

COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF COMPUTER APPLICATIONS

KOCHI – 682 022, KERALA, INDIA



**M.Sc. Computer Science with Specialization in
Data Science**

AMENDMENTS TO REGULATIONS

(2025 admission onwards)

(As per U.O. No. CUSAT/AC(A).A3/3037/2025 dated 29.07.2025, Academic Council held on 26.05.2025 vide agenda item No. II (48), regulations of all PG/UG Programmes offered by the University have been amended, w.e.f 2025 admission onwards. Therefore the regulations of the programme M.Sc. Computer Science with Specialization in Data Science is hereby modified accordingly, w.e.f 2025 admission onwards.)

**M.Sc. COMPUTER SCIENCE WITH
SPECIALISATION IN DATA SCIENCE
AMENDMENTS TO REGULATIONS (2025 Admission onwards)**

Semester I

| Course Code | Paper | L | T | P | Marks | | Credit |
|--------------|--|---|---|---|-----------|-------|-----------|
| | | | | | Sessional | Final | |
| 25-359-0101 | Statistical Foundations for data Science | 3 | 1 | 0 | 50 | 50 | 4 |
| 25-359-0102 | Operating System Concepts | 3 | 1 | 0 | 50 | 50 | 4 |
| 25-359-0103 | Data Structures and Algorithms | 3 | 1 | 0 | 50 | 50 | 4 |
| 25-359-0104 | Python for Data Analytics | 3 | 1 | 0 | 50 | 50 | 4 |
| 25-359-0105 | Mathematics for Machine Learning | 3 | 1 | 0 | 50 | 50 | 4 |
| 25-359-0106 | Python Programming LAB | | | 4 | 50 | | 2 |
| 25-359-0107 | Data Structure LAB | | | 4 | 50 | | 2 |
| TOTAL | | | | | | | 24 |

Semester II

| Course Code | Paper | L | T | P | Marks | | Credit |
|--------------|----------------------------------|---|---|---|-----------|-------|-----------|
| | | | | | Sessional | Final | |
| 25-359-0201 | Networks and Data Communications | 3 | 1 | 0 | 50 | 50 | 4 |
| 25-359-0202 | Database Management Systems | 3 | 1 | 0 | 50 | 50 | 4 |
| 25-359-0203 | R for Data Analytics | 3 | 1 | 0 | 50 | 50 | 4 |
| 25-359-0204 | Machine Learning | 3 | 1 | 0 | 50 | 50 | 4 |
| | Elective I | 3 | 1 | 0 | 50 | 50 | 4 |
| 25-359-0206 | Data Analytics LAB (ML and R) | | | 4 | 50 | 50 | 2 |
| 25-359-0207 | Mini Project | | | 4 | 50 | | 2 |
| TOTAL | | | | | | | 24 |

Semester III

| Course Code | Paper | L | T | P | Marks | | Credit |
|-------------|-------------------|---|---|---|-----------|-------|-----------|
| | | | | | Sessional | Final | |
| 25-359-0301 | Deep Learning | 3 | 1 | 0 | 50 | 50 | 4 |
| | Elective II | 3 | 1 | 0 | 50 | 50 | 3 |
| | Elective III | 3 | 1 | 0 | 50 | 50 | 3 |
| | Elective IV -MOOC | | | | 0 | 100 | 3 |
| | Elective V -IE | 3 | 0 | 0 | 50 | 50 | 3 |
| 25-359-0306 | Seminar | | | 2 | 50 | | 2 |
| 25-359-0307 | Mini Project | | | 4 | 50 | | 2 |
| | TOTAL | | | | | | 20 |

*IE - Interdisciplinary Elective***Semester IV**

| Course Code | Paper | Marks | | Credit |
|--------------|-------------------------|-----------|-------|-----------|
| | | Sessional | Final | |
| 25-359-0401 | Internship/Project Work | 200 | 200 | 16 |
| TOTAL | | | | 16 |

LIST OF ELECTIVES**Elective I**

- 25-359-0211 Blockchain Technology
- 25-359-0212 Digital Image Processing
- 25-359-0213 Natural Language Processing
- 25-359-0214 Cryptography and Network Security

Elective II

- 25-359-0311 Explainable Artificial Intelligence
- 25-359-0312 Software Project Management
- 25-359-0313 Network Security Essentials
- 25-359-0314 Cloud Computing
- 25-359-0315 Internet of Things
- 25-359-0316 Android Application Programming

Elective III

- 25-359-0321 Big Data Analytics
- 25-359-0322 Cyber Forensics
- 25-359-0323 Computer Vision
- 25-359-0324 Social Network Analysis
- 25-359-0325 Virtualization and Containers
- 25-359-0326 Software Testing

Elective IV

- 25-359-0331 –MOOC

Elective V -IE