



Module Description

Module name	Research Methods
Module level, if applicable	Bachelor of Informatics
Code, if applicable	21D12130703
Subtitle, if applicable	-
Course, if applicable	-
Semester(s) in which the module is taught	5 th
Person responsible for the module	Dr. Amil Ahmad Ilham., ST., MIT
Lecturer	<ol style="list-style-type: none"> 1. Dr. Amil Ahmad Ilham., ST., MIT 2. Dr. Eng. Muhammad Niswar., ST., MIT 3. Dr. Ir. Ingrid Nurtanio., MT 4. Dr. Indrabayu., ST., MT., M.Bus.Sys 5. Adnan., ST., MT., PhD 6. Dr. Eng. Zulkifli Tahir., ST., M.Sc
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is a compulsory course and offered in the 5 th semester.
Type of teaching, contact hours	Teaching methods: [case study], [problem-based learning]. Teaching forms: [lecture], [tutorial], [research]. CH : 08.00 - 16.00
Workload	For this course, students are required to meet a minimum of 136 hours in one semester, which consist of: <ul style="list-style-type: none"> - 40 hours for lecture, - 48 hours for structured assignments, - 48 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	-
Module objectives/intended learning outcomes	<p>Intended Learning Outcomes (ILO): After completing this course, students are able to:</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 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>ILO 5: Accomplish the tasks within their professional responsibilities based on legal and ethical principles.</p> <p>ILO 7: Perform a logical systematic procedure to solve problems, then communicate their ideas in a convincing and effective manner, either in written or orally, to propose solutions.</p> <p>Course Learning Objective (CLO): After completing this course, students can understand important things related to research (from problem formulation to drawing conclusions), design a final project research proposal, communicate the proposal to other parties and understand ethics in research.</p> <p>ILO 1 ⇒ CLO 1: Students can understand important things related to research such as problem formulation, objectives, methods, data collection techniques, data analysis and interpretation and drawing conclusions.</p>



	<p>ILO 4 ⇒ CLO 2: Students can design and write a final project research proposal which includes the formulation of the problem, objectives, related work, proposed methods, proposed data collection techniques and proposed data analysis and interpretation techniques.</p> <p>ILO 5 ⇒ CLO 3: Students can understand legal and ethical principles in research.</p> <p>ILO 7 ⇒ CLO 4: Students can communicate the proposal to other parties.</p>
<p>Content</p>	<p>Students will learn about :</p> <ol style="list-style-type: none"> 1. Definition of research and the importance of research activities. 2. Kinds and steps of research methods 3. Research problem formulation 4. Thinking Framework and Hypotheses 5. Variables and how to measure them 6. Research object and method 7. Sources and Data Collection Techniques 8. Case Studies with Individual Research 9. Data Analysis and Interpretation 10. Research Conclusions and Implications 11. Research Report Writing
<p>Forms of Assessment</p>	<p>Assessment techniques: [observation], [written test].</p> <p>Assessment forms: [quiz], [final term exam], [report], [presentation].</p> <p>Final term exam = 30%, Report = 30%, Quiz = 20%, Presentation = 20%</p> <p>CLO 1 ⇒ ILO 1: 30% (Final term exam: written test)</p> <p>CLO 2 ⇒ ILO 4: 30% (Report: observation)</p> <p>CLO 3 ⇒ ILO 5: 20% (Quiz: written test)</p> <p>CLO 4 ⇒ ILO 7: 20% (Presentation: observation)</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.



	<ul style="list-style-type: none"> - Students must submit all class assignments before the deadline. - Students must attend the exam to get final grade. <p>Form of examination: Written test</p>
Media employed	Video conference, slide presentation, Learning Management System (LMS)
Reading list	<p>Main : Suryana, Prof., Dr., 2010, <i>Metodologi Penelitian, Model praktis penelitian kuantitatif & kualitatif</i>, Universitas Pendidikan Indonesia.</p>