TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

Study of derivatives, their methods and applications, and their relationship to real problems. Teaching training students to deal with the rules and laws of derivatives and apply them in the future in a logical and correct manner.

0 - Learning outcomes, teaching method, learning and assessment

A- Knowledge and Understanding

A 1. Acquiring the ability and skill to distinguish the bases of derivatives methods and dealing with them

A 2. Acquire the capabilities and skills of applications of derivatives

A3. Dealing with different methods of finite and indefinite derivatives

B. Subject-specific skills

- B1. Summer Training
- B2. Fourth year projects
- B3. Scientific projects

Teaching and Learning Methods

- Daily and weekly quizzes.
- Class room activities.
- Guiding the student to some electronic websites.

Assessment methods

- Participation inside the class.
- Presentation of activities.
- Semesters and final examinations.

C. Thinking Skills

- C1. Develop the student's ability to work and provide homework in a timely manner.
- C2. Analyze the problem and find the solution based on the methods used in the various derivatives
- C 3. To develop the student's ability to debate.

Teaching and Learning Methods

- Managing the lecture to deal with the real problem that attracts the student to the topic of the lesson.
- Assigning groups of students with some activities.
- Make part of the grades for the assignments.
 - Assessment methods
- Active participation in the classroom is evidence of student commitment and responsibility.
- Commitment to the deadline in submitting assignments and research.
- The exams express commitment and cognitive and skill achievement.

- D. General and Transferable Skills (other skills relevant to employability and personal development)
 - D1. Developing the student's ability to deal with technical methods.
 - D2. Developing the student's ability to deal with Internet.

D3. Developing the student's ability to deal with multi media.

D4. Developing the student's ability to discuss real problems.

11. Course Structure					
Week	Hour s	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	3	Derivatives	The Definition of the Derivative Interpretation of the Derivative	Theoretical	Assignments and Discussions
2	3	Differentiation Formulas, Product and Quotient Rule	Properties of Derivative , Some laws of derivatives	Theoretical	Assignments and Discussions
3	3	Differentiation Formulas, Product and Quotient Rule	Properties of Derivative , Some laws of derivatives	Theoretical	Quiz ,Assignments and Discussions
4	3	Derivatives of Trig Functions	Derivatives of the six trig functions	Theoretical	Quiz
5	3	Derivatives of Exponential and Logarithm Functions	Exponential Functions, Logarithm Functions	Theoretical	Assignments ,Discussions, H.W
6	3	Derivatives of Inverse Trig Functions	Inverse Sine, Inverse cosine, Inverse tangent, Alternate Notation	Theoretical	Assignments and Discussions
7	3	Derivatives of Inverse Trig Functions	Inverse Sine, Inverse cosine, Inverse tangent, Alternate Notation	Theoretical	Assignments and Discussions
8	3	Derivatives of Hyperbolic Trig Functions	These are the six hyperbolic trig Functions .and They are defined as	Theoretical	Quiz, Assignments and Discussions
9	3	Chain Rule	There are two forms of the chain rule	Theoretical	Assignments and Discussions
10	3	Implicit Differentiation	Defined , formula, and used the chain rule	Theoretical	Assignments and Discussions, H.W
11	3	Higher Order Derivatives	first derivative, second derivative, third derivative.	Theoretical	Quiz, Assignments and Discussions
12	3	Logarithmic Differentiation	the properties of logarithms	Theoretical	Assignments and

					Discussions
13		Examination		On- line	
14	3	Applications of Derivatives	Introduction, Critical Points and Minimum and Maximum Values	Theoretical	Assignments and Discussions
15	3	Applications of Derivatives	Introduction, Critical Points and Minimum and Maximum Values	Theoretical	Assignments and Discussions

12. Infrastructure			
 Required reading: CORE TEXTS COURSE MATERIALS OTHER 	 Book " Thomas Calculas Lecture Notes 		
Special requirements (include for example workshops, periodicals, IT software, websites)			
Community-based facilities (include for example, guest Lectures , internship , field studies)	Practical applications in the companies and projects.		

13. Admissions				
Pre-requisites	Mathematical I, Mathematical II, Advanced Mathematics			
Minimum number of students	15			
Maximum number of students	50			