Module Description

Module name	Specific Topic in Artificial Intelligence
Module level, if applicable	Bachelor of Informatics
Code, if applicable	417D4233
Subtitle, if applicable	-
Course, if applicable	
Semester(s) in which the module is taught	6th/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 2:** Have the knowledge of advanced topics in an Informatics specific fields of either Artificial Intelligence, Data Science, Computer Network, Cloud Computing or Internet of Things. **ILO 7 :** 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 2 : Students can understand the history and current trends of Artificial Intelligence CLO 2 → ILO 2: 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 2 => CLO 1: 30% (midterm exam: written test) ILO 2 => 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, Google Colab, and PowerPoint Presentation.
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)