UNDERGRADUATE PROGRAM IN COMPUTER SCIENCE
DEPARTMENT OF COMPUTER ENGINEERING
FACULTY OF INTELLIGENT ELECTRICAL AND INFORMATICS TECHNOLOGY

Module name	**Soft computing dan Deep Learning**	
Module level	Undergraduate	
Code	EC184946	
Courses (if applicable)	Soft computing dan Deep Learning	
Semester	Elective	
Contact person	*Prof M Hery Purnomo*	
Lecturer	Muhtadin, ST. MSc.	
Language	[Indonesia / English]	
Relation to curriculum	Undergraduate degree program, *Elective*	
Type of teaching, contact hours	Lecture, < 60 students, 170 Minutes * 3 SKS	
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.	
Mandatory prerequisites		
Learning outcomes and their corresponding PLOs	CLO 1 Students can capture problems from the available data as well as the expected solution plan CLO 2 Students can understand the concept and workings of various optimization algorithms CLO 3 Students can explain and apply the concept of optimization algorithms combined with machine learning for problem-solving CLO 4 Students can explain and implement the concept of deep learning for problem-solving	PLO 3 PLO 4 PLO 5 PLO 6
Content	In this course, students are able to explain the concepts and models of various soft computing and deep learning, the approaches to solve various case studies	

Study and examination requirements and forms of examination	• *In-class exercises* • *Quiz 1 and 2* • *Assignment 1, 2, 3* • *Mid-term examination* • *Final examination*
Media employed	*LCD, whiteboard, websites (myITS Classroom).*
Reading List	Ian Goodfellow, Deep Learning, MIT Press