

4 New Program / Batch 1.

Road map - Computing and Data Science

Total crh = 133

1st Year

Semester 1

| Code | Course Title | | Th | Lab | Pre-req |
|--------------|---------------------------|-----|----|-----------|---------|
| CC1311w | Discrete Structures | CC | 3 | 0 | |
| | Calculus 1 | CSC | 3 | 0 | |
| CS1011w | Introduction To Computing | GE | 3 | 1 | |
| | English 1 | GE | 3 | 0 | |
| | Islamic Studies 1 | GE | 3 | 0 | |
| Total | | | | 16 | |

Semester 2

| Code | Course Title | | Th | Lab | Pre-req |
|--------------|--------------------------|-----|----|-----------|---------|
| | Programming Fundamentals | CC | 3 | 1 | CS1011w |
| | Linear Algebra | CSC | 3 | 0 | |
| | English 2 | GE | 3 | 0 | |
| | Basic Electronics | CSC | 3 | 1 | |
| | Pakistan Studies | GE | 3 | 0 | |
| Total | | | | 17 | |

2nd Year

Semester 3

| Code | Course Title | | Th | Lab | Pre-req |
|---------|-----------------------------|-----|----|-----------|---------|
| CC1111w | Object Oriented Programming | CC | 3 | 1 | PF |
| | Univ. Elective 1 | UE | 3 | 0 | |
| CC2211w | Digital Logic Design | CC | 3 | 1 | BE |
| | Probability and Statistics | CSC | 3 | 0 | |
| | Communication Skills | GE | 3 | 0 | |
| | | | | 17 | |

Semester 4

| Code | Course Title | | Th | Lab | Pre-req |
|--------------|--------------------------------|------|----|-----------|---------|
| | Data Mining | CSC | 3 | 1 | |
| CC2711w | Software Engineering | CC | 3 | 0 | CC1111w |
| | Calculus 2 | CSSC | 3 | 0 | |
| CC2411w | Data Structures and Algorithms | CC | 3 | 1 | CC1111w |
| | Univ. Elective 2 | UE | 3 | 0 | |
| Total | | | | 17 | |

4thYear
Semester 5

| Code | Course Title | | Th | Lab | Pre-req |
|--------------|--|-----|----|-----------|---------|
| CC3021w | Operating Systems | CC | 3 | 1 | |
| CC2421w | Introduction to DataBase Systems | CC | 3 | 1 | CC2411w |
| | Data Warehousing and Business Intelligence | CSC | 3 | 0 | |
| CS3611w | Computer and Communication Networks | CC | 3 | 1 | CC2211w |
| | Univ. Elective 3 | UE | 3 | 0 | |
| Total | | | | 18 | |

Semester 6

| Code | Course Title | | Th | Lab | Pre-req |
|--------------|--|--------|----|-----------|---------|
| | Machine Learning | CSC | 3 | 0 | |
| CS3421w | Big Data Analytics | CSC | 3 | 0 | CC2411w |
| | Statistical Inference and Representation | CSC | 3 | 0 | |
| | Technical Elective | TE/ITC | 3 | 0 | |
| | Technical Elective | TE/ITC | 3 | 0 | |
| CS3331w | Differential Equations | CSSC | 3 | 0 | |
| Total | | | | 18 | |

4thYear

Semester 7

| Code | Course Title | | Th | Lab | Pre-req |
|--------------|---------------------------------------|-----|----|-----------|---------|
| CS3041w | Human Computer Interaction | CC | 3 | 0 | CC2711w |
| | Cloud Computing | CSC | 3 | 0 | |
| | Programming Language for Data Science | CSC | 3 | 0 | |
| | Technical Elective | TE | 3 | 0 | |
| | Final Year Project 1 | CC | 3 | 0 | |
| Total | | | | 15 | |

Semester 8

| Code | Course Title | | Th | Lab | Pre-req |
|--------------|---------------------|------|----|-----------|---------|
| CS4931w | Numerical Analysis | CSSC | 3 | 0 | |
| | Technical Elective | TE | 3 | 0 | |
| | Technical Elective | TE | 3 | 0 | |
| | Technical Elective | TE | 3 | 0 | |
| | Final Year Project2 | CC | 3 | 0 | |
| Total | | | | 15 | |

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