

Curriculum for the Physics major

Major	Physics
Degree	Bachelor of Science
Number of credits required	180
Areas of concentration	- Physics and technology of advanced materials - Physics and technology of nuclear reactors

First year

No.	Code	Course	Semester I (14 weeks)					Semester II (14 + 2 weeks)						
			C	S	L	V	Cr	C	S	L	V	Cr		
1.	FZ1101	Mathematical analysis/Calculus	2	2	-	E	5	-	-	-	-	-		
2.	FZ1102	Algebra & Geometry	2	2	-	E	5	-	-	-	-	-		
3.	FZ1103	Informatics	2	-	2	C	6	-	-	-	-	-		
4.	FZ1104	Mechanics I	2	-	2	E	6	-	-	-	-	-		
5.	FZ1105	Molecular Physics & Heat I	2	-	2	E	6	-	-	-	-	-		
6.	FZ1106	Foreign Language (English) I	-	1	-	C	1							
7.	FZ1107	Physical Education & Sports I	-	1	-	C	1							
8.	FZ1201	Mathematical Methods for Physicists	-	-	-	-	-	2	2	-	C	5		
9.	FZ1202	Mechanics II	-	-	-	-	-	2	-	2	E	5		
10.	FZ1203	Molecular Physics & Heat II	-	-	-	-	-	2	-	2	E	5		
11.	FZ1204	Electricity & Magnetism I	-	-	-	-	-	2	-	2	E	5		
12.	FZ1205	Optics I	-	-	-	-	-	2	-	2	E	5		
13.	FZ1206	Foreign Language (English) II	-	-	-	-	-	-	1	-	C	1		
14.	FZ1207	Physical Education & Sports II	-	-	-	-	-	-	1	-	C	1		
15.	FZ1208	Practical Training						2 weeks x 30 h*			C	3		
Total hours / week			10	6	6	-	30	10	4	8	-	30		
			22				4E, 3C				30			
							22				4E, 4C		30	

Second year

No.	Code	Course	Semester I (14 weeks)					Semester II (14 + 2 weeks*)						
			C	S	L	V	Cr	C	S	L	V	Cr		
1	FZ2101	Electricity & Magnetism II	2	-	2	E	6	-	-	-	-	-		
2	FZ2102	Optics II	2	-	2	E	6	-	-	-	-	-		
3	FZ2103	Theoretical Classical Mechanics	2	2	-	C	6	-	-	-	-	-		
4	FZ2104	Introduction to Quantum Mechanics	2	2	-	C	5	-	-	-	-	-		
5	FZ2105	Physics of Atoms and Molecules	2	-	2	E	5	-	-	-	-	-		
6.	FZ2106	Foreign Language (English) I	-	1	-	C	1	-	-	-	-	-		
7.	FZ2107	Physical Education & Sports I	-	1	-	C	1	-	-	-	-	-		
8.	FZ2201	Nuclear Physics	-	-	-	-	-	2	-	2	E	6		
9.	FZ2202	Electrodynamics	-	-	-	-	-	2	2	-	E	6		
10.	FZ2203	Chemistry	-	-	-	-	-	2	-	2	E	5		
11.	FZ2204	Spectroscopy and Lasers	-	-	-	-	-	2	-	2	E	6		
12.	FZ2205	Numerical Physics and Data Analysis	-	-	-	-	-	2	2	-	C	2		
13.	FZ2206	Foreign Language (English) II	-	-	-	-	-	-	1	-	C	1		
14.	FZ2207	Physical Education & Sports II	-	-	-	-	-	-	1	-	C	1		
15.	FZ2208	Practical Training	-	-	-	-	-	2 weeks x 30 h*			C	3		
Total hours / week			10	6	6	-	30	10	6	6	-	30		
			22				3E, 4C				30			
							22				4E, 4C		30	

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RECTOR

Prof. univ. dr. Victor Ciupinã

DEAN,

Prof. univ. dr. Ing. Dan Mandalopol

Third year

No.	Code	Course	Semester I (14 weeks)					Semeste II (12 + 2 weeks**)				
			C	S	L	V	Cr	C	S	L	V	Cr
1.	FZ3101	Solid state physics	2	-	2	E	5	-	-	-	-	-
2.	FZ3102	Thermodynamics and statistical physics	2	1	-	E	5	-	-	-	-	-
3.	FZ3103	Plasma physics	2	-	2	E	5	-	-	-	-	-
4.	FZ3104	Physical methods of control	2	-	2	C	5	-	-	-	-	-
5.	FZ3105	Physics of materials	2	-	1	C	5	-	-	-	-	-
6.	FZ3106	Electronic devices	2	-	2	C	5	-	-	-	-	-
7.	FZ3201	Fundamental electronic circuits	-	-	-	-	-	2	-	2	E	5
8.	FZ3202	Elective 1	-	-	-	-	-	2	-	2	E	5
9.	FZ3203	Elective 2	-	-	-	-	-	2	-	1	E	5
10.	FZ3204	Elective 3	-	-	-	-	-	2	-	2	C	5
11.	FZ3205	Elective 4	-	-	-	-	-	2	-	1	C	5
12.	FZ3206	Research for bachelor thesis	-	-	-	-	-	2 weeks x 28 h**			C	5
Total hours / week			12	1	9	-	30	10	-	8	-	30
						22	3E, 3C		30	18+4		

No.	Code	Course
Physics & Technology of Advanced Materials		
1	FZ3201a	Transport phenomena in semiconductors
2	FZ3202a	Modern technologies with plasmas
3	FZ3203a	Optoelectronics
4	FZ3204a	Conventional methods of material investigation
Physics & Technology of Nuclear reactors		
1	FZ3201b	Nuclear radiation measurement, radioprotection
2	FZ3202b	Computational systems for nuclear reactors
3	FZ3203b	Introduction to Physics of nuclear reactors
4	FZ3204b	Nuclear security & Environmental radioprotection

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