

APPLIED MECHANICS: STATICS

Code du cours Course Code			Titre du cours Course title					
BAC.EAINA.OTMAE. 2081			APPLIED MECHANICS: STATICS					
Crédits Credits		Période d'enseignement Teaching period					Année Académique Academic Year	
6		fall					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	120	0	6	165
Programme Program			Global BBA					
Discipline Discipline								
Module			-					
Type de cours Course type			core					
Campus			Sophia					
Campus partenaire								
Course open to students in exchange								
Langue d'enseignement Teaching language		Anglais / English						
Responsable du cours Course leader			GRASSELLI Yan					
Pré-Requis Prerequisite			Physics I					
Nom des intervenants par campus Instructor(s) names by campus	Belo Horizonte							
	Lille							
	Paris							
	Raleigh							
	Sophia							
	Stellenbosch- Le Cap							
	Suzhou							
	Nanjing							

	Barcelone			
	Other			

Descriptif du cours / Course description	Force and position vectors : spatial equilibrium Equivalent forces systems Center of gravity ; mass and area moment of inertia Equilibrium of rigid body Structural analysis : trusses, frames and machines Internal forces : shear and bending moment diagrams Friction ; Cables & Virtual Work
Thèmes / Topics	Force and position vectors : spatial equilibrium Equivalent forces systems Center of gravity ; mass and area moment of inertia Equilibrium of rigid body Structural analysis : trusses, frames and machines Internal forces : shear and bending moment diagrams Friction ; Cables & Virtual Work
Résultats d'apprentissage / Intended Learning Outcomes and Skills	A l'issue de la formation, vous serez capable de / As a result of this module, you will be able to: Connaissances / Knowledge and Understanding (subject specific) This course is designed to give the students the problem solving skill in the area of rigid body statics using the basic concepts of mechanics of particules and rigid bodies. Aptitudes cognitives / Cognitive skills Attitudes / Key transferable skills Ethical and social understanding
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) 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) / Final examination 40% (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 Continuous Assessment	60%
préciser nature / Explain type		
	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:	Nb midterms : 0
Méthodes d'enseignement Teaching Methods	Format de cours / Course format	
	Cours magistral / Lecture - TD / Tutorials	
	Autre, précisez / Other, precise:	
	Activités d'apprentissage / Learning activities	
Plan de cours Course Plan	Statics of Particles (In Plane = 2D) Statics of Particles 2D & Equivalent systems of forces 2D Equivalent systems of forces 2D Equilibrium of rigid bodies 2D Quiz on Chapter 2 & Equilibrium of rigid bodies 2D Distributed forces : Centroids and centers of gravity Quiz on Chapter 3 & Distributed forces : Centroids and centers of gravity Distributed forces : Centroids and centers of gravity Quiz on Chapter 4 & Analysis of Structures Analysis of Structures Quiz on Chapter 5 & Analysis of Structures Forces in Beams and Cables Midterm I on Chapter 2 to 5 1 pm in 527 Forces in Beams and Cables Quiz on Chapter 6 & Forces in Beams and Cables Friction Quiz on Chapter 7 & Friction Friction Distributed forces: moments of inertia Distributed forces: moments of inertia Distributed forces: moments of inertia Midterm II on Chapter 6 to 8 1 pm in 527 Distributed Forces : moments of inertia Method of Virtual Work Method of Virtual Work Quiz on Chapter 9 & Statics & Equivalent systems of forces 3D	

	Equilibrium of rigid bodies 3D Quiz on Chapter 10 & Equilibrium of rigid bodies 3D
Référence Académique / Academic reference	
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	