



# UNIVERSITAS GADJAH MADA

Faculty of Mathematics and Natural Sciences

Mathematics Department

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Undergraduate Program in Statistics

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## MODULE HANDBOOK

Module name	Pengendalian Kualitas Statistik (Statistical Quality Control)												
Module level, if applicable	Bachelor												
Code, if applicable	MMS-2425												
Subtitle, if applicable	-												
Courses, if applicable	Pengendalian Kualitas Statistik (Statistical Quality Control)												
Semester(s) in which the module is taught	4/second year												
Person responsible for the module	Dr. Herni Utami, M.Si.												
Lecture(s)	Dr. Herni Utami, M.Si., Rianti Siswi Utami, S.Si., M.Sc.												
Language	Bahasa Indonesia												
Classification within the Curriculum	<del>Compulsory course</del> / Elective Studies												
Teaching format /class hours per week during the semester:	2 hours lecture, 2 hours laboratory session												
Workload	<ul style="list-style-type: none"><li>• 2 hours lecture+ 4 hours individual study, 14 weeks lecture persemester,</li><li>• 2 hours laboratory session + 2 hours individual study, 10 weeks laboratory session per semester,</li><li>• total 124 hours a semester</li></ul>												
Credit points	3												
Requirements	MMS-1404 Metode Statistika I (Statistical Methods I)												
Module objectives/intended learning outcomes	By the end of this course, students are expected to be able to: CO 1. interpret the basic of statistical process control techniques; CO 2. explain the application of quality control to improve production process. CO 3. use statistical software to solve statistical quality control's problems; CO 4. apply statistical quality control's techniques in real data set; CO 5. construct control charts for attributes and variables.												
Content	Modeling process quality, statistical process control, control charts for attributes, control charts for variables, other statistical control techniques, process capability analysis, acceptance sampling for attributes and acceptance sampling by variables, statistical software for quality control.												
Study and examination requirements and forms of examination	The weight of assignments will be as follows: <table><tr><td>i.</td><td>Quiz, homework</td><td>15%</td></tr><tr><td>ii.</td><td>Laboratory session</td><td>15%</td></tr><tr><td>iii.</td><td>Mid semester exam</td><td>30%</td></tr><tr><td>iv.</td><td>Final exam</td><td>40%</td></tr></table> <p>Grade scale: A: <math>80 \leq \text{score}</math> A/B: <math>70 \leq \text{score} &lt; 80</math> B: <math>60 \leq \text{score} &lt; 70</math> B/C: <math>50 \leq \text{score} &lt; 60</math> C: <math>40 \leq \text{score} &lt; 50</math> D: <math>20 \leq \text{score} &lt; 40</math> E: <math>\text{score} &lt; 20</math></p>	i.	Quiz, homework	15%	ii.	Laboratory session	15%	iii.	Mid semester exam	30%	iv.	Final exam	40%
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iv.	Final exam	40%											

Media employed	Slides and LCD projectors, whiteboards
Reading List	<ol style="list-style-type: none"> <li>1. Burr, J. T. 2004. Elementary Statistical Quality Control. 2<sup>nd</sup> edition. Taylor &amp; Francis Group. Boca Raton.</li> <li>2. Montgomery, D. C. 2005. Introduction to Statistical Quality Control. 5<sup>th</sup> edition. John Wiley &amp; Sons. New York.</li> </ol>

#### CO and PLO mapping

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7
CO 1	x						
CO 2		x					
CO 3			x				
CO 4				x			
CO 5	x						