PhD Course Structure for SPASE students as on July 2025

Total Number of Course Credits required for a student -

With a MTech: 58 (40 compulsory credits in 1st year + 18 elective credits)
With a MSc: 76 (40 compulsory credits in 1st year + 36 elective credits)
With a BTech: 94 (40 compulsory credits in 1st year + 54 elective credits)

The compulsory basket of courses has been divided into modular courses in three classes. Each modular course is 5 credits

Math Methods Courses: 2 modules have to be taken out of 4 modules

1. SPA 622 M Mathematical Techniques in Space Science and Engineering [S2]
2. SPA 623 M Numerical Techniques in Space Science and Engineering [S2]
3. SPA 631 M Statistical Methods and Applications [S2]
4. SPA 632 M Introduction to Mathematical Transforms and Applications in Space Sciences [S2]

Physics Concepts Courses: 3 out of 4 modules will be taken

1. SPA 614M Introduction to Celestial Mechanics (compulsory - no option) [S1]
2. SPA 618M Introduction to Radiative Processes in Space (compulsory - no option) [S1]
3. SPA 627M Introduction to Fluid Mechanics in Space (compulsory - no option) [S2]
4. SPA 629M Introduction to Geology: Measuring the Heartbeat of a Planetary Body (no longer offered)

Instrumentation/Observational Courses (2 compulsory + 1 out of 3 labs have to be taken)

1. SPA 617M Space Instrumentation Laboratory (compulsory - no option) [S1]
2. SPA 613M Introduction to Celestial Observational Techniques (compulsory - no option) [S1]
3. SPA 628M Introduction to Planetary Remote Sensing from Space Missions (no longer offered)
4. SPA 636 Radio Instrumentation Laboratory [S2]
5. SPA 624M Optical Instrumentation Laboratory [S2]
6. SPA 635M Study of compact objects using real space data (X-ray Laboratory) [S2]

In addition to these courses, each semester you have to do the remaining credits as elective course credits from the elective basket. You may also choose to do a modular course as an elective course in addition to the one that you have taken for satisfying the compulsory course requirement.