Table. 1 Curriculum structure

| Courses Groups | Curriculum 2016 | |
|---|---|---|
| | Credit | Percentage |
| University Compulsory Courses (UCC) | 18 | 12.50 |
| Science and Technology Cluster Compulsory Courses (STCCC) | 2 | 1.39 |
| Faculty Compulsory Courses (FCC) | 8 | 5.55 |
| Physics Compulsory Courses (PCC) | 90 | 62.50 |
| Concentration Courses (CC) | 26 | 18.06 |
| Total Study Load | 144 | 100.00 |

Table 2. Generic and specific ELOs

| No | Courses Groups | ELOs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | UCC | X | | | | X | X | X | X |
| 2 | STCCC | X | X | | | | X | | |
| 3 | FCC | X | X | | | X | X | X | |
| 4 | PCC | X | X | | X | X | X | X | X |
| 5 | CC | | | X | | X | X | X | |

In Table 3 we show the contribution made by each course, from year 1 to year 4 of study, to achieve ELOs. The year and semester are put in the first column. There are 2 semesters in each year. For example, 1(2) means the second semester of the first year. The second, third, and fourth columns show respectively the course's code, name, and credit. The last 8 columns show the ELOs correlated with the courses.

Tabel 3 Courses per semester and their correlation with ELOs

| Year (Term) | Code | Course | Credit | ELOs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 (1) | UCC | | | | | | | | | | |
| | UIGE600002 | Science | 6 | X | | | | X | X | X | X |
| | UIGE600003 | English | 3 | | | | | | | X | X |
| | UIGE60xxxx | Art / Sport | 1 | | | | | | | | X |
| | STCCC | | | | | | | | | | |
| | UIST601110 | Basic Mathematics 1 | 2 | X | X | | | | X | | |
| | FCC | | | | | | | | | | |
| | SCMA601200 | Statistical Methods | 2 | | | | | X | X | X | |
| | SCFI601110 | Basic Physics | 2 | X | X | | | X | X | X | |
| | PCC | | | | | | | | | | |
| | SCFI601114 | Mechanics and Heat | 4 | X | X | | | X | X | X | |
| 1(2) | UCC | | | | | | | | | | |
| | UIGE600001 | Social Science and Humanity | 6 | | | | | X | | X | X |
| | UIGE60xxxx | Religion | 2 | | | | | | | | X |
| | PCC | | | | | | | | | | |
| | SCFI601121 | Laboratory Work of Basic Physics 1 | 1 | X | X | | | | X | | X |
| | SCMA601111 | Basic Mathematics 2 | 4 | X | X | | | | X | | |
| | SCFI601115 | Electricity and Magnetism | 3 | X | X | | | X | X | X | |
| | SCFI601116 | Vibrations, Waves, and Optics | 3 | X | X | | | X | X | X | |
| | SCFI602214 | Mathematical Methods in Physics 1 | 3 | X | X | | | | X | | |
| 2(1) | FCC | | | | | | | | | | |
| | SCCH601101 | Basic Chemistry 1 | 2 | | | | | X | X | X | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | SCBI601112 | General Biology | 2 | | | | | X | X | X | |
| | PCC | | | | | | | | | | |
| | SCFI601122 | Laboratory Work of Basic Physics 2 | 1 | X | X | | | | X | | X |
| | SCFI602117 | Modern Physics | 3 | X | X | | | X | X | X | |
| | SCFI602112 | Thermodynamics | 3 | X | X | | | X | X | X | |
| | SCFI602215 | Mathematical Methods in Physics 2 | 4 | X | X | | | | X | | |
| | SCFI602216 | Mathematical Methods in Physics 3 | 3 | X | X | | | | X | | |
| | SCFI602311 | Electronics 1 | 3 | | X | | | X | X | X | |
| | SCFI602321 | Laboratory Work of Electronics 1 | 1 | | X | | | X | X | X | X |
| 2(2) | PCC | | | | | | | | | | |
| | SCFI602122 | Laboratory Work of Intermediate Physics | 1 | | X | | | X | X | X | X |
| | SCFI602113 | Classical Mechanics | 4 | X | X | | | X | X | X | |
| | SCFI602114 | Electromagnetic Field 1 | 3 | X | X | | | X | X | X | |
| | SCFI602021 | Computational Physics | 4 | | X | | | X | X | X | X |
| | SCFI602312 | Electronics 2 | 3 | | X | | | X | X | X | |
| | SCFI602322 | Laboratory Work of Electronics2 | 1 | | X | | | X | X | X | X |
| | SCCH601103 | Basic Chemistry 2 | 2 | | | | | X | X | X | |
| | SCFI602118 | Vibrations and Waves | 2 | X | X | | | X | X | X | |
| | SCMA601120 | Elementary Linear Algebra | 2 | X | X | | | | X | | |
| 3(1) | PCC | | | | | | | | | | |
| | SCFI603117 | Introduction to Solid State Physics | 3 | X | X | | | X | X | X | |
| | SCFI603118 | Introduction to Nuclear Physics | 3 | X | X | | | X | X | X | |
| | SCFI603110 | Quantum Mechanics 1 | 4 | X | X | | | X | X | X | |
| | SCFI603110 | Statistical Physics | 4 | X | X | | | X | X | X | |
| | SCFI603115 | Electromagnetic Field 2 | 3 | X | X | | | X | X | X | |
