DE LA SALLE UNIVERSITY – MANILA
COLLEGE OF SCIENCE
Mathematics Department

SYLLABUS

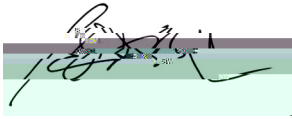|	
COURSE CODE	MTH741M/D
COURSE TITLE	Real Analysis 2
CLASS DAY & TIME	
ROOM	
NAME OF FACULTY	
COURSE CREDIT	3 Units
CONTACT NO. (DEPT)	(02) 536-0270, (02) 524-4611 loc. 420/413
TERM/SCHOOL YEAR	

COURSE DESCRIPTION

This course discusses measure and integration. In particular, it focuses on Lebesgue integration, some differentiation, and a few additional topics, if time permits.

COURSE OBJECTIVES

1. Introduce algebras and -algebras.
2. Provide a sufficient background on measure, measurable sets, measurable spaces, and measurable functions.
3. Introduce the abstract concept of integration.
4. Discuss the relationship between the Riemann and the Lebesgue integrals.
5. Discuss differentiation and introduce the indefinite integral.
6. Instill values like:
    - cooperation through group study;
    - honesty by claiming credit only for the work he has done;
    - patience, perseverance and diligence by solving assigned exercises completely including the difficult

Topic/Subtopic	Learning Strategies/ Activities	Week/Meeting
1.3 Measurable sets and Lebesgue measure		
2. Integration 2.1 Measurable spaces and measurable functions. 2.2 Integration of simple functions 2.3 The Lebesgue integral 2.4 Convergence Theorems	Lecture-Discussions Report Problem Solving	15 hrs
3. Differentiation 3.1 Vitali's Lemma. 3.2 Derivates and the derivative. 3.3 Functions of bounded variation 3.4 The indefinite integral. 3.5 Absolute continuity.	Lecture-Discussions Report Problem Solving	12 hrs

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DR. JOSE SANTOS R. CARANDANG VI
Dean, College of Science