

BUSINESS AND ECONOMICS CALCULUS

Code du cours Course Code			Titre du cours Course title					
BAC.EAINA.ECMTH. 1702			BUSINESS AND ECONOMICS CALCULUS					
Crédits Credits		Période d'enseignement Teaching period					Année Académique Academic Year	
6		fall, spring					2022/2023	
Charge de travail Student workload	Synchrone / Synchronous	Asynchrone / Asynchronous	Travail en équipe Team work	Activités pédagogiques / Pedagogical activities	Travail personnel Personal work	Coaching	Evaluation	Charge totale de travail Total workload
	39	0	0	0	40	0	6	86
Programme Program			Global BBA					
Discipline Discipline			Autre					
Module			-					
Type de cours Course type			core					
Campus			Barcelone, Belo Horizonte, Lille, Raleigh, Sophia					
Campus partenaire								
Course open to students in exchange								
Langue d'enseignement Teaching language		Anglais / English						
Responsable du cours Course leader			DALMASSO Audrey					
Pré-Requis Prerequisite			BAC.EAINA.OTMTH.1701					
Nom des intervenants par campus Instructor(s) names by campus	Belo Horizonte							
	Lille							
	Paris							
	Raleigh							
	Sophia				ABOUSSOUAN Pierre - ROCHOW Sabine - BOISSIN Denis - GRASELLI Yan			
	Stellenbosch- Le Cap							
	Suzhou							
	Nanjing							

	Barcelone			
	Other			

Descriptif du cours / Course description	To provide the students with the basic concepts and techniques of differential and integral calculus, as well as an elementary knowledge of matrix algebra, applied to business, economics, management and the social sciences, There will be a strong emphasis on methodology.		
Thèmes / Topics			
Résultats d'apprentissage / Intended Learning Outcomes and Skills	<p>A l'issue de la formation, vous serez capable de / As a result of this module, you will be able to:</p> <p>Connaissances / Knowledge and Understanding (subject specific)</p> <p>Have knowledge and understanding of the following subjects: Precalculus review Introduction to Matrices Functions, graphs and limits and continuity Differentiation and its applications Applications of the derivative Exponential and logarithmic function Integration and its applications: Antiderivatives Techniques of integration, Definite integrals.</p> <p>Aptitudes cognitives / Cognitive skills</p> <p>Attitudes / Key transferable skills</p> <p>Ethical and social understanding</p>		
Contribution aux objectifs pédagogiques du programme / Contribution to learning objectives	Indiquer les learning objectives auxquels contribue le cours (en se basant sur le curriculum mapping du programme) / Indicate which learning objectives the course contributes to (based on the program curriculum mapping)		
	LO4.1 : To assess a business issue and to formulate solutions : LG4 : Graduates should be able to think critically and to demonstrate awareness of ethical considerations		
	Cours soumis à évaluation dans le cadre de l'Assurance of Learning pour l'année en cours ?		Non / No
Evaluation des étudiants / Student Assessment	Evaluation finale (DS)		40%
	Final examination		
	(Précisez la nature pour l'évaluation finale / Explain type for final examination)		
Cliquez ici pour entrer du texte.			
QCM - Quiz:			
Epreuve sur table - Supervised exam:			

	Présentation orale - Presentation:	
	Rapport écrit/Dissertation - Report / Dissertation:	
	Participation - Class participation:	
	Autre, précisez / Other, precise:	
Contrôle continu		60%
Continuous Assessment		
préciser nature / Explain type		
Cliquez ici pour entrer du texte.		Nb midterms : 2
QCM - Quiz:		
Epreuve sur table - Supervised exam:		
Présentation orale - Presentation:		
Rapport écrit/Dissertation - Report / Dissertation:		
Participation - Class participation:		
Autre, précisez / Other, precise:		
Méthodes d'enseignement Teaching Methods	Format de cours / Course format	
	Cours magistral / Lecture - TD / Tutorials	
	Autre, précisez / Other, precise:	
	Activités d'apprentissage / Learning activities	
Devoirs / Assignments		
Plan de cours Course Plan	<p>College Algebra review: Real number line and order. Absolute value and distance on the real number line. Exponents and radicals. Factoring polynomials. Matrices The derivative and the slope of a graph. Some rules for differentiation. Rates of change: velocity and marginals. The product and quotient rules. The chain rule. Exponential functions. Natural exponential functions. Derivatives of exponential functions Logarithmic functions. Derivatives of logarithmic functions. Exponential growth and decay. Increasing and decreasing functions. Extrema and first derivative test. Concavity and the second derivative test. Optimization problems Midterm test #1 Business and economics applications Limits Continuity Asymptotes. Curve sketching Higher order derivatives. Implicit differentiation. Related rates. The Cartesian plane and the distance formula. Graph of equations. Line in the plane and slope Keynesian Cross Diagram Antiderivatives and indefinite integrals. The general power rule. 5.3: Exponential and logarithmic integrals.</p>	

	Midterm test #2 Integration by parts and present value. Partial fractions and logistic growth. Final Exam
Référence Académique / Academic reference	Lectures obligatoires / Required readings : Brief Calculus, an Applied Approach, Larson & Edwards, Houghton Mifflin Company, 9th edition Lectures Recommandées / Recommended readings :
Site(s) web / Web site(s)	
Licence(s) informatique(s)/ Computer licenses	

	Modalités de délivrance du cours (par campus si différent) Course delivery modes (per campus if different)					
Nombre CM Amphi / Number of Lectures	Durée CM Amphi (en heures) / Lecture duration (in hours)	Nombre TD / Number of Tutorial classes	Durée TD (en heures) / Tutorial class duration (in hours)	Asynchrone / Asynchronous	Autres (Distance learning, etc...) (en heures) / Other (in hours)	Préciser les spécificités de programmation (TD journée, cadencement spécifique des séances) / Specify if full-day tutorial class, different schedules
Campus Sophia						
0	0	13	3	0	0	