



ROMÂNIA
MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
UNIVERSITATEA DIN CRAIOVA
FACULTATEA DE INGINERIE ELECTRICĂ

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NUMELE DISCIPLINEI: AERODINAMICA SI EFICIENTA ENERGETICA LA BORDUL VEHICULELOR RUTIERE SI AERIENE	COURSE NAME: AERODYNAMICS AND ENERGETIC EFFICIENCY FOR ROAD AND AERIAL VEHICLES
DATE GENERALE	GENERAL INFORMATION
Program de studii: SUSTAINABLE ENERGY AND MOBILITY SYSTEMS Anul: I Semestrul: I Credite ECTS: 5 Tipuri de activități: Lecture, Laboratory Tip evaluare: Examen Titular: Conf.dr.ing. Liviu Dincă	Study Program: SUSTAINABLE ENERGY AND MOBILITY SYSTEMS Year: I Semester: I ECTS Credits: 5 Types of activities: Lecture, Laboratory Assessment: Exam Lecturer: Conf.dr.ing. Liviu Dincă
SCOPUL DISCIPLINEI	COURSE PURPOSE
Cunoasterea principalelor probleme legate de aerodinamica vehiculelor rutiere si aeriene si de utilizarea eficienta a energiei la bordul acestora	Knowledge of the main issues concerning the road and air vehicles aerodynamics and efficient use of energy on board
CERINȚE PREALABILE	PREREQUISITES
Analiza matematica, Matematici speciale, Mecanica fluidelor, Bazele aerodinamicii, Termodinamica tehnica	Mathematical analysis, Special mathematics, Fluid mechanics, Basics of aerodynamics, Technical thermodynamics
OBIECTIVE	OBJECTIVES
• Obiectiv 1: Cunoasterea caracteristicilor aerodinamice ale vehiculelor rutiere si aeriene • Obiectiv 2: Cunoasterea principalelor surse de energie si a principalilor consumatori de la bord • Obiectiv 3: Cunoasterea metodelor de optimizare a utilizarii energiei la bord	• Objective 1: Knowledge of the aerodynamic characteristics of the road and air vehicles • Objective 2: Knowledge of the main power sources and consumers on board • Objective 3: Knowledge of the optimization methods for energy use on board
CONȚINUT CURS	LECTURE CONTENT
1. Probleme specifice aerodinamicii vehiculelor rutiere 2. Probleme specifice aerodinamicii vehiculelor aeriene 3. Transfer de caldura la bordul vehiculelor rutiere 4. Transfer de caldura la bordul vehiculelor aeriene	1. Specific issues in road vehicles aerodynamics 2. Specific issues in aerial vehicles aerodynamics 3. Heat transfer on board of road vehicles 4. Heat transfer on board of aerial vehicles
METODE DE EVALUARE	EVALUATION METHODS
Examen	Exam
COMPETENȚE DOBÂNDITE	ACQUIRED COMPETENCIES
• Studentul cunoaste principalele probleme legate de aerodinamica vehiculelor aeriene si terestre, precum si de transferul de caldura la bordul acestora • Studentul este capabil sa utilizeze sisteme	• The student knows the main problems concerning the road and aerial vehicles aerodynamics and also the heat transfer on board • The student is able to use software packages



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software pentru studiul aerodinamic al vehiculelor rutiere si aeriene, precum si al transferului de caldura la bordul acestora	for the aerodynamic study of road and air vehicles and for the heat transfer on board
• Studentul poate evalua critic, pe baza rezultatelor simularilor, calitatile aerodinamice ale vehiculelor rutiere si aeriene • Studentul poate evalua critic, pe baza rezultatelor simularilor, solutiile de imbunatatire a utilizarii energiei la bord	• The student is able to make critical analysis, based on the simulation results, for the aerodynamic qualities of the road and aerial vehicles • The student is able to make critical analysis, based on the simulation results, for the improvement solutions of the on board energy use.
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