Module Description

Module name	Virtualization and Cloud Computing
Module level, if applicable	Bachelor of Informatics
Code, if applicable	21D12131004
Subtitle, if applicable	-
Course, if applicable	-
Semester(s) in which the module is taught	6th
Person responsible for the module	Dr. Eng. Ir. Muhammad Niswar, S.T., M.InfoTech.
Lecturer	1. Dr. Eng. Ir. Muhammad Niswar, S.T., M.InfoTech. 2. Dr.Eng Ady Wahyudi Paundu, ST.,MT. 3. A. Ais Prayogi, ST., M.Eng
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is a compulsory course for the Cloud Computing and Big Data research group and is offered in the 6th semester.
Type of teaching, contact hours	Teaching methods: [group discussion], [collaborative learning]. Teaching forms: [lecture]. CH : 08.00 - 16.00
Workload	For this course, students are required to meet a minimum of 181.33 hours in one semester, which consist of: - 53.33 hours for lecture, - 64 hours for structured assignments, - 64 hours for private study,
Credit points	4 credit points (equivalent with 6.8 ECTS)
Requirements	Students have participated in at least 80% of the learning activities

according to the examination regulations	(Academic Regulations, Chapter VII)
Recommended prerequisites	Operating System, Computer Architecture and Organization, Computer Network
Module objectives/intended learning outcomes	After completing the course, Students are able: **Intended Learning Outcomes (ILO):** **ILO 2 :** Have the knowledge of basic entrepreneurship, full technology stack and web development. [ILO2]-K **ILO 4 :** Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements by applying computer science theory and software development fundamentals. [ILO4] - C **ILO 6 :** Perform effectively in a team, either as a member or leader, in activities related to the program's discipline. [ILO6] - C **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. [ILO7]-S **Course Learning Objective (CLO):** After attending the Virtualization and Cloud Computing Course for one semester, students have knowledge about cloud computing. Students have the ability to implement problems related to cloud computing by demonstrating good performance both independently and in a team in solving problems. **Sub CLO:** ILO 2 ⇒ CLO 1: Students have knowledge of specific topics in informatics engineering field at cloud computing field (K) ILO 4 ⇒ CLO 2: Students able to design, implement and evaluate computer based solution by implementing cloud computing theory (C) ILO 6 ⇒ CLO 3: Students able to work in team in activities that related to cloud computing

	ILO 7 ⇒ CLO 4: Students are able to communicate their ideas to solve problem that relate to cloud computing (S)
Content	Students will learn about : 1. Introduction to Cloud Computing 2. Cloud Computing Computer Network Theory 3. Cloud Computing Visualization Services 4. Cloud Computing Storage Services 5. Cloud Computing Database Services 6. Cloud Computing Automatic System
Forms of Assessment	Assessment techniques: [observation], [participation], [written test]. Assessment forms: [quiz], [final term exam], [presentation]. Quiz = 35%, Final term exam = 15%, Presentation = 50% CLO 1 ⇒ ILO 2: 35% Quiz + 15% Exam (Quiz and Final term exam: written test) CLO 2 ⇒ ILO 4: 10% (Presentation: observation) CLO 3 ⇒ ILO 6: 20% (Presentation: observation) CLO 4 ⇒ ILO 7: 20% (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:** Written test
Media employed	Video conference, slide presentation, Learning Management System (LMS)
Reading list	**Main :** Cloud Computing Implementation, Management, and Security **Support :** AWS Certified Cloud Practitioner, 2019