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

جامعة المجمعة
Majmaah University

المملكة العربية السعودية
وزارة التعليم العالي
جامعة المجمعة
كلية العلـــوم بالزلفي
قسم الرياضيات

COURSE CLASSIFICATION FORM

Course Number/Name		**Math326 Mathematical Methods**	
Prepared by		**Dr. Khaled El Helow**	
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 Logical statements	• 1 Midterm and final exam • Home work
a3. Realize Social and ethical values	**0**		•
b1. Read and construct mathematical arguments and proofs	**4**	- Lectures - assignments	Home work
b2. Apply critical thinking skills to solve problems that can be modeled mathematically.	**5**	- Lectures - assignments - Oral discussion	• 3 Midterm and final exam+ Home work
c1. Work independently and within a team	**3**	Divided students into groups and using oral discussion with homework	• Home work
c2. Bear responsibility for different situations.	**2**	Real life applications	• Quizzes
c3. Realize codes of ethics and their importance.	**0**	Open book exam	• Quizzes
d1. Communicate a depth and breadth of mathematical knowledge, both orally and in writing.	**4**	- Lectures - assignments - Oral discussion	• 3 Midterm + final exam • Home work • Quizzes
d2. Ability to Organize, connect and communicate mathematical and algorithmic ideas.	**4**	- Lectures - assignments	• Home work • Quizzes
d3. Critically interpret numerical and graphical data.	**3**	- assignments on information data and represented data	• Home work • Quizzes
e1. Use computer and its applications as an office tool	**3**	- 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.**

جامعة المجمعة

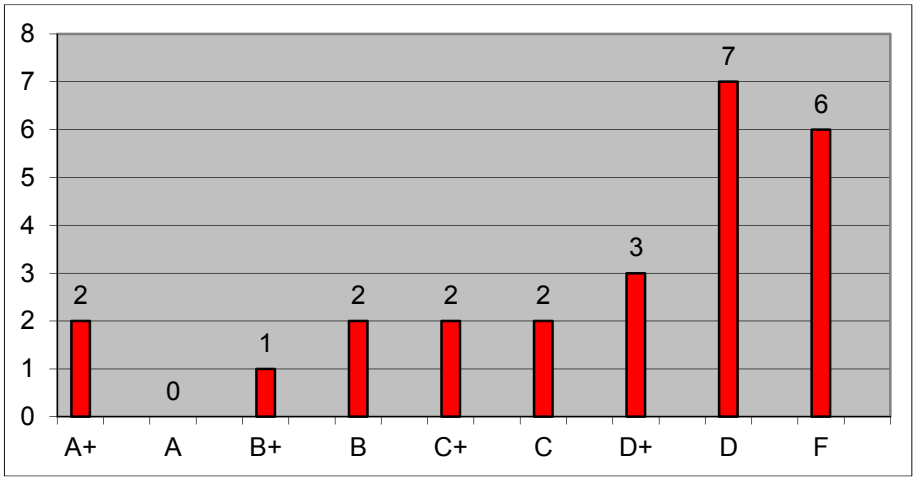
كلية العلوم بالزلفي

نموذج تحويل العلامات النهائي من مئوي الى أحرف لطلبة البكالوريوس

الفصل الدراسي	الثاني	١٤٣٤/١٤٣٥	الترم الثاني	
القسم	الرياضيات	رقم المادة		ريض ٣٢٦
استاذ المادة	د. خالد السيد الحلو	اســـــم المـــــــادة		الطرائق الرياضية
عدد الطلبة المسجـليـــن	25	عدد الطلبة الغائبين عن التهائي		0
عدد الطلبة النـــاجحين	19	عدد الطلبة الراسبين		6
متوسط الدرجات	2.52	العلامة الدنيا		F
الدرجـة العليـــــا	A +	نسبة النجاح		76.00%

Average	Percentage	SUM	Count	TO	From	Average
	8	10	2	100	95	A+
	0	0	0	94	90	A
	4	4.5	1	89	85	B+
	8	8	2	84	80	B
	8	7	2	79	75	C+
	8	6	2	74	70	C
	12	7.5	3	69	65	D+
	28	14	7	64	60	D
	24	6	6	59	0	F
2.52	100	63	25		Total Students	

