

CURRICULUM starting form Academic year 2015-2016

BABEȘ-BOLYAI UNIVERSITY

FACULTY OF PHYSICS

Field of study: PHYSICS (INTERDISCIPLINARY with domains: CHEMISTRY, BIOLOGY)

Programme of study: MASTER'S DEGREE PROGRAMME IN TEACHING SCIENCE

Language of instruction: ROMANIAN

Name of qualification: MASTER'S DEGREE

Duration of studies: 4 SEMESTERS

Type of study: FULL TIME

I. DEGREE STRUCTURE

120 credits, whereof:

72 credits for compulsory courses;

48 credits for optional course;

and

10 credits for dissertation examination

II. STRUCTURE OF PROGRAMME (in weeks)

	Courses given		Examination			Merged traineeship	Trainee eship	Holiday		
	Sem I	Sem II	I	V	R			Winte	Spring	Summ
Year I	14	14	3	3	2	0	2	3	1	12
Year II	14	12	3	2	2	0	4	3	1	13

REMARKS:

Traineeship in Semester 2 and 4 is organized during the semester.

Semester 3 is entirely devoted to traineeship.

The examination period at the end of Semester 4 is followed by 2 weeks consacrated to preparing the Dissertation.

III. WEEKLY STRUCTURE OF TEH PROGRAMME (in hours)

	Semester I	Semester II
Year I	16	16
Year II	17	17

IV. EXAMENUL DE DISERTAȚIE

Between 25 June - 6 July

Dissertation = 10 credits

V. SELECTION OF OPTIONAL COURSES

Sem. 1: Se aleg patru discipline din pachetul: FMX510X

Sem. 2: Se aleg patru discipline din pachetul: FMX520X

For a maximum of 3 optional courses, it is allowed for every student to select any course held at any other Faculty of the Babeș-Bolyai University.

VI. SIMILAR PROGRAMMES

Eötvös Loránd Tudományegyetem Budapest

Ludwig Maximilians Universität München

VII. COURSES

Year I, Semester 1												
CODE	COURSES	ECTS Credits	Hours / week			Hours for study / week			Assesment			Course type
			C	S	LP	F	I	T	E	C	VP	
FMX5101	Optional Course 1	6	2	1	0	3	8	11	E			Fundamental
FMX5102	Optional Course 2	6	2	1	0	3	8	11	E			Fundamental
FMX5103	Optional Course 3	6	2	1	0	3	8	11	E			Fundamental
FMX5104	Optional Course 4	6	2	1	0	3	8	11	E			Fundamental
FMR5105	Laboratory Techniques I	6	0	0	4	4	7	11		C		Fundamental
TOTAL		30	8	4	4	16	39	55	4	1	0	

Year I, Semester 2												
CODE	COURSES	ECTS Credits	Hours / week			Hours for study / week			Assesment			Course type
			C	S	LP	F	I	T	E	C	VP	
FMX5201	Optional Course 5	6	2	1	0	3	8	11	E			Fundamental
FMX5202	Optional Course 6	6	2	1	0	3	8	11	E			Fundamental
FMX5203	Optional Course 7	6	2	1	0	3	8	11	E			Fundamental
FMX5204	Optional Course 8	6	2	1	0	3	8	11	E			Fundamental
FMR5205	Laboratory Techniques II	6	0	0	4	4	7	11		C		Fundamental
TOTAL		30	8	4	4	16	39	55	4	1	0	

Year II, Semester 3												
CODE	COURSES	ECTS Credits	Hours / week			Hours for study / week			Assesment			Course type
			C	S	LP	F	I	T	E	C	VP	
FMR5301	Life Sciences and the Progress of Knowledge	5	2	1	0	3	6	9	E			Speciality
CMR5302	Green Chemistry - applications	5	2	1	0	3	6	9	E			Speciality
BMR5303	General Ecology	5	2	1	0	3	6	9	E			Speciality
BMR5304	Genetics II	5	2	1	0	3	6	9	E			Speciality
PMR5305	Teaching Science	5	2	1	0	3	6	9	E			Speciality
FMR5306	Teaching Practice I	5	0	0	2	2	7	9		C		Speciality
TOTAL		30	10	5	2	17	37	54	5	1	0	

