

## FOUNDATION LEVEL:

Course Name	Credits	Code	Prerequisites	Corequisites	
Mathematics for Data Science I	4	BSMA1001	None	None	➤
Statistics for Data Science I	4	BSMA1002	None	None	➤
Computational Thinking	4	BSCS1001	None	None	➤
English I	4	BSHS1001	None	None	➤
Mathematics for Data Science II	4	BSMA1003	BSMA1001	None	➤
Statistics for Data Science II	4	BSMA1004	BSMA1002, BSMA1001	BSMA1003	➤
Programming in Python	4	BSCS1002	BSCS1001	None	➤
English II	4	BSHS1002	BSHS1001	None	➤

## DIPLOMA LEVEL:

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	➤
<b>PROJECT</b> 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	➤
<b>PROJECT</b> Modern Application Development II - Project	2	BSCS2006P	BSCS2003P	BSCS2006	➤
System Commands	3	BSSE2001	None	None	➤
Course Name	Credits	Code	Prerequisites	Corequisites	
Machine Learning Foundations	4	BSCS2004	None	None	➤
Business Data Management	4	BSMS2001	None	None	➤
<b>PROJECT</b> Business Data Management - Project	2	BSMS2001P	None	BSMS2001	➤
Machine Learning Techniques	4	BSCS2007	None	BSCS2004	➤
Machine Learning Practice	4	BSCS2008	BSCS2004, BSCS2007	None	➤
<b>PROJECT</b> Machine Learning Practice - Project	2	BSCS2008P	None	BSCS2008	➤
Business Analytics	4	BSMS2002	BSMS2001	None	➤
Tools in Data Science	3	BSSE2002	None	BSCS2004	➤

## BSC LEVEL:

## 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	Core Courses Pair II
Software Engineering	AI: Search Methods for Problem Solving
Software Testing	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

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11. Design Thinking for Data-Driven App Development

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12. Industry 4.0

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13. Sequential Decision Making

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14. Market Research

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15. Privacy & Security in Online Social Media

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16. Introduction to Big Data

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17. Financial Forensics

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18. Linear Statistical Models

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19. Advanced Algorithms

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20. Statistical Computing

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21. Computer Systems Design

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22. Programming in C

23. Mathematical Thinking

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24. Large Language Models

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25. Introduction to Natural Language Processing (i-NLP)

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26. Deep Learning for Computer Vision

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27. Managerial Economics

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28. Game Theory and Strategy

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29. Corporate Finance

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30. Deep Learning Practice

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31. Operating Systems

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