

Program Structure

Master of Technology in Defence Technology (Aerospace Technology)

Duration: 2 Years | Level: Post Graduate

Eligibility: B.E./B.Tech. in Aerospace, Mechanical, Electrical, Electronics, or related branches with minimum qualifying marks.

Program Overview

This program focuses on advanced aerospace analysis, defence system design, simulation, control, and research-led project work for strategic and mission-oriented applications.

Semester-wise Structure

Semester I

| Course Code | Course Title | Credits |
|-------------|---|---------|
| xxxx | Advanced Mathematical Methods | 3 |
| xxxx | Aerospace System Analysis | 4 |
| xxxx | Computational Fluid Dynamics | 4 |
| xxxx | Advanced Propulsion Systems | 4 |
| xxxx | Research Methodology and Scientific Writing | 2 |

Semester II

| Course Code | Course Title | Credits |
|-------------|---|---------|
| xxxx | Aerospace System Configuration, Design and Simulation | 4 |
| xxxx | Flight Dynamics and Control | 4 |
| xxxx | Space Vehicle Engineering | 4 |
| xxxx | Defence Materials and Structures | 3 |
| xxxx | Elective I | 3 |

Semester III

| Course Code | Course Title | Credits |
|-------------|------------------------------------|---------|
| xxxx | Launch Vehicle Design and Analysis | 4 |
| xxxx | Guidance, Navigation and Control | 4 |
| xxxx | Aerospace Sensor Technologies | 3 |
| xxxx | Elective II | 3 |
| xxxx | Project and Thesis I | 12 |

Semester IV

| Course Code | Course Title | Credits |
|-------------|---|---------|
| xxxx | Aerospace Mission Planning and Optimization | 3 |
| xxxx | Elective III | 3 |
| xxxx | Project and Thesis II | 12 |
| xxxx | Dissertation Defence and Seminar | 3 |

Elective Basket

1. Computational Aerodynamics
2. Hypersonic Vehicle Design
3. Acquisition, Tracking and Pointing Technology
4. Trajectory Modelling and Simulation
5. Advanced Spacecraft Systems
6. Aerospace AI and Autonomous Systems

7. Defence Avionics

8. Structural Health Monitoring

Total Credits

Suggested total: 72 credits including advanced theory, electives, research project, and dissertation defence.