## **TEMPLATE FOR COURSE SPECIFICATION**

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

## **COURSE SPECIFICATION**

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	Al-Nahrain University/ College of Science			
2. University Department/Centre	Mathematics & Computer Applications			
3. Course title/code	Calculus II			
4. Modes of Attendance offered				
5. Semester/Year	Second semester/ Year First			
6. Number of hours tuition (total)	60 hours			
7. Date of production/revision of this specification				
8. Aims of the Course				
Learning the basic concepts of integration and the methods of integration with some properties and applications				

9. Learning Outcomes, Teaching ,Learning and Assessment Methode			
<ul> <li>A- Cognitive goals .</li> <li>A1. Enabling the students to understand the basics of the scientific subjects A2. Providing the students with the maximum amount of mathematical terms and definitions</li> <li>A3.</li> <li>A4.</li> <li>A5.</li> </ul>			
B. The skills goals special to the course.			
<ul><li>B1. Providing the students with the sufficient amount of mathematical terms and definitions</li><li>B2.</li><li>B3.</li></ul>			
Teaching and Learning Methods			
Assessment methods			
Pre final exam 40%			
Final exam 60%			
<ul> <li>C. Affective and value goals</li> <li>C1. Understanding the definition of integration and its applications</li> <li>C2. Enabling the students to solve the problems about integration</li> <li>C3.</li> <li>C4.</li> </ul>			
Teaching and Learning Methods			
Presenting on the wight board			
Assessment methods			
Final exam 60%			

D. General and rehabilitative transferred skills(other skills relevant to employability and personal development)
D1.Providing the students with mathematical skills about integration to solve some real life problems
D2.
D3.
D4.

10. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	4	Basic concepts	Introduction to Integral	lectures	
2-10	36	Study 9 methods of Integration	Methods of Integration	lectures	
11-12	8	Area under the curve and area between two curves	Area	lectures	
13-14	8	Learning Disk and Shell methods	Volumes	lectures	
15	4	Solve problems about Arc Length	Arc Length	lectures	

11. Infrastructure	
1. Books Required reading:	Calculus and analytic Geometry by Thomas
2. Main references (sources)	University Calculus with Analytic Geometry by Morry
A- Recommended books and references (scientific journals, reports).	Calculus with application brief version
B-Electronic references, Internet sites	Google.com
12. The development of the curricu	lum plan

Including some real life applications