



Module Description

Module name	Object-Oriented Programming
Module level, if applicable	Bachelor of Informatics
Code, if applicable	21D12120403
Subtitle, if applicable	-
Course, if applicable	-
Semester(s) in which the module is taught	3 rd
Person responsible for the module	Dr. Eng. Muhammad Niswar., ST., MIT
Lecturer	<ol style="list-style-type: none"> 1. Dr. Eng. Muhammad Niswar., ST., MIT 2. Dr. Ir. Zahir Zainuddin., M.Sc 3. Elly Warni., ST., MT 4. A. Ais Prayogi Alimuddin., ST., M.Eng 5. Iqra Aswad, S.T., M.T
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is a compulsory course and offered in the 3 rd semester.
Type of teaching, contact hours	<p>Teaching methods: [group discussion], [simulation], [case study], [collaborative learning], [problem-based learning].</p> <p>Teaching forms: [lecture], [tutorial], [practicum]. CH : 08.00 - 16.00</p>
Workload	<p>For this course, students are required to meet a minimum of 136.00 hours in one semester, which consist of:</p> <ul style="list-style-type: none"> - 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	Algorithm and Data Structure
Module objectives/intended learning outcomes	<p>After completing the course, Students are able:</p> <p>Intended Learning Outcomes (ILO):</p> <p>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.</p> <p>ILO 3 : Apply the knowledge of computing and other related disciplines to analyze and identify solutions for any computing-based problem.</p> <p>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.</p> <p>Course Learning Objective (CLO): After completing the course, students should be able to understand the basic concepts of object oriented programming and solve any computing-based problem using object-oriented approach.</p> <p>Sub CLO : ILO 1 => CLO 1 : Students should be able to understand the concept of object-oriented programming including class, object, encapsulation, inheritance, and polymorphism. ILO 3 => CLO 2 : Students should be able to apply the knowledge of the concept of Unified Modeling Language (UML), common class, Testing, Debugging, Unit Testing, Automation. ILO 4 => CLO 3 : Students should be able to design and implement an</p>



	application program using an object-oriented approach.
Content	<p>Students will learn about :</p> <ol style="list-style-type: none"> 1. Introduction to object-oriented programming 2. Basic java programming 3. Object-oriented programming concepts (class, object, encapsulation, inheritance, polymorphism) 4. Unified Modeling Language (UML) 5. Common class 6. Testing, Debugging, Unit Testing, and Automation
Forms of Assessment	<p>Assessment techniques: [observation], [participation], [written test].</p> <p>Assessment forms: [midterm exam], [final term exam], [assignment], [presentation]</p> <p>Mid-term Exam = 30%, Final exam = 40%, Assignment = 20%, Presentation = 10%</p> <p>CLO 1 => ILO 1: 70% (Mid and Final term exam: written test) CLO 2 => ILO 3: 20% (Assignment: participation) CLO 3 => ILO 4: 10% (Presentation: observation)</p>
Study and examination requirements and forms of examination	<p>Study and examination requirements:</p> <ul style="list-style-type: none"> - 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. <p>Form of examination: Written exam: Essay</p>
Media employed	Video conference, slide presentation, Learning Management System (LMS).



Reading list	Main : <ol style="list-style-type: none"><li data-bbox="532 247 1341 317">1. Introduction to Object Oriented Programming with Java (C. Thomas Wu)<li data-bbox="532 325 1406 394">2. A Comprehensive Introduction to Object Oriented Programming with Java (C. Thomas Wu)<li data-bbox="532 403 1289 436">3. Object First with Java (David Barnes, Michael Kolling)
---------------------	--