

UNIVERSITY OF CRAIOVA
 Faculty of Mathematics and Natural Sciences
 Department: Physics (D2)
 Hierarchical domain: Physics
 Programme of studies: Theoretical Physics (MTP)
 Duration of studies: 2 years
 Full-time course

Approved starting with
 the academic year 2015-2016

Sem. I		Sem. II
14	Weeks no./sem. if ≠ 14	14

CURRICULUM-First year (2015-2016)

Subject	Cod	A S C	OB OP F	Opt. 0/≥1	C1	S1	L1	P1	CT1	FV1	C2	S2	L2	P2	CT2	FV2	
MANDATORY AND OPTIONAL SUBJECTS																	
Quantum field theory	D2MTPM101	S	OB	1	2	2			9	E							
Dynamics of degenerate systems	D2MTPM102	S	OB	1	2	2			9	E							
Methods and multiscale problems in numerical simulations	D2MTPM103	S	OB	1	2		2		9	E							
Scientific research laboratory I	D2MTPM104	S	OB	1			2		3	V							
Kinetic equations	D2MTPM205	S	OB	1							2	2			9	E	
Hamiltonian BRST symmetry	D2MTPM206	C	OB	1							2	2			9	E	
Introduction to General Relativity	D2MTPM207	C	OB	1							2	2			9	E	
Scientific research laboratory II	D2MTPM208	C	OB	1									2		3	V	
TOTAL					6	4	4	0	30		6	6	2	0	30		
FACULTATIVE SUBJECTS																	
TOTAL																	
					0	0	0	0	0		0	0	0	0	0	0	

Sem. I		Sem. II
14	Weeks no./sem. if ≠ 14	14

CURRICULUM-Second year (2016-2017)

Subject	Cod	A S C	OB OP F	Opt. 0/≥1	C1	S1	L1	P1	CT1	FV1	C2	S2	L2	P2	CT2	FV2
MANDATORY AND OPTIONAL SUBJECTS																
Nonlinear dynamical systems	D2MTPM301	S	OB	1	2	2			9	E						
Many-particle physics	D2MTPM302	S	OB	1	2	2			9	E						
Theory and modeling of instabilities in plasma/ Mathematical Physics I/ Hydrodynamics and magneto-hydrodynamics/Nonlinear optics	D2MTPM303/ D2MTPM304/ D2MTPM305/ D2MTPM306	A	OP	1	2	1			8	E						
Scientific research laboratory III	D2MTPM307	A	OB	1			3		4	V						
Lagrangian BRST symmetry	D2MTPM408	C	OB	1							2	2			9	E
Extended BRST symmetries/ Interactions in field theory/ Kinetic theory of waves in homogenous plasmas/Theory of solid state	D2MTPM409/ D2MTPM410/ D2MTPM411/ D2MTPM412	A	OP	1							2	1			8	E
Introduction to supersymmetries and supergravity/ Mathematical Physics II/ Dynamics of magnetic field lines in tokamak/ Partially ordered systems	D2MTPM413/ D2MTPM414/ D2MTPM415/ D2MTPM416	A	OP	1							2	1			8	E
Elaboration of master dissertation	D2MTPM417	A	OB	1										4	5	V
TOTAL					6	5	3	0	30		6	4	0	4	30	
FACULTATIVE SUBJECTS																
TOTAL																
					0	0	0	0	0		0	0	0	0	0	