Module Description

Module name	Specific Topic in Artificial Intelligence
Module level, if applicable	Bachelor of Informatics
Code, if applicable	21D12143403
Subtitle, if applicable	-
Course, if applicable	
Semester(s) in which the module is taught	6th or 7th
Person responsible for the module	Dr. Indrabayu.,ST., MT., M.Bus.Sys
Lecturer	Dr. Indrabayu.,ST., MT., M.Bus.Sys Anugrayani Bustamin., ST,. MT
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is an elective course and offered in the 6th or 7th semester.
Type of teaching, contact hours	Teaching methods: [group discussion], [project-based learning]. Teaching forms: [lecture], [tutorial]. CH : 8.00 - 16.00
Workload	For this course, students are required to meet a minimum of 136.00 hours in one semester, which consists of: - 40.00 hours for lecture, - 48.00 hours for structured assignments, - 48.00 hours for private study
Credit points	3 credit points (equivalent with 5.1 ECTS)
Requirements	Students must have attended all minimum 80% of classes and submitted

according to the examination regulations	all class assignments that are scheduled before the final tests.
Recommended prerequisites	Applied Artificial Intelligence, Artificial Intelligence
Module objectives/intended learning outcomes	**Intended Learning Outcomes (ILO):** **ILO 3:** apply the knowledge of computing and other related disciplines to analyse and identify solutions for any computing-based problem **ILO 7 :** Perform a logical systematic procedure to solve problems, then communicate their ideas in a convincing and effective manner, either in written or orally, to propose solutions. **Course Learning Objective (CLO):** After completing the course, students should be able to explain and understand trends in advanced Artificial Intelligence. The content of this course is the algorithm and artificial intelligence, which is a continuation of the Artificial Intelligence and Applied Artificial Intelligence courses. CLO 1 → ILO 3: Students can understand the history and current trends of Artificial Intelligence CLO 2 → ILO 3: Students can describe Convolutional Neural Networks Architecture. CLO 3 → ILO 7: Students can present their idea about Special Topics in Image/Video Processing for Agrocomplex, Animal Husbandary, Face Detection and Intelligent Transport System
Content	Students will learn about : - History and current trends of Artificial Intelligence - Convolutional Neural Network Architecture - Applied Decision Support Systems - Special Topics in Image Processing for Agrocomplex - Special Topics Image Processing for Animal Husbandry - Special Topics Video Processing (Face Detection) - Special Topics Video Processing (Intelligent Transport System)
Forms of Assessment	Assessment techniques:[participation], [written test]. Assessment forms: [midterm exam], [assignment], [presentation].

	ILO 3=> CLO 1: 30% (midterm exam: written test) ILO 3 => CLO 2: 30% (assignment: participation) ILO 7 => CLO 4: 40% (presentation: observation)
Study and examination requirements and forms of examination	**Study and examination requirements:** - Students must attend 15 minutes before the class starts. - Students must switch off all electronic devices. - Students must inform the lecturer if they will not attend the class due to sickness, etc. - Students must submit all class assignments before the deadline. - Students must attend the exam to get a final grade. **Form of examination:** Presentation
Media employed	Video conference, slide presentation, google colab, Learning Management System (LMS)
Reading list	**Main :** 1. Bishop, C.M., *Pattern Recognition and Machine Learning*, Springer: 2006. **Support :** 1. Sarkar, Dipanjan. Bali, Raghav. And Ghosh, Tamogha. 2018. *Hands-On Transfer Learning with Python Implement Advanced Deep Learning and Neural Network Model Using TensorFlow and Keras.* Packt Publishing 2. Indrabayu. Zamman. Baizul, Ilham. Amil Ahmad, and Areni. Intan Sari, 2015. *Prediction of Reagents Needs Using Radial Basis Function in Teaching Hospital*. Journal of Engineering and Technology. Vol 7 No 4. 3. C. Yohannes, Indrabayu, Ingrid Nurtanio, Reza Maulana, Intan Sari Areni, and Elly Warni. 2016. *Apriori Algorithm for Surgical Consumable Material Standardization*. International Organization of Scientific Research (IOSR). Vol 18 No 6 4. Indrabayu, Mar'atuttahirah, and Intan Sari Areni. 2019. *Automatic counting of chili ripeness on computer vision for industri 4.0*. IEEE International Conference on Industry 4.0, Artificial Intelligence and Communications Technology. 5. Intan Sari Areni. Sri Wahyuni. And Indrabayu. 2017. *Solution to Abbreviated Words in Text Messaging for Personal Assistant Application.* International Seminar on Application for technology of Information and Communication (iSemantic 2017)