Module designation	*Real Analysis*
Semester(s) in which the module is taught	*4*
Person responsible for the module	*Kus Prihantoso Krisnawan, M.Si.*
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	*MAT6312 Multivariable Calculus*
Module objectives/intended learning 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 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.*

Content	This course contains some foundations on mathematical proofs, real number systems (R), sequences and series, some concepts of sets topology, and functions. Firstly, it will be given the foundations, such as; reviewsonbijective functions, mathematical induction, countable and uncountable sets. Secondly, the subject of the real number system includes: rational and irrational numbers, the order properties ofR, and the completeness property of R. The subject sequences and series include: limit sequence, monotonous sequences, sub-sequences, Cauchy criteria, and several propertiesof series. Finally, the subject of several topological concepts includes: open set, closed set, and compact set. And, at the end of the course we discussed the limit of functions, continuity of functions, and uniform continuity.
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. *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.*