



**PHYSICS PhD Program (on BSc)**

<b>REMEDIAL COURSES</b>				
<b>Dept.</b>	<b>Code</b>	<b>Course Name</b>	<b>CR.</b>	<b>ECTS</b>
PHYS	102	Physics II	NC	
PHYS	104	Physics III	NC	
PHYS	203	Statistical Physics	NC	
PHYS	204	Classical Mechanics	NC	
PHYS	205	Introduction to Optics	NC	
PHYS	206	Mathematical Methods in Physics	NC	
MATH	241	Differential Equations	NC	
PHYS	303	Introduction to Metrology	NC	
PHYS	304	Applied Metrology	NC	
PHYS	306	Photonics	NC	
PHYS	311	Quantum Mechanics	NC	
PHYS	317	Electromagnetism	NC	
PHYS	319	Modern Physics	NC	
PHYS	401	Metrology and Calibration Lab.	NC	
PHYS	408	Nuclear and Plasma Physics	NC	
PHYS	409	Medical Physics	NC	
PHYS	412	Condensed Matter Physics	NC	
<b>PROGRAM COURSES</b>				
<b>Dept.</b>	<b>Code</b>	<b>Course Name</b>	<b>CR.</b>	<b>ECTS</b>
PHYS	511	Electromagnetism I	4	10
PHYS	541	Thermodynamics	4	10
PHYS	561	Mathematical Methods & Classical Mechanics	3	10
PHYS	521	Quantum Mechanics I	4	10
PHYS	685	Critical Thinking and Scientific Method	3	10
PHYS	542	Advanced Metrology	3	10
PHYS	651	Nanotechnology and Materials	4	10
PHYS	621	Electromagnetism & Plasma Physics	4	10
PHYS	632	Advanced Quantum Mechanics	4	10
PHYS	654	Modern Theoretical Physics	4	10
PHYS	656	Photonics	4	10
		Area Elective I	3	10
		Area Elective II	3	10
		Area Elective III	3	10
PHYS	690	PhD Seminar	NC	2
PHYS	691	Independent Study for Qualifying Exam	NC	30
PHYS	700	PhD Dissertation	NC	150
		<b>TOTAL</b>	<b>50</b>	<b>322</b>
<b>EXTRA/NON-DEGREE COURSES</b>				
<b>Dept.</b>	<b>Code</b>	<b>Course Name</b>	<b>CR.</b>	<b>ECTS</b>
		Extra/Non-degree	NC	

<b>Course Group</b>	<b>Description</b>
Area Elective I	PHYS 514, ESYE 501, BTEC 550
Area Elective II-III	All GSNAS courses in the elective pool offered by all departments
Extra/Non-degree	Optional non-credit (NC) courses that are not part of the program

Remedial Courses	Undergraduate level courses offered by department.
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