO3</td> </tr> <tr> <td data-bbox="358 527 444 646">LO2</td> <td data-bbox="444 527 1235 646">be able to apply the concepts and techniques learnt in this course to develop the network applications.</td> <td data-bbox="1235 527 1430 646">PLO4</td> </tr> <tr> <td data-bbox="358 646 444 766">LO3</td> <td data-bbox="444 646 1235 766">be able to apply the concepts and techniques learnt in this course to develop the mobile applications.</td> <td data-bbox="1235 646 1430 766">PLO4</td> </tr> <tr> <td data-bbox="358 766 444 844">LO4</td> <td data-bbox="444 766 1235 844">able to apply problem-solving skills to programming languages.</td> <td data-bbox="1235 766 1430 844">PLO5</td> </tr> <tr> <td data-bbox="358 844 444 1039">LO5</td> <td data-bbox="444 844 1235 1039">be able to explain the state-of-the-art in the field of network and mobile programming, emerging and trending research topics, and to know the general direction of researches in this field</td> <td data-bbox="1235 844 1430 1039"></td> </tr> </tbody> </table>					LO	Description	Supported PLO	LO1	be able to explain the basic concepts needed to follow this course, especially those related to networks, communication protocol, and programming.	PLO3	LO2	be able to apply the concepts and techniques learnt in this course to develop the network applications.	PLO4	LO3	be able to apply the concepts and techniques learnt in this course to develop the mobile applications.	PLO4	LO4	able to apply problem-solving skills to programming languages.	PLO5	LO5	be able to explain the state-of-the-art in the field of network and mobile programming, emerging and trending research topics, and to know the general direction of researches in this field	
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Content	The Network and Mobile Programming Course is an advanced course in the field of computer systems and networks. This course provides an understanding of how the development of computer network-based applications and applications on the mobile devices (mobile), along with characteristics respectively. The course will use several GIS software (open source based), analyse and understand how it works, and then implementing the best practices into the student projects. The course will help the student to have clear understanding on concepts, theories and perform experiences on the project																						
Study and examination requirements and forms of examination	Exercises in class, Mid-terms examination, and Final examination.																						
Media employed	LCD, blackboard, websites, and e-learning.																						
Assessments and Evaluation	<table border="1"> <thead> <tr> <th data-bbox="358 1843 578 1881">LO</th> <th data-bbox="578 1843 812 1881">Evaluation</th> <th data-bbox="812 1843 1011 1881">Type</th> <th data-bbox="1011 1843 1214 1881">Percentage</th> <th data-bbox="1214 1843 1430 1881">Total</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					LO	Evaluation	Type	Percentage	Total													
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		Method			
	LO1	Problem 1 in midterm	Summative	5%	15%
	Problem 1 in final	Summative	5%		
	Exercise 1	Formative	5%		
	LO2	Problem 2 in midterm	Summative	5%	15%
	Problem 3 in midterm	Summative	5%		
	Exercise 2	Formative	5%		
	LO3	Problem 2 in final	Summative	5%	15%
	Problem 3 in final	Summative	5%		
	Exercise 3	Formative	5%		
	LO4	Problem 4 in midterm	Summative	5%	10%
	Problem 4 in final	Summative	5%		
	LO5	Exercise 4	Formative	5%	5%
Reading List	<p>W1: Donahoo, M.J., Calvert, K.L., 2009, TCP/IP Sockets in C Bundle: TCP/IP Sockets in C, Second Edition: Practical Guide for Programmers, Morgan Kaufmann; 2 edition.</p> <p>W2: Mikkonen, T., 2007, Programming Mobile Devices: An Introduction for Practitioners, Wiley; 1 edition.3</p> <p>A1: Mednieks, Z., Dornin, L., Meike, G.B., Nakamura, M., 2012, Programming Android: Java Programming for the New Generation of Mobile Devices, O'Reilly Media; 2 edition</p>				