| | CC | | | | | | | | | | |
| | SCFI603414 | Classical Field Theory | 4 | | | X | | X | X | X | |
| | SCFI603511 | Introduction to Materials Science | 3 | | | X | | X | X | X | |
| | SCFI603514 | Research Methods of Materials | 2 | | | X | | X | X | X | |
| | SCFI603613 | Spectroscopy 1 | 3 | | | X | | X | X | X | |
| | SCFI603614 | Green's Function Method in Condensed Matter Physics | 2 | | | X | | X | X | X | |
| | SCFI604713 | Embedded System | 3 | | | X | | X | X | X | |
| | SCFI604712 | Computer Based Data Acquisition | 2 | | | X | | X | X | X | |
| | SCFI603911 | Introduction to Radiology Physics | 2 | | | X | | X | X | X | |
| | SCFI603912 | AnatomyandPhysiology | 2 | | | X | | X | X | X | |
| 3(2) | PCC | | | | | | | | | | |
| | SCFI603116 | Quantum Mechanics 2 | 3 | X | X | | | X | X | X | |
| | SCFI602116 | Physics of Energy | 2 | X | X | | | X | X | X | |
| | SCFI603310 | Physics of Measurements | 2 | | X | | | X | X | X | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | CC | | | | | | | | | | |
| | SCFI603416 | Advanced Computational Physics | 3 | | | X | | X | X | X | X |
| | SCFI603415 | Nuclear and Particle Physics | 4 | | | X | | X | X | X | |
| | SCFI604411 | Relativistic Quantum Mechanics | 4 | | | X | | X | X | X | |
| | SCFI603412 | Scattering Theory | 3 | | | X | | X | X | X | |
| | SCFI604512 | Ceramic Physics | 3 | | | X | | X | X | X | |
| | SCFI604513 | Composite Materials | 3 | | | X | | X | X | X | |
| | SCFI603513 | Thermodynamics of Materials | 3 | | | X | | X | X | X | |
| | SCFI603515 | Methods of Materials Characterization | 4 | | | X | | X | X | X | |
| | SCFI603611 | Solid State Physics 1 | 4 | | | X | | X | X | X | |
| | SCFI604611 | Spectroscopy 2 | 3 | | | X | | X | X | X | |
| | SCFI603622 | Advanced Laboratory | 4 | | | X | | X | X | X | X |
| | SCFI603711 | Sensorsand Actuators 1 | 2 | | | X | | X | X | X | |
| | SCFI603712 | InstrumentationPhysics 1 | 2 | | | X | | X | X | X | |
| | SCFI603716 | Control System | 4 | | | X | | X | X | X | |
| | SCFI603726 | Laboratory Work of Control System | 1 | | | X | | X | X | X | X |
| | SCFI604723 | Laboratory Work of Embedded System | 1 | | | X | | X | X | X | X |
| | SCFI604915 | Introduction to Radiotherapy Physics | 3 | | | X | | X | X | X | |
| | SCFI603919 | Introduction to Biophysics | 2 | | | X | | X | X | X | |
| | SCFI603914 | Health Physics & Radiation Protection | 2 | | | X | | X | X | X | |
| | SCFI603915 | Radiobiology | 2 | | | X | | X | X | X | |
| | SCFI603927 | Laboratory Work of Medical Physics and Counter System | 1 | | | X | | X | X | X | X |
| | SCFI604916 | Introduction to Medical Imaging and Nuclear Medicine | 3 | | | X | | X | X | X | |
| 4(1) | PCC | | | | | | | | | | |
| | SCFI604101 | Seminar | 2 | | | | X | X | | X | X |
| | CC | | | | | | | | | | |
| | SCFI604413 | Quantum Field Theory | 4 | | | X | | X | X | X | |
| | SCFI604414 | Theory of Angular Momentum | 4 | | | X | | X | X | X | |
| | SCFI604511 | Phase Transformationof Materials | 3 | | | X | | X | X | X | |
| | SCFI603512 | Materials Properties | 3 | | | X | | X | X | X | |
| | SCFI604514 | Internship in MaterialsPhysics | 2 | | | X | | X | X | X | X |
| | SCFI603612 | Solid State Physics 2 | 4 | | | X | | X | X | X | |
| | SCFI604613 | Capita Selection of Condensed Matter | 3 | | | X | | X | X | X | |
| | SCFI604742 | Internship | 2 | | | X | | X | X | X | X |
| | SCFI603713 | Sensorsand Actuators 2 | 2 | | | X | | X | X | X | |
| | SCFI603723 | Laboratory Work of Sensors and Actuators | 1 | | | X | | X | X | X | X |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | SCFI604715 | Digital Signal Processing | 4 | | | X | | X | X | X | |
| | SCFI603714 | InstrumentationPhysics 2 | 2 | | | X | | X | X | X | |
| | SCFI604917 | Introduction to Biomaterials | 2 | | | X | | X | X | X | |
| | SCFI604918 | Advanced Biophysics | 2 | | | X | | X | X | X | |
| | SCFI604919 | Introduction to Medical Instrumentation | 2 | | | X | | X | X | X | |
| | SCFI604921 | Laboratory Work of Radiology Physics | 1 | | | X | | X | X | X | X |
| | SCFI604941 | Internship | 2 | | | X | | X | X | X | X |
| 4(2) | PCC | | | | | | | | | | |
| | SCFI604102 | Undergraduate Thesis | 6 | X | X | X | X | X | X | X | X |