



# UNIVERSITAS NEGERI YOGYAKARTA

FACULTY OF MATHEMATICS AND NATURAL SCIENCES  
DEPARTMENT OF MATHEMATICS EDUCATION

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## Bachelor of Science in Mathematics

## MODULE HANDBOOK

Module name:	Queuing Theory
Module level,if applicable:	Undergraduate
Code:	MAT-6368
Sub-heading,if applicable:	-
Classes,if applicable:	-
Semester:	7 <sup>th</sup>
Module coordinator:	Nikenasih Binatari, M.Si.
Lecturer(s):	Nikenasih Binatari, M.Si.
Language:	Bahasa Indonesia
Classification within the curriculum:	Elective course
Teaching format / class hoursperweekduring the semester:	150 minutes lectures and 180 minutes structured activities per week.
Workload:	Total workload is 136 hours per semester which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes self-study per week for 16 weeks.
Creditpoints:	3
Prerequisites course(s):	ProbabilityTheory (MAT6315)
Course outcomes:	After taking this course the students have ability to: CO1. Demonstrate collaborative attitude and independence in carrying out individual tasks and group assignments CO2. Communicate ideas in solving mathematical problems in writing or verbally CO3. Describe concepts and methods in queuing theory

	CO4. Applying concepts and methods in queuing theory															
Content:	This course discusses queuing system elements, arrival and departure process, queuing model, M / G / 1 system, Multiserver, the application of queuing theory.															
Study/exam achievements:	<p>CO1: Attitude assessment is carried out at each meeting by observation and / or self-assessment techniques using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude.</p> <p>The final mark will be weight as follow:</p> <table border="1"> <thead> <tr> <th>No</th> <th>CO</th> <th>Assesment Object</th> <th>Assessment Techniques</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CO2, CO 3 and CO 4</td> <td>a. Individual assignments b. group assignments c. Quiz d. MID e. Final Exam</td> <td>Written test</td> <td>15% 10% 20% 25% 30%</td> </tr> <tr> <td colspan="4">Total</td> <td>100%</td> </tr> </tbody> </table>	No	CO	Assesment Object	Assessment Techniques	Weight	1	CO2, CO 3 and CO 4	a. Individual assignments b. group assignments c. Quiz d. MID e. Final Exam	Written test	15% 10% 20% 25% 30%	Total				100%
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Total				100%												
Forms of media:	Board, LCD Projector, Laptop/Computer															
Literature:	<ol style="list-style-type: none"> <li>1. Taha, Hamdy A. 1996. <i>Riset Operasi Edisi kelima</i> (terjemahan), Jilid 2. Jakarta :BinarupaAksara.</li> <li>2. Hillier/Lieberman. 2001. Introduction to Operation Research. Interactive e-text. The McGraw Hill Company.</li> <li>3. Saaty, Thomas L. 1961. Elements of Queueing Theory with applications. New York. Dover publications, Inc.</li> <li>4. Bunday, Brian D. (1996). <i>An Introduction to Queueing Theory</i>. New York :Johm Willey and Sons.</li> <li>5. Cooper, Robert B. 1981. Introduction to Queueing Theory Second Edition. New York. Elsevier North Holland., Inc.</li> </ol>															

## PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CO1		✓								
CO2				✓						
CO3						✓				
CO4							✓			