

COURSE GUIDE – short form

Academic year 2024-2025

Course name ¹	TECHNIQUES FOR SIMULATION OF THERMO-GAZ-DYNAMICS PROCESSES					Course code	TAIPM IA 105		
Course type ²	DS	Category ³	DI	Year of study	1	Semester	1	Number of credit points	4

Faculty	Material Science and Engineering	Number of teaching and learning hours ⁴					
Field	Materials Engineering	Total	L	T	LB	P	IS
Specialization	TAIPM	100	14	-	28	-	58

Pre-requisites from the curriculum ⁵	Compulsory	Not applicable
	Recommended	Not applicable

General objective ⁶	Development of profesional and transversal competences in regard to apply numerical techniques to thermal-gaz-dynamics processes. The activities can be performed online using institutional platforms.
Specific objectives ⁷	<ul style="list-style-type: none"> - Development of integration capacity of knowledge based in regard to solve some complex technical issues specific to engineering area - Development of innovation capacity due to rapid change in the market - Development of auto-evaluation capacity in regard to successful integration in labor market - Defining concepts, theories and basic methods using CFD techniques - Usage of basic knowledge in numerical simulation of heat and mass transfer processes
Course description ⁸	CFD simulation, mesh creation, boundary conditions

Assesment			Schedule ⁹	Percentage of the final grade (minimum grade) ¹⁰
A. Final assessment form ¹¹ :	Class tests along the semester	%		50% (minimum 5)
	Home works	%		
	Other activities	10%	week 14	
	Examination procedures and conditions: 1. Subject with open questions, working conditions oral, percent 100%.	90% (minimum grade 5)	week 14	
B. Seminar	Activity during seminar			% (minimum 5)
C. Laboratory	Activity during laboratory			50% (minimum 5)
D. Project	Activity during project			% (minimum 5)

Course organizer	Prof. dr. habil. ing. Alina Adriana MINEA
Teaching assistants	Prof. dr. habil. ing. Alina Adriana MINEA

¹Course name from the curriculum

² DF – fundamental, DID – in the field, DS – specialty, DC – complementary (from the curriculum)

³ DI – imposed, DO –optional, DL – facultative (from the curriculum)

⁴ Points 3.8, 3.5, 3.6a,b,c, 3.7 from the Course guide – extended form (L-lecture, T-tutorial, LB-laboratory works, P-project, IS-individual study)

⁵ According to 4.1 – Pre-requisites - from the Course guide – extended form

⁶ According to 7.1 from the Course guide – extended form

⁷ According to 7.2 from the Course guide – extended form

⁸ Short description of the course, according to point 8 from the Course guide – extended form

⁹ For continuous assessment: weeks 1 – 14, for final assessment – colloquium: week 14, for final assessment-exam: exam period

¹⁰ A minimum grade might be imposed for some assessment stages

¹¹ Exam or colloquium