

## Module Handbook of Research Methodology

Module designation	The Research Methodology course is designed to provide students with a comprehensive understanding of the essential principles, techniques, and tools required to conduct research effectively across various disciplines. The course emphasizes the systematic and scientific approach to inquiry, equipping students with the skills necessary to plan, execute, analyse, and report research findings.
Semester(s) in which the module is taught	Fifth Semester
Person responsible for the module	Prof. Ir. Irfan D. Prijambada, M.Eng., Ph.D.
Language	Bahasa Indonesia/Indonesian Language
Relation to curriculum	<i>Compulsory Course</i>
Teaching methods	<p>Lecture are conducted in the class with 30-40 students. In every meeting, there will be delivered interactive lecture and discussion. In some topics there will be quizzes, individual and/or group assignment.</p> <p>Details:</p> <ol style="list-style-type: none"> <li>1. Lectures</li> <li>2. Assignment (Individual and Group)</li> <li>3. Discussion</li> <li>4. Midterm</li> <li>5. Final Exam</li> </ol>
Workload (incl. contact hours, self-study hours)	<ul style="list-style-type: none"> <li>- Lectures = 2 SKS x 50 minutes x 16 meetings = 1.600 minutes = 26,67 hours = 26,67 hours/27,1 hours = 0,98 ECTS</li> <li>- Assignment = 2 SKS x 60 minutes x 16 meetings = 1.920 minutes = 32 hours = 32 hours/27,1 hours = 1,18 ECTS</li> <li>- Self Study = 2 SKS x 60 minutes x 16 meetings = 1.920 minutes = 32 hours = 32 hours/27,1 hours = 1,18 ECTS</li> </ul> <p>Total Workload = 3,34 ECTS</p>
Credit points	<i>2/0 Credit Points</i>
Required and recommended prerequisites for joining the module	<i>None</i>

Module objectives/intended learning outcomes	<p><i>Program Learning Outcomes (PLO):</i></p> <p><i>PLO1: Demonstrate truthful and responsible attitude, self-confidence, emotional maturity, ethical, and consciousness as a lifelong learner.</i></p> <p><i>PLO2: Competent to implement logical, critical, systematic, and innovative thinking by employing information technology to produce solutions based on expertise with integrity and incorporated into scientific documents</i></p> <p><i>PLO3: Masterful in documenting, storing, securing, and retrieving data to ensure validity and prevent plagiarism practices.</i></p> <p><i>Course Learning Outcomes (CLO):</i></p> <p><i>CLO1: Students are able to develop research designs, understand the stages of research implementation, and have the ability to process research data .</i></p> <p><i>CLO2: Students are able to conduct analysis, collect research samples, process data, and write the results of processed research data into a scientific work</i></p> <p><i>CLO3: Students apply honest behavior in conducting research and are able to avoid research misconduct.</i></p>																																				
Content	<ol style="list-style-type: none"><li>1. Introduction (1 meeting)</li><li>2. Ethics and scientific conduct (1 meeting)</li><li>3. Research Methodology (3 meetings)</li><li>4. Search of References (1 meeting)</li><li>5. Review of articles published in journals (1 meeting)</li><li>6. Citation Writing Methods (1 meeting)</li><li>7. Methods of Molecular Microbiological Analysis (1 meeting)</li><li>8. Chemical Analysis Methods (1 meeting)</li><li>9. Data analysis and its presentation (1 meeting)</li><li>10. Scientific Communication (2 meetings)</li><li>11. Strategies for Obtaining Research Funding (1 meeting)</li></ol>																																				
Examination forms	<p><i>High Order Thinking Skills Examination</i></p> <table><tr><th colspan="4">Grade and Score</th></tr><tr><th>Grade</th><th>Score</th><th>Grade</th><th>Score</th></tr><tr><td>A</td><td>≥ 85</td><td>C+</td><td>64,0-66,9</td></tr><tr><td>A-</td><td>82,0-84,9</td><td>C</td><td>61,0-63,9</td></tr><tr><td>A/B</td><td>79,0-81,9</td><td>C-</td><td>58,0-60,9</td></tr><tr><td>B+</td><td>76,0-78,9</td><td>C/D</td><td>55,0-57,9</td></tr><tr><td>B</td><td>73,0-75,9</td><td>D+</td><td>52,0-54,9</td></tr><tr><td>B-</td><td>70,0-72,9</td><td>D</td><td>49,0-51,9</td></tr><tr><td>B/C</td><td>67,0-69,9</td><td>E</td><td>&lt;49</td></tr></table>	Grade and Score				Grade	Score	Grade	Score	A	≥ 85	C+	64,0-66,9	A-	82,0-84,9	C	61,0-63,9	A/B	79,0-81,9	C-	58,0-60,9	B+	76,0-78,9	C/D	55,0-57,9	B	73,0-75,9	D+	52,0-54,9	B-	70,0-72,9	D	49,0-51,9	B/C	67,0-69,9	E	<49
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Study and examination requirements	<i>To be able to take the final exams, the minimum of student attendance is 70% out of effective meetings. From 14 meetings, students must take a minimum of 10 meetings to take the exam.</i>
Reading list	<i>None</i>