Computer Science and Engineering
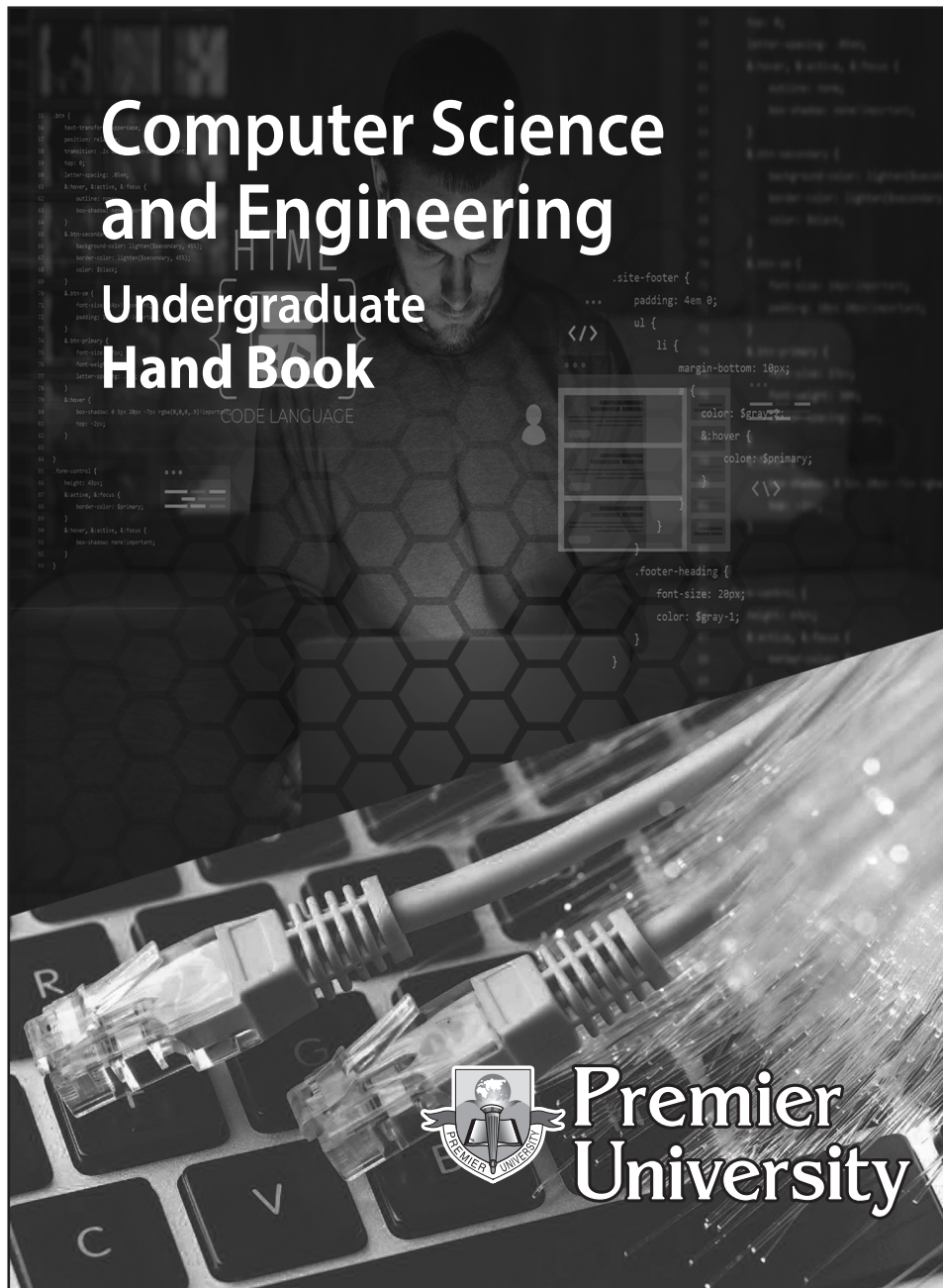
Undergraduate
Hand Book

Premier University

Computer Science and Engineering

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1. PREFACE

Welcome to Premier University (PU). This Undergraduate Handbook contains essential information regarding students' life, academic policies, available services, and resources. It is the responsibility of every undergraduate student to thoroughly read this document and adhere to its guidelines throughout their academic journey. Ignorance of the rules or any provision in this Handbook will not be accepted as an excuse for any breach of or non-compliance with the rules. For further clarifications, students should consult their assigned academic Adviser or the Registrar's Office.

2. NOTICE

This Handbook outlines the university's rules, policies, and resources applicable to all undergraduate students. Premier University reserves the right to update this document as necessary.

3. HOW TO NAVIGATE THE HANDBOOK

• **The Student and Campus Life section** includes details about extracurricular activities, facilities, student services, and campus resources.

• **The Academic section** covers courses, degree requirements, grading, and graduation policies.

• **The Code of Conduct and Disciplinary Procedures section** outlines expected behavior, the consequences of violations, and the process for ensuring a fair and respectful academic environment.

4. UNIVERSITY OVERVIEW

Background

Since ancient times, education has been recognized as a fundamental factor in improving human conditions within a social setting. Greek thinkers such as Socrates, Plato, and Aristotle acknowledged the crucial role of education in society. Plato, in particular, developed a comprehensive educational framework for his ideal state, recognizing that a philosopher-king must have adequate education to govern effectively.

Education has always played a vital role in economic and social development. Modern economists, including Theodore Schultz, Gary Becker, and Amartya Sen, have emphasized the significance of human capital in driving economic growth. Studies conducted by the World Bank further highlight that investment in human capital through education which significantly contributes to national development.

Higher education is essential in transforming individuals into skilled human capital. Societies that invest in education and skill development can compete successfully in today's global market. The experiences of Japan, South Korea, Hong Kong, Singapore, Malaysia, and China illustrate how education, when combined with workforce efficiency, fosters economic prosperity.

Genesis

Recognizing the importance of education, the Chattogram City Corporation envisioned establishing a university in Chattogram that would provide quality education at an affordable cost. In 1998, a Needs Assessment Study was conducted, leading to the submission of a project proposal for Premier University to the Ministry of Education in May 2001. The government approved the proposal under the Private University Act, 1992 (Amended in 1998), and the University Grants Commission (UGC) approved its curricula. Premier University officially commenced its academic programs on January 21, 2002.

Premier University is approved by the Government of the People's Republic of Bangladesh, and its curricula and programs are approved by the University Grants Commission (UGC). The President of the People's Republic of Bangladesh serves as the Chancellor of Premier University.

BAETE and Washington Accord Accreditation

The Electrical and Electronic Engineering (EEE) Department at Premier University is accredited by the Board of Accreditation for Engineering and Technical Education (BAETE) under the Institution of Engineers, Bangladesh (IEB). Additionally, the EEE program is recognized under the Washington Accord, ensuring its international accreditation.

Permanent Charter

On December 29, 2021, the Ministry of Education granted Premier University a Permanent Charter, recognizing it as a distinguished university in Bangladesh. This distinction reflects the university's commitment to quality, education and research.

Vision of the University

The vision of Premier University is to become a leading academia in the country and beyond for quality education, research and innovations in higher education.

Mission of the University

Mission 1: Premier University aims to provide higher education to students.

Mission 2: Premier University aims to educate the students through the best possible methods of learning.

Mission 3: The higher education Premier University provides will not only disseminate knowledge but also generate an urge among students to create new knowledge, skills and technology.

Mission 4: One of the aims of Premier University is to participate in the endeavor of the state of Bangladesh in transforming it into a great seat of learning.

Mission 5: Premier University is also committed to disseminating and creating scientific, technological, engineering and humanitarian knowledge and skills related to new emerging industrial revolutions.

Core Values of the University

Premier University is built upon core values that define its academic culture:

- **Excellence:** Commitment to high educational standards, research, and innovation.
- **Integrity:** Upholding ethical conduct, transparency, and accountability.
- **Innovation:** Encouraging creativity, critical thinking, and technological advancements.
- **Social Responsibility:** Fostering leadership, sustainable development, and community engagement.

Strategic Pillars of the University

Premier University has established five foundational pillars to drive its mission and vision:

- **Program Expansion:** Expanding academic offerings, including M.Phil. and Ph.D. programs, to strengthen research and innovation.
- **Infrastructure Enhancement:** Investing in modern facilities, laboratories, and digital resources to support academic excellence.
- **Industry Integration & Collaborative Synergy:** Strengthening partnerships with industries, academic institutions, and research organizations to enhance practical learning and research impact.
- **Curriculum, Teaching & Learning:** Advancing curriculum development and pedagogical approaches to uphold educational excellence.
- **Student-Centric Approach:** Prioritizing student engagement, well-being, and holistic development.

Additionally, **Impact-Driven Research** remains a key focus at Premier University, ensuring that research efforts address real-world challenges and contribute to societal progress. The university also focuses on publishing research journals in both print and online versions, organizing research seminars to disseminate outcomes, and fostering collaboration among faculty and students to create solutions for contemporary issues. These initiatives contribute significantly to advancing the university's position as a leader in higher education and research.

5. FACULTIES AND DEPARTMENTS

There are six faculties under which departmental programs are carried out. The faculties and their respective departments are as follows:

Faculty of Business Studies

- Department of Business Administration
  (Accounting Discipline, Finance Discipline, Human Resource Management Discipline, Management Discipline and Marketing Discipline)

Faculty of Engineering

- Department of Computer Science and Engineering (CSE)
- Department of Electrical and Electronic Engineering (EEE)
- Department of Architecture

Faculty of Arts

- Department of English Language and Literature
- Department of Fashion Design and Technology
- Department of Bangla Language and Literature

Faculty of Law

- Department of Law

Faculty of Social Science

- Department of Economics
- Department of Sociology and Sustainable Development

Faculty of Science

- Department of Mathematics
- Department of Public Health
- Department of Chemistry

6. PROGRAMS

The following undergraduate and postgraduate programs are offered under different departments:

Undergraduate Programs

- Bachelor of Business Administration (BBA);
  (Accounting Discipline, Finance Discipline, Human Resource Management Discipline, Management Discipline and Marketing Discipline)
- Bachelor of Science in Computer Science and Engineering (CSE);
- Bachelor of Arts (Hons.) in English;
- Bachelor of Laws (LL.B. (Hons.);
- Bachelor of Social Science (Hons.) in Economics;
- Bachelor of Science in Electrical and Electronic Engineering (EEE);
- Bachelor of Architecture;
- Bachelor of Science (Hons.) in Mathematics;
- Bachelor of Science (Hons.) in Chemistry;
- Bachelor of Social Science (Hons.) in Sociology and Sustainable Development;
- Bachelor of Arts (Hons.) in Bengali Language and Literature;
- Bachelor of Arts in Fashion Design and Technology.

Graduate Programs

- Master of Business Administration;
  (Accounting Discipline, Finance Discipline, Human Resource Management Discipline, Management Discipline, Marketing Discipline and Supply Chain Management Discipline)
- Master of Arts in English (Major in EL & TESOL);
- Master of Social Science in Economics;
  (Specialization in Banking and Finance & Development Studies)
- Master of Laws (LL.M.);
- Master of Science in Mathematics;
- Master of Public Health;
- Master of Science in Computer Science and Engineering;
- Master of Science in Sociology and Sustainable Development;
- Master of Science in Molecular Biology & Bio-Info.

Other Programs (Diploma & Certificate Courses)
- CISCO Certified Network Associates (CCNA);
- Postgraduate Diploma in Library and Information Science (PGDLIS);
- IoT & Data Analytics;
- Amazon Web Service (AWS) Cloud Foundations;
- Japanese and Chinese Language Course.

In future, Premier University will expand its activities and offer degrees, diplomas, certification programs and other educational services to expand knowledge.

