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Doctor in Mathematics

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MODULE HANDBOOK

Module Name	*Topics in Measure and Integral Theory*
Module level, if applicable	*Doctor*
Code, if applicable	*MMM-7106*
Subtitle, if applicable	-
Courses, if applicable	*Topics in Measure and Integral Theory*
Semester(s) in which the module is taught	*1st or 2nd semester*
Person responsible for the module	*Chair of the Lab. of Analysis*
Lecturer(s)	*Prof. Dr. Ch. Rini Indrati, M.Si.; Prof. Dr. Supama, M.Si.; Atok Zulijanto, M.Sc., Ph.D.; Hadrian Andradi, M.Sc., Ph.D.*
Language	*Bahasa Indonesia*
Relation to curriculum	*Elective course in the 1st or 2nd semester of doctor's degree*
Teaching methods	*Lecture, classroom discussion, flipped classroom.*
Workload (incl. contact hours, self-study hours)	*Total workload is 136 hours per semester, which consists of 150 minutes lectures per week for 14 weeks, 180 minutes structured activities per week, 180 minutes individual study per week, in total is 16 weeks per semester, including mid exam and final exam.*
Credit points	*3*
Required and recommended prerequisites for joining the module	*Students have strong knowledge on set theory and Riemann integral.*

<table>
<tr><td>Module objectives/intended learning outcomes</td><td>After completing this course, the students should have the ability to:
CO 1 prove the properties of measure and the associated integral, both Lebesgue and in general.
CO 2 prove the properties of the absolute or non-absolute integrals.
CO 3 prove the convergence theorems in the integral.</td></tr>
<tr><td>Content</td><td>It will be derived from research topic of the students. It will be focused on the measure and the associated integral, both Lebesgue and in general either on absolute and non-absolute integrals.</td></tr>
<tr><td>Examination forms</td><td>Oral presentation, essay.</td></tr>
<tr><td>Study and examination requirements</td><td>The final mark will be weighted as follows:
<table><tr><th>No</th><th>Assessment methods (components, activites)</th><th>Weight (percentage)</th></tr><tr><td>1</td><td>Final Examination (essay/oral presentation)</td><td>35%</td></tr><tr><td>2</td><td>Mid-Term Examination (essay/presentation)</td><td>35%</td></tr><tr><td>3</td><td>Class Activities: Presentation/Quiz</td><td>30%</td></tr></table>To pass the course, the minimum grade is B.</td></tr>
<tr><td>Media employed</td><td>Board, LCD Projector, Laptop/Computer</td></tr>
<tr><td>Reading list</td><td>Royden, H.L, 1988, Real Analysis, 3th edition, Macmillan Publishing Company.
Lee Peng Yee, 1989, Lanzhou Lectures on Henstock integration, World Scientific, Singapore.
Lee P.Y. and Výborný, R., 2000, Integral: An Easy Approach after Kurzweil and Henstock, Cambridge University Press.
Bartle, R.G, 2001, A Modern Theory of Integration, Graduate Studies in Mathematics, AMS Series, Volume 32.
Pfeffer, W.F., 1993, The Riemann Approach to Integration, Cambridge University Press, New-York, USA.</td></tr>
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CO-PLO Mapping

	PLO 1	**PLO 2**	**PLO 3**	**PLO 4**	**PLO 5**	**PLO 6**
CO 1	**v**	**v**	**v**			**v**
CO 2	**v**	**v**	**v**			**v**

Last Modified Date : 11 August 2022