الرقم	العلامة	التقدير
1	60	D
2	67	D+
3	45	F
4	60	D
5	61	D
6	38	F
7	80	B
8	80	B
9	37	F
10	67	D+
11	60	D
12	95	A+
13	97	A+
14	73	C
15	60	D
16	75	C+
17	31	F
18	46	F
19	60	D
20	70	C
21	46	F
22	60	D
23	75	C+
24	85	B+
25	65	D+



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Course Objectives and Outcomes

Course Number: Math326 **Course Name: Mathematical Methods**

Prepared by: Dr. Khaled El Helow

Table 1: Relationship of course objectives/outcomes with PLO and ASIIN Criteria

Course Objectives:	Course Outcomes:	ASIIN	PLO
Series Solutions of Ordinary differential equations with variable coefficients- Inner product space of functions. . Improper integrals and its properties.	**Define** and **recognize** the power Series Solutions	a, b, e, m	
	Improve and **outline** the logical thinking.	b, c	
	Illustrate how to communicating with: Peers, Lecturers and Community.	l, n	
Bessel function and its properties,. .Gamma and Beta functions , the relation between them and their properties.	**Define** and **recognize** the Bessel, Gamma and Beta functions and their properties.	a, b, c, g, m , j	
	Shown the ability of working independently and with groups.	n	
	Illustrate how take up responsibility.	l, n	
Orthogonal polynomials and special functions(Legender, Hermite,). .	**Define** and **recognize** the Legender, Hermite,). Orthogonal polynomials concepts	a, b, f, h	
	ability to **solve** differential equations with its initial and boundary conditions	a, j, g	
Laplace transformations and its proofs	**Define** and **recognize** Laplace and its properties	a, c, h	
	Appraise how to Use the computer skills and library.	d, h	
	Illustrate how to Search the internet and using software programs to deal with problems	d, h	
Inverse Laplace transformation	**Define** and **recognize** inverse Laplace transformation.	a, e, i	
	interpret how using both Laplace and inverse Laplace transformation.to solve differential equations..	k, h, g	
Studing the generalized theory of Fourier series - Fourier integral	**Define** and **recognize** Fourier series - Fourier integral	a, i	
	interpret how to Know the Fourier series - Fourier integral using the internet	h, k	
Solution of differential equations with its initial and boundary conditions using Laplace	**Define** and **recognize** Solution of differential equations with its initial and boundary conditions using Laplace transforms theory	a, i	

transforms	**interpret** how to Know the Solution of differential equations with its initial and boundary conditions using Laplace using the internet	k, h, g	

Table 2: Methods of assessment of course syllabus

.

Assessment Method	Number/Type				Instructor Assessed	TA/Grader Assessed	Peer/Self Assessed
Homework	6 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 ASIIN	
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	Math326 Mathematical Methods	Semester	First 1434/1435
Instructor	Dr. Khaled El Helow		

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.	Some real life applications					**1**	
b1. Read and construct mathematical arguments and proofs.	- Lectures - assignments		**4**				
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			**3**			
c2. Bear responsibility for different situations.	By solving some applications				**2**		
c3. Realize codes of ethics and their importance.							**0**
d1. Communicate a depth and breadth of mathematical knowledge, both orally and in writing.	- Lectures - assignments - Oral discussion		**4**				
d2. Ability to Organize, connect and communicate mathematical and algorithmic ideas.	- Lectures - assignments		**4**				
d3. Critically interpret numerical and graphical data.	- assignments on information data and represented data			**3**			
e1. Use computer and its applications as an office tool	- assignments on Logical expression			**3**			

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	• **Define the fundamental Series Solutions of Ordinary differential equations with variable coefficients-** • **Inner product space of functions. .** • **Improper integrals and its properties** • **Bessel Orthogonal polynomials and special functions(** • **Legender, Hermite,). generalized theory of Fourier series - Fourier integral. Function and its properties,. .** • **Gamma and Beta functions , the relation between them and their properties** • **Solution of differential equations with its initial and boundary conditions using Laplace transforms**						
Course Prerequisites:	Math321	**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):	• **Equations: Special Functions and Their ClassificationGerhard KristenssonSpringer201010: 048665649713: 978-0486656496** • **Fourier Analysis and its ApplicationsGeral B. F FourierFollandPacific GroveLatest edition978-0821847909**	**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)**

Majmaa University
Deanship of Admission and Registration
Edugate
Time : 13:30
Date: 27/05/2014

جامعة المجمعة
Majmaah University

رصد الدرجات

الفصل الثاني 1435/1434

جامعة المجمعة
عمادة شؤون القبول والتسجيل
البوابة الالكترونية
الوقت : 13:30
التاريخ : 1435/07/28