7. STUDENT LIFE

7.1 The Campus

Premier University, located in the heart of Chattogram, operates across multiple campuses, each designed to provide a modern and student-friendly learning environment. Strategically positioned near key transportation hubs such as Chattogram Zero Point, the railway station, and the central bus depot, all campuses are easily accessible within 5 to 10 minutes from these locations. The university offers high-quality infrastructure, including air-conditioned and multimedia-equipped classrooms, well-structured laboratories, modern computer facilities, and enriched libraries to support academic and research activities. With dedicated academic buildings, seminar halls, research centers, and recreational spaces, Premier University ensures a comprehensive educational experience. Its commitment to excellence is reflected in its state-of-the-art facilities, fostering an engaging and innovative learning atmosphere for students.

7.2 The Faculty

The teaching staff at Premier University consists of highly qualified full-time faculty members with strong academic backgrounds in their respective fields. In addition to its dedicated faculty, the university invites adjunct professors from other universities, leading business organizations, government institutions, research bodies, and various industries to enhance the learning experience. Senior executives from multinational corporations and international banks are occasionally invited to deliver lectures, providing students with valuable insights into real-world corporate environments. Furthermore, Premier University invites experts from diverse sectors, including industrial professionals, judicial service officers, doctors, architects, national designers, and foreign language experts, to contribute their expertise as guest faculty. The university also welcomes visiting professors from foreign

universities, fostering a global perspective in its academic programs. It is to be noted that US Department of State has been consistently providing Native America Language Felloes to the Department of English since 2012.

7.3 Quality Education

Since its inception, Premier University has been dedicated to providing quality education. The university's commitment to excellence is reflected in its highly qualified faculty, supportive administration, and vast array of learning resources. Premier University equips students to tackle global challenges, with an open credit system that offers greater flexibility for those pursuing higher studies abroad. Many of its alumni hold prominent positions at prestigious universities both regionally and internationally, including institutions in the USA, the European Union, the UK, and the Asia-Pacific region. The university places a strong emphasis on fostering creative learning, encouraging innovation and critical thinking in its students.

7.4 Classrooms

The classrooms at Premier University are designed to provide a modern and comfortable learning environment, ensuring an interactive and engaging academic experience for students. Each classroom is fully air-conditioned and equipped with multimedia projectors, high-quality sound systems, and advanced teaching aids, allowing faculty members to deliver lectures effectively. To support digital and remote learning, the classrooms are also outfitted with high-speed internet connectivity, video conferencing facilities, and smart classroom technology, making them well-suited for conducting online and hybrid classes. The university prioritizes a student-friendly atmosphere, ensuring spacious seating arrangements, proper lighting, and ventilation to enhance concentration and learning efficiency. With these state-of-the-art facilities, Premier University fosters an innovative and technology-driven educational environment that meets global academic standards.

7.5 Lab Facilities

Premier University offers a range of state-of-the-art laboratories designed to provide hands-on practical experience across various disciplines. The university features advanced computer labs with over 500 high-performance computers, each highly configured with external GPUs, managed by professional system administrators and lab assistants. These labs allow students to engage in supervised coursework and independent assignments, enhancing their technical skills.

In addition to the computer labs, the university boasts specialized laboratories such as the Electrical Circuit Lab, Electronics Lab, Machine Lab, Electric Power Lab,

Communication Engineering Lab, IoT & Microprocessor Lab, Programmable Logic Control (PLC) Lab, and Control System Lab. These labs are equipped with modern instruments and cutting-edge technology to support experimental learning and research.

Premier University also houses specialized labs dedicated to emerging fields, including an Artificial Intelligence Lab, Software Development Lab, Programming Lab, and Networking Lab. These well-equipped facilities ensure that students gain the practical skills necessary for academic excellence and professional development, preparing them for success in a rapidly evolving technological landscape.

7.6 Library

Premier University has a central library supported by four departmental libraries, located across three separate academic buildings, to meet the needs of students, faculty, and staff. These libraries house a comprehensive collection of books, research journals, periodicals, archival materials, and e-resources spanning various fields of knowledge. Equipped with up-to-date technology and professionally skilled staff, the libraries offer a wide range of services, including book lending, research assistance, reference and bibliographical services, and information literacy programs. As an integral part of the university, they are designed to support academic research and curriculum requirements. The libraries are fully automated and subscribe to world-renowned e-resources, including IEEE Xplore Digital Library, JSTOR, Wiley Online Library, Oxford University Press, Cambridge University Press, Emerald Insight, and many others through LiCoB and the UGC Digital Library Consortium. Additionally, the library maintains an institutional repository for archiving the university's research output. Users can access over 40,000 online journals and more than 100,000 e-books. The library also subscribes to all major local and national newspapers. Currently, it holds approximately 30,000 printed books for readers.

7.7 Premier University Academic Information System (PUAIS)

Premier University utilizes the Premier University Academic Information System (PUAIS), a comprehensive, automated platform designed to streamline and integrate all academic activities. PUAIS automates key tasks such as course enrollment, tuition fee payments, grading, and convocation applications, enhancing efficiency and reducing errors. The system provides students with real-time access to course details, schedules, and examination results, while faculty members can securely manage grades, course resources, and academic activities remotely. The platform

also ensures efficient student information management through an advanced IT-based database, with dedicated staff ensuring data confidentiality, accuracy, and accessibility. PUAIS is maintained by the university's IT office, ensuring smooth operation and data integrity, with backup and disaster recovery procedures in place.

7.8 Registrar's Office

The Office of the Registrar is responsible for maintaining the accuracy, confidentiality, and security of academic records of all the students while upholding academic integrity. It facilitates course enrollment, manages class schedules, and ensures proper record-keeping of students' academic progress. The office also verifies enrollment and graduation status, develops and implements academic policies, and collaborates with external partners. By providing essential academic services and reports to students, faculty, and administrative staff, the Office of the Registrar plays a vital role in ensuring a seamless academic experience.

7.9 Office of the Controller of Examinations

The Office of the Controller of Examinations is responsible for managing and overseeing all examination-related activities with accuracy and integrity. It ensures the smooth planning and management of examinations, processes and publishes results, and handles grade correction requests. The office safeguards examination scripts, issues transcripts and certificates, and verifies student grades for both internal and external purposes. Additionally, it archives photocopies of academic records and organizes the Convocation Ceremony. Committed to maintaining academic standards, the office plays a crucial role in upholding the credibility and fairness of the university's examination system.

7.10 Accounts Office

The Accounts Office provides essential financial services to students, ensuring a smooth and transparent payment process. It assists with tuition fee calculations, payment systems, and managing late fines for any semester. Students can obtain detailed statements of their accounts, including outstanding amounts, transaction history, and payment details through the PUAIS. The office also issues payment slips, provides information on depository banks and payment options, and addresses account-related inquiries. With a commitment to accuracy and efficiency, the Accounts Office helps students stay informed and manages their financial responsibilities with ease.

7.11 Student Affairs & Student Welfare Office

The Student Affairs & Student Welfare Office is a dedicated support center focused on students' academic, emotional, financial, and personal well-being. It provides well-being advice, academic support through peer mentoring and guidance for students on probation, and scholarship assistance. The office also offers financial aid guidance, including poor fund & other scholarships, and other financial support for students facing economic hardships. Students can access counseling services, mental health advisory support, and crisis intervention for issues such as harassment, bullying, and academic distress. Additionally, it provides emotional and health-related assistance, representation in disciplinary cases, campus support, and facilitates communication with guardians. The office strives to ensure that every student has the necessary support to succeed and thrive.

7.12 Premier University Website (www.puc.ac.bd)

Premier University has a dynamic and resourceful website (www.puc.ac.bd) designed to serve students, faculty, staff, and general visitors. The website provides comprehensive information about all academic programs offered by the university, including admission schedules, eligibility criteria, and admission test results.

Each academic department has a dedicated section where students can find the latest news, notices, and event updates at a glance. Faculty members also have personalized panels to update their profiles with relevant academic and research information. The website offers easy access to details about scholarships for meritorious students and financial aid opportunities for those in need.

Additionally, the site features a dedicated section showcasing recent university activities, such as programming contests, research initiatives, seminars, industrial training, and co-curricular events. A link to the Premier University Digital Library is also available, allowing users to search for books, journals, and other academic resources.

The Premier University website serves as a central hub for academic and administrative support, ensuring seamless communication and accessibility for all stakeholders.

7.13 IT Office

Students will receive comprehensive IT support from the IT Office, including access to browsing PCs in libraries and high-speed internet in computer labs. They can

utilize PUAIS support for academic needs, multimedia and internet facilities in classrooms, and an efficient ID card management system. Additionally, the IT Helpdesk offers assistance with technical issues, ensuring smooth digital access for students. Security is also a priority, with CCTV monitoring enhancing campus safety.

7.14 Co-Curricular & Extra-Curricular Activities

Premier University ensures opportunities for broadening the experience of both students and staff through active participation in a wide array of sports, music, drama, visual arts, and other cultural activities. These opportunities allow students to develop talents outside of their academic pursuits, encouraging well-rounded personal growth and leadership. As a result, students at Premier University are enthusiastically involved in various extra-curricular activities, honing various skills that prepare them for future success.

7.14.1 Active Participation in Clubs

Students participate in the following clubs, gaining invaluable experiences that nurture their creativity, critical thinking, teamwork, and communication skills:

I.   **Premier University Debating Society (PUDS)**

Premier University Debating Society (PUDS) is a prestigious platform dedicated to fostering critical thinking, argumentation, and public speaking skills among students. The club organizes national and international debate competitions, workshops on logic and rhetoric, and training sessions to enhance analytical reasoning. By joining PUDS, students gain exposure to intellectually stimulating discussions, develop confidence in public speaking, and improve their leadership and teamwork skills. Members get the opportunity to represent the university in renowned debate championships, both nationally and globally, earning accolades and recognition. Over the years, PUDS has won numerous awards, including Champion of the Bangladesh Inter-University Debate Championship, Best Speaker Award at the Asian Parliamentary Debate Championship, and Top Finalist Positions in the World Universities Debating Championship (WUDC) and various national circuits. PUDS continues its legacy of excellence, empowering students to excel in communication and persuasive discourse.

II.   **Premier University Cultural Club**

The Premier University Cultural Club is a dynamic platform for students to explore and showcase their talents in music, dance, drama, and other cultural

arts. It actively organizes cultural events, drama productions, dance performances, and musical shows, providing opportunities for students to express their creativity. By joining, students can develop their artistic skills, boost confidence, and engage in collaborative performances. Over the years, members have excelled in various national and regional cultural festivals, winning numerous awards and recognition for their outstanding performances. With a strong legacy of artistic excellence, the club continues to celebrate diversity and creativity, making Premier University a hub of cultural brilliance.

III. **Premier University Language Club**

The Premier University Language Club is dedicated to enhancing students' linguistic skills through interactive learning and creative expression. It organizes language proficiency workshops, creative writing sessions, and language exchange programs, helping students refine their communication abilities in multiple languages. The club provides a platform for students to improve their fluency, expand their vocabulary, and develop strong writing skills. Over the years, its members have achieved remarkable success in regional language and writing competitions, earning numerous accolades and recognition. By fostering a love for languages and literature, the club continues to inspire students to excel in linguistic and creative pursuits.

IV. **Premier University Robotics Club**

The Premier University Robotics Club is a hub for innovation, where students engage in cutting-edge robotics and automation projects. The club conducts hands-on robotics projects, participates in robotics challenges, and hosts workshops on automation and AI, equipping students with practical skills in robotics engineering. Over the years, its teams have achieved remarkable success in both national and international robotics competitions, earning accolades for their innovative designs and automation systems. By fostering creativity and technological advancement, the club continues to inspire students to push the boundaries of robotics and AI, shaping the future of intelligent systems.

V. **Debate club of LAW**

The Debate Club of Law, Premier University, established in 2006, is a platform dedicated to enhancing critical thinking, articulate advocacy, and legal reasoning among law students. The club aims to cultivate analytical skills, develop persuasive argumentation, and foster informed discourse, preparing students for successful legal careers. It regularly organizes law debates, public

speaking contests, workshops, and seminars, encouraging intellectual curiosity and reasoned debate. With a vision to empower future legal professionals, the club equips students with the confidence and competence to contribute meaningfully to the legal landscape, ensuring they excel in advocacy, logical reasoning, and teamwork.

