

SKEMA GLOBAL BBA SYLLABUS

CAMPUS: Sophia Antipolis ACADEMIC YEAR: 2022/2023

COURSE CODE	COURSE NAME			
BAC.EAINA.OTMTH.1002	CALCALUS II			
Credits	US Credits 4	/ ECTS Credits 8		
Student Workload	Contact Hours	Personal and/or Teamwork	Evaluation	
	52,5	225	7,5	
Teaching Language	English			
Co/Prerequisite	alculus I			
Discipline	ther			
Course Manager	an Grasselli - yan.grasselli@skema.edu			
Course Description	This course is the second math course taken by all engineering and science majors. Geometric and Thysics applications of the definite integral links this course to its predeceases MTH 1001, followed by the same geometric applications in polar coordinates or for parametric equations, New techniques of integration and an introduction to differential equations complete the topics of ontegral Calculus, Other topics like the infinite series, power series and conic sections cover the last past of the course.			
Learning Out	Fechniques of integration more integrals Modeling with differential equations Applications of the definite integral in geometry and physics Sequences finite series Power series Taylor series: convergence, the remainder estimation theorem, Conic sections Rotation of axes			
Course included in AACSB Assurance of Learning	No If Yes, enter the LO(s)			
Transferable Competences	□ Sustainability □ Ethics	Please include details here:		



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	 Artificial Intelligence Technological Agility Communication Research Methods Other 			
Teaching Methods	 ☑ Lectures □ Blended Learning ☑ Guided Personal Work ☑ Autonomous Personal Work 	Case Study Case Study Project Seminar Other Please specify		
Student Assessment	Written Examination 2 midterms tests Final Exam	Coefficient % 40% 35%		
	Continuous Assessment: 3 Quizzes	Coefficient % 25%		
Grading System	Please refer to the Academic Regulations for the grading system used in the BBA Program and further details and for information concerning absences, participation in class, plagiarism, etc.			
References / Books	Required for the course Enter a brief reference to any required reading	Recommended references Thomas' Calculus (12th Ed.) George B, Thomas, Maurice D, weir, Joel R, Hass		
Online reference material	Required for the course List any required online resources here	Recommended references List any recommended online resources here		
	COURSE CONTENT			
Session:	Contents:			
16/09/2022	Area between two curves, Volumes by slicing, disks and washers,			
20/09/2022	Volume by cylindrical shells; length of a plane curve, area of surface of revolution, average value			
23/09/2022	Work, fluid, pressure and force			
27/09/2022	Hyperbolic functions, hanging cables, an overview of integration methods			
30/09/2022	Integration by parts, substitution, power of trigonometric functions			

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04/10/2022	Trigonometric substitution		
07/10/2022	Integrating rational functions by partial fractions		
11/10/2022	Integrating rational functions by partial fractions		
14/10/2022	Improper integrals		
18/10/2022	Infinites series: Divergence test, Geometric series test		
21/10/2022	Infinite series: Ratio test, n root test, Limit comparison test		
25/10/2022	Infinite series: Ratio test, n root test, Limit comparison test		
28/10/2022	Infinite series, Alternating series test		
04/11/2022	Power series: Radius of convergence and interval of convergence		
08/11/2022	Power series: Radius and interval of convergence		
15/11/2022	Power series: Radius and interval of convergence		
18/11/2022	Taylor series: Taylor's theorem, Taylor's formula, The remainder estimation theorem,		
22/11/2022	Taylor series: Taylor's theorem, Taylor's formula, The remainder estimation theorem,		
25/11/2022	Finding an upper bound on the error using the remainder theorem		
29/11/2022	Finding an upper bound on the error using the remainder theorem		
02/12/2022	Conic section in calculus,		
06/12/2022	Conic section in calculus,		
09/12/2022	Review		