COURSE CLASSIFICATION FORM

Course Number/Name	Math202 Calculus (2)		
Prepared by	**Dr. Mohamed Herzallah**		
Program Learning Outcomes	**Levels* (0,1,2, 3,4,5)**	**Relevant Activities**	**Assessment Methods/Metrics**
a1. Apply fundamentals and concepts of mathematics.	5	- Lectures - assignments	• 2 Midterm and final exam • Home work
a2. Apply fundamentals and concepts General sciences and Computer skills.	3	- assignments on logic statements	• 1 Midterm and final exam • Home work
a3. Realize Social and ethical values.	4	-Lectures - work team from the students	• Home work • The oral discussions
b1. Read and construct mathematical arguments and proofs	5	- Lectures - assignments	Home work
b2. Apply critical thinking skills to solve problems that can be modeled mathematically.	5	- Lectures - assignments - Oral discussion	• 2 Midterm and final exam+ Home work
c1. Work independently and within a team	4	Divided students into groups and using oral discussion with homework	• Home work
c2. Bear responsibility for different situations.	4		• Quizzes
c3. Realize codes of ethics and their importance.	4		
d1. Communicate a depth and breadth of mathematical knowledge, both orally and in writing.	5	- Lectures - assignments - Oral discussion	• 2 Midterm + final exam • Home work • Quizzes
d2. Ability to Organize, connect and communicate mathematical and algorithmic ideas.	5	- Lectures - assignments	• Home work • Quizzes
d3. Critically interpret numerical and graphical data.	4	- assignments on information data and represented data	• Home work • Quizzes
e1. Use computer and its applications as an office tool	2	- assignments on Logical expression	Home work Quizzes

* Please mark (or type) High (5), Medium-High (4), Medium (3), Low-Medium (2), Low (1) or Not At All (0) indicating the level

to which you believe, as an instructor, the students have achieved these outcomes in this course.

Kingdom of Saudi Arabia
Ministry of Higher Education
Majmaah University
Zulfi, College of Sciences
Mathematics Department

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جـامـعـة المجمعة
كلـيــة العلـــــوم بالزلفي
قسم الرياضيات

Course Objectives and Outcomes

Course Number: Math202   **Course Name: Calculus 2**
Prepared by: Dr. Mohamed Herzallah
Table 1: Relationship of course objectives/outcomes with PLO and ASIIN Criteria

Course Objectives:	Course Outcomes:	ASIIN	PLO
Have the knowledge of Definite integral and its properties – mean value theorem of integral – the fundamental theorem of calculus-	**Define** and **recognize** the definite integral	a, b, e, m	
	Improve and **outline** mean value theorem.	b, c	
	Illustrate the fundamental theorem of calculus	l, n	
Have the knowledge of Indefinite integral – standard integrals.- Derivatives&integrals of hyperpolic and inverse hyperpolic functions-	**Define** and **recognize** the definite integral	a, b, e, m	
	Improve and **outline** mean value theorem.	b, c	
	Illustrate the fundamental theorem of calculus	l, n	
Integration methods: integration by substitution – integration by parts- integration by partial fractions – Other substitutions- L'Hospitals Rule – implicit integration.	**Define** and **recognize** integration methods and L'Hospitals rule	a, b, c, g, m , j	
	Shown the ability of working independently and with groups**.**	n	
	Illustrate how take up responsibility.	l, n	
evaluation of area and volume of revolution- arc length- Numerical integration(Trapiziodal rule)-	**Define** and **recognize** the use of integration in evaluation the area and volume of revolution	a, b, f, h	
	ability to **write** arc length and area of revolution by integration	a, j, g	
Polar coordinates-Polar curves graphs-Areas using polar coordinates.	**Define** and **recognize** the polar coordinates	a, i	
	interpret how graph the polar curves and using it in finding the area.	k, h, g	

