UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF MATHEMATICS EDUCATION
Jalan Colombo Nomor 1 Yogyakarta 55281
Telepon(0274)565411 Pesawat 217, (0274)565411(TU),fax (0274)548203
Laman :fmipa.uny.ac.id, E-mail :humas_fmipa@uny.ac.id

Module name:	Advanced Real Analysis
Module level,ifapplicable:	Undergraduate
Code:	MAT6233
Sub-heading,ifapplicable:	-
Classes,ifapplicable:	-
Semester:	6th
Module coordinator:	Kus Prihantoso Krisnawan, M.Si.
Lecturer(s):	1. Kus Prihantoso Krisnawan, M.Si. 2. Husna Arifah, M.Sc. 3. FitrianaYuli S., M.Si.
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory course
Teaching format / class hoursperweekduring the semester:	100 minutes lectures and 120 minutes structured activities per week.
Workload:	Total workload is 90,67 hours per semester which consists of 100 minutes lectures, 120 minutes structured activities, and 120 minutes self-study per week for 16 weeks.
Creditpoints:	2
Prerequisites course(s):	Real Analysis (MAT6325)
Course outcomes:	After taking this course the students have ability to: CO 1. Respecting other people's views, opinions,and original ideas CO 2. Understanding definitions, theorems, and some

<table>
<tr><td></td><td>characteristics in mathematics using critical and systematic thinking in a manner individually or groups
CO 3. Communicating, in writing or verbally,ideas to understand or solve mathematical problems.
CO 4. Explaining the meaning or definition of terms and the intent of the theorems or properties in mathematics
CO 5. Using related definitions and theorems to prove other properties or theorems.</td></tr>
<tr><td>Content:</td><td>This course discusses the subject of differentiation, sequences and series of functions, and Riemanian Integral.The topics in differential are derivative and intermediate value property, the mean value theorem, and a continues nowhere-differentiable function.The subject of sequences and series of functions include;piecewise and uniform convergence, series, power series, and Taylor series. Finally, the subject of Riemanian Integral consist of the definition of Riemanian Integral, Integrating functions with discontinuities, properties of integral, the fundamental theorem of calculus, and Lebesgue’s criterion for Riemann Integrability.</td></tr>
<tr><td>Study/exam achievements:</td><td>CO1: Attitude assessment is carried out at each meeting using observation and / or self-assessment techniques by the assumption that every student is good. The student will be given a value as very good or not good if he/she shows, significantly,excellent or poor attitude. The results of attitude assessment used as one of the graduation requirements.

The final grades will be weight as follow:
<table>
<tr><th>No</th><th>CO</th><th>Objek Penilaian</th><th>Teknik Penilaian</th><th>Bobot</th></tr>
<tr><td>1</td><td>CO 2 and 4</td><td>a. Presentation
b. Individual Assignment
c. Quiz</td><td>Observation
Written

Written</td><td>10%
10%

20%</td></tr>
<tr><td>2</td><td>CO 3 and5</td><td>a. Group Assignment
b. Mid test</td><td>Written</td><td>10%

20%</td></tr>
</table>
</td></tr>
</table>

			c. Final test		30%
			Total		100%
Forms of media:	Board, LCD Projector, Laptop/Computer				
Literature:	1. Abbot, S. 2010. *Understanding Analysis*. New York: Springer ScienceBusiness Media, Inc. 2. Bartle,R.G.& Sherbet D.R. 2000. *Introduction to Real Analysis*. Third Edition. New York: Jhon Wiley&Sons. 3. Brannan, D.A. 2006. *A First Course in Mathematical Analysis*. Cambridge: Cambridge University Press. 4. Davidson, K.R. &Donsig, A.P. 2010. *Real Analysis with Applications*. Upper Sadle River: Prentice-Hall, Inc. 5. Walter Rudin, 2000. *Principles of Mathematical Analysis, Third Edition.* McGraw-Hill, Inc.				

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CO1		✓								
CO2			✓							
CO3				✓						
CO4					✓					
CO5						✓				