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

Module name	**Introduction to Computer Science**	
Module level	Undergraduate	
Code	MII-1205	
Courses (if applicable)	**Introduction to Computer Science**	
Semester	Fall (Gasal)	
Contact person	Aina Musdholifah, Ph.D.	
Lecturer	Aina Musdholifah, Ph.D.	
Language	Bahasa Indonesia and English	
Relation to curriculum	Undergraduate degree program, compulsary, 1st semester	
Type of teaching, contact hours	Undergraduate degree program: lectures, 36 students, Tuesdays, 14.00-16.30.	
Workload	1. Lectures: 3 x 50 = 150 minutes (2.5 hours) 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	None	
Learning outcomes and their corresponding PLOs	After completing this module, a student is expected to: **LO-1** be able to explain the basic concept of computer, computer code, role of computer, and technology of computer. **LO-2** master the basic concept of information theory **LO-3** be able to explain how the hardware and software works, and to identify the types and functions of each items in the computer. **LO-4** master the representation of data and number. **LO-5** be able to explain the basic concept of analog and digital, digital media, a bit of spreadsheets **LO-6** master internet and its technology **LO-7** be able to understand the concept of computer security and to identify any types of computer security attacks **LO-8** be able to explain computer science as a science, the trend and challenges of computer science.	 PLO2 PLO2 PLO3 PLO3 PLO2 PLO2 PLO2 PLO9
Content	This course provides an introduction to computer science both in terms of technology and science. Topics given in this	

	course include how to work computer and program code, information theory, how to work computer hardware, representation of numbers, how to work computer software, how the internet work and how digital images and explanation of computer science as a science.
Study and examination requirements and forms of examination	Mid-terms examination and Final examination.
Media employed	LCD, blackboard, websites, and e-learning.
Assessments and Evaluation	**LO1**: problem 1 in Midterm Exam (5%) **LO2**: problem 2 in Midterm Exam (5%) **LO3**: problem 4 in Midterm Exam (5%), and Quiz 2 – Case Study (5%) **LO4**: problem 3 in Midterm Exam (5%), task 1 – Case Study (10%), Quiz 1 (5%), and problem 1 and 2 in Final Exam (10%) **LO5**: problem 3 in Final Exam (5%), and Quiz 2 – Case Study (5%) **LO6**: problem 4 in Final Exam (5%), and task 2 – Group Work (5%) **LO7**: problem 5 in Final Exam (5%), and task 3 – Case Study (5%) **LO8**: review paper (20%)
Reading List	David Reed. A Balanced Introduction of Computer Science. Prentice Hall, 2004. Garry B. Shelly and Misty E. Vermaat. Discovering Computers 2011: Living in a Digital World. Course Technology, Cengage Learning. 2011. David R. O'Hallaron. Computer Systems: A Programmer's Perspective, 2nd Edition. Pearson Publisher, 2010.