## Program Highlights

**Field of Study:** Science

**Alumni:** 7 Graduated batch

**Duration:** 126 hours of instruction

## Eligibility Criteria

1. Should have successfully completed twelve years of schooling in the science stream or equivalent from any university, board, or institution.
2. Should have secured a minimum of the second division.
3. Should have successfully passed the entrance examination conducted by the Institute of Science and Technology (IOST), TU.
4. Complied with all the application procedures.

## Year-wise Course Outline

### Semester 1

| Course Code | Course Title | Credit Hours | Full Marks |
|---|---|---|---|
| CSC109 | Introduction to Information Technology | 3 | 100 |
| CSC110 | C Programming | 3 | 100 |
| CSC111 | Digital Logic | 3 | 100 |
| MTH112 | Mathematics I | 3 | 100 |
| PHY113 | Physics | 3 | 100 |
| **Total** | | **15** | **500** |

### Semester 2

| Course Code | Course Title | Credit Hours | Full Marks |
|---|---|---|---|
| CSC160 | Discrete Structure | 3 | 100 |
| CSC161 | Object Oriented Programming | 3 | 100 |
| CSC162 | Microprocessor | 3 | 100 |
| MTH163 | Mathematics II | 3 | 100 |
| STA164 | Statistics I | 3 | 100 |
| **Total** | | **15** | **500** |

### Semester 3

| Course Code | Course Title | Credit Hours | Full Marks |
|---|---|---|---|
| CSC206 | Data Structure and Algorithms | 3 | 100 |
| CSC207 | Numerical Method | 3 | 100 |
| CSC208 | Computer Architecture | 3 | 100 |
| CSC209 | Computer Graphics | 3 | 100 |
| STA210 | Statistics II | 3 | 100 |
| **Total** | | **15** | **500** |

### Semester 4

| Course Code | Course Title | Credit Hours | Full Marks |
|---|---|---|---|
| CSC257 | Theory of Computation | 3 | 100 |
| CSC258 | Computer Networks | 3 | 100 |
| CSC259 | Operating Systems | 3 | 100 |
| CSC260 | Database Management System | 3 | 100 |
| CSC261 | Artificial Intelligence | 3 | 100 |
| **Total** | | **15** | **500** |

### Semester 5

| Course Code | Course Title | Credit Hours | Full Marks |
|---|---|---|---|
| CSC314 | Design and Analysis of Algorithms | 3 | 100 |
| CSC315 | System Analysis and Design | 3 | 100 |
| CSC316 | Cryptography | 3 | 100 |
| CSC317 | Simulation and Modeling | 3 | 100 |
| CSC318 | Web Technology | 3 | 100 |
| | Elective I | 3 | 100 |
| **Total** | | **18** | **600** |

### Semester 6

| Course Code | Course Title | Credit Hours | Full Marks |
|---|---|---|---|
| CSC364 | Software Engineering | 3 | 100 |

| | | | |
|---|---|---|---|
| CSC365 | Compiler Design and Construction | 3 | 100 |
| CSC366 | E-Governance | 3 | 100 |
| CSC367 | NET Centric Computing | 3 | 100 |
| CSC368 | Technical Writing | 3 | 100 |
| | Elective II | 3 | 100 |
| **Total** | | **18** | **600** |

### Semester 7

| Course Code | Course Title | Credit Hours | Full Marks |
|---|---|---|---|
| CSC409 | Advanced Java Programming | 3 | 100 |
| CSC410 | Data Warehousing and Data Mining | 3 | 100 |
| MGT411 | Principles of Management | 3 | 100 |
| CSC412 | Project Work | 3 | 100 |
| | Elective III | 3 | 100 |
| **Total** | | **15** | **500** |

### Semester 8

| Course Code | Course Title | Credit Hours | Full Marks |
|---|---|---|---|
| CSC461 | Advanced Database | 3 | 100 |
| CSC462 | Internship | 6 | 200 |
| | Elective IV | 3 | 100 |
| | Elective V | 3 | 100 |
| **Total** | | **15** | **500** |

### Non-Credit Courses (NCC):

- Mobile Application Development
- UI/UX Design
- Web Development
- AWS
- CCNA
- Flutter
- Golang
- IT Essentials
- Linux
- Python
- React

# Career Opportunities

## Web Developer

Opportunities as a Web Developer include designing, coding, and optimizing web applications. You'll craft user-friendly interfaces, ensure responsive designs, and integrate databases, combining creativity with technical skills to deliver impactful digital solutions.

## Project Manager

Combining technical expertise and leadership, Computer Science graduates can manage IT projects, oversee teams, and ensure timely delivery of solutions, bridging communication between stakeholders and developers for efficient and successful outcomes.