VI. Premier University Computer Club

The Computer Club at Premier University, established in 2015, serves as a dynamic hub for students to network, collaborate, and dive deep into tech-related projects, enhancing the campus's technological ecosystem. Through student-led groups focused on IoT, Embedded Systems, Deep Neural Research, DevOps, Linux-Based Networking, and Mobile/Game Development, the club fosters hands-on learning, collaboration, and skill development. These initiatives are complemented by career-oriented programs like Career Counseling & Placement and Emotional Intelligence, which help students prepare for the professional world by offering guidance on job opportunities, interview preparation, and soft skills development. The club also actively connects students with industry professionals, organizing workshops and seminars that bridge the gap between academia and industry demands. Participation in competitive events like ICPC/NCPC, Hackathons, Ideathons, gaming contests, seminars, and workshops further enhances students' problem-solving abilities and practical knowledge, making them more marketable to employers. The club has achieved remarkable success in prestigious competitions, including qualifying for the ICPC Asia West Continent Championship 2022, ranking 52nd in the ICPC Dhaka Regional Contest 2022, securing 2nd place in the Ada Lovelace National Girls' Programming Contest 2020, and winning the 14th Inter University Programming Contest 2020. These accomplishments, along with top positions in IIT Techfest Bombay, NASA Space Apps Challenge, and MIST Tech Fest, have earned the club national recognition. Through its comprehensive approach, the club not only builds technical expertise but also ensures that students are well-equipped for a successful career in the tech industry.

VII. Premier University Economics Forum (PUEF)

PUEF is organized into five wings: Education and Communication, Culture and Society, Debate Club, Sports and Recreation, and Community and Service. Members of PUEF actively arrange seminars, workshops, debates, sports events, national day celebrations, and community welfare programs, all of which help students prepare for successful careers. Members of the PUEF

actively engage in co-curricular activities to enhance their academic and professional growth. These experiences help students develop analytical, problem-solving, and critical-thinking skills while also fostering leadership abilities and professional networking. Meanwhile, PUEF members have earned national and international recognition through prestigious competitions and programs, including the Economics Olympiad, National Economic Fest, Community Role Model Badge Winner in SLDW (Student Leadership Development Workshop), National IQ Olympiad, Newspaper Olympiad, Chatgaiya Idea Contest, Bangabandhu Innovation Fair, International Academic Research Competition, and many more.

VIII. DELL Language & Literary Society

The DELL Language & Literary Society at Premier University is a creative hub for students passionate about language, literature, and creative expression. The society organizes events like literary discussions, poetry readings, creative writing workshops, and language games, providing students with opportunities to enhance their writing skills and explore diverse literary forms. By joining, students can develop their literary talents, engage in intellectual conversations, and connect with fellow enthusiasts. The society also hosts monthly seminars on language trends, writing techniques and academic research in both linguistic and literary arena, helping members refine their communication and research abilities. Through these activities, DELL fosters a love for literature and promotes creativity within the university community.

IX. Premier University Mooting Society

The Premier University Mooting Society, inaugurated in 2024, serves as a vital academic platform for law students, focusing on legal advocacy, jurisprudential understanding, and professional development. Through simulated moot court proceedings, legal workshops, and structured training, the society cultivates scholarly rigor and practical proficiency in legal argumentation and brief writing. It aims to equip students with the essential skills for distinguished legal careers, including critical analysis, persuasive advocacy, and legal research. With a view to becoming a leading mooting institution, the society is committed to fostering future legal professionals and upholding exemplary legal standards, contributing to the evolution of legal education.

X. Premier University Business Entrepreneurs Club

The Business Entrepreneurs Club (BEC) at Premier University is a dynamic

platform dedicated to nurturing entrepreneurial mindsets and business leadership. The club actively organizes business idea competitions, startup incubation programs, skill development workshops, and networking sessions with industry leaders, equipping students with real-world business acumen. It also conducts seminars on market trends, investment strategies, and business model development, preparing members to navigate the corporate and entrepreneurial world. Over the years, BEC members have excelled in national and international business case competitions, startup pitch events, and entrepreneurial summits, consistently securing top positions. Several student-led startups have emerged from the club, significantly contributing to the entrepreneurial ecosystem and inspiring future innovators.

XI. **IEEE Premier University Students' Branch**

The IEEE Premier University Students' Branch is a prominent platform for students passionate about technology and engineering, actively participating in regional and international IEEE competitions, conferences, and technical events. The branch has earned recognition for its innovative projects and leadership, with members playing key roles in organizing workshops, hackathons, and technical seminars that have garnered accolades at various levels. The branch regularly organizes workshops, seminars, and hackathons on emerging technologies such as AI, IoT, and robotics, fostering hands-on learning and innovation. It also promotes collaboration on research projects, connects students with industry leaders, and develops leadership skills through student-driven initiatives. By offering these opportunities, the branch prepares its members for successful careers in technology and engineering, empowering them to become the next generation of tech leaders.

XII. **PUC Fashion Designers' Club**

The PUC Fashion Designers' Club at Premier University is a creative platform for students interested in the art of fashion design and styling. The club organizes a variety of events, including fashion shows, design competitions, workshops, and styling sessions, providing students with opportunities to showcase their talent and gain hands-on experience in the fashion industry. It fosters creativity and innovation, allowing members to explore the latest trends, design techniques, and fashion business strategies. Through collaborations with industry professionals, the club offers valuable insights into the fashion world and helps students develop the skills necessary for a successful career in fashion design. Over time, the club has gained recognition for its outstanding fashion events and creative contributions, making it a hub for aspiring fashion designers.

XIII. The Math Club

The Math Club and the Co-curricular Club in our Mathematics Department actively organize and participate in a diverse range of academic, co-curricular, and extra-curricular activities—such as Olympiads, research festivals, indoor and outdoor games, seasonal celebrations, and community work. By joining these clubs, students not only contribute as volunteers but also gain valuable opportunities to enhance their leadership, communication, social, and time management skills. Additionally, participants earn certificates upon completion, recognizing their contributions and achievements. With a strong record of successful events and notable accolades, these clubs are an ideal platform for students to grow both academically and personally.

XIV. Premier University Business Sports Club

The Business Sports Club of the Faculty of Business Studies of Premier University is dedicated to promoting sports and physical activities among students, fostering teamwork, leadership, and a healthy competitive spirit. The club organizes various sports events, including cricket, football, badminton, chess, and other exciting games, providing students with opportunities to showcase their skills and engage in recreational activities. Regular tournaments and friendly matches create a vibrant sports culture within the faculty. With a commitment to expanding its activities, the club plans to introduce more sports events in the future, ensuring an inclusive and dynamic platform for students to stay active and connected.

XV. Premier University Business Career Club

The Business Career Club of the Faculty of Business Studies of Premier University is committed to equipping students with the skills, knowledge, and networking opportunities essential for a successful career. The club actively organizes seminars, workshops, and career fairs, bringing industry experts, corporate leaders, and alumni to share insights and experiences. These events help students develop professional skills, explore career opportunities, and build valuable connections with potential employers. By fostering an environment of learning and growth, the club prepares students to navigate the competitive job market with confidence and competence, ensuring a strong foundation for their future careers.

7.15 Sports Facilities

To ensure the all-round growth of students, Premier University has formed a Central Sports Body, called the PU Sports Development Committee, which organizes various

various sports such as cricket, football, and indoor games for students year-round on campus. Students have successfully participated and won national and international awards in cricket and football events held in Dhaka, Chattogram, and India.

7.16 Central Auditorium, Premier University

The Central Auditorium at the Wasa Campus of Premier University is a modern, fully equipped venue with a 500-seat capacity, designed to accommodate academic seminars, conferences, workshops, and cultural events. It features a high-quality audiovisual system, advanced acoustics, a spacious stage, and multimedia support, ensuring an engaging experience for presenters and attendees alike. Additionally, it is fully air-conditioned and well-lit, providing a comfortable and professional setting for various university events.

7.17 Advancing Impact-Driven Research & Innovation

Premier University is dedicated to fostering a robust research culture that emphasizes Impact-Driven Research, ensuring that scholarly efforts address real-world challenges and contribute to societal progress. Actively promoting interdisciplinary research, the university encourages collaboration among faculty, students, and industry experts to develop innovative solutions for contemporary issues. To disseminate research outcomes effectively, Premier University publishes research journals in both print and online versions and actively distributes them to various universities, industries, and organizations to enhance academic exchange and industry collaboration. The university also supports faculty and students in publishing in national and international journals and conferences, fostering a broader academic impact. Additionally, the university and its departments regularly organize academic research seminars and workshops, providing a platform for researchers to share their findings, exchange ideas, and engage in intellectual discussions that advance knowledge across disciplines. Committed to expanding Faculty and Student Research Collaboration, the university creates opportunities for students to engage in faculty-led projects and participate in interdisciplinary and cross-institutional research initiatives.

Furthermore, Premier University aims to strengthen industry partnerships and innovation-driven engagements, fostering collaborations with industries, government agencies, and research institutions to facilitate technology transfer, patent development, and the commercialization of research outcomes. Recognizing the importance of impactful research, faculty and students have achieved notable milestones, earning prestigious awards such as Best Researcher, Best Paper Presenter, and Best Reviewer in international and national forums. With a vision to enhance academic excellence, uphold research ethics, and deepen industry collaboration, Premier University continues to solidify its position as a leading institution in higher education and research, driving innovation and making meaningful contributions to global and national development.

8. GENERAL ACADEMICS

8.1 Student Admission Guidelines

Each department's admission committee will oversee its own admission process. Students will be admitted to the first semester of an academic year for their respective programs. The schedule for admission tests and other essential requirements will be made available in advance through the university website and newspaper announcements.

A. Undergraduate Program
Candidates seeking admission into Level-1 / Year 1 must meet the following requirements:

i. Minimum Academic Qualifications:
- A minimum GPA of 2.5 (or second division) in either S.S.C. and H.S.C. examinations (or their equivalent), or at least one GPA of 2.00 with an aggregate GPA of 6.00 in S.S.C. and H.S.C.
- For G.C.E. candidates:
    - "O" Level: Minimum of five (5) subjects
    - "A" Level: Minimum of two (2) subjects
    - At least four (4) B Grades (GPA 4.00) and three (3) C Grades (GPA 3.50) based on a grading scale of A=5, B=4, C=3.5, D=2, E=1.

ii. Special Considerations:
- Sons/daughters of freedom fighters are eligible for admission with an aggregate GPA of 5.00 in S.S.C. and H.S.C.
- Equivalent performance under other educational systems (e.g., American High School Diploma, IB, etc.) will also be accepted.
- A combined SAT score of 1100 is accepted in lieu of the admission test for high school graduates from any system.
- Credit transfers from comparable educational institutions may be considered after admission.
- Students must pass an admission test to secure admission at PU.

iii. Degree Equivalence and Foreign Qualifications:
- Any issue or confusion regarding the degree or diploma obtained from home or abroad will be referred to the Degree Equivalence Committee of PU for resolution.
- Foreign degree holders must submit an equivalence certificate issued by the Ministry of Education at the time of admission.

B. Graduate Program

- All requirements applicable to the undergraduate program.
- A minimum GPA of 2.00 in the undergraduate program.
- Any issue regarding the equivalence of degrees or diplomas will be handled by the Degree Equivalence Committee of PU.

C. International Students

Premier University accepts applications from foreign nationals year-round for undergraduate and graduate programs. Applicants must submit the prescribed application form via the university website and appear for an admission test (written, viva, or both).

Eligibility Criteria:

- Undergraduate: Minimum CGPA of 2.5 on a 5.0 scale.
- Graduate: Minimum CGPA of 2.5 on a 4.0 scale.
- Academic qualifications must be approved by the University Grants Commission (UGC) of Bangladesh.
- English proficiency is required (TOEFL/IELTS or equivalent).
- A valid student visa and proof of financial solvency are mandatory.

