



Course Specifications

Institution:	Al Majma'ah University, KSA.
Academic Department :	College of Science, Department of Mathematics
Programme :	Computer Science and Information
Course :	Calculus (2)
Course Coordinator :	Naveed Yaqoob
Programme Coordinator :	
Course Specification Approved Date :	.... / ... / ..... H



A. Course Identification and General Information

1 - Course title :	Calculus (2)	Course Code:	Math 220
2. Credit hours :	02		
3 - Program(s) in which the course is offered:	Computer Science		
4 – Course Language :	English		
5 - Name of faculty member responsible for the course:	Naveed Yaqoob		
6 - Level/year at which this course is offered :			
7 - Pre-requisites for this course (if any) :	Math 212		
8 - Co-requisites for this course (if any) :	No		
9 - Location if not on main campus :	College of Science, Al-Zulfi		
10 - Mode of Instruction (mark all that apply)			
A - Traditional classroom	<input type="checkbox"/>	What percentage?	10 %
B - Blended (traditional and online)	<input type="checkbox"/>	What percentage? %
D - e-learning	<input type="checkbox"/>	What percentage?	60 %
E - Correspondence	<input type="checkbox"/>	What percentage?	30 %
F - Other	<input type="checkbox"/>	What percentage? %
Comments :	<hr/>		

B Objectives

<p>What is the main purpose for this course?</p> <p>Students are expected to</p> <ul style="list-style-type: none">• improve their concepts about derivatives.• accurately solve the questions related to antiderivatives.
<p>Briefly describe any plans for developing and improving the course that are being implemented :</p> <ul style="list-style-type: none">• N/A



C. Course Description

1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
A: Derivatives:		
1. Basics of derivatives (product and quotient)	01	04
2. Derivatives of logarithmic, trigonometric and hyperbolic functions	03	12
B: Introduction to Integration:	01	04
1. Basics of integration and their properties	01	04
2. Fundamental theorems of calculus	01	04
3. Integrals of hyperbolic and inverse hyperbolic functions	01	04
4. Integration methods: by substitution, by parts and by partial fractions	01	04
5. Definite integrals and their properties	01	04
C: Numerical Integration:		
1. Trapezoidal rule	01	04
2. Polar coordinates – Areas using polar coordinates	02	08
Revision	02	08

2. Course components (total contact hours and credits per semester):

	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	30	6	.....	.....	.....	36
Credit	.....	.....	.....	.....	.....	.....

3. Additional private study/learning hours expected for students per week.

06

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Deepen students' concepts	Drilling	Assignments
1.2	Improve students understanding and awareness.	Imitation	Quizzes
1.3	Expand students' exposure to solve the problems	Writing	CW/HW
1.4	.....	.....	.....
2.0	Cognitive Skills		
2.1	Ability to think analytically and critically;	Lectures	Assignments
2.2	Ability to understand and analyze the mathematical problems	Class discussion	Quizzes
2.3	.....	.....	.....
3.0	Interpersonal Skills & Responsibility		
3.1	Students can complete assignments in due time;	Lectures	Assignments
3.2	Students can actively and critically participate in class activities;	Class discussion	Quizzes
3.3	Students can act responsibly and ethically in conducting their work;	Peer and group discussion	CW/HW
3.4	Students can communicate, negotiate and evaluate their strengths and weaknesses as team members.	Speaking practice	Mid Term
3.5	.....	.....	.....
4.0	Communication, Information Technology, Numerical		
4.1	.....	.....	.....
4.2	.....	.....	.....
4.3	.....	.....	.....
4.4	.....	.....	.....
5.0	Psychomotor		
5.1	.....	.....	.....
5.2	.....	.....	.....
5.3	.....	.....	.....
5.4	.....	.....	.....
5.5	.....	.....	.....
5.6	.....	.....	.....

5. Schedule of Assessment Tasks for Students During the Semester:

	Assessment task	Week Due	Proportion of Total Assessment
1	Assignments	.....	05
2	Participation	.....	05
3	Attendance	05





4	Quizzes	20
5	Mid Term	25
6	Final Examination	40
7	Total Marks	100
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D. Student Academic Counseling and Support

Available at office hours per week and reachable via email:

- Sunday from 08 a.m - 2:30 p.m.
- Monday from 10 a.m – 2:30 p.m
- Wednesday from 10 a.m – 2:30 p.m.
- Thursday from 10 a.m – 2:30 p.m.
-

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E. Learning Resources

1. List Required Textbooks :

- Calculus by Swokowski, Sixth Edition.
- Calculus with analytic geometry by Larsen and Hostetler, 5th Edition.
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2. List Essential References Materials :

- Calculus by Swokowski, Sixth Edition
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3. List Recommended Textbooks and Reference Material :

- Calculus with analytic geometry by Larsen and Hostetler, 5th Edition.
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4. List Electronic Materials :

- **Google**
- http://mathcity.org/bsc/notes_of_calculus_with_analytic_geometry
- www.ilmikitabhana.com
- **Laptop and Internet Connection in the classroom**

5. Other learning material :

- **Find more and more website related to Calculus**
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F. Facilities Required

1. Accommodation <ul style="list-style-type: none">• Lecture room with speakers and internet access.•
2. Computing resources <ul style="list-style-type: none">• Desktop or laptop with internet facility•
3. Other resources <ul style="list-style-type: none">• Data show to facilitate going over students' papers in class•

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching: <ul style="list-style-type: none">• Weekly assignments• Class quizzes• Class participation• Positive use of website• Mid term exams• Final exams
2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor : <ul style="list-style-type: none">• Cooperation of course coordinators•
3 Processes for Improvement of Teaching : <ul style="list-style-type: none">• Training sessions.• Workshops to facilitate the exchange of experiences amongst faculty members• Regular meetings where problems are discussed and solutions are given• Discussion of problems faced in the classroom with colleagues and supervisors• Encouragement of faculty members to attend professional development conferences• Keeping up to date with pedagogical theory and practice• Update learning sources•
4. Processes for Verifying Standards of Student Achievement <ul style="list-style-type: none">• Check marking of students' papers (those who believe they are under graded can have their papers checked by a second reader).•
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement : <ul style="list-style-type: none">••





Course Specification Approved
Department Official Meeting No (.....) Date ... / / *H*

Course's Coordinator

Name : Naveed Yaqoob
Signature :
Date : .../ ... / *H*

Department Head

Name : Prof. Dr. Adel Zak Ali
Signature :
Date : .../ ... / *H*

