

1st year:

Course Name	Credits	Code
Mathematics for Data Science I	4	BSMA1001
Statistics for Data Science I	4	BSMA1002
Computational Thinking	4	BSCS1001
English I	4	BSHS1001
Mathematics for Data Science II	4	BSMA1003
Statistics for Data Science II	4	BSMA1004
Programming in Python	4	BSCS1002
English II	4	BSHS1002

2nd year:

Course Name	Credits	Code	Prerequisites	Corequisites
Database Management Systems	4	BSCS2001	None	None
Programming, Data Structures and Algorithms using Python	4	BSCS2002	None	None
Modern Application Development I	4	BSCS2003	None	BSCS2001
PROJECT Modern Application Development I - Project	2	BSCS2003P	None	BSCS2003
Programming Concepts using Java	4	BSCS2005	None	None
Modern Application Development II	4	BSCS2006	BSCS2003	None
PROJECT Modern Application Development II - Project	2	BSCS2006P	BSCS2003P	BSCS2006
System Commands	3	BSSE2001	None	None

3rd year:

Course Name	Credits	Code	Prerequisites
Machine Learning Foundations	4	BSCS2004	None
Business Data Management	4	BSMS2001	None
PROJECT Business Data Management - Project	2	BSMS2001P	None
Machine Learning Techniques	4	BSCS2007	None
Machine Learning Practice	4	BSCS2008	BSCS2004, BSCS2007
PROJECT Machine Learning Practice - Project	2	BSCS2008P	None
Business Analytics	4	BSMS2002	BSMS2001
Tools in Data Science	3	BSSE2002	None

4th year:

Degree Level Courses

Core Courses

There are two pairs of core courses in the degree level. It is mandatory for the learner to complete all four core courses.

Core Courses Pair I

Software Engineering

Software Testing

Core Courses Pair II

AI: Search Methods for Problem Solving

Deep Learning

Elective Courses

Here is the list of elective courses offered in the program. In the BSc and BS level, a maximum of 8 credits can be transferred from NPTEL and there is the option to do an apprenticeship and transfer up to a maximum of 12 credits in the BS level.

(Note: List of elective courses may change each term depending on availability.)

1. Software Engineering CORE COURSE
2. Software Testing CORE COURSE
3. AI: Search Methods for Problem Solving CORE COURSE
4. Deep Learning CORE COURSE
5. Strategies for Professional Growth MANDATORY COURSE
6. Algorithmic Thinking in Bioinformatics
7. Big Data and Biological Networks
8. Data Visualization Design
9. Special topics in Machine Learning (Reinforcement Learning)
10. Speech Technology
11. Design Thinking for Data-Driven App Development
12. Industry 4.0
13. Sequential Decision Making

14. Market Research
15. Privacy & Security in Online Social Media
16. Introduction to Big Data
17. Financial Forensics
18. Linear Statistical Models
19. Advanced Algorithms
20. Statistical Computing
21. Computer Systems Design
22. Programming in C
23. Mathematical Thinking
24. Large Language Models
25. Introduction to Natural Language Processing (i-NLP)
26. Deep Learning for Computer Vision
27. Managerial Economics
28. Game Theory and Strategy
29. Corporate Finance
30. Deep Learning Practice
31. Operating Systems