21B33C507 – Software Testing

Module designation	Software Testing (Undergraduate)
Semester(s) in which the module is taught	5th
Person responsible for the module	Ayu Widya Listari, S.Pd., M.Pd
Language	Indonesia – English
Relation to curriculum	This course is an elective course
Teaching methods	Lecture, Presentation
Workload (incl. contact hours, self-study hours)	CH: 09.00-17.00 Face to face: 3x50 minutes / week Independent Study: 3x50 minutes / week Structured assignment: 3x50 minutes / week
Credit points	3 SKS (equivalent 5.1 ECTS)
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	**Program Learning Outcomes (PLO)** PLO 2: Working together and having social sensitivity and concern for society and the environment; PLO 5: Mastering research methodology in the field of informatics and computers; PLO 5: Master the basics of algorithms and programming to help solve problems; PLO 5: Able to design, engineer and implement software; PLO 7: Apply logical, critical, systematic and innovative thinking in the context of developing or implementing science and/or technology in accordance with the fields of informatics and computer engineering; **Course Learning Objectives (CLO)** The Discrete Mathematics course is one of the basic courses in the Information and Computer Technology Education Undergraduate Study Program. This course aims to explain quality dimensions, software

	sources, testing, production phase, software, task acceptance testing, black box and white box testing. **Sub CLO:** Sub-CLO 1: Able to explain the basics of Testing and Implementation of Information Systems Sub-CLO 2: Able to explain the quality aspects Sub-CLO 3: Have the ability to explain issues surrounding Testing and Testability Sub-CLO 4: Have the ability to explain the concept of Testability Sub-CLO 5: Able to create strategies in the testing process and test cases Sub-CLO 6 Able to solve problems in program case studies Sub-CLO 7 Able to explain the Unit Testing process from largest to smallest Sub-CLO 8 Able to explain Procedural and Object Oriented Testing Sub-CLO 9 Able to explain the documentation of a test Sub-CLO 10 Able to explain the task acceptance system Sub-CLO 11 Able to explain system implementation strategies Sub-CLO 12 Able to explain system maintenance strategies Sub-CLO 13 Able to solve project case study problems
Content	Students will learn about: ● Introduction to Testing and Implementation of Software and Information Systems ● Basics of software quality and testing; Software quality management ● Testing ● Testability ● Software testing strategy and test cases ● Procedural Testing and Object Oriented Testing ● System Acceptance Task; System Implementation Strategy; System Maintenance Strategy
Examination forms	Assessment Techniques: Exam, Presentation, Case Based Learning Assessment Forms: Assignment, Presentation Assessment
Study and examination requirements	● Students have to inform the lecturer when they are not able to attend the class due to sickness etc ● Active in making projects by showing participation in making projects in class ● Able to present and answer questions that exist during project presentations
Reading List	● Software Testing: Concepts and Operations, Ali Mili and Fairouz Tchier ● Homes, Bernard. 2012. Fundamentals of software Testing. Hoboken : John Wiley & Sons, Inc ● Software Engineering and Testing, B.B Agarwal, S. P. Tayal, M. Gupta. ● Widyawati, dkk. 2022. Rekayasa Perangkat Lunak. Bandung: CV. Widina Media Utama