

4/1/2/1 Curriculum Study Plan (Nuclear and High energy physics track)

| Level | Course Code | Course Title | Required or Elective | Prerequisite Courses | Credit Hours | |
|--|-----------------------|---|----------------------|----------------------|--------------|-----------|
| Level 1 | 403638 | Introduction to Nuclear and High energy physics | Required | Academic guide | 3 | |
| | 403640 | Nuclear Reactions | Required | Academic guide | 3 | |
| | 403642 | Quantum Field Theory | Required | Academic guide | 3 | |
| | 4036XX | Phys. 647, 649, 651 | Elective | Academic guide | 3 | |
| | Semester Hours | | | | | 12 |
| Level 2 | 403639 | High energy Physics | Required | 403642 | 3 | |
| | 403641 | Detector Physics | Required | 403638 | 3 | |
| | 403643 | Research Methodology | Required | Academic guide | 3 | |
| | 403645 | Seminar* | Required | Academic guide | 1 | |
| | Semester Hours | | | | | 10 |
| Level 3 | 403652 | Special topics (1)** | Required | Academic guide | 2 | |
| | 403654 | Thesis | Required | Department approval | 6 | |
| | Semester Hours | | | | | 8 |
| Level 4 | 403653 | Special topics (2)** | Required | Academic guide | 2 | |
| | 403654 | Thesis | Required | Department approval | | |
| | Semester Hours | | | | | 2 |
| | Total Hours | | | | | 32 |
| Elective Courses | 403647 | Advanced Programming | Academic guide | | 3hrs | |
| | 403649 | Semiconductor device modelling | | | 3hrs | |
| | 403651 | Advanced Research Lab. | | | 3hrs | |
| <p>*Scheduled discussions of current problems in physics, centered around guest lecturer and student presentations. It is designed to acquaint the graduate student with current research areas in physics. **This course is proposed by faculty members based on students "track and new trends in Physics.</p> | | | | | | |

Include additional levels or courses if needed