Year II, Semester 4												
CODE	COURSES	ECTS Credits	Hours / week			Hours for study / week			Assesment			Course type
			C	S	LP	F	I	T	E	C	VP	
FMR5401	Physical, Chemical and Biological Techniques in Enviromental	5	2	1	0	3	7	10		C		Complementary
FMR5402	Biophysics and Biochemistry	5	2	1	0	3	7	10	E			Speciality

BMR5403	Impact Assessment and the Reconstruction of Ecosystems	5	2	1	0	3	7	10		C		Complementary
FMR5404	Interaction of Radiation with the Living Matter	5	2	1	0	3	7	10		C		Complementary
FMR5405	Teaching Practice II	5	0	0	2	2	8	10		C		Speciality
FMR5406	Dissertation Writing	5	0	0	3	3	7	10		C		Speciality
TOTAL		30	8	4	5	17	43	60	1	5	0	

OPTIONAL COURSES

CODE	COURSES	ECTS Credits	Hours / week			Hours for study / week			Assesment			Course type
			C	S	LP	F	I	T	E	C	VP	
OPTIONAL COURSE 1 (Year I, Semester 1)												
FMR5101	Advanced Mechanics and Thermal Phenomena	6	2	1	0	3	8	11	E			Fundamental
FMR5102	Electric and Magnetic Phenomena in Nature and Technology	6	2	1	0	3	8	11	E			Fundamental
CMR5103	Advanced Chemistry	6	2	1	0	3	8	11	E			Fundamental
CMR5104	Special Topics in Physical Chemistry	6	2	1	0	3	8	11	E			Fundamental
BMR5105	General Biology I	6	2	1	0	3	8	11	E			Fundamental
BMR5106	Plant and Human Physiology	6	2	1	0	3	8	11	E			Fundamental
OPTIONAL COURSE 2 (Year I, Semester 2)												
FMR5201	Optical Phenomena in Science, Nature and Society	6	2	1	0	3	8	11	E			Fundamental
FMR5202	Concepts of Modern Physics	6	2	1	0	3	8	11	E			Fundamental
CMR5203	Special Topics in Inorganic Chemistry and Analytical Chemistry	6	2	1	0	3	8	11	E			Fundamental
CMR5204	Special Topics in Physical Chemistry	6	2	1	0	3	8	11	E			Fundamental
BMR5205	General Biology II	6	2	1	0	3	8	11	E			Fundamental
BMR5206	Genetics I	6	2	1	0	3	8	11	E			Fundamental
OPTIONAL COURSE 3 (Year II, Semester 3)												
		0	0	0	0	0	0	0				
OPTIONAL COURSE 4 (Year II, Semester 4)												
		0	0	0	0	0	0	0				
Credits / Hours / Week / Assesment / % from total number of courses		48	4	2	0	24	64	22	2	0	0	26.67%
Hours / week - Hours for study / week			56	28	0	84	224	308				
			84			308						

Appendix to the Curriculum for Programme of Study:

FUNDAMENTAL COURSES (Fundamental)

CODE	COURSES	ECTS Credits	Hours / week			Hours for study / week			Assesment			Course type
			C	S	LP	F	I	T	E	C	VP	
Semesters 1 - 3 (14 weeks)												

