**Plan of Studies in Physics/Astronomy**

Requirements for earning Science B.S.c in Physics /Astronomy are to achieve 128 units accepted with a grade not less than (2) contain:

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements** | **Units** | **Remarks** | |
| University requirements | 26 | As shown in university requirements | |
| First year requirements of natural science students | 15 | As shown in first year rquierments of Natrual Science students | |
| College requirements | 9 | As shown in faculty requirements | |
| Department requirements | 72 | 31 | Compulsory Astronomy Department requirements |
| 25 | Compulsory Physics Department requirements |
| 3 | Compulsory Math & Statics Department requirements |
| 13 | Elective Astronomy &Pysics Department |
| Elective requirements | 6 | Other department | |
| **Total** | **128** |  | |

\* Faculty Requirements:

|  |  |  |  |
| --- | --- | --- | --- |
| **Course No.** | **Course Title** | **Code & NO** | **Pre-requisites** |
| ASTR200 | Laboratory Safety | ASTR200 | - |
| Astr 201 | Genral Astronomy | ASTR 201 | - |
| Astr 390 | Summer training | ASTR 390 | - |
| BIO281 | Biology Lab. |  |  |
| PHYS 281 | Physics Lab. |  |  |

**Physics / Astronomy major requirements :**

Student studies 72 units from astronomy Physics, and mathematic department as shown:

**a- 27 units Compulsory from Astronomy Courses:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course No.** | **Course Title** | **No. of Units** | | | **Pre-requisites** |
| **Th.** | **Pr.** | **Credit** |
| Astr 202 | General Astronomy (2) | 3 | 3 | 4 | Astr 201 |
| Astr 211 | Telescopes & Accessories | 2 | 3 | 3 | Astr 201, Phys 110 |
| Astr 304 | Computer Applications | 2 | 3 | 3 | Astr202, Phys202 |
| Astr 321 | Variable & binary Stars | 2 | - | 2 | Astr 351 |
| Astr 331 | Spherical Astronomy (1) | 2 | 3 | 3 | Astr 202, Math 202 |
| Astr 351 | Stellar Radiation and Characteristics | 2 | 3 | 3 | Astr 202, Phys 202 |
| Astr 361 | Radio Astronomy | 2 | - | 2 | Astr 211, 351 |
| Astr 371 | Physics of Solar System | 2 | - | 2 | Astr 202 |
| Astr 391 | Scientific terminology | 2 | - | 2 | - |
| Astr 422 | Space physics | 2 | 3 | 3 | Astr 331 |
|  | Total Units |  |  | 27 |  |

**b- 25 units Compulsory from Physics Courses as follows:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course No.** | **Course Title** | **No. of Units** | | | **Pre-requisites** |
| **Th.** | **Pr.** | **Credit** |
| Phys 202 | General Physics (2) | 3 | 3 | 4 | Phys 110, Math 110 |
| Phys 203 | General Physics (3) | 3 | 3 | 4 | Phys 110, Math 110 |
| Phys 241 | Modern Physics (1) | 3 | - | 3 | Phys 202, Math 202 |
| Phys 251 | Methods of theory. Phys (1) | 4 | - | 4 | Math 202 |
| Phys252 | Classical mechanics (1) | 3 | - | 3 | Phys 110,Math 202 |
| Phys 331 | Electricity & Magnetism (1) | 3 | - | 3 | Phys 202,Phys 251 |
| Phys 351 | Modern Physics (2) | 4 | - | 4 | Phys 251 |
|  | Total Units |  |  | 25 |  |
|  |  |  |  |  |  |

**c- 3 units Compulsory from Mathematics & Static Courses:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course No.** | **Course Title** | **No. of Units** | | | **Pre-requisites** |
| **Th.** | **Pr.** | **Credit** |
| Math 204 | Ordinary Differential Eqs. (1) | 3 | - | 3 | Math 202 |
|  | Total |  |  | 3 |  |

d-**6 Units from Astronomy Courses (Elective):**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course No.** | **Course Title** | **No. of Units** | | | **Pre-requisites** |
| **Th.** | **Pr.** | **Credit** |
| Astr 203 | History of Astronomy | 3 | - | 3 |  |
| Astro 341 | Celestial Mechanics (1) | 3 | - | 3 |  |
| Astr 352 | Stellar Atmospheres | 3 | - | 3 | Astr 351 |
| Astr453 | Stellar Interior | 2 | - | 2 | Astr 352 |
| Astr 472 | Solar Physics | 1 | 3 | 2 | Astr 371,352 |
| Astr 481 | Galaxies | 3 | - | 2 | Stat 201,Astr 351 |

1. **7 Units from Physics Courses (Elective):**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Course No.** | **Course Title** | **No. of Units** | | | | **Pre-requisites** |
| **Th.** | **Pr.** | **Credit** | |
| Phys 221 | Thermodynamics | 3 | - | 3 | | Phys 103, Math 202 |
| Phys 342 | Modern Physics (2)\* | 3 | - | 3 | 4 | Phys 252,251,241 |
| Phys 381 | Modern Physics Lab\* | - | 3 | 1 | Phys 241 |
| Phys 343 | Special Relativity | 3 | - | 3 | | Phys 241 |
| Phys 353 | Classical Mechanics (2) | 3 | - | 3 | | Phys 252 |
| Phys 311 | Optics\* | 3 | - | 3 | 4 | Phys 241 |
| Phys 383 | Optics lab\* | - | 3 | 1 | Phys 311 |
|  | Totlal |  |  | 7 | |  |

\* Must be registered with lab

1. **Training Course (astr 390)(2 units):**

**A new course added recently to train students for 6 weeks in the summer season which is spent at the department under the supervision of an academic supervisor:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Course No.** | **Course Title** | **Units** | **Pre-requisites** |
| Astr 390 | Training (1) | 2 | - |

1. **Elective courses from other departments (6 units):**

Students choose elective courses under supervision of their academic supervisor that helps with their studying courier