



NAAC A+ Accredited & UGC 12(B) Status Holder

# Assam down town University

Established Vide The Assam Act. No. VIII of 2010, Gazette No. LGL.9/2010/11

Promoted by: **Assam down town**  
Charity Trust

## BCA PROGRAM STRUCTURE

### First Semester

### Credits

- Programming for Problem Solving (with Lab) 5(4+1)
- Introduction to Web Technology (with Lab) 5(4+1)
- Fundamentals of Computer Applications 3
- Digital Electronics 3
- Mathematics for Computer Applications 3
- Fundamentals of Management 2

### Second Semester

- Data Structures (with Lab) 5(4+1)
- Database Management Systems (with Lab) 5(4+1)
- Computer Networks 3
- Computer Organization and Architecture 3
- Fundamentals of Probability and Statistics 3
- Functional English 2

### Third Semester

#### Core Subjects

- Design and Analysis of Algorithms 3
- Object Oriented Programming Paradigm in JAVA (with Lab) 5(4+1)
- Operating Systems 3
- Fundamentals of Discrete Mathematics 3
- Logical Reasoning for Computer Science 2
- Environmental Studies 2

### Specialization

- Programme Elective I 3

### Fourth Semester

#### Core Subjects

- Basics of Python Programming (with Lab) 5(4+1)
- Big Data Analysis 4
- Software Engineering 3
- Data Visualization 3
- Introduction to Computer Graphics 3
- Quantitative Aptitude for Computer Science 2



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## Specialization

- Programme Elective II 3

## Fifth Semester

### Core Subjects

- Advanced Application Development (with Lab) 4(3+1)
- Generative AI 3
- Project I 10

## Specialization

- Programme Elective III 3

## Sixth Semester

### Core Subjects

- Computer Vision 3
- Digital Image Processing 3
- Project II 12

## Specialization

- Programme Elective IV 3
- Programme Elective V 3

Learners will be allowed to select any one specialization during the third semester. Once selected, the same will continue till 6<sup>th</sup> semester

Total Credit= 130





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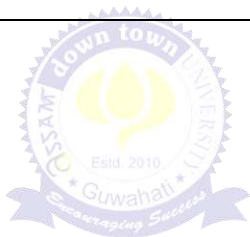
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## PROGRAMME SPECIALIZATIONS/ PROGRAM ELECTIVES

| Specialization           | Third Semester                  | Fourth Semester                  | Fifth Semester                         | Sixth Semester                                                                                                                          |
|--------------------------|---------------------------------|----------------------------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Cyber security           | Introduction To Cyber Security  | Ethical Hacking Fundamentals     | Information Security and Cryptosystems | <ul style="list-style-type: none"><li>• Cyber Security Incident Response Management</li><li>• Cyber Forensics</li></ul>                 |
| Data Science             | Introduction to Data Science    | Inferential Statistics           | Business Analytics                     | <ul style="list-style-type: none"><li>• Exploratory Data Analysis</li><li>• Pattern Recognition</li></ul>                               |
| AI/ML                    | Fundamentals of AI/ML           | Inferential Statistics           | Deep Learning and Neural Networks      | <ul style="list-style-type: none"><li>• Predictive Analysis</li><li>• Pattern Recognition</li></ul>                                     |
| Cloud & Mobile Computing | Introduction to Cloud Computing | Fundamentals of Mobile Computing | Principles of Virtualization           | <ul style="list-style-type: none"><li>• Security in Mobile and Cloud Environments</li><li>• Serverless Computing in the Cloud</li></ul> |



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