Fees and Scholarships:

- International students are required to pay double the fees of domestic students, covering tuition, registration, and administrative costs.
- Merit- and need-based free studentships are available.

Credit Transfers and Withdrawals:

- Credit transfers from recognized institutions are accepted, with at least 50% of credits to be completed at Premier University.
- Withdrawals require a formal application, but tuition refunds are not applicable.

  For inquiries, contact:

  ☎ +8801313044515-17

  ✉ foreign_admission@puc.ac.bd

D. Application Procedure

A candidate must apply for the written admission test within the specified time limit using the prescribed application form, available at the Premier University

Information Desk upon payment. Admission-related information can be obtained from the Information Office, Premier University Buildings: 1/A O.R. Nizam Road, Prabartak Circle, Panchlaish, Chattogram and 541, O.R.Nizam Road, GEC Circle, Chattogram.

The Admission Committee of Premier University evaluates each applicant based on the following criteria:

- A completed application form for admission
- Official transcripts of academic records
- Payment of a non-refundable application fee
- Test scores from the admission test administered by Premier University
- Performance in the interview

8.2 Duration of Program

All programs at Premier University (PU) follow a bi-semester system, consisting of two academic terms per year:

- **Term I (Spring Semester)** – Begins in March
- **Term II (Fall Semester)** – Begins in September

Each term has a minimum duration of **24 weeks**, allocated as follows:

A. Term I (Spring Semester)

- **Classes:** 14 weeks
- **Mid-Term Examination (Generally after 50% of the term duration):** 1 week
- **Preparatory Leave for Final Examination:** 1 week
- **Term Final Examination Period:** 3 weeks
- **Publication of Results:** 2 weeks
- **Inter-Term Break:** 1 week
- **Course Enrollment and Result Correction:** 2 weeks
- **Total Duration:** 24 weeks

B. Term II (Fall Semester)

- **Classes:** 14 weeks
- **Mid-Term Examination (Generally after 50% of the term duration):** 1 week
- **Preparatory Leave for Final Examination:** 1 week
- **Term Final Examination Period:** 3 weeks
- **Publication of Results:** 2 weeks

- **Inter-Term Break:** 1 week
- **Course Enrollment and Result Correction:** 2 weeks
- **Total Duration:** 24 weeks

C. Ramadan, Puja, and Other Vacations Throughout the Academic Year
- **Total Duration: 4 weeks**

Overall Academic Year Duration
- **Total:** 52 weeks

Students admitted to PU must complete their **undergraduate program within seven (7) years** (**while eight (8) years** for the B.Arch. program) from the date of first enrollment.

Students admitted to **Master's degree programs** must complete their program within **three (3) years** from the date of enrollment.

8.3 Course Levels

The four-year undergraduate programs (B.Sc (Hons.), BSS (Hons.), B.Sc. (Eng.), BBA, LL.B. (Hons.), and BA (Hons.)) consist of Level-1, Level-2, Level-3, and Level-4 classes. The five-year B.Arch. program includes Level-1, Level-2, Level-3, Level-4, and Level-5 classes. Students are admitted into the Level-1 class of their respective programs.

8.4 Assignment of Credits

A semester consists of 14 calendar weeks of instructional time. Students take courses each semester, with assigned credits that count toward their degree. A "credit hour" means for lecture, tutorial/ counselling sessions, seminar 1-hour face to face teaching per week for 14 weeks. For lab, studio or clinical work 1.5-hour face to face teaching per week for 14 weeks is equivalent to 1 credit. In case of industrial/workplace learning 2 hours per week for 14 is equivalent to 1 credit.

A. Contact hour (teacher- student interaction): One (1) credit hour means that the course meets for 50 minutes in a class each week; Three (3) credits mean that the class will meet twice a week for 75 minutes in each session. The tutorial/counselling sessions/lab/workshop sessions meet for 75-150 minutes each week. Two (2) credit courses mean that the course meets once every week for 100 minutes in each class.

B. Notional hour means the estimated learning time taken by an 'average' student to achieve the specified learning outcomes of a program or a course. They are, therefore, not a precise measure but instead provide students with an indication of the amount of teacher- student interaction (face to face, blended and online), self-study and degree of commitment expected from them in attaining the defined learning outcomes.

The Calculation of the hours
The calculation of notional hours is based on class contact time and self-learning time of a student in addition to the class contact time.

Learning-Teaching Activities	Notional Hours for 1 Credit
Lecture, Tutorial, Seminar	40
Lab, Studio, or Clinical Work	60
Industrial/Workplace Learning	80

The contact hours of teaching loads shall be counted according to the following guidelines

SL. No	Nature of the course	Contact Period (in a term)	No. of Credit
1	Theory courses	1 hour per week	1.00
2	i) Laboratory Courses	2 hours per week	1.00
	ii) Design Studio (for B. Arch.)	2 hours per week for level 1 1.5 hours per week for level -2,3, and 4 1.25 hours per week for level-5	1.00
3	Project and Thesis	2 hours per week	1.00
4	Field work	According to the requirement of the departments	1.00
5	Industrial Training / Internship	3-12 weeks (varies depends on department)	0.5-3.00 (varies depends on department)

Credits are also assigned to Seminar, projects, fieldwork and thesis work taken by the students. The number of credits assigned to such work varies from one discipline to another.

8.5 Classification of Courses
Undergraduate curricula include the following types of courses:

A) Core Courses

Core courses are the essential courses within a specific program that all students must complete. Each program designates certain courses as core requirements, ensuring that every student gain fundamental knowledge and skills in their field of study. Completing all required core courses is mandatory for graduation

B) Prerequisite Courses

Some core courses are designated as prerequisites for other courses, meaning they must be completed before students can enroll in those subsequent courses. These prerequisite courses provide foundational knowledge essential for advanced subjects.

C) General Education Courses

General Education (GED) courses at the honors level provide students with knowledge beyond their core subject areas, covering humanities, social sciences, natural sciences, and mathematics. These courses enhance critical thinking, communication, and analytical skills, fostering a well-rounded academic foundation. By integrating multidisciplinary learning, GED courses prepare students to adapt to diverse challenges and become socially responsible professionals.

D) Elective Courses

In addition to core courses, based on approval of the department, students can choose from a set of **elective courses**. The number of required electives varies by program.

E) Capstone Course

A capstone course is a core course designed for students nearing graduation, providing an opportunity to integrate their learning and apply their knowledge to address real-world challenges within their discipline or profession. These courses are structured to enhance problem-solving, critical thinking, and practical application of acquired skills.

8.6 Medium of Instruction and Examinations

English is the medium of instruction and examination for all academic programs at PU. Each course emphasizes the intellectual development of students and incorporates various teaching methods to enhance their proficiency in the subject.

8.7 Credit Transfer

A student may apply for the transfer of credits earned from a similar course or degree at another university or institution. The Equivalence Committee of the respective department or program, or the Admission Committee of Premier University, will determine the acceptance of transferred credits. The decision will be made on a case-by-case basis, considering the quality and academic standards of the institution or program.

Students approved for credit transfer must pay a Credit Transfer Fee in addition to all applicable fees as per the prevailing university regulations.

Required Documentation for Credit Transfer:

- A completed application form, available at the respective program office.
- An official transcript from the previous university or institution.
- The complete syllabus of the courses requested for transfer.
- A prospectus or relevant documents from the previous institution outlining the academic system, grading system, and course descriptions (or course outlines, if available).
- Any additional documents required by PU authorities at any time.

Courses with content similar to or equivalent to those at PU may be considered for transfer. Non-equivalent courses may be transferred as elective courses, subject to approval by the Credit Transfer Committee. The total transferred credits must not exceed 50% of the total credits required for a degree at PU. For Bangladeshi institutions, credit transfer is only considered if the institution is approved by the UGC.

Premier University will not include transferred courses in its transcripts, nor will it incorporate their grades into CGPA calculations. Only the total number of transferred credit hours will be recorded as "transfer credit hours." CGPA will be calculated based solely on courses completed at Premier University. Students must retain transcripts from their previous institution to verify transferred credits.

Note: A student already admitted to one department may transfer to another department by paying only the tuition fees. Accepted credits will be transferred to the new department, while non-transferable courses will be listed as non-credit courses on the transcript.

8.8 Academic Calendar

Before the end of the calendar year (preferably by November), the Head of the Department (HoD) will propose an academic schedule for all academic levels to the Vice Chancellor for approval, through the Dean of the respective Faculty. The academic schedules of all departments (for both Undergraduate and Master's programs) will be compiled, published along with the yearly holiday list, and announced before the commencement of the classes.

8.9 Course Offering

The courses to be offered in a particular term are announced and published in the Course Catalog, along with the tentative Term Schedule, before the end of the previous term. Respective departments may arrange to offer one or more prerequisite or core courses in any term, depending on the number of students who dropped or failed the course in the previous term. Each course is conducted by a course teacher who is responsible for maintaining the expected standard of the course and for assessing student performance.

For a course with a strength necessitating two or more parallel classes or sections, one of the course teachers or another member of the teaching staff from the department will be designated as the course coordinator. He/she will have full responsibility for coordinating the work of the other department members involved in that course.

Courses will not be offered if there are fewer than 10 students in any regular or recourse class. In such cases, students will be offered substitute courses for the non-offered course. The respective department can also designate course instructors who will instruct students for the non-offered courses.

8.10 Student Adviser

Academic advising is an integral part of Premier University's academic policy, ensuring students' overall development through continuous guidance and support. Each student is assigned an Academic Adviser (a designated faculty member) at the beginning of their academic journey at PU. The adviser serves as the primary contact for academic matters and overall progress, meeting with students at least twice per term to assess performance, recommend courses (including prerequisites), and provide guidance on academic decisions.

New students are automatically advised on their first-semester courses during admission. However, those with credit transfers or course exemptions must obtain

their adviser's name from the Chairman's Office/Department Office, contact them, and complete the advising process. Before enrollment, students are expected to review Academic Rules, the Semester Calendar, Advising Rules, the Program Course Sequence, and the semester's class schedule. The adviser confirms course enrollment and notifies students if they have not followed enrollment rules correctly.

If a student encounters issues with registration, enrollment, or advising, they must contact their adviser. Students are encouraged to reach out to their adviser for academic or other concerns throughout their time at PU.

8.11 Attendance Policy

Attendance in class is mandatory for all undergraduate students at Premier University. Additionally, students must meet the following criteria for assessments: at least 50% attendance for the midterm examination and an overall at least 60% attendance requirement for the final examination.

In cases where students are unable to attend classes due to major circumstances beyond their control, the Head of Department, in consultation with the concern authority, will make arrangements to consider exceptions.

8.12 General Rules Regarding Enrollment

Every regular student who wants to study must register for courses before the beginning of the classes each term. Starting from July 2014, all students at Premier University must select and enroll in courses using the PUAIS (Premier University Academic Information System) with the following rules:

a. Students must select and enroll in their courses within 10 working days of the result publication of the previous semester.

b. Course enrollment for a semester is conducted according to the previously published academic calendar.

c. Students cannot enroll after the scheduled date of enrollment mentioned in the academic calendar, except by special permission from the Chairman.

d. To avoid paying a late fee, students must pay their tuition fees within the scheduled period (i.e., 45 days from the beginning of their first class).

e. Course enrollment for a semester is conducted according to the academic calendar. It starts immediately before the commencement of classes and continues up to the second week of classes.

f. Credit Transfer students are provided with the opportunity to register in advance on specific registration days meant for new students.

g. Mere attendance does not constitute registration in a class or enrollment in a course.

h. Changes to courses can only be made through the processing of an official enrollment form.

i. Total fees for each semester can also be paid in one installment in advance. A student will not be registered online until fees are paid according to the schedule given above and will not receive an admit card for examinations.

j. Newly admitted students (including Credit Transfer Students) can pay applicable fees in two installments only in their first semester. Admission notices will declare such dates (the first one is immediate, and the next one is usually within 11 weeks from the commencement of classes).

k. Students may not drop a course merely by stopping attending classes. Dropping of courses will not be possible after the mid-term examination without written permission from the Chairman.

