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	*6 / third year*
Person responsible for the module	*Dr. Eng. Wirarama Wedashwara, S.T., M.T.*
Language	*Indonesian*
Relation to curriculum	*Compulsory*
Teaching methods	*Lectures, Discussions, Case Studies, Project*
Workload (incl. Contact hours, selfstudy hours)	Contact Hours every week, each week O f the 16 weeks/semester including Evaluation ● 2 x 50 minutes lecturer/week ● 120 minutes class exercise/week ● Self Study hours = 150 minutes/week ● Midterm Exam = 60 minutes ● Final Exam = 60 minutes Total workload 88,33 hours/semester
Credit points	*2 (~ 3,53 ECTS)*
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	1. Introduction to Emerging Technologies 2. Project Ideation and Problem Identification 3. Artificial Intelligence (AI) in Emerging Technologies 4. Internet of Things (IoT) and Smart Systems 5. Blockchain and Decentralized Applications 6. Cloud Computing and Edge Computing 7. Augmented Reality (AR) and Virtual Reality (VR) 8. Project Development and Implementation 9. Security, Privacy, and Ethical Considerations 10. Project Finalization and Presentation
Examination forms	*Assignments, Quizzes, Case Studies, Final Project*
Study and examination requirements	*Assignments: 15%* *Quizzes: 20%* *Case Studies: 30%* *Final Project: 35%*
SDG Issues	*11. Sustainable Cities and Communities* This course provide knowledge to develop emerging technology to support smart infrastructure and build smart community
Reading list	1. Russell, S., & Norvig, P. (2020). Artificial Intelligence: A Modern Approach (4th Edition). Pearson. 2. Bahga, A., & Madisetti, V. (2015). Internet of Things: A Hands-On Approach. VPT. 3. Nakamoto, S. (2008). Bitcoin: A Peer-to-Peer Electronic Cash System. 4. Erl, T. (2019). Cloud Computing: Concepts, Technology & Architecture. Prentice Hall. 5. Milgram, P. (1994). A Taxonomy of Mixed Reality Visual Displays. IEEE.