Course Summary

Course Instructor	**Radhi Ibrahim .M.Ali**
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Title	**Advanced Mathematical Analysis**
Course Coordinator	**……………………………**
Course Objective	**The course is an option course the aim of the course is to give students advanced Mathematical Analysis concepts.**
Course Description	**……………………………**
Textbook	**Bartle R."Elements of Real Analysis"**
References	**Rudin W. "Principle of Mathematical Analysis "**

Course Assessments	Terms Tests	Laboratory	Quizzes	Project	Final Exam
	40%	**…..**	**10%**	**…..**	**50%**

Course Weekly Outlines

Week	Topics Covered	Lab. Experiment Assignments
1	**1st,Semester** :Introduction &Fundamentals concepts in the real number systems	
2	===============.	
3	Sequence of function	
4	Convergence of Sequence of function and related theorems.	
5	===============.	
6	Series of Sequence of function Tests of Convergence of Series of Sequence .	
7	===============.	
8	Power Series and radius of convergence.	
9	===============.	
10	The Space R and norms.	
11	The continuity in R .	
12	===============.	
13	The derivative in R .	
14	===============.	
15	Examination	
16	**2nd, Semester:** The change Rule and Mean value theorem.	
17	===============.	
18	Integration in R^n .	
19	===============.	
20	===============.	
21	The weakness of Riemann's integration.	
22	Outer measure.	
23	Lebesgue measure.	
24	================.	
25	Lebesgue integration.	
26	================.	
27	================.	
28	Space L^p	
29	===============.	