Table 2: Methods of assessment of course syllabus

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Assessment Method	Number/Type				Instructor Assessed	TA/Grader Assessed	Peer/Self Assessed
Homework	5 homework assignments				x		
Mid Terms/Final Exams	2 mid-term; 1 final exam				x		
Quizzes	One biweekly				x		
Individual Projects	1-2 wks	3-4 wks	1/2 sem	Full sem			
Team Projects	1-2 wks	3-4 wks x	1/2 sem	Full sem x	x		x
Lab Assignments							
Computer Assignments							
Computer Tools Used							
Oral Presentations	One				x		x
Written Reports	One				x		
Other	Design project (project binder)				x		

Outcome of ASIN	
a	Graduates have sound mathematical knowledge. They have a profound overview of the contents of fundamental mathematical disciplines and are able to identify their correlations.
b	Graduates are able to recognise mathematics-related problems, assess their solvability and solve them within a specified time frame.
c	Graduates have a basic ability to work in a scientific way. They are in particular able to formulate mathematical hypotheses and have an understanding of how such hypotheses can be verified or falsified using mathematical methods.
d	Graduates can flexibly apply mathematical methods of fundamental component areas of mathematics and are able to transfer the findings obtained to other component areas or applications.
e	Graduates have abstraction ability and are able to recognise analogies and basic patterns
f	Graduates are able to think in a conceptual, analytical and logical manner.
g	Graduates have an extensive comprehension of the significance of mathematical modelling. Are able to create mathematical models for mathematical problems as well as for problems in other areas of science or everyday life, and have a selection of problem solving strategies at their disposal.
h	Graduates can use basic methods of computer-aided simulation, mathematical software and programming to solve mathematical problems
i	Graduates are in a position to solve more extensive mathematical
j	Graduates can classify, recognise, formulate and solve mathematics-related problems
k	Graduates use electronic media competently
l	Graduates can implement lifelong learning strategies. A prerequisite for this is that the students are per-severing and that they have developed persistence.
m	Graduates can recognise, formulate, classify and solve problems in a mathematical context
n	Graduates can communicate, possibly also in a foreign language, and contribute their work effectively in teams

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Instructor Course Evaluation Form

The purpose of this evaluation is to collect instructor feedback for improving this course and the Mathematics program. Information will also be used for program accreditation purposes.

I.   **Program Learning Outcomes Evaluations**

Course Number/Name	Math202 Calculus (2)	Semester	second 1434/1435	
Instructor	Dr. Mohamed Herzallah			

The course listed above is designed for students to achieve the following outcomes at a Not At All, Low, Low- Medium, Medium, Medium-High or High level.

Please mark (or type) High (5), Medium-High (4), Medium (3), Low-Medium (2), Low (1) or Not At All (0) indicating the level to which you believe, as an instructor, the students have achieved these outcomes in this course.

Program Learning Outcomes	Relevant Activities	5	4	3	2	1	0
a1. Apply fundamentals and concepts of mathematics.	- Lectures - assignments	5					
a2. Apply fundamentals and concepts General sciences and Computer skills.	- assignments on logic statements			3			
a3. Realize Social and ethical values.	-Home work - Oral discussions		4				
b1. Read and construct mathematical arguments and proofs.	- Lectures - assignments	5					
b2. Apply critical thinking skills to solve problems that can be modeled mathematically.	- Lectures - assignments - Oral discussion	5					
c1. Work independently and within a team	Divided students into groups and using oral discussion with homework		4				
c2. Bear responsibility for different situations.			4				
c3. Realize codes of ethics and their importance.			4				
d1. Communicate a depth and breadth of mathematical knowledge, both orally and in writing.	- Lectures - assignments - Oral discussion	5					
d2. Ability to Organize, connect and communicate mathematical and algorithmic ideas.	- Lectures - assignments	5					
d3. Critically interpret numerical and graphical data.	- assignments on information data and represented data		4				
e1. Use computer and its applications as an office tool	- assignments on Logical expression				2		

II.   Catalog Description , and   Course Prerequisites Evaluations:

Based on your experiences in the course, please respond by circling the most appropriate number. Circle N/A for items that are not applicable, or if you have no opinion.

