

BRAINWARE UNIVERSITY

COURSE CATALOG 2025

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Overview

Brainware University offers a comprehensive range of 62+ academic programs across multiple disciplines. Our curriculum is designed to meet industry demands while maintaining academic excellence and affordability. All programs follow the National Education Policy (NEP) 2020 guidelines with multiple entry and exit points.

Academic Framework

- **Credit-Based System:** All programs follow semester-based credit system
- **Industry-Oriented:** Curriculum designed with industry partnerships
- **Research Focus:** Emphasis on practical learning and research
- **Multiple Exit Options:** Certificate, Diploma, Degree, and Honors options
- **Flexible Structure:** Choice-based credit system implementation

Diploma Programs

Engineering & Technology

1. Diploma in Computer Science & Engineering

- Duration: 3 Years
- Specializations: Programming, Software Development, Database Management

2. Diploma in Electrical Engineering

- Duration: 3 Years
- Focus: Power systems, Electronics, Control Systems

3. Diploma in Mechanical Engineering

- Duration: 3 Years
- Areas: Design, Manufacturing, Thermal Engineering

Health Sciences

4. Diploma in Medical Laboratory Technology

- Duration: 2 Years
- Clinical Training: Pathology, Microbiology, Biochemistry

5. Diploma in Pharmacy

- Duration: 2 Years
- Pharmaceutical Sciences and Drug Technology

Undergraduate Programs

Computer Applications & Technology

Bachelor of Computer Applications (Honours)

- **Duration:** 3-4 Years (120-160 Credits)
- **Specializations:**
 - General BCA (Honours)
 - Mobile Application and Web Technologies
- **Career Prospects:** Software Developer, System Analyst, Web Designer

Bachelor of Science (Honours) Programs

1. Advanced Networking & Cyber Security

- Industry-oriented cybersecurity curriculum
- Hands-on training in network security

2. Animation & Multimedia

- Creative design and digital media production
- Industry-standard software training

Engineering Programs (B.Tech)

Computer Science & Engineering

- **Duration:** 4 Years (160 Credits)
- **Core Specializations:**
 - 1. Computer Science & Engineering (General)**
 - 2. Artificial Intelligence & Machine Learning**
 - 3. Artificial Intelligence & Robotics**
 - 4. Data Science**
 - 5. Cyber Security**

Curriculum Highlights:

- Programming languages (Python, Java, C++)
- Database management systems
- Software engineering principles
- Machine learning algorithms
- Cybersecurity protocols

Biotechnology Programs

1. Bachelor of Technology in Biotechnology

- Duration: 4 Years
- Focus: Bioprocess engineering, Genetic engineering

2. Bachelor of Science (Honours) in Biotechnology

- Duration: 3 Years
- Molecular biology, Bioinformatics

Health Sciences

Medical & Allied Health

1. **Bachelor of Science in Medical Lab Technology**
 - Clinical pathology and diagnostic procedures
2. **Bachelor of Science in Medical Radiology & Imaging Technology**
 - Advanced imaging techniques and radiological procedures
3. **Bachelor of Optometry**
 - Eye care and vision sciences
4. **Bachelor of Science in Physician Assistant**
 - Healthcare support and patient care
5. **Bachelor of Physiotherapy**
 - Rehabilitation and physical therapy
6. **Bachelor of Science in Critical Care Technology**
 - Intensive care unit procedures
7. **Bachelor of Science in Operation Theatre Technology**
 - Surgical assistance and OT management
8. **Bachelor of Science (Honours) in Food, Nutrition & Dietetics**
 - Nutritional science and dietary planning

Pharmacy

- **Bachelor of Pharmacy**
 - Duration: 4 Years
 - Pharmaceutical chemistry and drug development

Nursing

- **Bachelor of Science in Nursing** (details as per nursing council guidelines)

Management & Commerce

Business Administration

1. **Bachelor of Business Administration (Honours)**
 - **Specializations:**
 - General BBA
 - Digital Marketing
 - Business Analytics

- Hospital Management
- Duration: 3 Years
- 2. **Bachelor of Commerce (Honours) in Accounts, Finance & Banking**
 - Financial management and accounting principles

Legal Studies

1. **Bachelor of Business Administration & Bachelor of Law (BBA LL.B)**
 - Duration: 5 Years integrated program
2. **Bachelor of Law (LL.B)**
 - Duration: 3 Years
3. **Bachelor of Arts & Bachelor of Law (BA LL.B)**
 - Duration: 5 Years integrated program

Liberal Arts

1. **Bachelor of Arts (Honours) in English**
 - Literature, linguistics, and communication
2. **Bachelor of Science (Honours) in Psychology**
 - Clinical and applied psychology

Agriculture

- **Bachelor of Science (Honours) in Agriculture**
 - Modern farming techniques and agricultural technology

Media & Communication

- **Bachelor of Science (Honours) in Media Science & Journalism**
 - Digital journalism and mass communication

Postgraduate Programs

Technology & Engineering

1. **Master of Science in Advanced Networking & Cyber Security**
2. **Master of Technology in Computer Science & Engineering**
 - Specializations:
 - General M.Tech CSE
 - Artificial Intelligence & Machine Learning
 - Data Science

3. **Master of Technology in Robotics & Automation**
4. **Master of Computer Applications (MCA)**
5. **Master of Science in Animation & Multimedia**