8.13 Registration Procedure for New Students

1. **Fee Payment & ID Number:** As part of the admission procedure, a new student must pay the necessary fees and obtain an ID number from the Accounts Office.

2. R**egistration Form:** After completing the admission procedure, the Admission Office will provide a registration form.

3. **Form Submission:** The student must fill out the registration form and submit it to the Registrar's Office with the necessary documents.

4. **Academic Adviser Assignment:** After completing the admission procedure, it is the responsibility of the department to assign an academic adviser to the new student.

5. **Profile Creation & Enrollment:** The student must create a profile in the PUAIS and enroll in the advised courses.

6. **Enrollment Form:** The enrollment form will then be printed and signed by both the student and the adviser.

8.14 Course Enrollment for Existing Students (Second and Subsequent Terms)

a) The date, time, and venue of enrollment will be announced in advance by the

concerned department office, and signed by the respective Chairman. All students seeking enrollment must remain present according to the schedule.

b) A student will meet with their academic Adviser to select courses as per their term status and the four-year course distribution chart provided in the syllabus of the respective department.

c) Students will then enroll themselves in the selected courses, and the enrollment form will be printed shortly after the course entry.

d) Both the academic adviser and the student will sign the enrollment form.

e) The signed enrollment form will be sent to the Accounts Office and/or the office of the Controller of Examinations (CoE) for verification.

f) After verification, the signed forms will be returned to the department and ready for distribution to facilitate the payment of tuition fees.

g) Any changes in enrollment, such as withdrawing or changing courses, should again be made online through academic advisers within 7 days from the last date of course enrollment.

h) A student will be allowed to register for courses up to one week after the start of classes if they have a convincing reason. This time may be extended further up to midterm if the Chairman gives written permission.

i) A student will not be allowed to register for any course after the midterm period has elapsed. However, this may be relaxed for students completing Level 5 Term-II for B. Arch and Level 4 Term-II for others, with recommendations from the Adviser and the Head of the Department.

j) No students will be allowed to register for advanced courses if they have not completed their prerequisite courses.

k) A student should register for their failed course in the immediate next semester.

l) Students registering for next term's courses for the first time will be given priority over students who are registering for a course for a second or subsequent time.

m) Departments will ensure that students taking courses in higher levels must complete the courses in lower levels.

8.15 Course Types, Load, and Sequence

For enrollment purposes, courses are divided into four types: Regular, Recourse, Retake, and Drop.

- A Regular course is one in which no payment has been made previously or is a fresh course.

- Recourse indicates courses that students take again or repeat in their entirety.
- Retake includes only appearing for the final examination, leaving the continuous assessment marks intact.
- Drop means cancelled courses after enrollment.

The course sequence and load vary from program to program, and students are advised to consult their respective program curriculum. A student must follow the course sequence stipulated in the program curriculum. They must pass all prerequisite courses to be eligible to enroll in higher-level courses required for a given program.

For undergraduate courses, the normal course load (regular and recourse) per term is a maximum of 21 credits for Arts, Business, and Law faculties. The maximum course load for students in the Engineering and Science faculties is 25 credits, including regular and recourses. In addition to this load, students may register for up to 6 more credits for retakes.

The total load, including regular, recourse, and retake, should not exceed 31 credits for Engineering and Science faculties and 27 credits for other faculties. In special cases, final semester students can register for 6 more credits in all programs.

A student may take a reduced course load under extenuating circumstances, but only with the approval of their Adviser. Taking a reduced load in the first year is strongly discouraged, except for Credit Transfer Students. A student may take additional courses beyond the normal load only if their CGPA is 3.0 or above and the departmental head approves it based on the recommendation of the academic adviser.

8.16 Enrollment Deadline

The enrollment schedule, along with dates and venue, will be announced in advance. Students must enroll in courses before the commencement of each semester, and no late enrollment will be accepted after one week of classes. Late enrollment after this date will not be accepted unless the student submits a written appeal to the concerned Head of the Department through their Adviser and can document extenuating circumstances, such as medical problems (physically incapacitated and unable to attend) or other academic commitments that precluded enrolling before the last date of enrollment.

8.17 Add, Drop, and Section Change (Course)

An undergraduate/graduate student may withdraw from one or more courses, add one or more courses, or change sections with the permission of the Academic Adviser within 7 days of course enrollment, following the Semester Calendar for exact deadlines. A student must have a convincing reason to add/drop a course or change sections.

A student will be allowed to withdraw from a course(s) before the Midterm Examination of any given term. In exceptional cases (e.g., serious illness of students, death of parents), students may be allowed to withdraw from a course after the Midterm Examination with the recommendation of their Adviser and Chairman. Such requests should be supported by a medical certificate from a registered medical practitioner.

8.18 Conditions for Taking Recourse

A student who receives an F grade in a course will be required to repeat the course if they scored below 40% in continuous assessment. The grade received in Recourse will replace the original grade (F). The transcript will show the best grade earned in Recourse and will be counted in GPA or CGPA computation.

A student may recourse one or more courses for grade improvement, and the best grade earned will be counted for CGPA calculation.

8.19 Conditions for Taking Retakes

A student who receives an F grade in a course may retake the course if they scored 40% or above in continuous assessment.

A student may retake one or more courses for grade improvement, and the best grade earned will be counted for CGPA calculation. Courses with less than a 'B' grade or below 60 marks (i.e., 'B-' or lower) will be allowed to register for Retake. A course cannot be retaken more than twice.

8.20 Appearing in Examination

No student will be allowed to appear in the Midterm or Final examinations without clearing their dues with the university. Students must present their ID cards for the mid-term examination and both their ID cards and admit cards for the final examination. They are required to collect their admit cards at least two days before the final examination begins. Admit cards will only be issued to students who have cleared their accounts.

For any other examination, it is mandatory for students to wear their university ID cards.

8.21 The Grading System

The performance of a student in a given course is evaluated based on a scheme of continuous assessment and summative assessment (semester final examination). For theory courses, continuous assessment is conducted through class attendance, class performance, quizzes, homework/assignments/presentations/viva, case studies/ reports, class tests, and mid-term examinations. Summative assessment is carried out through the semester final examination, which evaluates the student's overall understanding of the course content, critical thinking, and problem-solving abilities. This comprehensive evaluation ensures that students are assessed on both their ongoing progress and their cumulative knowledge at the end of the semester. Numerical scores earned by a student in tests, exams, assignments etc. are cumulated and converted to letter grades at the end of the semester.

The assessment in laboratory/sessional courses is based on observation of a particular student's work during class, presentation, viva-voce during laboratory hours, project and quizzes. For architecture students, assessments in design sessional will be done through the evaluation of several projects assigned throughout the term. Numerical scores earned by a students in tests, exams, assignments etc. are cumulated and converted to letter grades at the end of the semester.

Each course has a certain number of credits, which describe its corresponding weight. A letter grade with a specified number of grade points is awarded for each course in which a student is registered. Letter grades and corresponding grade points will be awarded according to the provisions shown below:

Marks Range	Letter Grade	Grade Points
80% and above	A+ (A Plus)	4.00
75% to less than 80%	A (A Regular)	3.75
70% to less than 75%	A- (A Minus)	3.50
65% to less than 70%	B+ (B Plus)	3.25
60% to less than 65%	B (B Regular)	3.00
55% to less than 60%	B- (B Minus)	2.75
50% to less than 55%	C+ (C Plus)	2.50
45% to less than 50%	C (C Regular)	2.25
40% to less than 45%	D	2.00
Less than 40%	F	0.00

The courses in which a student has earned a 'D' or a higher grade will be counted as credits earned by him/her. Any course in which a student has obtained an 'F' grade will not be counted towards earned credits or GPA calculation. A student who obtains an 'F' grade in a core course will have to recourse or retake that particular course. However, if a student gets an 'F' in an optional course, he/she may choose to recourse or retake the course or take a substitute course if available.

If a student obtains a grade lower than 'B' in a particular course, he/she will be allowed to retake the course only twice for the purpose of grade improvement, by forgoing the earlier grade. If a student obtains a 'B' or a better grade in any course, he/she will not be allowed to retake the course for the purpose of grade improvement. In that case, the student may take recourse.

Note: A student who fails to attend the final examination will be considered as having obtained an 'F' grade.

8.22   Calculation of CGPA

Grade Point Average (GPA) is the weighted average of the grade points obtained in all the courses passed/completed by a student. The Cumulative Grade Point Average (CGPA) is computed after each semester to determine the academic standing of the student in the program. The following four-step procedure is used to calculate the CGPA of a student:

1. **Grade points earned in each course** will be computed by multiplying the credit hours of that course by the grade points obtained in that course.

2. **Total grade points** will be determined by summing the grade points of all courses (calculated in Step 1).

3. **Total credits** will be determined by summing the credits of all courses taken.

4. **CGPA will be calculated** by dividing the total grade points (Step 2) by the total credits (Step 3).

For example, if a student passes/completes five courses in a semester with credits C_1, C_2, C_3, C_4, and C_5, and his/her grade points in these courses are G_1, G_2, G_3, G_4, and G_5 respectively, then:

$$\text{CGPA} = \frac{\sum(\text{Credit of the courses passed X grade points earned})}{\sum(\text{Credit of all courses attempted})} = \frac{\sum C_i\,G_i}{\sum C_i}$$

Numerical Example:

Suppose a student has completed eight courses in a term and obtained the following grades:

Course	Credits, Ci	Grade	Grade Points, Gi	Ci * Gi
CSE 100	2.00	A+	4.00	8.000
EEE 163	3.00	A+	4.00	12.000
EEE 164	1.50	A	3.75	5.625
MATH 141	3.00	B	3.00	9.000
ME 160	1.50	A-	3.50	5.250
ME 165	3.00	A+	4.00	12.000
PHY 109	4.00	A	3.75	15.000
PHY 102	1.50	A-	3.50	5.250
Total	**19.50**			**72.125**

The CGPA is then calculated as:

$$\mathbf{CGPA} = \frac{72.125}{19.50} = \mathbf{3.70}$$

Note: If the third digit after the decimal point is greater than '0', the value will be rounded to the second digit after the decimal. For example, **2.990** will be counted as **2.99**, while **2.991** will be rounded to **3.00** in CGPA calculation.

8.23   Grades Review Procedure

Grading of all courses will be conducted objectively and impartially. If a student suspects discrimination, they may seek redress through an appropriate grievance procedure. The student must submit a written notification to the Department Head within 10 working days of the result's publication. The Department Head, along with the examination committee members, will review the matter and work toward a reasonable solution at the departmental level. The head of the department may also provide a written recommendation to both the student and the faculty member following the review.

8.24 Measures for Helping Academically Weak Students

The following provisions will be made, as far as possible, to assist academically weak students in completing their studies within the maximum allowable period of seven years for Engineering, Sciences, Humainities, and Social Sciences while eight years for Architecture:

1. Students whose Cumulative GPA (CGPA) falls below 2.00 at the end of a term may be allowed to take a reduced course load of no more than four courses in the next term.

2. To address academic deficiencies, some basic and core courses may be offered to help academically weak students partially compensate for their reduced workload during Regular Terms. If course loads are provided at that time, opportunities for tutorial sessions/counselling sessions should also be arranged to ensure additional academic support for students according to the decision of the concerned department.

Academically weak students will be identified based on the following criteria:

1. A Term GPA falling 2.20 points below that of the previous term.

2. A Cumulative GPA (CGPA) below 2.20.

3. The total earned credits falling below 15 times the number of terms attended.

8.25 Exam Policies and Procedures

1. Reporting Time: Students must report to the assigned exam hall/room at least 15 minutes before the exam starts. If a student arrives more than 30 minutes late, they will not be allowed to take the exam. The exam duration will not be extended to compensate for late arrivals.

