ADVCED MATHEMATICS 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	University of Baghdad/ College of Science for Women
2. University Department/Centre	Computer Science of Department
3. Course title/code	Advanced Mathematics/ 307 CAM
4. Programme(s) to which it contributes	Mathematics
5. Modes of Attendance offered	Actual attendance until the download status and there is no study remotely by the laws in force.
6. Semester/Year	Semester/ Third Year First

7. Number of hours tuition (total)	30hours (30 hours theoretical)
8. Date of production/revision of this specification	6/4/2016

9. Aims of the Course

This course aims to enable the student to find out what are the differential equations and classification of differential equations and how they can classified and how much there is a way to solve differential equations and how to find those solutions.

10· Learning Outcomes, Teaching ,Learning and Assessment Methods

GG- Knowledge and Understanding

A1. Identification of differential equations.

A2. To identify the types of differential equations.

A3. Identify ways of solving differential equations.

A4. Learn how to find those solutions of differential equations.

B. Subject-specific skills

B1. Find out what kind of differential equations.

B2. Knowledge in any way could solve the differential equations.

B3. Did you know that the resulting solution of the differential equation is a true solution

Teaching and Learning Methods

- Education: provide printed lectures and modern, diverse and rich sources of examples.
- Education: Harnessing the blackboard to teach students the goal of clarifying the steps the solution and extraction results.

- Education: resolving some questions.
- Learning: asking questions and inquiries and make the student turn into a teaching explanation and solution on the blackboard at that point.
- Learning: direct questions and each student is experimenting to see how its interaction in order to pay attention to the rest.
- Learning: give the questions a group duty to students to encourage them to follow up article where by solving those questions to know whether he has been absorbing material or not.

Assessment methods

- Quizzes (quiz) semi-weekly.
- Questions sudden and overlapping put up with to explain Article.
- Monthly and Semester tests.

C. Thinking Skills

C1. Introducing a range of solutions to the same problem and discussed both individually and determine the appropriate method of solution to the problem at hand with a stand on the disadvantages of the rest of the roads.

C2. Asked questions that need to be exceptional oral answers where exceptional be specified in terms of the weight of the calendar and grades, which are a strong incentive for student participation, competition and the race to solve them.

Teaching and Learning Methods

Discussions that arise in the course of the lecture and try to involve the largest possible number of students, and touched on the details of things and discussed objectively and targeted discussion.

Assessment methods

- Oral evaluated by involving students in discussions.
- Quizzes (quiz).
- Monthly and Semester Tests.

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1. Giving duties to students and ask them to solve them to know where the strengths and weaknesses.

D2. Alert on errors in students' oral answers and discussion to see her fault.

D3. Alert on errors in the answers written by students and notation to clarify the student.

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	Introduction to differential equations	Introduction to differential equations	According to point 10 above and as needed	According to point 10 above and as needed
2	2	Classification of differential equations	Classification of differential equations	According to point 10 above and as needed	According to point 10 above and as needed
3	2	Solution of differential equations of first order	Solution of differential equations of first order	According to point 10 above and as needed	According to point 10 above and as needed
4	2	Solution of differential equations of first order	Solution of differential equations of first order	According to point 10 above and as needed	According to point 10 above and as needed
5	2	Solution of differential equations of second order	Solution of differential equations of second order	According to point 10 above and as needed	According to point 10 above and as needed
6	2	Solution of differential equations of second order	Solution of differential equations of second order	According to point 10 above and as needed	According to point 10 above and as needed
7	2	Solution of initial value problems	Solution of initial value problems	According to point 10 above and as needed	According to point 10 above and as needed

8	2	Solution of initial value problems	Solution of initial value problems	According to point 10 above and as needed	According to point 10 above and as needed
9	2	Solutions of boundary problems	Solutions of boundary problems	According to point 10 above and as needed	According to point 10 above and as needed
10	2	Non-homogenous differential equations	Non-homogenous differential equations	According to point 10 above and as needed	According to point 10 above and as needed
11	2	Solution of non-homogenous differential equations	Solution of non-homogenous differential equations	According to point 10 above and as needed	According to point 10 above and as needed
12	2	Solution of non-homogenous differential equations	Solution of non-homogenous differential equations	According to point 10 above and as needed	According to point 10 above and as needed
13	2	Laplace transformation	Laplace transformation	According to point 10 above and as needed	According to point 10 above and as needed
14	2	Inverse of Laplace transformation	Inverse of Laplace transformation	According to point 10 above and as needed	According to point 10 above and as needed
15	2	Examination	Examination	According to point 10 above and as needed	According to point 10 above and as needed

12. Infrastructure

Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	• Differential Equations with Boundary Value Problems ,5th Edition, Michael R. Cullen,2001. A crash course to differential equations, Schum, 2006. • Differential Equations with Boundary Value Problems ,5th Edition, Michael R. Cullen,2001
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	Mathematics 1,2
Minimum number of students	Depending on the size of the classroom, according to the division of the people, 20 students
Maximum number of students	Depending on the size of the classroom, according to the division of the people, 30 students