Catalog Description 1434-1435	• Definite integral and its properties • mean value theorem of integral • the fundamental theorem of calculus • Indefinite integral • standard integrals. • Derivatives&integralsof hyperpolic and inverse hyperpolic functions • Integration methods: integration by substitution – integration by parts- integration by partial fractions – Other substitutions • L'Hospitals Rule • evaluation of area and volume of revolution- arc length • Numerical integration(Trapiziodal rule) • Polar coordinates-Polar curves graphs-Areas using polar coordinates.						
Course Prerequisites:	Math201	**Circle One (5=Strongly Agree; 1=Strongly disagree)**					
2a. Do you believe that the catalog description (above) is accurate for this course?		**(5)**	4	3	2	1	**N/A**
2b. Do you believe that the course prerequisites (above) are appropriate for this course?		**(5)**	4	3	2	1	**N/A**
2c. If not, please list any prerequisites you believe are not appropriate for this course.							

III.   Textbook(s) and/or Lab Manuals (if applicable) Evaluations:

Textbook(s) and/or Lab Manuals (if applicable):	• H. Anton: Calculus with analytical Geometry, 4th edition, John Wiley & sons, New York, 1992. • George B. Thomas,Ross L. Finney, Calculus and analytical Geometry(9th Edition), Addison-Wesley publishing company, 1996.	**Circle One (5=Strongly Agree; 1=Strongly Disagree)**					
3a. In general, do you believe this to be an appropriate textbook for this course?		5	**(4)**	3	2	1	**N/A**
3b. Was the organization of the textbook appropriate for this course?		**(5)**	4	3	2	1	**N/A**
3c. Was the level of the textbook appropriate for this course?		**(5)**	4	3	2	1	**N/A**

IV.   Computer usage (if applicable) Evaluations:

Computer usage (if applicable):		**Circle One (5=Strongly Agree; 1=Strongly Disagree)**					
5a. Was the use of computer well integrated with the course?		5	4	3	2	**(1)**	**N/A**
5b. Was the computer lab adequately equipped with well-maintained and updated computers?		5	4	3	2	**(1)**	**N/A**
5c. Was the computer lab equipped with sufficient number of computers?		5	5	5	2	**(1)**	**(N/A)**
5d. Were the special software packages (MATLAB, SPSS, C+, FORTRAN, etc) available and accessible?		5	4	3	2	**(1)**	**(N/A)**
5e. Was adequate technical support available when needed?		5	4	3	2	**(1)**	**(N/A)**

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Student Course Evaluation Form

The purpose of this evaluation is to collect instructor feedback for improving this course and the Mathematics program. Information will also be used for program accreditation purposes.

I. **Program Learning Outcomes Evaluations**

Course Number/Name	Math 202 Calculus(2)	Semester	Second 1434/1435
Instructor	**Dr. Mohamed Herzallah**		
Student Name	-----------------------------------	**Student ID**	---------------------

The course listed above is designed for students to achieve the following outcomes at a Not At All, Low, Low- Medium, Medium, Medium-High or High level.

Please mark (or type) High (5), Medium-High (4), Medium (3), Low-Medium (2), Low (1) or Not At All (0) indicating the level to which you believe, as an instructor, the students have achieved these outcomes in this course.

Program Learning Outcomes	5	4	3	2	1	0
a1. Apply fundamentals and concepts of mathematics.	*					
a2. Apply fundamentals and concepts General sciences and Computer skills.			*			
a3. Realize Social and ethical values.	*					
b1. Read and construct mathematical arguments and proofs.	*					
b2. Apply critical thinking skills to solve problems that can be modeled mathematically.	*					
c1. Work independently and within a team		*				
c2. Bear responsibility for different situations.		*				
c3. Realize codes of ethics and their importance.		*				
d1. Communicate a depth and breadth of mathematical knowledge, both orally and in writing.	*					
d2. Ability to Organize, connect and communicate mathematical and algorithmic ideas.	*					
d3. Critically interpret numerical and graphical data.		*				
e1. Use computer and its applications as an office tool				*		

II.   **Catalog Description , and   Course Prerequisites Evaluations:**

Based on your experiences in the course, please respond by circling the most appropriate number. Circle N/A for items that are not applicable, or if you have no opinion.

