Module designation	*Matrix Theory*
Semester(s) in which the module is taught	*5*
Person responsible for the module	*1. Lusi Harini S.Si., M.Sc.* *2. Thesa Adi Saputra Yusri M.Cs.*
Language	*Bahasa Indonesia*
Relation to curriculum	*Elective 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	*MAT6304 - Number Theory*
Module objectives/intended learning outcomes	*After taking this course the students have ability to:* *CO1. Demonstrate respect for other people's opinions in completing group and individual tasks* *CO2. Communicate ideas in solving mathematical problems in writing or verbally.* *CO3. Explain the concept of module and its properties* *CO4. Prove the properties of module and submodule* *CO5. Prove the properties of homomorphism in module* *CO6. Prove the properties of direct sum, torsion module, free module, simple module and artin module* *CO7. Use the concept of module in solving mathematical problem*
Content	*This course discusses the basics of cryptography, classical cryptography, Data Encryption Standard (DES), Advanced Encryption Standard (AES), public key, RSA, Elgamal, discrete logarithms, email and internet security.*
Examination forms	*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.*

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<td>Study and examination requirements</td>
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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>CO1</td><td>presentation</td><td>Observation</td><td></td></tr>
<tr><td>2</td><td>CO2, CO3 CO4 and CO5</td><td>a. Individual Assignment
b. Group Assignment
c. Mid
d. Final Exam</td><td>Presentation / written test</td><td>30%

20%
25%
25%</td></tr>
<tr><td colspan="3"></td><td>Total</td><td>100%</td></tr>
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<td>Reading list</td>
<td>
A. Mollin, A.R. 2007. An Introduction to Cryptography. Chapman&Hall/CRC : New York B. Stinson, D.R. 2006. Cryptography; Theory and Practice. Chapman&Hall/CRC : New York
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