



Jordan University of Science and Technology
Faculty of Science & Arts
Basic Sciences And Humanities Department

HSS102MATH Calculus 2 (For Biological Sciences)

First Semester 2023-2024

Course Catalog

3 Credit Hours. Introduction, Exponential and logarithmic functions, trigonometric functions, techniques of integration, definite integral and its application

Text Book

Title	Mathematics for the Biological science
Author(s)	J.C. Arya and R. W. Lardner
Edition	1st Edition
Short Name	Text Book
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref 1	Calculus for the Life Sciences	R.N. Greenwell, N.P. Ritchey, M.L. Lial	2nd Edition	
Ref 2	Calculus for the Life Sciences	M. L. Bittinger, N. Brand, J. Quintanilla	1st Edition	

Instructor

Name	Mrs. Hiyam Al-Bataineh
Office Location	NA
Office Hours	Sun : 09:30 - 10:30 Sun : 11:30 - 13:30 Mon : 11:30 - 12:00 Tue : 09:30 - 10:30 Tue : 11:30 - 13:30 Thu : 11:30 - 13:30

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Instructor	
Name	Mr. Issam Abu-Irwaq
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Instructor	
Name	Mr. Hasan Al Bzoor
Office Location	-
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Class Schedule & Room

Section 1:

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

Room: NF45

Section 2:

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

Room: SF05

Section 3:

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

Room: NG54

Section 4:

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

Room: SF11

Section 5:

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

Room: NG55

Section 6:

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

Room: NG54

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	Real Number System, Sets and their Representations	From Text Book
Week 2	Functions, Linear Functions, Linear Inequalities	From Text Book
Week 3	Other Simple Functions, More on Functions\ part 1	From Text Book
Weeks 3, 4	More on Functions : Composite Functions , Limits as x Goes to Infinity	From Text Book
Week 5	Increments and Rates, Limits	From Text Book
Week 6	More on Limits	From Text Book
Week 7	Continuous Functions	From Text Book
Week 8	The Derivative	From Text Book
Week 9	Derivative of Power Functions, Product and Quotient Rules	From Text Book

Week 10	Derivatives of Composite Functions, Higher derivatives	From Text Book
Week 11	Exponential Functions, Inverse Functions and Logarithms	From Text Book
Week 12	Natural Logarithms and Exponential, Trigonometric Functions, Derivatives of Trigonometric Functions	From Text Book
Week 13	Anti-derivatives, Method of substitution	From Text Book
Week 14	Method of Partial Fractions, Integration by Parts.	From Text Book
Week 15	Volumes of Revolutions.	From Text Book

Mapping of Course Outcomes to Program Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Analyze linear functions and inequalities and draw them. [4SLO1, 1SLO4]	20%	First Exam
Study the properties of functions; domain range, graph,...., etc and calculate limits of functions. [4SLO1, 1SLO4]	20%	First Exam, Second Exam
Apply the derivatives and use them in some applications. [4SLO1, 1SLO2]	30%	Second Exam, Final Exam
Perform integration via the methods of substitution and by parts. [4SLO1, 1SLO2]	20%	Final Exam
Find the area enclosed by two curves and volumes by slicing. [3SLO1, 1SLO2, 1SLO4]	10%	Final Exam

Relationship to Program Student Outcomes (Out of 100%)					
SLO1	SLO2	SLO3	SLO4	SLO5	SLO6
78	12		10		

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

