Module designation	*Partial Differential Equations*
Semester(s) in which the module is taught	*4*
Person responsible for the module	*Nikenasih B, M.Sc*
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	*MAT6313 Differential Equations*

Module objectives/intended learning outcomes	*After taking this course the students have ability to:* *CO1. demonstrate collaborative attitude and independence to do individual or group assigntments* *CO2.Communicate ideas in solving mathematical problems in writing or verbally* *CO3.Understanding the motivation to learn partial differential equations and their relation to elementary differential equations.* *CO4.solving partial differential equation linear order one, semilinear and quasilinear* *CO5.solving partial differential order two, parabolic, hyperbolic, elliptic* *CO6. Understanding Fourier series concept* *CO7. Understanding separation variable method.* *CO8. Analyzing first-order partial differential models of conservation law equations and applying them to the case of traffic flow* *CO9. Understanding "The Big Three Models" : Heat Equations, Laplace Equations and Wave Equations* *CO10. Using MAPLE software to analyze results*
Content	*The course contains discussion on First order of partial differential equation, classifications: hyperbolic, parabolic, and elliptic, characteristic's curve, d'alembert equation, Fourier series, convergence of Fourier series, odd and even function, separation of variable's method, The Big Three 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. *Binatari, Nikenasih. 2019. Modul Persamaan Diferensial Parsial.* 2. *Haberman, Richard. 2013. Applied Partial Differential Equations with Fourier Series and Boundary Value Problems, 5th Ed. USA. Pearson.* 3. *Agarwal, Ravi P. O'Regan, Donal. 2009. Ordinary and Partial Differential Equations. USA. Springer.* 4. *Zaghmanoglou, E.C. Thoe, Dale W. Introduction to Partial Differential Equation with Application. New York. Dover Publications, Inc.*