



**UNIVERSITAS MATARAM**  
*(University of Mataram)*  
**FAKULTAS TEKNIK**  
*(Faculty of Engineering)*  
**PROGRAM STUDI TEKNIK INFORMATIKA**  
*(Department of Informatics Engineering)*

**MODULE HANDBOOK DESCRIPTION**

Project in Emerging Technology (P22C10)

Module designation	Project in Emerging Technology
Semester(s) in which the module is taught	<i>6 / third year</i>
Person responsible for the module	<i>Dr. Eng. Wirarama Wedashwara, S.T., M.T.</i>
Language	<i>Indonesian</i>
Relation to curriculum	<i>Compulsory</i>
Teaching methods	<i>Lectures, Discussions, Case Studies, Project</i>
Workload (incl. contact hours, self-study hours)	Contact Hours every week, each week of the 16 weeks/semester including Evaluation <ul style="list-style-type: none"> <li>● 2 x 50 minutes lecturer/week</li> <li>● 2 x 60 minutes class exercise/week</li> <li>● Self Study hours = 120 minutes/week</li> </ul> Total workload 340 minutes/week
Credit points	<i>2 (~ 3,2 ECTS)</i>
Required and recommended prerequisites for joining the module	-

Module objectives/intended learning outcomes	This course is designed to provide students with hands-on experience in developing and implementing projects utilizing emerging technologies such as Artificial Intelligence (AI), Internet of Things (IoT), Blockchain, Cloud Computing, and Augmented Reality (AR). The course enables students to explore innovative solutions to real-world challenges using the latest technological advancements.
Content	<ol style="list-style-type: none"> <li>1. Introduction to Emerging Technologies</li> <li>2. Project Ideation and Problem Identification</li> <li>3. Artificial Intelligence (AI) in Emerging Technologies</li> <li>4. Internet of Things (IoT) and Smart Systems</li> <li>5. Blockchain and Decentralized Applications</li> <li>6. Cloud Computing and Edge Computing</li> <li>7. Augmented Reality (AR) and Virtual Reality (VR)</li> <li>8. Project Development and Implementation</li> <li>9. Security, Privacy, and Ethical Considerations</li> <li>10. Project Finalization and Presentation</li> </ol>
Examination forms	<i>Assignments, Quizzes, Case Studies, Final Project</i>
Study and examination requirements	<i>Assignments: 15%</i> <i>Quizzes: 20%</i> <i>Case Studies: 30%</i> <i>Final Project: 35%</i>
Reading list	<ol style="list-style-type: none"> <li>1. Russell, S., &amp; Norvig, P. (2020). <i>Artificial Intelligence: A Modern Approach</i> (4th Edition). Pearson.</li> <li>2. Bahga, A., &amp; Madisetti, V. (2015). <i>Internet of Things: A Hands-On Approach</i>. VPT.</li> <li>3. Nakamoto, S. (2008). <i>Bitcoin: A Peer-to-Peer Electronic Cash System</i>.</li> <li>4. Erl, T. (2019). <i>Cloud Computing: Concepts, Technology &amp; Architecture</i>. Prentice Hall.</li> <li>5. Milgram, P. (1994). <i>A Taxonomy of Mixed Reality Visual Displays</i>. IEEE.</li> </ol>