



### Nonparametric Statistics

<b>Module name</b>	Course Module
<b>Module level</b>	Undergraduate Programme
<b>Code, if applicable</b>	3115-233-3
<b>Sub-title, if applicable</b>	-
<b>Courses, if applicable</b>	Nonparametric Statistics
<b>Semester(s) in which the module is taught</b>	Semester 5, 6, or 7
<b>Person responsible for the module</b>	Lecturer of course
<b>Lecturer(s)</b>	11. Dra. Widyanti Rahayu, M.Si. 12. Qorry Meidianingsih, M.Si.
<b>Language</b>	Bahasa Indonesia
<b>Relation to curriculum</b>	Mata kuliah ini adalah mata kuliah pilihan dan ditawarkan mulai semester 5.
<b>Type of teaching, contact hours</b>	Teaching methods used in this course are: <ul style="list-style-type: none"> <li>- Lecture (i.e. presentation of lecture material, group discussion, case-based learning)</li> <li>- Structured assignments (case studies)</li> </ul> <p>The class size for the lecture is 40 students. Contact hours for lecture is 26.67 hours.</p>
<b>Workload</b>	Students are required to fulfill a minimum of 90.67 hours in one semester, which consists of: <ul style="list-style-type: none"> <li>- 26.67 hours for lecture,</li> <li>- 32 hours for structured assignments,</li> <li>- 32 hours for self-study</li> </ul>
<b>Credit points</b>	3.0 ECTS
<b>Requirements according to the examination Regulations</b>	Students should have attended all lectures and submitted all scheduled individual and group assignments prior to the final examination.
<b>Recommended prerequisites</b>	<ul style="list-style-type: none"> <li>- Linear Algebra</li> <li>- Basic Statistics</li> </ul>



**MINISTRY OF EDUCATION, CULTURE, RESEARCH, AND TECHNOLOGY**  
**UNIVERSITAS NEGERI JAKARTA**  
**FACULTY OF MATHEMATICS AND NATURAL SCIENCE**

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<b>Program intended learning outcomes</b>	<p>Programmes Learning Outcome (PLO) that can be achieved with this course are:</p> <p>PLO 5 : Mastering the theoretical concept of mathematics, including mathematical logic, discrete mathematics, algebra, analysis and geometry, probability, and statistics.</p> <p>PLO 6 : Mastering in modeling mathematical concepts, linear programs, differential equations, dan numerical methods.</p> <p>PLO 7 : Able to conduct, analyze, and apply research outcomes to improve the mathematics learning process.</p> <p>PLO 10 : Able to solve problems in real situations based on knowledge of mathematics education.</p> <p>The Course Learning Outcomes (CLO) to be achieved in this course are:</p> <p>CLO 1 : Mastering basic statistical concepts that have an important role in nonparametric statistical analysis.</p> <p>CLO 2 : Able to understand the concept of various tests for one sample cases and apply them in various fields.</p> <p>CLO 3 : Able to understand the concept of various tests for the case of two independent samples and apply them in various fields.</p> <p>CLO 4 : Able to understand the concept of various tests for the case of two related samples and apply them in various fields.</p> <p>CLO 5 : Able to understand the concept of various tests for the case of <math>k</math> independent samples (<math>k &gt; 2</math>) and apply them in various fields.</p> <p>CLO 6 : Able to understand the concept of various tests for the case of <math>k</math> related samples (<math>k &gt; 2</math>) and apply them in various fields.</p> <p>CLO 7 : Mastering concepts and procedures in obtaining nonparametric correlation values so as to be able to express their meaning based on real problems.</p> <p>The relationship between PLO and CLO in this course is described as follows.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">CLO</th> <th colspan="4">PLO</th> </tr> <tr> <th>5</th> <th>6</th> <th>7</th> <th>10</th> </tr> </thead> <tbody> <tr> <td>1</td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> </tbody> </table>	CLO	PLO				5	6	7	10	1					2					3					4					5				
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<b>Content</b>	<p>Students will learn about:</p> <p>29. The Use of Statistical Test in Research</p> <p>30. Statistical Tests for the case of:</p> <ul style="list-style-type: none"> <li>- One-Sample</li> <li>- Two Independent Samples</li> <li>- Two Related Samples</li> <li>- <math>k</math> independent samples</li> <li>- <math>k</math> related samples</li> </ul> <p>Measures of Correlation and Their Tests of Significance</p>				
<b>Forms of Assessment</b>	<p>The components of assessment in learning consist of assignments (30%), mid-exams (35%), and final exams (35%).</p>				
<b>Study and examination requirements and forms of examination</b>	<ul style="list-style-type: none"> <li>• Study and examination requirements: <ul style="list-style-type: none"> <li>36. Students must be present 15 minutes before the lecture begins.</li> <li>37. Students who do not attend more than 20% of the total meeting are considered failed in this course.</li> <li>38. Students are not allowed to use communication tools for purposes that are not related to learning.</li> <li>39. Students must submit all assignments before the deadline.</li> <li>40. Students must take the exam to get the final grade.</li> </ul> </li> <li>• Form of examination: <ul style="list-style-type: none"> <li>written examination</li> </ul> </li> </ul>				
<b>Media employed</b>	<ul style="list-style-type: none"> <li>• Computer/ personal laptop, internet, LCD, whiteboard, online learning platforms (Microsoft Teams/ Zoom, LMS), Microsoft Excel, and Microsoft Power Point.</li> </ul>				
<b>Reading list</b>	<p>References:</p> <p>12. Conover, W.J. 1999. <i>Practical Nonparametric Statistics</i>. New York: Wiley International Edition.</p> <p>13. Siegel, Sidney.1956. <i>Nonparametric Statistics for the Behavioral Sciences</i>. New York: Mc Graw Hill.</p> <p>14. Kvam, Paul H. &amp; Vidakovic, Brani. 2007. <i>Nonparametric Statistics with Application to Science and Engineering</i>. New Jersey: John Wiley &amp; Sons, Inc.</p> <p>15. Sheskin, David J. 2000. <i>Handbook of Parametric and Nonparametric Statistical Procedures</i>. Second Edition. Chapman &amp; Hall/ CRC.</p> <ul style="list-style-type: none"> <li>• Sprent, P. &amp; Smeeton, N.C. 2001. <i>Applied Nonparametric Statistical Methods</i>. Third Edition. Chapman &amp; Hall/ CRC.</li> </ul>				