



Module Description

Module name	Basic Computer Programming
Module level, if applicable	Bachelor of Informatics
Code, if applicable	21D12110203
Subtitle, if applicable	-
Course, if applicable	-
Semester(s) in which the module is taught	1 st
Person responsible for the module	Dr. Ir. Ingrid Nurtanio, MT.
Lecturer	<ol style="list-style-type: none"> 1. Dr. Ir. Ingrid Nurtanio, MT. 2. Adnan., ST., MT., PhD 3. Dr. Ir. Zahir Zainuddin, MSc. 4. Ir. Christoforus Yohannes, MT.
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is a compulsory course and offered in the 1 st semester.
Type of teaching, contact hours	Teaching methods: [case study], [problem-based learning]. Teaching forms: [lecture], [tutorial], [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: <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)



<p>Requirements according to the examination regulations</p>	<p>Students have participated in at least 80% of the learning activities (Academic Regulations, Chapter VII)</p>
<p>Recommended prerequisites</p>	<p>-</p>
<p>Module objectives/intended learning outcomes</p>	<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 attending this course for one semester, students are expected to be able to explain the basic concepts of programming using the C language, and create basic application programs using the basic instructions in the C language library.</p> <p>Sub CLO : ILO 1 => CLO 1: Students are able to explain the types of devices on a computer, the C programming language, and its components. ILO 3 => CLO 2: Students are able to make simple programs using data types, conditions, and loops. ILO 4 => CLO 3: Students are able to complete case studies and manipulate programs using the concept of pointers.</p>
<p>Content</p>	<p>Students will learn about :</p> <ol style="list-style-type: none"> 1. Definition of hardware, software, and language on computers.



	<ol style="list-style-type: none"> 2. The evolution of computer languages. 3. Concepts and how programs work on computers. 4. History, program structure and basic syntax of C language. 5. Data types, variables, constants and literals, operators 6. Decision Making and loops 7. Functions 8. Arrays 9. Pointers 10. Strings and Structures 11. File Structure. 12. Simple Problem Analysis and Program Solution.
<p>Forms of Assessment</p>	<p>Assessment techniques: [participation], [written test].</p> <p>Assessment forms: [quiz], [midterm exam], [final term exam], [assignment].</p> <p>Quiz 1 = 5%, Quiz 2 = 5%, Quiz 3 = 5%, Quiz 4 = 5%, Mid term exam = 30% Final term exam = 30%, Assignment 1 = 5%, Assignment 2 = 5%, Assignment 3 = 5%, Assignment 4 = 5%.</p> <p>CLO 1 => ILO 1: 40% (Assignment: participation, Quiz: written test) CLO 2 => ILO 3: 30% (Mid term exam : written test) CLO 3 => ILO 4: 30% (Final term exam: written test)</p>
<p>Study and examination requirements and forms of examination</p>	<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. <p>Form of examination: Written exam: Essay, multiple choice,</p>
<p>Media employed</p>	<p>Video conference, slide presentation, Learning Management System (LMS).</p>
<p>Reading list</p>	<p>Main :</p> <ol style="list-style-type: none"> 1. Kernighan Brian W., Ritchie Dennis M., 1988, <i>The C Programming Language</i>, Second Edition, AT & T Bell



	<p>Laboratories, Murray Hill, New Jersey, Prentice Hall, Englewood Cliffs, New Jersey.</p> <ol style="list-style-type: none">2. www.tutorialspoint.com, Learn C Programming, C Programming Language, tutorialspoint simply easy learning. <p>Support :</p> <ol style="list-style-type: none">1. Daniel Appleman, 1994, How Computer Programming Works, Ziff Davis Press, California
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