



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

MATH102A Calculus 2 (For Biological Sciences)

Summer Semester 2019-2020

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	TextBook
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 : 08:30 - 10:00 Mon : 08:30 - 10:00 Tue : 08:30 - 10:00 Wed : 08:30 - 10:00
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Instructor	
Name	Mr. Issam Abu-Irwaq
Office Location	-
Office Hours	Sun : 13:30 - 15:30 Mon : 13:30 - 15:30 Tue : 13:30 - 15:30 Wed : 13:30 - 15:30
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Class Schedule & Room
<p>Section 1: Lecture Time: Sun, Mon, Tue, Wed : 08:30 - 10:00 Room: منصة الكترونية</p> <p>Section 2: Lecture Time: Sun, Mon, Tue, Wed : 10:00 - 11:30 Room: منصة الكترونية</p> <p>Section 3: Lecture Time: Sun, Mon, Tue, Wed : 11:30 - 13:00 Room: منصة الكترونية</p> <p>Section 5: Lecture Time: Sun, Mon, Tue, Wed : 13:00 - 14:30 Room: منصة الكترونية</p>

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Real Number System, Sets and their Representations	Sections 1.1, 1.2 From TextBook
Week 1	Functions, Linear Functions, Linear Inequalities	Sections 1.3, 1.4, 1.5 From TextBook
Week 2	Other Simple Functions, More on Functions\ part 1	Sections 1.6, 1.7 From TextBook
Weeks 2, 3	More on Functions : Composite Functions , Limits as x Goes to Infinity	Sections 1.7, 1.8 From TextBook
Week 3	Increments and Rates, Limits	Sections 2.1, 2.2 From TextBook
Week 4	More on Limits, Continuous Functions	Sections 2.3, 2.4 From TextBook
Week 4	The Derivative, Derivative of Power Functions	Sections 2.5, 2.6 From TextBook

Week 5	Product and Quotient Rules, Derivatives of Composite Functions, Higher derivatives.	Sections 2.7, 2.8, 2.9 From TextBook
Week 5	Exponential Functions, Inverse Functions and Logarithms, Natural Logarithms and Exponential	Sections 3.1, 3.2, 3.4 From TextBook
Week 6	Trigonometric Functions, Derivatives of Trigonometric Functions	Sections 5.2, 5.3 From TextBook
Week 6	Anti-derivatives, Method of substitution	Sections 6.1, 6.2 From TextBook
Weeks 6, 7	Method of Partial Fractions, Integration by Parts.	Sections 6.4, 6.6 From TextBook
Week 7	Definite Integrals, More on areas	Sections 7.3, 7.4 From TextBook
Week 7	Volumes of Revolutions.	Section 7.5 From TextBook
Week 8	Final Exam Week	

Mapping of Course Outcomes to Program Student 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]	25%	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]	15%	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	11		11		

Evaluation	
Assessment Tool	Weight
First Exam	25%
Second Exam	25%
Final Exam	50%