2. Identity Verification: Students must check in with the invigilator by presenting their University ID card. Admit cards will be checked during Final Examinations.

3. Personal Belongings: All personal belongings must be left in designated areas. Under no circumstances may these items be brought into the exam hall or kept with the examinee.

4. Exam Duration Confirmation: Students should confirm their start and finish time with the invigilator and may request to be advised of the remaining time.

5. Exit Restrictions: No student will be allowed to leave the exam hall/room within the first and last hour of the exam, except in case of an emergency.

6. Prohibited Devices: The following electronic and telecommunications devices are not allowed in the exam hall:

   o Cellular phones
   o Pagers
   o MP3 players
   o Programmable or graphing calculators

> o   Personal digital assistants (PDAs)
>
> o   Tablets
>
> o   Smartwatches
>
> o   Personal computers

7.   Permitted Items: Students may bring non-programmable calculators, pens, pencils, erasers, and non-programmable clocks/watches. The invigilator may inspect these items.

8.   Use of Notes and Aids: Unless explicitly permitted by the course instructor, students may not bring prepared notes such as crib/cue sheets, word lists, or memory aids into the exam hall. Any aid must be pre-approved; otherwise, it will not be allowed.

9.   Use of Books: Unless the exam is explicitly open-book, books are not allowed in the exam hall.

8.26 Unauthorized Absence or Semester Drop

A student may be granted a leave of absence or semester drop for a period of up to two consecutive semesters or one academic year, subject to the student meeting academic requirements. This arrangement does not apply to students who have received academic probation, been expelled from the university on disciplinary grounds, or been excluded on academic grounds. The decision to grant leave of absence will rest with the Vice-Chancellor through the concerned Head of the Department. A student granted leave of absence must enroll in the semester immediately following the expiry of the leave period.

8.27 Striking Off the Names

A student's name may be struck off from the university rolls under the following conditions:

1.   **Voluntary Withdrawal:** If a student voluntarily withdraws after clearing all university fees and dues.

2.   **Failure to Graduate:** If a student fails to meet the required credit completion or CGPA requirements within the maximum allowed time.

8.28 Progression Rules for Premier University Undergraduate Programs

The following progression rules outline the academic standards and requirements that students must meet to continue their studies at Premier University. These rules ensure students maintain satisfactory academic progress and adhere to the university's policies.

1. General Progression Rule (GPA)

- **Students must maintain a minimum Cumulative Grade Point Average (CGPA)** of **2.00** to remain in good academic standing.

- **Term GPA Monitoring:** Students whose Term GPA falls **2.20 points below their previous term's GPA** will be flagged for academic review.

- **Academic Probation:** Students with a CGPA below **2.20** will be placed on academic probation and required to meet with their academic adviser to develop a remediation plan.

2. Subject Progression Rule

- **Prerequisite Compliance:** Students must pass all prerequisite courses before enrolling in advanced-level courses. Failure to do so will block enrollment for subsequent courses.

- **Grade Requirements:**
    o A minimum grade of **D (40%)** is required to pass a course.
    o Courses with an **F grade** must be taken as retake or recourse (see **Retake/Recourse Rules** below).

- **Sequential Enrollment:** Students must follow the course sequence outlined in their program curriculum. Deviations require approval from the academic adviser and department head.

3. Maximum Study Time Progression Rule

- **Undergraduate Programs:**
    o All programs (except B.Arch) must be completed within **7 years** from the date of first enrollment.
    o **B.Arch Program:** Must be completed within **8 years**.

- Students exceeding these limits will face **automatic dismissal** unless granted an extension by the Vice-Chancellor under exceptional circumstances.

4. Retake/Recourse Rules

- **Recourse:**
    o Required for **F grades** if continuous assessment marks are **below 40%**.
    o The best grade from recourse replaces the original grade in CGPA calculations.

- **Retake:**
  - o Allowed for **F grades** with continuous assessment marks of **40% or above**.
  - o Students may retake courses with grades below **B (60%)** up to **twice** for grade improvement.
  - o The best grade is counted toward CGPA.
- **Advising:** Academic advisers provide personalized guidance, course planning, and progress tracking.

8.29 Fees

The university follows a structured payment system for different departments, ensuring transparency and consistency in tuition fees. However, the university reserves the right to review and modify the fee structure as necessary.

9. STUDENT CODE OF CONDUCT AND DISCIPLINARY PROCEDURES

9.1 General Guidelines for Student Code of Conduct

A student shall conform to a high standard of discipline and shall conduct themselves, both within and outside the university, in a manner befitting to a student of a university of national importance. They shall show due courtesy and consideration to the employees and guards of the university and Halls of Residence, display good neighborliness towards fellow students and teachers, and pay due attention and courtesy to visitors.

Upon admission to Premier University (PU), a student accepts the mission of the university and is subject to the following principles:

- All human beings are endowed by their Creator with certain rights, and no student, faculty member, staff, or university authority may infringe upon the rights of fellow members of PUC.
- The goal of PUC is the advancement of knowledge, which cannot occur without a safe and comfortable learning environment. All persons working at and attending PUC are responsible for creating and maintaining such an environment.

9.2 Related Bodies to Ensure Disciplinary Rules

Premier University has constituted a Proctorial Body, recognizing that discipline is the most essential and important element for the development of the institution. This Proctorial Body assists the Disciplinary Committee in exercising its power related to disciplinary actions as outlined in this document.

9.3 Prohibited Misconduct and Activities

Premier University does not accept the following types of misconduct and criminal activities within its premises:

9.3.1 Academic Dishonesty/Plagiarism

a) Using unfair means during examinations by any method or means.

b) Assisting other students in adopting unfair means during examinations.

c) Plagiarism: Reproducing another's work as one's own.

d) Preparing work for others to be submitted as their own.

e) Cheating in any form.

f) Using scientific or educational data without proper acknowledgment and declaring it as one's own research.

g) Fabrication or falsification of any event or information.

9.3.2 Classroom Discipline

Students are expected to maintain respectful and decorous behavior towards students, staff, and faculty while in the classroom and on university premises. Classroom indiscipline includes:

a) Interrupting learning through inappropriate talking.

b) Use of mobile phones.

c) Being late to the class.

d) Use of rude words or behavior.

e) Loud talking or disruptive behavior in hallways during classes and exams.

9.3.3 Violence/Physical Abuse

Premier University is committed to ensuring the safety and well-being of all its members and maintaining an environment free from violence. Acts of physical abuse/violence include but are not limited to:

a) Physical abuse or violence, such as beating, punching, or kicking.

b) Direct threats of violence, either verbal, written, or via electronic messages.

c) Intimidation, either verbal, written, or via electronic messages.

d) Deliberate obstruction or interference with any person's right to attend or participate in university functions.

e) Reckless behavior that endangers any person.

f) Misrepresentation, misinformation, force, or coercion to solicit support or participation in subversive activities.

g) Any conduct, expression, or language deemed improper when interacting with faculty members, university officials, and staff.

9.3.4 Dangers to Health and Safety

a) Smoking inside the campus or classrooms.

b) Use, production, distribution, sale, possession, or storage of drugs, including but not limited to alcohol, marijuana, stimulants, and narcotics.

c) Entering the campus under the influence of intoxicants.

d) Possession of weapons, firearms, knives, or clubs.

e) Possession or use of explosives, including bombs, cocktails, or chemicals.

f) Unauthorized use of fireworks.

9.3.5 Damage to Property

a) Willful or malicious damage to university property.

b) Setting fire to university property.

c) Reckless behavior causing damage to university or personal property.

d) Tampering with or damaging university equipment, security devices, or property.

e) Walking on lawns, crossing boundary walls, or damaging gardens and flowers.

9.3.6 Disobedience to Lawful Authority

a) Disobedience or resistance to university authorities.

b) Trespassing or unauthorized presence.

c) Refusal to show an ID card when requested by university officers or security personnel.

d) Non-compliance with university parking rules.

9.3.7 Deception

a) Furnishing false information to the university.

b) Misuse, alteration, or forgery of university documents or records.

c) Forging signatures of university officials or faculty.

d) Submitting false certificates or documents.

e) Committing financial fraud or embezzlement.

9.3.8 Theft

a) Misappropriation of university funds or property.

b) Possessing or transporting stolen university property.

c) Aiding or abetting theft of university property.

d) Misappropriation of funds by student organizations.

e) Stealing or damaging library books, lab equipment, or other university assets.

9.3.9 Tarnishing University Image/Unlawful Association

a) Engaging in behavior that damages the university's reputation.

b) Associating with groups banned by the government or involved in illegal activities.

c) Propagating hate messages or extremist ideologies.

9.3.10 Rules on Promotional Activities on Campus

a) Unauthorized promotional activities, including banners, posters, or stalls, require prior approval from university authorities.

b) Clubs and academic departments must seek approval before engaging in sponsorship negotiations.

c) Writing or posting unauthorized posters on campus walls is prohibited.

9.3.11 Social Misconduct/Harassment

a) Using abusive or vulgar language.

b) Teasing or annoying others.

c) Sexual harassment in any form.

d) Uploading indecent images or comments on social media.

9.3.12 Cyber-Crime

Misuse of email, blogs, social media, or mobile phones for fraud, identity theft, harassment, pornography, subversive activities, hacking, or cyberbullying is strictly prohibited.

9.3.13 Disorder and Disorderly Behavior

a) Rioting or inciting riots.

b) Illegal strikes and agitations.

c) Breach of university rules and policies.

9.3.14 Free Expression and Disruption

The university supports freedom of expression but does not tolerate disruptions that interfere with normal academic operations.

9.3.15 Intolerance

All students are expected to be respectful regardless of gender, race, religion, political affiliation, or social status.

9.3.16 Misuse of ID

Lending or forging an ID card will result in disciplinary action.

9.3.17 Subversive Activities

Any act threatening national security or public safety is considered subversive.

9.3.18 Unauthorized Recording

Recording, storing, or distributing images, videos, or audio without consent is prohibited.

9.3.19 Agitation

Group representation, whether verbal, written, or in any other form, is strictly forbidden and is considered an act of agitation.

9.3.20 Ragging and Bullying

Ragging and bullying can include: intimidation, humiliation, ridicule, and physical threats; exercise of power over another through negative behavior; insulting, abusing, disparaging, or intimidating behavior or words.

Cyber Bullying is "the use of electronic communication to bully a person." It falls under this policy if the bullying is between students and occurs on the university premises or adversely affects the safety of students while in university.

9.3.21 Political and Non-Political Involvements and Activities

Premier University has a strict policy of non-association and non-involvement in political activities inside the campus and the classrooms. Whatever political views an individual(s) may have, he/she shall not bring them onto the campus or class or within 20 yards of the boundary of the campus premises of the University. No student can use the name of this university with any political party. The Authority shall have the right to expel students not complying with this rule. For every non-political activity, written permission must be taken from the Disciplinary Committee.

9.3.22 Other Misconducts

a) Walking, gathering, or roaming in the University premises without justified causes at night after office hours.

b) Any other acts that disturb the normalcy or peace of the campus.

c) Any act of indiscipline or disturbances in various activities of the University or any function, ceremony, etc., held on campus.

d) Making false allegations, and character assassinations of teachers, officers, and employees.

e) Any other act or omission to be deemed improper by the authority concerned.

9.4 Further Regulations

9.4.1 Compliance with Campus Security

The security of Premier University students, faculty, staff, and physical property is of utmost importance. Students must comply with instructions from security or administrative staff regarding campus security. Failure to do so will be considered a disruption.

Students may be required to submit to a search of their person or possessions while on campus. Failure to comply with a search order will be considered a disruption or disobedience.

