

UNIVERSITY OF CRAIOVA/ FACULTY OF EXACT SCIENCES/ DEPARTMENT OF PHYSICS
 FIELD OF STUDY/ PROGRAMME OF STUDY: PHYSICS/ MATERIALS PHYSICS
 TITLE AWARDED: MASTER DEGREE IN PHYSICS/ MATERIALS PHYSICS
 MODE OF STUDY: FULL-TIME STUDIES
 LENGTH OF THE PROGRAMME OF STUDY/ TOTAL NUMBER OF ECTS CREDITS: 2 YEARS (4 semesters)/120 CREDITS

CURRICULUM - Cycle II, FIRST YEAR of STUDY

No.	Discipline title	Type of discipline	Discipline code	First semester					2nd semester				
				No.hours/week			VF	Credits ECTS	No.hours/week			VF	Credits ECTS
				C	A	P			C	A	P		
1	Developing materials	Mand.ATM	MFM101	1	1	-	E	6	-	-	-	-	-
2	Experimental methods in materials physics	Mand.AKD	MFM102	2	2	-	E	9	-	-	-	-	-
3	Optionally discipline I (disciplines to choose a, b, c) a) NMR and electron microscopy. Applications b) Composite materials c) Waste management	Opt. AKD	MFM103a MFM103b MFM103c	2	2	-	E	9	-	-	-	-	-
4	Bibliographical research on a topic of materials physics	Mand.RP	MFM104	-	-	4	C	6	-	-	-	-	-
5	Advanced semiconductor, dielectric and ferroelectric materials	Mand.AKD	MFM105	-	-	-	-	-	2	2	-	E	8
6	Optionally discipline II (disciplines to choose a, b, c) a) Partially ordered systems with medical applications b) Magnetic materials c) Radioactive pollution	Opt.AKD	MFM106a MFM106b MFM106c	-	-	-	-	-	2	2	-	E	8
7	Materials and optical fiber sensors	Mand.AKD	MFM107	-	-	-	-	-	2	1	-	E	8
8	Optionally discipline III Research project on a topic of materials physics	Opt.RP	MFM108	-	-	-	-	-	-	-	3	C	6
Total hours per week				5	5	4	3E+1C	30 Cr	6	5	3	3E+1C	30 Cr
Total general				14 hours/week						14 hours/week			

- Disciplines of psycho-pedagogical module (30 or 60 transferable credits, if applicable) are not included in the curriculum and will be determined by the Teacher Training Department, in accordance with the law.

- KEY: Mand.=Mandatory, Opt.=Optionally, AKD=advanced knowledge discipline, ATM=additional training module, RP=research program, C=course, A=application, P=practice, E=exam, C=colloquium, As=assessment, Cr=credits, VF=verification form.

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CURRICULUM - Cycle II, 2nd YEAR of STUDY

Nr. crt.	Discipline title	Type of discipline	Discipline code	First semester					2nd semester				
				No.hours/week			VF	Credits ECTS	No.hours/week			VF	Credits ECTS
				C	A	P			C	A	P		
1	Thin films and their applications	Mand.AKD	MFM201	2	1	-	E	7	-	-	-	-	-
2	Plasma and advanced materials	Mand.AKD	MFM202	2	2	-	E	8	-	-	-	-	-
3	Optionally discipline IV (disciplines to choose a, b, c) a) Superconductive materials. Applications b) Combustibile materials c) Biomaterials. Biotechnologies	Opt.AKD	MFM203a MFM203b MFM203c	2	2	-	E	8	-	-	-	-	-
4	Optionally discipline V (disciplines to choose a, b, c) a) Numerical simulation in materials physics b) Hydrodynamic and magnetohydrodynamic numerical simulations c) Modeling transport and combustion	Opt. ATM	MFM204a MFM204b MFM204c	1	2	-	C	7	-	-	-	-	-
5	Optionally discipline VI (disciplines to choose a, b, c) a) Electromagnetic interactions in material media b) The effect of radiation on living matter c) Light sources and photometric equipment	Opt. ATM	MFM205a MFM205b MFM205c	-	-	-	-	-	2	1	-	E	9
6	Optic of anisotropic materials	Mand.AKD	MFM206	-	-	-	-	-	2	2	-	E	9
7	Thermal properties of materials	Mand.ATM	MFM207	-	-	-	-	-	1	2	-	E	8
8	Practice for the elaboration of the dissertation paper	Mand.RP	MFM208	-	-	-	-	-	-	-	4	C	4
Total hours per week				7	7	-	3E+1C	30 Cr	5	5	4	3E+1C	30 Cr
Total general				14 hours/week				14 hours/week					

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