FMX5101	Optional Course 1	6	2	1	0	3	8	11	E			Fundamental
FMX5102	Optional Course 2	6	2	1	0	3	8	11	E			Fundamental
FMX5103	Optional Course 3	6	2	1	0	3	8	11	E			Fundamental
FMX5104	Optional Course 4	6	2	1	0	3	8	11	E			Fundamental
FMR5105	Laboratory Techniques I	6	0	0	4	4	7	11		C		Fundamental
FMX5201	Optional Course 5	6	2	1	0	3	8	11	E			Fundamental
FMX5202	Optional Course 6	6	2	1	0	3	8	11	E			Fundamental
FMX5203	Optional Course 7	6	2	1	0	3	8	11	E			Fundamental
FMX5204	Optional Course 8	6	2	1	0	3	8	11	E			Fundamental
FMR5205	Laboratory Techniques II	6	0	0	4	4	7	11		C		Fundamental
TOTAL		12	2	1	4	7	15	22	1	1	0	
Semester 4 (12 weeks)												
												Fundamental
TOTAL		0	0	0	0	0	0	0	0	0	0	
Credits / Hours / Week / Assesment / % from total number of courses		12	2	1	4	7	15	22	1	1	0	33.33%
Hours / week - Hours for study / week			28	14	56	98	210	308				
			98			1540						

SPECIALITY COURSES (Speciality)												
CODE	COURSES	ECTS Credits	Hours / week			Hours for study / week			Assesment			Course type
			C	S	LP	F	I	T	E	C	VP	
Semesters 1 - 3 (14 weeks)												
FMR5301	Life Sciences and the Progress of Knowledge	5	2	1	0	3	6	9	E			Speciality
CMR5302	Green Chemistry - applications	5	2	1	0	3	6	9	E			Speciality
BMR5303	General Ecology	5	2	1	0	3	6	9	E			Speciality
BMR5304	Genetics II	5	2	1	0	3	6	9	E			Speciality
PMR5305	Teaching Science	5	2	1	0	3	6	9	E			Speciality
FMR5306	Teaching Practice I	5	0	0	2	2	7	9		C		Speciality
TOTAL		30	10	5	2	17	37	54	5	1	0	
Semester 4 (12 weeks)												
FMR5402	Biophysics and Biochemistry	5	2	1	0	3	7	10	E			Speciality
FMR5405	Teaching Practice II	5	0	0	2	2	8	10		C		Speciality
FMR5406	Dissertation Writing	5	0	0	3	3	7	10		C		Speciality
TOTAL		15	2	1	5	8	22	30	1	2	0	
Credits / Hours / Week / Assesment / % from total number of courses		45	12	6	7	25	59	84	6	3	0	30.00%
Hours / week - Hours for study / week			164	82	88	334	782	1116				

HOURS / WEEK - HOURS FOR STUDY / WEEK	334	1116
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COMPLEMENTARY COURSES (Complementary)												
CODE	COURSES	ECTS Credits	Hours / week			Hours for study / week			Assesment			Course type
			C	S	LP	F	I	T	E	C	VP	
Semesters 1 - 3 (14 weeks)												
TOTAL		0	0	0	0	0	0	0	0	0	0	Complementary
Semester 4 (12 weeks)												
FMR5401	Physical, Chemical and Biological Techniques in Enviromental Res	5	2	1	0	3	7	10		C		Complementary
BMR5403	Impact Assessment and the Reconstruction of Ecosystems	5	2	1	0	3	7	10		C		Complementary
FMR5404	Interaction of Radiation with the Living Matter	5	2	1	0	3	7	10		C		Complementary
TOTAL		15	6	3	0	9	21	30	0	3	0	
Credits / Hours / Week / Assesment / % from total number of courses		15	6	3	0	9	21	30	0	3	0	10.00%
Hours / week - Hours for study / week			72	36	0	108	252	360				
			108			360						

OVERALL BALANC

CODE	COURSES	HOURS	Hours for study / week			%	NR. OF CREDITS	
			F	I	T		YEAR	YEAR II
1	COMPULSORY	42	42	94	136	64%	12	60
2	OPTIONALE	24	24	64	88	36%	48	0
TOTAL		66	66	158	224	100%	60	60