Academic discipline

Composites in modern design

Specialities: *131 Applied Mechanics; 133 Industrial Machinery Engineering; 134 Aerospace Engineering; 141 Power Engineering, Electrical Engineering and Mechanics; 142 Power Engineering; 274 Automobile Transport*

Рівень вищої освіти	*First (bachelor)*
Статус дисципліни	*Selective*
Обсяг дисципліни	150 hours/ 5 credits
Мова викладання	*English*
Що буде вивчатися (предмет вивчення)	The course is recommended for students who want to understand the areas of application of composite materials in various spheres of life. The main issues studied in this course are: - variety of composite construction applications; - technological features of composite products manufacturing in modern design; - features of modeling typical composite structures in the CATIA system.
Чому це цікаво/треба вивчати (мета)	The **goal** is to introduce students to the basics, perspectives and main directions of using composites in modern design and to teach them how to design objects in the CATIA system. The **task** is to teach how to use the CATIA system for designing general-purpose composite elements.
Як можна користуватися набутими знаннями і уміннями (компетентності)	As a result of studying the academic discipline, the student should **know:** - the main directions of composites using in modern design; - principles of composite products designing for domestic and industrial purposes; - basic structural and technological solutions of composite structures used in various industries; - modern state and capabilities of integrated systems for designing composite structures. **be able:** - choose basic composite materials for domestic and industrial purposes; - analyze various manufacturing technologies of composite products; - create a geometric model of a structure in CATIA systems.
Пререквізити	Studying the course is based on general knowledge of such disciplines as "Sketch geometry", "Materials science", "Technology of construction materials".
Кореквізити	The course is important for studying courses that require knowledge of the manufacture of composite structures
Організація навчання	**Types of classes:** lectures, practical classes, individual consultations (if necessary), independent work of students based on materials published by the department (methodical manuals). **Forms of obtaining education:** daily, distance **Forms of control:** participation in lectures, remote test assignments, performance of laboratory work. Conducting current control, written modular control, final control in the form of an exam.
Кафедра	403
Факультет	*Rocket and space engineering*

Викладач		ПІБ	**Svitlana Purhina**
		Посада	Associate Professor
		Вчене звання	Associate Professor
		Науковий ступінь	Ph.D
		e-mail	s.purhina@khai.edu
Посилання на електронні матеріали курсу	https://mentor.khai.edu/course/		
Посилання на робочу програму (силабус)			