Module Description

Module name	Multimedia Networks
Module level, if applicable	Bachelor of Informatics
Code, if applicable	21D12141303
Subtitle, if applicable	-
Course, if applicable	-
Semester(s) in which the module is taught	7th
Person responsible for the module	Dr. Indrabayu., ST., MT., M.Bus.Sys
Lecturer	1. Dr. Indrabayu., ST., MT., M.Bus.Sys 2. Anugrayani Bustamin., ST., MT
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is an elective course and offered in the 7th semester.
Type of teaching, contact hours	Teaching methods: [group discussion], [case study], [problem-based learning]. Teaching forms: [lecturer], [tutorial] CH : 08.00 - 16.00
Workload	For this course, students are required to meet a minimum of 136.00 hours in one semester, which consist 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 according to the examination regulations	Students have participated in at least 80% of the learning activities (Academic Regulations, Chapter VII)
Recommended prerequisites	-
Module objectives/intended learning outcomes	**Intended Learning Outcomes (ILO):** **ILO 1 :** Have the knowledge of fundamental in Computing Science that includes basic theory and concepts of computer science, Mathematics and Statistics, Programming Algorithm, Software Engineering, Information Management and Digital Resilience, also the advance topics of either Artificial Intelligence, Data Science, Computer Network, Cloud Computing or Internet of Things. **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. **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 Multimedia Network Course for one semester, students are able to master the theory of applying multimedia data transmission over a network by utilizing computational and mathematical sciences with logical and systematic thinking independently. ILO 1 => CLO 1: Students are able to understand the basics of multimedia and compression. ILO 1 => CLO 2: Students are able to describe the trend in multimedia networking ILO 4 => CLO 3: Students are able to recognize the trade-offs of efficiency and performance in multimedia networks. ILO 7 => CLO 4: Students are able to explain multimedia encryption techniques and QoS of multimedia networks.
Content	Students will learn about :

	1. Basic introduction to multimedia 2. Multimedia network media shift (ethernet, ATM, ADSL) 3. Multimedia Encryption Technique 4. Efficiency and performance trade-offs in multimedia networks 5. Multimedia network QoS 6. Network Analysis with OpNet 7. Walsh-Hadamard Transform
Forms of Assessment	Assessment techniques: [participation],[written test] Assessment forms: [midterm exam], [assignment], [presentation] ILO 1 => CLO 1: 30% (midterm exam: written test) ILO 1 => CLO 2: 20% (assignment: participation) ILO 4 => CLO 3: 20% (assignment: participation) ILO 7 => CLO 4: 30% (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 exam: Essay and multiple choice
Media employed	Video conference, slide presentation, Learning Management System (LMS).
Reading list	**Main :** 1. Kurose, J. F dan Ross,K. W. "Computer Networking- A Top Down Approach" Pearson 2013