1.	Course		Mathematical Physics II
2.	Module Level	:	Undergraduate
3.	Code	:	FIT202
4.	Sub-heading, if applicable	:	-
5.	Courses included in the module, if applicable	:	--
6.	Semester/Term	:	3Th/Second year
7.	Module Coordinator :	:	Drs. Siswanto, M.S
8.	Lecture (s)		Drs. Siswanto, M.S.; Drs. Adri Supardi,M.S.; Drs. Pujiyanto M.Si and Drs. R. Arif Wibowo, M.Si
9	Language		Bahasa Indonesia
10	Classification Within the Curriculum		Compulsory course / ~~Elective Course~~
11	Teaching format/ class hours per week during semester		4 hourss of lectures (50 minutes/hour)
12	Workload :		4 hours of lectures, 4 hours of tutorial and structured activities, 4 hours of individual activities 13 weeks per semester, and total of 156 hours per semester ~5,2 ECTS
13	Credit point		4
14	Requirement(s)		Mathematical Physics I
	Learning Goals/ Cometencies	:	**General Competence (Knowledge)** After following this course, students are able to find the solution of the mathematical model, various problems of physics. **Specific Competence** 1. The ability to apply mathematics to solve simple physics problems 2. The ability to identify or formulate a mathematical model to solve physics problems 3. The ability to apply mathematics to solve problems in physics fields : electricity and magnetism, wave, thermal physics, quantum mechanics
15	Contents	:	***Linear Algebra*** , linear combination, special matrices, vector spaces, eigen value and eigen vector , diagonalization ***Vector Analysis ,*** vector differenciation, vector field, directional derivatives, gradient, line integrals, Green theorem in plane, divergence and divergence theorem, curl, Stokes theorem ***Series Solution of Differential Equations and Special Functions,*** factorial function, gamma function, beta function, error function, series solution of ordinary diffrerential equation, Legendre equation, Legendre Polynomial, Bessel equation, Bessel functions, Hermite equaation, Hermite

			function, Laguerre function, ladder operator, Sturm-Liouville problem ***Partial Differential Equation (PDE),*** general form of PDE, second order PDE, classification of second order PDE , Laplace equation, diffusion equation, wave equation, Poisson equation ***Probability and Statistics***, sample space, probability theorem, random variable, continuous distribution, binomial distribution, Gaussian distribution, Poisson distribution
16.	Softskill Attribute	:	Effort and Ethic
17.	Study Exam Achievements	:	Students are considered to be competent and passed if at least get 50% of maximum mark of the midterm test, final examination, quizzes and home work. Final score is calculated as follow: 20 % homework + 10% quizzes + 32.5% midterm test + 32.5% final exam + 5% soft skill. Final grade is defined as follow : A : 75 – 100 AB : 70 - 74.99 B : 65 - 69.99 BC : 60 - 64.99 C : 55 - 59.99 D : 40 - 54.99 E : 0 - 39.99
18	Learning Methods		Lecture, discussion, tutorial
19.	Forms of Media	:	Powerpoint slides, LCD projector and whiteboard
20.	Literature(s)	:	1. Boas,M.L.,*Mathematical Methods in the Physical Sciences*, 3rd ed.,JohnWiley, 2005. 2. Arfken, G.B and Weber, H.J., 2013, Mathematical Methods for Physicist, 7th ed, Academic Press 3. Hobson, Riley and J. Bence, 2006, *Mathematical Methods for Physics & Engineering,* Cambridge University Press. 4. Kreyszig,E., 2005, *Advanced Engineering Mathematics*, John Wiley, New York
	Notes		Total ECTS={(total hours workloadx50 min)/60 min}/25 hours Each ECTS is equals with 25 hours