HANDBOOK

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

Module name	**Pervasive Computing and Sensor Networks**
Module level	Undergraduate
Code	IF184947
Courses (if applicable)	**Pervasive Computing and Sensor Networks**
Semester	8
Contact person	Dr Eng Radityo Anggoro
Lecturer	Dr Eng Radityo Anggoro
Language	Bahasa Indonesia and English
Relation to curriculum	1. Undergraduate degree program; mandatory; 8th semester. 2. International undergraduate program; mandatory; 8th 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 Networks	
	After completing this module, a student is expected to:	

<table>
<tr><td rowspan="8">Learning outcomes and their corresponding PLOs</td><td>CO1 Students understand and able to apply the concept and techniques of pervasive computing and sensor network.</td><td></td></tr>
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<tr><td>Content</td><td colspan="2">Knowledge:
• Mastering concept and principles of Intelligent System such as representation and reasoning techniques, searching technique, intelligent agent, data mining, machine learning, and development of intelligent application in various fields, and also mastering concept and principles of computation science such as manage information, multimedia data processing, and numerical analysis
• 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 the concepts and principles of computer graphics including modeling, rendering, animation, and visualization, and also mastering the concepts and principles of human computer interaction.
Specific Skill:
• Able to design and develop applications using principles of intelligent systems and computing science to produce intelligent applications in various fields</td></tr>
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	• Able to implement computer architecture and principles of operating system tasks to design, implement and manage network system with high performance, safety, 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. • Able to develop application using computer graphics principles including modeling, rendering, animation, and visualization, implement human computer interaction principles, and evaluate the efficiency of the appropriate interface in the application developed.
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	• Stefan Poslad, Ubiquitous Computing Smart Devices, Environments, and Interaction, JohnWiley&Sons, Ltd., 2009 • Frank Adelstein, Sandeep K. S. Gupta, Golden G. Richard III, Loren Schwiebert, Fundamentals of Mobile and Pervasive Computing, McGraw-Hill, 2005