Module designation	*Initial and Boundary Value Problems*
Semester(s) in which the module is taught	*5*
Person responsible for the module	*Drs. Muhammad Fauzan M.Sc.St.*
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	*MAT6324 - Mathematical modelling*
Module objectives/intended learning outcomes	*Students know that/know how to/are able to* *Co1. Communicate ideas for solving systems of partial differential equations, Fourier series, Fourier integrals, Fourier transformations, and traveling wave equations in writing and orally.* *CO2 Demonstrate a collaborative and independent attitude in carrying out individual and group tasks.* *CO3 Able to understand the definitions of partial differential equations, Fourier series, Fourier integrals, and Fourier transforms* *CO4 Able to use the concept of traveling wave equations to find solutions to initial value problems and boundary conditions*
Content	*This course covers the application of partial differential equation systems, Fourier series, Fourier integrals, Fourier transforms, and the solution of traveling wave equations.*
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.*

Study and examination requirements	*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:

No	CO	Assessment Object	Assessment Technique	Weight
1	CO 1	a. Presentation b. Discussion	Observation	5% 10%
2	CO 2, CO 3, CO 4	a. Individual assignment b. Group assignment c. Quiz d. Midterm e. Final test	Written	10% 10% 20% 20% 25%
		Total		100%

Reading list	*1. A. Humi, M. And Miller, Wil B,1992, Boundary Value Problems and Partial Differential Equations, PWS KENT Publishing Company, Boston.* *2. B. Braun, M. Differential Equation and Their Applications. 1983. Third Edition. USA : Springer-Verlag New York, Inc.* *3. C. Zill, Dennis G., Cullen, Michael R. 1997. Differential Equations with Boundary-value Problems. Fourth Edition. USA : Brooks/Cole Publishing Company.*