Module Description

Module name	Web Programming
Module level, if applicable	Bachelor of Informatics
Code, if applicable	21D12130403
Subtitle, if applicable	-
Course, if applicable	-
Semester(s) in which the module is taught	5th
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. Dr.Eng. Ir. Zulkifli Tahir, ST.,M.Sc. 4. Ais Prayogi A. ST. M.Eng. 5. Iqra' Aswad, S.T., M.T 6. Muhammad Alief Fadhal Imran Oemar, S.T., M.Sc
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is a compulsory course and offered in the 5th semester.
Type of teaching, contact hours	Teaching methods: [group discussion], [simulation], [collaborative learning], [problem-based learning]. Teaching forms: [lecture], [tutoria], [practicum]. 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 must have attended all minimum 80% of classes and submitted all assignments before the final exam.
Recommended prerequisites	Basic of Multimedia, Computer Architecture, Computer Networks, Operating System.
Module objectives/intended learning outcomes	After completing the course, Students are able: **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 eitherArtificial 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 this course, students should be able to understand the basic concepts of internet communication and web programming and create a web application using HTML, CSS, and JavaScript. **Sub CLO :** ILO 1 ⇒ CLO 1 : Students can understand the Concept of Internet communication and Web Programming. ILO 4 ⇒ CLO 2 : Students can write HTML, CSS, JavaScript code for creating a web application and evaluate the performance of the web

	application. ILO 7 ⇒ CLO 3 : Students can complete the programming assignment, meet a given set of requirements and present the result to the lecturer and other students.
Content	Students will learn about : 1. Introduction to Internet and Web Programming 2. Hypertext Markup Language (HTML) Basics 3. Cascading Style Sheets (CSS) Basics 4. HTML and CSS implementation 5. Responsive Design using CSS 6. Introduction to JavaScript: lexical structure, type, values, variable, expression, operators, arrays, object, and function, DOM, JSON 7. JavaScript OOP and Asynchronous Programming 8. Node.js: JavaScript on the server side 9. REST API 10. REACT
Forms of Assessment	Assessment techniques: [observation], [participation], [written test]. Assessment forms: [final term exam], [assignment], [presentation]. Final term exam = 40%, Assignment = 50%, Presentation = 10% CLO 1 => ILO 1: 40% (Final term exam: written test) CLO 2 => ILO 4: 50% (Assignment: participation) CLO 3 => ILO 7: 10% (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 question answer

Media employed	Video conference, Slide Presentation, Learning Management System (LMS).
Reading list	**Main :** 1. Niederst Robbins, Jennifer., "Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics", O'Reilly Media (2018) 2. David Flanagan., "JavaScript: Definitive Guide: Master the World's Most-Used Programming Language", O'Reilly Media (2020) **Support :** 1. https://www.w3schools.com/default.asp HTML The language for building web pages 2. https://reactjs.org/ React A JavaScript library for building user interfaces