HANDBOOK

BACHELOR OF INFORMATICS PROGRAM
DEPARTMENT OF INFORMATICS
FACULTY OF INTELLIGENT ELECTRICAL AND INFORMATICS TECHNOLOGY
INSTITUT TEKNOLOGI SEPULUH NOPEMBER

Module name	**Mobile Computing**
Module level	Undergraduate
Code	IF184943
Courses (if applicable)	**Mobile Computing**
Semester	7
Contact person	
Lecturer	Hudan Studiawan, S.Kom., M.Kom.,Ph.D. Baskoro Adi Pratomo S.Kom, M.Kom.
Language	Bahasa Indonesia and English
Relation to curriculum	1. Undergraduate degree program; optional; 7th semester. 2. International undergraduate program; optional; 7th semester.
Type of teaching, contact hours	1. Undergraduate degree program: lectures, < 60 students, 2. International undergraduate program: lectures, < 40 students
Workload	1. Lectures: 3 x 50 = 150 minutes (2 hours 30 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	A student must have attended at least 80% of the lectures to sit in the exams.

regulations		
Mandatory prerequisites	Computer Network	
	After completing this module, a student is expected to:	

Learning outcomes and their corresponding PLOs	**CO1** Students are able to understand concepts and problems in a mobile computing environment and be able to build systems that run in a mobile computing environment. Students are expected to have the ability to build systems that are able to work in a mobile environment with an understanding of technology that supports the development of the system with individual or group performance in teamwork.
Content	Knowledge: • Mastering concept and theory of architecture, system and network computer principles based on logic • Mastering theoretical concepts and fundamentals of net-centric computing and related-recent technologies, in the fields of distributed and mobile computing, multimedia computing, high performance computing along with information and network security • Mastering principles of algorithm development and various programming language concepts Specific Skill: • Able to implement computer architecture and principles of operating system tasks to design, implement and manage network system with high performance, safe, and efficient • Able to implement the concept of net-centric computing, parallel computing, distributed computing for analyzing and

	designing an algorithm which may be used to solve computation problem in various fields.
	• Capable of designing and analyzing of algorithms to solve problems effectively and efficiently based on programming principles, and able to apply programming model in various programming language; and able to choose programming languages in producing appropriate applications
Study and examination requirements and forms of examination	Mid-terms examination and Final examination.
Media employed	LCD, whiteboard, websites, books (as references), etc.
Assessments and Evaluation	
Reading List	Abdessalam Helal, Et.Al," Anytime, Anywhere Computing, Mobile Computing Concepts and Technology" , McGraw-Hill.
	Mobile Computing Principles Designing And Developing Mobile Applications With Uml And Xml and the Environment", Oxford Publisher 2002.
	Location Management and Routing in Mobile Wireless Networks,Amitava Mukherjee, Somprakash Bandyopadhyay, Debashis Saha, Artech House Publisher.
	Andreas Heinemann, Max Muhlhauser", Peer-to-Peer Systems and Application.
	Mohammad Ilyas and Imad Mahgoub, Mobile Computing Handbook, Auerbach PublicationHill et al, "Guide to Cloud Computing, Principles

	and Practice". Springer.Jeniq-Neng Hwang, "Multimedia Networking From Theory to Practice", Cambridge, 2013. ISBN 9780521882040.
	Ze-Nian Li and Mark. S. Drew, "Fundamentals of Multimedia", Prentice- Hall, 2003. ISBN 0130618721.
	W.C. Hardy,"QoS Measurement and Evaluation of Telecommunications Quality of Service", Wiley, 2001. ISBN 0470845910.