Catalog Description 1434-1435	• Definite integral and its properties • mean value theorem of integral • the fundamental theorem of calculus • Indefinite integral • standard integrals. • Derivatives&integralsof hyperpolic and inverse hyperpolic functions • Integration methods: integration by substitution – integration by parts-integration by partial fractions – Other substitutions • L'Hospitals Rule • evaluation of area and volume of revolution- arc length • Numerical integration(Trapiziodal rule) • Polar coordinates-Polar curves graphs-Areas using polar coordinates.						
Course Prerequisites:	Math 201	**Circle One (5=Strongly Agree; 1=Strongly disagree)**					
2a. Do you believe that the catalog description (above) is accurate for this course?		**5**	4	3	2	1	N/A
2b. Do you believe that the course prerequisites (above) are appropriate for this course?		**5**	4	3	2	1	N/A
2c. If not, please list any prerequisites you believe are not appropriate for this course.							

III.   **Textbook(s) and/or Lab Manuals (if applicable) Evaluations:**

Textbook(s) and/or Lab Manuals (if applicable):	• H. Anton: Calculus with analytical Geometry, 4th edition, John Wiley & sons, New York, 1992. • George B. Thomas,Ross L. Finney, Calculus and analytical Geometry(9th Edition), Addison-Wesley publishing company, 1996.	**Circle One (5=Strongly Agree; 1=Strongly Disagree)**					
3a. In general, do you believe this to be an appropriate textbook for this course?		5	**4**	3	2	1	N/A
3b. Was the organization of the textbook appropriate for this course?		**5**	4	3	2	1	N/A
3c. Was the level of the textbook appropriate for this course?		**5**	4	3	2	1	N/A

IV.   **Computer usage (if applicable) Evaluations:**

Computer usage (if applicable):		**Circle One (5=Strongly Agree; 1=Strongly Disagree)**					
4a. Was the use of computer well integrated with the course?		5	4	3	2	**1**	N/A
4b. Was the computer lab adequately equipped with well-maintained and updated computers?		5	4	3	2	**1**	N/A
4c. Was the computer lab equipped with sufficient number of computers?		5	5	5	2	**1**	N/A
4d. Were the special software packages (MATLAB, SPSS, C+, FORTRAN, etc) available and accessible?		5	4	3	2	**1**	N/A
4e. Was adequate technical support available when needed?		5	4	3	2	**1**	N/A

جامعة المجمعة

كلية العلوم بالزلفي

نموذج تحويل العلامات النهائي من مئوي الى أحرف لطلبة البكالوريوس

الترم الثاني	١٤٣٤/١٤٣٥	**الثاني**	**الفصل الدراسي**

math202+math223	رقم المادة	الرياضيات	**القسم**
حساب التفاضل والتكامل(٢)	اســــم المــــــادة	د. محمد أحمد السيد حرزالله	**استاذ المادة**
0	عدد الطلبة الغائبين عن النهائي	5	**عدد الطلبة المسجـلـيـن**
1	عدد الطلبة الراسبين	4	**عدد الطلبة النـــاجحين**
F	العلامة الدنيا	3.65	**متوسط الدرجات**
80.00%	نسبة النجاح	A +	**الدرجــة العليـــــا**

الرقم	العلامة	التقدير
1	97	**A+**
2	91	**A**
3	95	**A+**
4	65	**D+**
5	11	**F**

	Percentage	SUM	Count	TO	From	Average
Average	40	10	2	100	95	**A+**
	20	4.75	1	94	90	**A**
	0	0	0	89	85	**B+**
	0	0	0	84	80	**B**
	0	0	0	79	75	**C+**
	0	0	0	74	70	**C**
	20	2.5	1	69	65	**D+**
	0	0	0	64	60	**D**
	20	1	1	59	0	**F**
3.65	**100**	**18.3**	**5**			Total Students