9.4.2 Proper Use of Student IDs

Students must wear their own ID cards at all times on campus. Without an ID, students may not enter the campus or use university facilities. It is the student's sole responsibility to maintain possession and care of their ID.

a) **Loss or Theft:** Lost or stolen ID cards must be reported to the Administration immediately. A fee must be paid for replacement. The new ID will be issued within a reasonable timeframe upon receipt of payment.

b) **Forgotten IDs:** If a student forgets their ID, they may be issued a temporary ID upon payment of a fine.

c) **Do Not Share:** Students may not lend or share their ID with anyone. Doing so will result in disciplinary action for both the original student and the recipient.

d) **Do Not Use When Unauthorized:** If a student is not registered for a particular term or is barred from campus for disciplinary reasons, they may not use their ID, even if it grants access. Special permission must be obtained from the authorities for campus entry.

9.5 Students' Grievances

The university authorities shall hear student grievances for possible redress. A student may submit a grievance in writing through their batch advisor.

In cases involving violations of the Code of Conduct or disciplinary rules, written allegations must be submitted to the Proctorial Body. Batch advisors may also report violations to the Proctorial Body through the head of the relevant department.

9.6 Authorities and Punishments

The Proctorial Body, Eve Teasing and Sexual Harassment Prevention Committee, Anti-Drug Awareness Committee, and Anti-Drug Committee shall monitor their respective matters under the Disciplinary Committee. The Proctorial Body shall work closely with other authorities in all disciplinary matters.

If a student violates any rule, law, or prohibition, the Disciplinary Committee may impose the following punishments:

a) A fine of up to 2,00,000 BDT

b) Blacklisting (preventing further admission, appointments, or privileges at the university)

c) Suspension from classes or campus

d) Expulsion

e) Rustication

f) Withdrawal or cancellation of medals, degrees, or certificates

g) Disqualification from admission to this or any other university/institution

h) Legal or police action

i) Expulsion from university hostels

j) Banning access to university premises, library, hostel, sports fields, departments, etc.

k) Withdrawal of fellowships, scholarships, or other university-provided benefits

l) Any other punishment deemed appropriate by the Disciplinary Committee

Before imposing any punishment, the university will issue a written show-cause notice to allow the student to present a defense. If the student fails to respond, a decision will be made within a reasonable time and posted on the department's notice board.

All punishments require written approval from the Disciplinary Committee and will be reported to the Syndicate.

9.6.1 The Disciplinary Committee

The Disciplinary Committee consists of:

- A Chairperson from the Board of Trustees (BoT)
- The Vice-Chancellor
- Deans of all faculties
- One Department Chairperson (nominated by the Syndicate)
- The Registrar
- The Proctor (serving as the Member Secretary)

9.6.2 The Proctor's Office

The Proctorial Office is responsible for enforcing university rules and regulations. It investigates complaints and takes necessary action, ranging from counseling to official warnings or referral to the Disciplinary Committee, depending on the severity of the violation. The Proctorial Body consists of the Proctor and Assistant Proctors, appointed by the university administration. The Proctor and Assistant Proctors report directly to the Vice-Chancellor.

9.6.2.1 The Responsibility of the Proctorial Body

The responsibilities of the Proctorial Body may include:

a) Maintaining a peaceful environment inside and the adjacent areas of the university premises;

b) Ensuring the personal safety of students, teachers, and employees of the university;

c) Safeguarding the assets of the university;

d) Assisting in resolving non-academic disputes among students, faculty, or administration;

e) Controlling unauthorized access to the university premises;

f) Ensuring that the Code of Conduct for Premier University students is properly followed within the university campus and taking appropriate steps to ensure compliance;

g) Taking cognizance of any breach of the students' Code of Conduct and suggesting immediate disciplinary action in such cases;

h) Deciding the quantum of punishment to be imposed on the accused students;

i) Monitoring discipline within the student community in classrooms, exam halls, libraries, canteens, common rooms, study rooms, and inside and outside the campus;

j) Conducting inquiries into incidents relating to violations of disciplinary rules;

k) Supervising the investigation of any alleged breach of the students' Code of Conduct. This may involve interviewing the erring student(s) and other necessary students, conveying the information to the reporting authority, the Chairperson of

the respective department, the guardians of the involved students, and the law enforcement agency (if required). A written record of the entire proceeding shall be kept in the Proctorial office.

9.6.2.2 Scope and Jurisdiction of the Office of Proctor and Assistant Proctors

a) The jurisdiction of the Proctor and the Assistant Proctors shall extend to the whole university;

b) Ordinarily, during university hours, the Proctor or one Assistant Proctor shall be available to maintain and oversee order and discipline among the students;

c) During university hours, the Assistant Proctors from various faculties and departments shall be entrusted with the duty of ensuring discipline in their respective faculties and departments;

d) The Proctor and the Assistant Proctors shall investigate and submit a written report to the Disciplinary Committee in cases of violations of disciplinary rules;

e) The Proctorial Body shall maintain liaison with all other committees related to disciplinary matters of the university;

f) The Proctorial Body shall protect confidentiality at all stages regarding its investigation;

g) Cases shall only be referred to the law enforcement agencies upon taking approval from the Vice Chancellor when they constitute a criminal offence. In such cases, and in other appropriate situations, the university will not prevent the disclosure of confidential information when necessary for the discharge of duties or as required by law.

9.7 Disciplinary Hearings

a) The Proctorial Body may arrange a disciplinary hearing for any alleged breach of regulations, except in cases involving harassment, serious injury, property damage, or dishonesty. For such cases, the Disciplinary Committee determines the appropriate hearing authority.

b) After issuing a notice and conducting a hearing, the Proctorial Body will submit a written report to the Disciplinary Committee detailing the student's connection to the investigated incident.

9.8 Investigation Procedure

a) If misconduct occurs, the Proctor will investigate the matter. Meetings may be held with the complainant, the accused student(s), and other relevant persons.

b) Alleged students must attend any meeting deemed necessary by the Proctorial Body.

c) The Proctor will formally outline the allegations.

d) The student may respond to allegations and present representatives or guardians where required.

e) The student may submit witness testimonies or evidence, subject to cross-examination.

f) After the investigation, the Proctorial Body will formally notify the student of its decision and the appeals procedure.

g) All written reports will be submitted to the Disciplinary Committee.

9.9 Review of Decision

A student may request a review of their punishment by submitting a written application to the Disciplinary Committee within 7 days of the decision.

9.10 Amendment

The Code of Conduct and Disciplinary Rules may be amended by the Syndicate upon the Disciplinary Committee's recommendation.

9.11 Other Related Bodies

9.11.1 Eve Teasing and Sexual Harassment Prevention Committee

This committee has been formed in light of the judgment of the High Court Division (Writ petition no. 5916 of 2008). The role of the Eve Teasing and Sexual Harassment Prevention Committee includes receiving complaints, performing investigations, and recommending possible actions to the Disciplinary Committee regarding any eve teasing issue or sexual harassment. The Committee shall be constituted with a minimum of 5 (five) members, with the majority being women, and the head of the committee should be a woman, if available. This committee shall have at least two members from outside the organization concerned, preferably from organizations working on gender issues and sexual abuse. The committee will submit annual reports to the Government on compliance with the HCD guidelines and its activities.

9.11.1.1 Matters under Jurisdiction of the Eve Teasing and Sexual Harassment Prevention Committee

This committee shall arrange programs and training for all the employees and students of the University to raise awareness against eve teasing and sexual harassment. This committee shall investigate the following matters directly or by referral from the Proctorial Body or the Vice Chancellor:

a) Unwanted physical contact or conduct;

b) Verbal abuse of a sexual nature;

c) Demeaning, insulting, intimidating, or sexually aggressive comments;

d) Threats or implications that refusal of sexual advances will have an adverse effect on academic or employment conditions;

e) Demeaning comments or psychological pressure for refusing sexual advances; any demand or request to establish a sexual relationship;

f) Sending sexually explicit or implicit letters, emails, SMS, images, videos, social media, etc.; displaying pornographic materials or indecent pictures or drawings;

g) Taking any form of photographs or video recording for blackmailing or defaming someone;

h) Spreading rumors about sexual issues to humiliate or disgrace someone socially;

i) Discriminating against anyone on grounds of gender or sexual orientation.

9.11.1.2 Investigation Procedure (as directed by the HCD)

Normally, the complaint has to be lodged with the Committee within 30 working days of the occurrence. To verify the complaint, the Committee will:

a) In the case of minor harassment, if possible, the Committee shall dispose of the complaint with the consent of the parties involved and shall report it to the Disciplinary Committee. In all other cases, the Committee shall investigate the matter.

b) The Committee will have the power to send registered notices by mail to the parties and the witnesses, conduct hearings, gather evidence, and examine all relevant papers. In these types of complaints, apart from oral evidence, emphasis should be placed on circumstantial evidence.

c) The Committee will keep the identities of the complainant(s) confidential. While recording the testimony of the complainant(s), any question or behavior that is intentionally base, insulting, or harassing should be avoided. The testimony must be recorded in camera. If the complainant wants to withdraw the complaint or stop the investigation, the reason behind this must be investigated and mentioned in the report.

d) The Committee shall submit the investigation report with recommendations within 30 working days to the Disciplinary Committee.

e) The period of 30 days may be extended up to 60 days by the Disciplinary Committee if necessary.

f) If it is proved that a false complaint has been filed intentionally, a report will be submitted to the concerned authority, recommending appropriate action for the complainant(s). The Complaint Committee will make decisions based on the majority view of its members.

9.11.1.3 Punishment

The Disciplinary Committee may temporarily suspend the accused person (other than students), and in the case of students, may prevent them from attending their classes upon receiving the recommendation of the Committee. If the accused is found guilty of sexual harassment, the Disciplinary Committee shall treat it as misconduct and take appropriate action according to the disciplinary rules of the university within 30 (thirty) days and/or shall refer the matter to the appropriate court or tribunal if the act complained of constitutes an offence under any penal law.

9.11.2 Anti-Drug Awareness Committee

An Anti-Drug Awareness Committee shall be in operation to raise awareness against drug abuse among the students. Apart from individual and collective counseling of students, this committee shall arrange different programs and campaigns to raise awareness against drug abuse within the university. This body shall consist of the Proctorial Body and all chairpersons of the departments.

9.11.3 Anti-Drug Committee

An Anti-Drug Committee shall also be in operation as directed by the Ministry of Education of Bangladesh. Comprised of five members, this committee shall include the Vice Chancellor as the Chairperson. One representative each from the teachers, guardians, and students shall be members, while the sports/physical education officer shall be the member secretary of the committee. This committee shall work closely to prevent any drug abuse on campus, in classrooms, or on the premises of the university. In the case of any alleged drug abuse, it shall refer the matter to the Proctorial Body to handle. This committee shall assist the Anti-Drug Awareness Committee in all matters related to raising awareness against drug abuse.

PREMIER UNIVERSITY
Faculty of Engineering
Department of Computer Science and Engineering

1.   Overview of the Department

Established in 2002, the Department of Computer Science and Engineering (DCSE) is one of the two oldest departments of the university. The department's vision was to engender competent and skilled CSE graduates to avail and fill the lucrative job opportunities at that time. Since its establishment, the department has been offering a four-year undergraduate program titled Bachelor of Science in Computer Science and Engineering (B.Sc. in CSE). From 2023, the department also offers a two-year Master of Science in Computer Science and Engineering program. The courses of the undergraduate and graduate programs have a balance of theory and practical skills to prepare the learners for the highly competitive workplace. Apart from the degree awarding programs, the department has established three internationally affiliated academies, Cisco Networking Academy, AWS Academy, and Red Hat Academy to offer certification courses mainly to students and professionals.

In 2002, the DCSE of Premier University started its academic activities with 13 undergraduate students and two full-time faculty members. The average number of students admitted in the first semester was around 10 until 2012; from then, it started to rise dramatically, and at present, the recruitment average is above 200.