Health Sciences

1. **Master of Science in Medical Laboratory Technology**
2. **Master of Optometry**
3. **Master of Pharmacy**
 - Specializations:
 - **Pharmaceutics**
 - **Pharmaceutical Chemistry**

Sciences

1. **Master of Science in Biotechnology**
2. **Master of Science in Microbiology**
3. **Master of Science in Bioinformatics**
4. **Master of Science in Mathematics**

Management & Commerce

1. **Master of Business Administration (MBA)**
2. **Master of Business Administration in Healthcare & Hospital Management**
3. **Master of Commerce in Banking & Financial Accounting**

Liberal Arts

1. **Master of Arts in English**
2. **Master of Science in Applied Psychology**

Media & Communication

- **Master of Science in Media Science & Journalism**

Legal Studies

- **Master of Law (LL.M)**

Doctoral Programs

Ph.D. Programs Available in:

- Engineering and Technology
- Science and Humanities
- Management and Commerce
- Pharmacy
- Medical and Health Sciences

Duration: 3-6 Years

Requirements: Master's degree with research aptitude

Process: Entrance test, coursework, research work, thesis submission

Ph.D. Admission Process

1. **Eligibility:** Master's degree (55% for general, 50% for reserved)
2. **Selection:** NET qualified OR University entrance test (BWU-PET)
3. **Coursework:** Mandatory 8-credit coursework
4. **Research:** Original research under supervisor guidance
5. **Thesis:** Submission and viva-voce examination

Academic Structure

NEP 2020 Implementation

Multiple Exit Options

Level	Qualification	Duration	Credits	Description
5	UG Certificate	1 Year	40	After first year completion
6	UG Diploma	2 Years	80	After second year completion
7	Bachelor's Degree	3 Years	120	Traditional degree
8	Bachelor's with Honours	4 Years	160	Research-oriented degree

Course Components

- **Major Courses:** Core discipline-specific courses
- **Minor Courses:** Interdisciplinary elective courses
- **Ability Enhancement Courses (AEC):** Skill development courses
- **Skills Enhancement Courses (SEC):** Practical skill courses

- **Value Added Courses (VAC):** Ethics and values courses
- **Multidisciplinary Courses:** Cross-disciplinary learning
- **Internship/Project Work:** Practical experience component

Credit Distribution

- **Major Courses:** 50-60% of total credits
- **Minor/Elective:** 20-30% of total credits
- **AEC/SEC/VAC:** 10-15% of total credits
- **Research/Project:** 5-10% of total credits

Admission Requirements

General Eligibility

Undergraduate: 10+2 from recognized board with required percentage

Postgraduate: Bachelor's degree in relevant field

Doctoral: Master's degree with research aptitude

Program-Specific Requirements

Engineering: Physics, Mathematics mandatory; Chemistry/Biology/Computer Science optional

Medical Programs: Physics, Chemistry, Biology mandatory

Management: Any stream acceptable

Law: Any graduation for LL.B; 10+2 for integrated programs

Selection Process

1. **Application Submission**
2. **Brainware Eligibility Test (BET)**
3. **Merit List Preparation**
4. **Counseling and Seat Allocation**
5. **Document Verification**
6. **Fee Payment and Admission Confirmation**

Learning Outcomes

Graduate Attributes

Upon completion of programs, students will demonstrate:

- **Technical Competency:** Subject-specific knowledge and skills
- **Critical Thinking:** Analytical and problem-solving abilities
- **Communication Skills:** Effective written and oral communication
- **Professional Ethics:** Integrity and ethical decision-making
- **Lifelong Learning:** Commitment to continuous learning
- **Social Responsibility:** Awareness of societal needs and contributions

Industry Integration

- **Industry Partnerships:** Collaborations with leading companies
- **Internship Programs:** Mandatory industry exposure
- **Project Work:** Real-world problem-solving projects
- **Guest Lectures:** Industry expert sessions
- **Placement Support:** Career guidance and job placement assistance

Research Opportunities

Undergraduate Research

- Final year projects with industry collaboration
- Summer research internships
- Student research competitions
- Innovation and entrepreneurship programs

Postgraduate Research

- Master's thesis/dissertation
- Conference presentations
- Publication opportunities
- Research assistantship programs

Doctoral Research

- Original contribution to knowledge
- International conference participation
- Peer-reviewed publications
- Research collaboration opportunities

Contact Information

Academic Departments

- **Computer Science & Engineering:** +91 33 69010628/629/630
- **Allied Health Sciences:** +91 33 69010580/579/582
- **Biotechnology:** +91 33 69010574
- **Management:** +91 33 69010603/604
- **Law:** +91 33 69010631/632
- **Pharmaceutical Technology:** +91 33 69010522/519
- **Agriculture:** +91 33 69010575

General Information

- **Admission Cell:** +91 33 69010566
- **Academic Office:** +91 33 69010507
- **Main Helpline:** +91 33 69010532
- **Email:** info@brainwareuniversity.ac.in

Campus Address

Main Campus:

398, Ramkrishnapur Road, Barasat
Near Jagadighata Market
Kolkata - 700 125, West Bengal, India

City Campus:

Y8, EP Block, Sector V, Bidhannagar
Kolkata - 700 091, West Bengal, India

Note: This catalog is subject to revision. For the most current information on programs, curriculum, and admission requirements, please visit the official website or contact the respective departments directly.