



UNIVERSITAS GADJAH MADA

Faculty of Mathematics and Natural Sciences

Department of Mathematics

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Master in Mathematics

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MODULE HANDBOOK

Module Name	Biostatistika (Biostatistics)
Module level, if applicable	Master Program
Code, if applicable	MMM 5414
Subtitle, if applicable	-
Courses, if applicable	Biostatistika (Biostatistics)
Semester(s) in which the module is taught	Second semester
Person responsible for the module	Chair of Statistics Laboratory
Lecturer(s)	Drs. Zulaela, Dipl.Med.Stats., M.Si.
Language	Bahasa Indonesia
Relation to curriculum	Elective course
Teaching methods	Lecture, project (final exam)
Workload (incl. contact hours, self-study hours)	<ul style="list-style-type: none">• 3 hours lecture,• 3 hours structured activities,• 3 hours individual study,• 14 weeks per semester,• Total: 126 hours per semester.
Credit points	3
Required and recommended prerequisites for joining the module	The ideal preparation for this course is a course in statistical method.

Module objectives/intended learning outcomes	<p>After completing this course, the students should be able to:</p> <ul style="list-style-type: none"> • CO 1 Choose statistical tests in related to medical research hypotheses. • CO 2 Perform bivariable and multivariable analyses. • CO 3 Conduct a statistical package and interpret the output. 												
Content	The teaching materials consist of descriptive and inferential statistics for several levels of measurement, correlation and linear regression, binary logistic regression, survival analysis. In addition, examples and illustrations performed from medical research data.												
Examination forms	<p>The final mark will be weighted as follows:</p> <table border="1"> <thead> <tr> <th>No</th> <th>Assessment methods (components, activities)</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Final Examination</td> <td>40%</td> </tr> <tr> <td>2</td> <td>Mid-Term Examination</td> <td>35%</td> </tr> <tr> <td>3</td> <td>Quiz, Homework, Presentation</td> <td>30%</td> </tr> </tbody> </table>	No	Assessment methods (components, activities)	Weight	1	Final Examination	40%	2	Mid-Term Examination	35%	3	Quiz, Homework, Presentation	30%
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1	Final Examination	40%											
2	Mid-Term Examination	35%											
3	Quiz, Homework, Presentation	30%											
Study and examination requirements	<p>Final grade will be determined as follows:</p> <ul style="list-style-type: none"> ➤ A $90 \leq \text{score} \leq 100$ ➤ A- $85 \leq \text{score} < 90$ ➤ A/B $80 \leq \text{score} < 85$ ➤ B+ $75 \leq \text{score} < 80$ ➤ B $65 \leq \text{score} < 75$ ➤ B- $60 \leq \text{score} < 65$ ➤ B/C $55 \leq \text{score} < 60$ ➤ C+ $50 \leq \text{score} < 55$ ➤ C $40 \leq \text{score} < 50$ ➤ C- $35 \leq \text{score} < 40$ ➤ C/D $30 \leq \text{score} < 35$ ➤ D+ $25 \leq \text{score} < 30$ ➤ D $15 \leq \text{score} < 25$ ➤ E $0 \leq \text{score} < 15$ 												
Media employed	Computer and LCD projectors, whiteboards, online platforms, Learning Management System												

Reading list	<p>Agresti, A. 2007. <i>An Introduction to Categorical Data Analysis</i>. John Wiley & Sons. New York.</p> <p>Bland, M. 2000. <i>An Introduction to Medical Statistics</i>. Oxford University Press, Oxford.</p> <p>Daniel, W.W. 2009. <i>Biostatistics: A Foundation for Analysis in the Health Sciences</i>. John Wiley & Sons, Inc. United States of America.</p> <p>Hosmer, D.W. and Lemeshow, S. 2000. <i>Applied Logistic Regression</i>. John Wiley & Sons. New York.</p> <p>Montgomery, D.C., Peck, E.A. & Vining, G.G. 2012. <i>Introduction to Linear Regression Analysis</i>, John Wiley & Sons, Inc., New Jersey.</p> <p>Rosner, B. 2016. <i>Fundamentals of Biostatistics</i>. Cengage Learning, Boston, United States of America.</p>
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CO-PLO Mapping

	CO 1	CO 2	CO 3
PLO 1			
PLO 2			
PLO 3	v	v	v
PLO 4			
PLO 5	v	v	v
PLO 6			

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