



**Jordan University of Science and Technology**  
**Faculty of Science & Arts**  
**Mathematics Department**

HSS101MATH Calculus I - JNQF Level: 7

First Semester 2024-2025

**Course Catalog**

3 Credit Hours. Functions, Limits and continuity and their applications:, chain rule, Implicit differentiation, related rates, increase decrease, concavity. Extrema. Newton's method, Roll's theorem, Mean-Value Theorem, definite and indefinite integrations, fundamental theorem of calculus, Area and volume, inverse functions, Exponential and logarithmic functions with their derivatives. Conic sections.

**Teaching Method:** On Campus

**Text Book**

<b>Title</b>	Calculus, Early Transcendental
<b>Author(s)</b>	H. Anton, I.C. Bivens, S. Davis
<b>Edition</b>	9th Edition
<b>Short Name</b>	TextBook
<b>Other Information</b>	

**Course References**

Short name	Book name	Author(s)	Edition	Other Information
Ref 1	Calculus One and Several Variables	S.L. Salas, G.J. Etgen, E. Hille	10th Edition	

**Instructor**

Name	<b>Miss Shatha Alghueiri</b>
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Instructor	
Name	<b>Shereen Tamemi</b>
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Office Hours	
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Class Schedule & Room	
Section 1: Lecture Time: Sun, Tue, Thu : 08:30 - 09:30 Room: PH2102	

Section 2:

Lecture Time: Sun, Tue, Thu : 09:30 - 10:30

Room: SF05

Section 3:

Lecture Time: Sun, Tue, Thu : 09:30 - 10:30

Room: NG41

Section 4:

Lecture Time: Sun, Tue, Thu : 10:30 - 11:30

Room: SF05

Section 5:

Lecture Time: Sun, Tue, Thu : 10:30 - 11:30

Room: SF11

Section 6:

Lecture Time: Sun, Tue, Thu : 11:30 - 12:30

Room: SG16

Section 7:

Lecture Time: Sun, Tue, Thu : 11:30 - 12:30

Room: SF12

Section 8:

Lecture Time: Sun, Tue, Thu : 12:30 - 13:30

Room: SF11

Section 9:

Lecture Time: Sun, Tue, Thu : 12:30 - 13:30

Room: SF12

Section 10:

Lecture Time: Sun, Tue, Thu : 13:30 - 14:30

Room: NB49

Section 11:

Lecture Time: Sun, Tue, Thu : 14:30 - 15:30

Room: NB72

Section 12:

Lecture Time: Mon, Wed : 08:30 - 10:00

Room: SG16

Section 13:

Lecture Time: Mon, Wed : 08:30 - 10:00

Room: NG56

Section 14:

Lecture Time: Mon, Wed : 11:30 - 13:00

Room: SF11

Section 15:

Lecture Time: Sun, Tue, Thu : 08:30 - 09:30

Room: NG55

Section 16:

Lecture Time: Mon, Wed : 13:00 - 14:30

Room: SF11

Section 17:

Lecture Time: Mon, Wed : 13:00 - 14:30

Room: SF12

Section 18:

Lecture Time: Sun, Tue, Thu : 13:30 - 14:30

Room: NG41

Section 19:

Lecture Time: Mon, Wed : 08:30 - 10:00

Room: NF40

**Tentative List of Topics Covered**

<b>Weeks</b>	<b>Topic</b>	<b>References</b>
Week 1	Chapter 0: Before Calculus	<b>Sections: 0.1, 0.2, 0.4, 0.5</b> From <b>TextBook</b>
Week 2	Chapter 1: Limits and Continuity	<b>Sections: 1.1, 1.2, 1.3, 1.5, 1.6</b> From <b>TextBook</b>
Week 3	Chapter 2: The Derivative	<b>Sections: 2.1, 2.2, 2.3, 2.4, 2.5, 2.6</b> From <b>TextBook</b>
Week 4	Chapter 3: Topics in Differentiation	<b>Sections: 3.1, 3.2, 3.3, 3.6</b> From <b>TextBook</b>
Week 5	Chapter 4: The Derivative in Graphing and Applications	<b>Sections: 4.1, 4.2, 4.3, 4.4, 4.5, 4.8</b> From <b>TextBook</b>
Week 6	Chapter 5: Integration	<b>Sections: 5.1, 5.2, 5.3, 5.5, 5.6, 5.9, 5.10</b> From <b>TextBook</b>
Week 7	Chapter 6: Applications of the Definite Integral	<b>Sections: 6.1, 6.2, 6.3, 6.4, 6.5</b> From <b>TextBook</b>
Week 8	Final Exam Week	

<b>Mapping of Course Outcomes to Program Outcomes and NQF Outcomes</b>	<b>Course Outcome Weight (Out of 100%)</b>	<b>Assessment method</b>
Be able to analyze the properties of the functions, limits, and continuity, and sketch their graphs. [1SLO1(K1S1)] [1L7K1]	20%	

Be able to apply techniques of differentiation, solve optimization problems, use L'Hopital rule, and apply Rolle's Theorem and Mean-Value Theorem. [1SLO1(K1S1)] [1L7S1]	30%	
Be able to know the indefinite integrals, integration by substitution and apply the definite integrals, the fundamental theorem of Calculus, and principles of definite integral calculation. [1SLO1(K1S1)] [1L7S1]	35%	
Be able to find the area enclosed by two curves, volumes by slicing, and length of a plane curve. [1SLO1(K1S1)] [1L7S1]	15%	

Relationship to Program Student Outcomes (Out of 100%)					
SLO1(K1S1)	SLO2(S23C1)	SLO3(C24)	SLO4(C3)	SLO5(C4)	SLO6(S2C3)
100					

Relationship to NQF Outcomes (Out of 100%)	
L7K1	L7S1
20	80

Evaluation	
Assessment Tool	Weight
First Exam	30%
Second Exam	30%
Final Exam	40%

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