

HANDBOOK

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

Module name	IoT Technology
Module level	Undergraduate
Code	IF184914
Courses (if applicable)	IoT Technology
Semester	8
Contact person	-
Lecturer	-
Language	Bahasa Indonesia and English
Relation to curriculum	1. Undergraduate degree program; optional; 8 th semester. 2. International undergraduate program; optional; 8 th 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	-
Learning outcomes and their corresponding PLOs	After completing this module, a student is expected to: CO1 Provides knowledge and implementation of wireless sensor networks and uses computational tools that are

	physical, in the sense of developing a wider variety of computer devices that can be used in the physical environment.	
	CO2 Knowing the dispersed technological developments and designed to operate harmoniously in the human and social environment.	
Content	<p>Knowledge:</p> <ul style="list-style-type: none"> • Mastering the concepts and principles of intelligent systems including representation and reasoning techniques, search techniques, agents, data mining, and machine learning, as well as intelligent application development in various fields, and mastering the concepts and principles of computational science including information management, multimedia data processing, and numerical analysis. • Mastering the concepts and principles of architecture, systems and the basics of computer networks based on logic systems. • Master the theoretical concepts and principles of network-based computing and the latest technologies related to it, in the fields of distributed computing and mobile computing, multimedia computing, high-performance computing and information and network security. • Mastering the concepts and principles of computer graphics including modeling, rendering, animation and visualization, as well as mastering the concepts and principles of human and computer interaction. <p>Specific Skill:</p> <ul style="list-style-type: none"> • Able to design and build applications by applying the principles of intelligent systems and computational science to produce smart application products in various fields. • Able to apply computer architecture, operating system working principles to design, implement and manage network systems that have high performance, are safe, and efficient. • Able to apply the concept of network-based computing, parallel computing, distributed computing to analyze and design computational problem solving algorithms in various fields. • Able to build applications using the principles of computer graphics including modeling, rendering, animation and visualization, as well as applying the principles of human and computer interaction as well as evaluating the efficiency to build applications with a suitable interface. 	

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	<p>Stefan Poslad, Ubiquitous Computing Smart Devices, Environments, and Interaction, JohnWiley&Sons, Ltd., 2009</p> <p>Frank Adelstein, Sandeep K. S. Gupta, Golden G. Richard III, Loren Schwiebert, Fundamentals of Mobile and Pervasive Computing, McGraw-Hill, 2005</p>