Module designation	*Mathematical Modelling*
Semester(s) in which the module is taught	*6*
Person responsible for the module	*Fitriana Yuli Saptaningtyas,M.Si.*
Language	*Bahasa Indonesia*
Relation to curriculum	*Compulsory course*
Teaching methods	*150 minutes lectures and 180 minutes structured activities per week.*
Workload (incl. contact hours, self-study hours)	*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.*
Credit points	*3*
Required and recommended prerequisites for joining the module	*MAT6319 Linear Algebra*
Module objectives/intended learning 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. Mastering the concepts and basics of mathematical modelling process* *CO3. Use Matlab software to solve a simple mathematical modelling of real problem* *CO4. Make a simple mathematical modelling of real problem*
Content	*The discussion in this course emphasizes the process of modeling a case. Therefore, the discussion material is divided into three basic topics: terminology, examples of mathematical models and mathematical modeling projects.*
Examination forms	*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.*

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<tr>
<td>Study and examination requirements</td>
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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.

The final mark will be weight as follow:
<table>
<tr><th>No</th><th>CO</th><th>Assessment Object</th><th>Assessment Technique</th><th>Weight</th></tr>
<tr><td>1</td><td>CO 1</td><td>a. Presentation
b. Discussion</td><td>Observation</td><td>5%
10%</td></tr>
<tr><td>2</td><td>CO 2, CO 3, CO 4</td><td>a. Individual assignment
b. Group assignment
c. Quiz
d. Midterm
e. Final test</td><td>Written</td><td>10%
10%
20%
20%
25%</td></tr>
<tr><td colspan="4">Total</td><td>100%</td></tr>
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<td>Reading list</td>
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1. Jonathan Simon (2011), Head First Android Development (e-Maki, Daniel P. Thompson, Maynard. Mathematical Models and Applications. 1973. Prentice-Hall. United States of America.
2. Huntley, I.D. James, D.J.G. Mathematical Modelling A Source Book of Case Studies. 1990. Oxford University Press. New York
3. Bender, Edward A. An Introduction to Mathematical Modeling. 1978. John Willey & Sons. Canada
4. Tuharto. Diktat KuliahPengantar Model Matematika. 2001. JurusanPendidikanMatematika FMIPA UNY.
5. Giordano, Frank R. Weir, Maurice D. A First Course in Mathematical Modelling 3rd Ed. 2003. Thomson Learning. USA

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