



PHYSICS PhD Program (on BSc)

| REMEDIAL COURSES | | | | |
|---------------------------------|-------------|--|------------|-------------|
| Dept. | Code | Course Name | CR. | ECTS |
| 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 | |
| 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 | |
| PROGRAM COURSES | | | | |
| Dept. | Code | Course Name | CR. | ECTS |
| 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 |
| PHYS | 514 | Research Methods | 3 | 10 |
| | | Area Elective I | 3 | 10 |
| | | Area Elective II | 3 | 10 |
| PHYS | 690 | PhD Seminar | NC | 2 |
| PHYS | 691 | Independent Study for Qualifying Exam | NC | 30 |
| PHYS | 700 | PhD Dissertation | NC | 150 |
| | | TOTAL | 50 | 322 |
| EXTRA/NON-DEGREE COURSES | | | | |
| Dept. | Code | Course Name | CR. | ECTS |
| | | Extra/Non-degree | NC | |

| Course Group | Description |
|---------------------|---|
| Area Elective I-II | 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. |