المقر	الزلفي- ذكور	اسم المقرر	طرائق رياضية
الدرجة	البكالوريوس	النشاط	محاضرة
رمز المقرر	MATH 326	الشعبة	436

تسلسل	رقم الطالب	اسم الطالب	فصلي (60%)	نهائي (40%)	المجموع	التقدير
1	282100151	عبدالعزيز بن عواد بن صالح السالمي الحربي	41	19	60	د
2	291102816	محمد بن سطام بن حمد السالمي الحربي	----	----	----	ع
3	291103314	عواض بن خلف بن مرزوق الرشيدي	43	24	67	د+
4	291107557	احمد بن عماش بن محسن الفريدي الحربي	31	14	45	هـ
5	301102512	محمد بن زعل بن عياد الفهيدي الحربي	41	19	60	د
6	301105531	عبداللطيف بن صالح بن عبدالعالي الرخيمي المطيري	40	21	61	د
7	301106877	فواز بن مفلح بن صلاح المطيري	----	----	----	ع
8	301107441	أحمد بن عوض بن عابر الشمري	24	14	38	هـ
9	301110135	احمد بن محمد بن مبارك الضويفري المطيري	44	36	80	ب
10	301110325	فواز بن عايد بن زيد المطيري	46	34	80	ب
11	312100115	سجاد بن علي بن محمد الحاجي	32	5	37	هـ
12	312164020	محمد بن ناصر بن رومي الرومي	44	23	67	د+
13	321100071	راكان بن سعود بن قاعد الحربي	39	21	60	د
14	321100103	منيف بن معيبد بن عبيد الرشيدي	59	36	95	أ+
15	321100456	صالح بن معيبد بن عبيد الرشيدي	59	38	97	أ+
16	321100779	عبدالله بن علي بن بدر الشايع	50	23	73	ج
17	321120107	عبدالعزيز بن محمد بن فريج السقياني	45	15	60	د
18	321120142	محمد بن عبدالمحسن بن محمد البدر	50	25	75	ج+

اسم أستاذ المقرر : خالد السيد السيد الحلو
التوقيع : .....

اسم رئيس القسم : .....
التوقيع : .....

رصد الدرجات

الفصل الثاني 1435/1434

المقر	الزلفي- ذكور	اسم المقرر	طرائق رياضية
الدرجة	البكالوريوس	النشاط	محاضرة
رمز المقرر	MATH 326	الشعبة	436

تسلسل	رقم الطالب	اسم الطالب	فصلي (60%)	نهائي (40%)	المجموع	التقدير
19	321120183	عبدالله بن بدر بن عبدالله البدر	25	6	31	هـ
20	321120198	فهد بن محمد بن مسهي الرشيدي	32	14	46	هـ
21	321120286	سلطان بن حسين بن هليل العنزي	44	16	60	د
22	321120323	فهد بن سعود بن محمد الفرهود	43	27	70	ج
23	321120466	محمد بن عبدالرحمن بن صالح الصعب	35	11	46	هـ
24	431320167	خالد بن عبدالرحمن بن عثمان الضويحي	44	16	60	د
25	431320169	عبدالعزيز بن علي بن عبدالله الرشيد	43	32	75	ج+
26	431320276	أنس بن ضويحي بن حمود الضويحي	49	36	85	ب+
27	431640023	ناصر بن سالم بن معنز الرشيدي	47	18	65	د+
28	431640044	جهز بن جايز بن عوض الرخيمي	----	----	----	ع

اسم أستاذ المقرر : خالد السيد السيد الحلو

التوقيع : .....

اسم رئيس القسم : .....

التوقيع : .....

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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 326 Mathematical Methods	Semester	second 1434/1435
Instructor	**Dr. Khaled El Helow**		
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	Series Solutions of Ordinary differential equations with variable coefficients- Inner product space of - self-adjoint operator- Sturm-Liouville theory- Orthogonal polynomials and special functions(Legendre, Hermit, gamma, beta, Bessel)- Generalized theory of Fourier series - Fourier integral						
Course Prerequisites:		**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):	**Equations: Special Functions and Their Classification. Gerhard Kristensson Springer 2010 10: 0486656497 13: 978-0486656496 Fourier Analysis and its Applications Geral B. F Fourier Folland Pacific Grove Latest edition 978-0821847909**	**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	5	5	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