The department of CSE is supported by well-equipped and advanced labs including Artificial Intelligence Lab, Microprocessor-Microcontroller and IoT Lab, Software Development Lab, Operating Systems Lab, Computer Networking Lab, Competitive Programming Lab, Programming Labs and High-Performance Computer Lab. All these aims, visions, and missions are made a reality by the exceptional faculty members of the department through their friendly and effective collaboration. The department has successfully attracted highly competent and knowledgeable faculty members and researchers dedicated to offering the best available knowledge and experience to the students.

The Computer Club at Premier University, established in 2015, is a key strength of the CSE department, fostering a dynamic environment for students to engage in technology-driven activities. It conducts regular programming classes, organizes

national and regional contests, hosts IT fests, project exhibitions, and seminars, and facilitates research publications. With dedicated student-led groups in IoT, Embedded Systems, Deep Neural Research, DevOps, Linux-Based Networking, and Mobile/Game Development, the club promotes hands-on learning and collaboration. Through these initiatives, it enhances the campus's technological ecosystem and prepares students for industry challenges. The IEEE Student Branch arranges seminars, workshops, trainings, talks, etc., on cutting-edge technologies related to computer science and related disciplines.

Alumni of the department of CSE are its greatest asset since they offer a positive perception rating to the department by being among its most distinguished. The Computer Science and Engineering Alumni Association, PU (CSEAA_PU) formed on 14th April 2023 is now operating effectively. The CSE department has expanded over the years with proud Alumni working leading corporations both domestically and internationally. Many graduates are working as professors and continuing their education abroad. Our way of thinking and operating will change as a result of the Fourth Industrial Revolution (4IR). 4IR integrates use of advancements in Big Data, Machine Learning, Artificial Intelligence (AI), the Internet of Things (IoT), Blockchain, and other technologies.

2.　B. Sc. in CSE Program

The Bachelor of Science in Computer Science and Engineering (B.Sc. in CSE) program was incepted and got the approval in the year of 2002. Since then, the program has received a lot of praise for its superior research and educational capacities. Before 2023, the four-year undergraduate program was the primary focus of the CSE department. Students graduating from this program had a balance of theoretical knowledge and practical abilities that helped them to succeed in the extremely competitive job market. B. Sc. in Computer Science and Engineering abbreviated, as B. Sc. in CSE requires a student to complete 150 credits.

The CSE curriculum encompasses general education, core, capstone, and elective courses. The core courses are designed to provide students with fundamental knowledge and skills in key areas of computer science and engineering. Capstone courses offer opportunities to apply theories and practices from multiple disciplines to complex problems. Elective courses allow students to select advanced topics based on their interests.

The CSE curriculum is structured to provide a comprehensive learning experience through a combination of general education, core, capstone, and elective courses. Core courses form the foundation, equipping students with essential knowledge and

skills in key areas of computer science and engineering. Some core courses serve as prerequisites, ensuring a logical progression of learning by establishing fundamental concepts before advancing to more complex topics. General Education (GED) courses broaden students' knowledge and perspectives by integrating humanities, social sciences, natural sciences, and mathematics, enhancing critical thinking and communication skills. Elective courses offer flexibility, allowing students to explore specialized areas based on their interests and career aspirations. Additionally, capstone courses, designed for students nearing graduation, provide an opportunity to integrate and apply their knowledge to real-world challenges, fostering problem-solving and practical expertise. This well-rounded curriculum ensures that graduates are prepared for both academic and professional success in the ever-evolving field of computer science and engineering.

3. Vision of the Department

To be among the nation's leading universities renowned for world class-teaching and research aiming to produce 21st century competent professionals for information industry.

4. Mission of the Department

The mission of the CSE department at Premier University is to:

Mission 1: Emphasize analytical and creative assessment in the teaching-learning to enable students to identify and analyze real-world problems;

Mission 2: Equip graduates with contemporary knowledge and machine intelligence to contribute significantly to the local and global information industry;

Mission 3: Provide professional exposure to acquire experience on real-time problem-solving design, implementation and evaluation methods to address the actualities of 21st century;

Mission 4: Collaborate with local, national, and international entities in education and research;

Mission 5: Support access to contemporary research resources and facilities to engage teachers and students in research activities for quality innovation;

Mission 6: Nurture our graduates' generous and communication skills to make them visionary and frontier leaders in a multicultural environment;

Mission 7: Engage students in co-curricular or extra-curricular activities, community services or service to humanity.

5. **Goals and Objectives of the Department**

Goals:

- Increase student enrollment in the computer science and engineering program
- Prepare graduates for their professional career
- Equip students with an innovative mindset
- Impart industry or real-life knowledge in students
- Enhance research competencies of faculty and students
- Facilitate collaborative research
- Advance cutting-edge research
- Develop students' essential soft skills and lifelong learning aptitude
- Support diversity and inclusion
- Engage students with the broader community
- Leverage alumni networks
- Provide state-of-the-art learning resources to students
- Keep the program curriculum relevant

Objectives:

- Achieve a 50% increase in student enrollment, especially in the master's program of the department, over the next four academic years through targeted recruitment strategies.

- Equip students with a strong foundation in theoretical computer science and hands-on skills to prepare them for real-world applications and problem-solving.

- Foster an environment conducive to cutting-edge research in modern and emerging areas of computer science, such as artificial intelligence, cyber-security, virtual reality, and data science.

- Nurture a mindset in students for diverse, innovative, and interdisciplinary use of computer science and engineering while addressing societal challenges.

- Uphold a welcoming and favorable environment for students from diverse backgrounds, cultures, and identities.

- Train faculty and graduate students in research techniques to contribute to the creation and dissemination of new knowledge and research outcomes in reputable journals and conferences.

- Promote interdisciplinary research collaborations within the university and with external partners, including industry and government.

- Prepare readymade students for the IT sector through internships, collaborative projects and training, and partnerships with industry leaders.

- Develop students' soft skills, such as teamwork, communication, and entrepreneurship and leadership essential for career advancement.

- Instill a commitment to continuous learning and adaptation to keep pace with the rapidly evolving tech landscape.

- Engage with the local and global community through outreach programs, workshops, and seminars to promote computer science and engineering education.

- Maintain a strong alumni network to support current students with mentorship and career opportunities.

- Ensure access to modern laboratories, computing facilities, and software resources necessary for advanced learning and research.

- Continuously review and update the curriculum adopting stakeholders' feedback and industry demands to make it market-demand-driven.

6.   Program Learning Outcomes (PLOs)/Graduate Attributes

The Program Learning Outcomes (PLOs) describe the skills met by our graduates at the time of graduation to achieve the program objectives listed above. Combine and apply foundations of mathematics and knowledge of computer science and engineering to analyze real world computing problems. The PLOs and Graduate Attributes are similar for the B. Sc. in CSE program and designed according to the PLOs and Graduate Attributes identified in Washington Accord.

The Graduate Attributes are dedicated to nurturing future-ready professionals equipped with the essential knowledge, skills, and attributes to thrive in today's dynamic technological landscape. Our graduate attributes are meticulously crafted in alignment with the identified needs of stakeholders and the learning outcome domains outlined in the **Bangladesh National Qualifications Framework (BNQF)** for higher education.

The graduate attributes are defined such that at the time of graduation our graduates will have the following attributes:

PLO(a): Engineering Knowledge: Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

PLO(b): Problem Analysis: Identify, formulate, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

PLO(c): Design/ Development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations.

PLO(d): Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions.

PLO(e): Modern Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PLO(f): The Engineer and Society: Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.

PLO(g): Environment and Sustainability: Understand the impact of professional engineering solutions in societal and environmental contexts, demonstrate knowledge of, and need for sustainable development.

PLO(h): Ethics: Apply ethical principles and commit to professional ethics, responsibilities, and norms of engineering practice.

PLO (i): Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.

PLO(j): Communication: Communicate effectively on complex engineering activities with the engineering community and with society, such as being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.

PLO(k): Project Management and Finance: Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PLO(l): Life-long Learning: Recognize the need for and have the preparation and ability to Engage in independent and life- long learning in the broadest context of technological Change.

7.   BNQF Learning Domain and mapping with PLOs

The PLOs are defined to ensure the achievement of the four Learning Outcome Domains appropriate for Level 7 of BNQF. The Learning Outcome Domains for level 7 (4-year Bachelor') are briefly given as:

Fundamental Domain: This realm encapsulates the specialized knowledge and skills acquired through academic endeavors, shaping an individual's performance and societal impact.

Social Domain: This side encompasses the abilities crucial for effective interaction with individuals across various levels to accomplish shared objectives, emphasizing communication and community involvement. According to the World Economic Forum, social skills encompass coordination, instruction, negotiation, persuasion, service orientation, and perceptiveness toward people and the environment.

Thinking Domain: This segment includes skills vital for adaptive learning, decision-making, problem-solving, and entrepreneurial pursuits. It underscores graduates' capacity for proactive learning and critical thinking, necessitating investigative, enterprising, scientific, analytical, and managerial competencies.

Personal Domain: This dimension encompasses lifelong learning, self-directedness, integrity, and citizenship development. It involves abilities like active listening, time management, caregiving, team building, accountability, civic engagement, and societal contribution.

The following table shows the alignment of our PLOs with the identified needs of the stakeholders, learning outcome domains indicated in BNQF and Bloom' Taxonomy.

Issues/Concerns & Identified needs	Graduate Attributes/PLOs	BNQF Indicator	Bloom's Taxonomy
Use contemporary knowledge while developing rapid solutions to common problems considering diversity and ethics.	Modern Tool Usage, Ethics, Individual and Team Work.	Fundamental Skills, Personal Skill, Social Skill.	Cognitive, Affective, Psychomotor.

Resource optimization in developing diverse application and innovation (Sustainable Development Goals (SDG- 2, 7 & 13)).	Problem Analysis, Project Management and Finance.	Fundamental Skills, Thinking Skills, Social Skill.	Cognitive, Psychomotor.
Develop entrepreneurship mindset satisfying poverty reduction and economic growth (SDG 1 & 8).	Design/ Development of Solutions.	Fundamental kills, Personal Skill.	Cognitive, Affective.
Strive at the same capacity and tempo as the global community by staying updated with the latest advancements, trends.	Conduct Investigations	Fundamental Skills	Cognitive, Psychomotor.
Massive technological evolution requiring innovative approaches to discover new career prospects considering societal impact (Future Industrial Requirements (FIR)).	The Engineer and Society	Social Skill, Fundamental Skill.	Affective
Multidisciplinary approaches that combine engineering knowledge can help to find more sustainable and fair solutions to global problems (SDG 10, 12 & 13).	Environment and Sustainability, Individual and Team Work.	Personal Skill, Social Skill, Fundamental Skills.	Cognitive, Affective, Psychomotor.
Cross-cultural communication training, intercultural competency development, culturally adapted communication strategies.	Communication	Social Skills	Psychomotor, Affective.
Strive at the same capacity and tempo as the global community by staying updated with the latest advancements, trends.	Life-long Learning	Personal Skills	Affective, Psychomotor.

8.   Program Educational Objectives (PEOs) and mapping with Missions and PLOs

PEO-1: Think Critically: Use problem-solving, decision-making and research skills to identify and solve complex problems needed to pursue a diverse range of professions.

PEO-2: Implementation Efficiency: Develop and implement efficient, sustainable, scalable, manageable, and future-proof solutions to problems through continuous learning.

PEO-3: Society, Ethics and Team Player: Ethically manage independent or team work considering the societal, health and safety, and environmental impact.

PEO-4: Communication: Graduates will be able to disseminate information clearly and precisely to a broad range of audiences.

Mapping Missions with the PEOs:

Missions	PEO-1	PEO-2	PEO-3	PEO-4
Mission 1:	√	√		
Mission 2:	√	√		
Mission 3:	√	√	√	
Mission 4:			√	√
Mission 5:	√	√	√	√
Mission 6:	√	√	√	√
Mission 7:	√	√	√	√

Mapping PLOs with the PEOs:

PLO No.	PLO Statement	PEO-1	PEO-2	PEO-3	PEO-4
		Thinking Critically	Implement Efficiently	Society, Ethics, and Team Player	Communication
PLO(a)	Engineering Knowledge	√			
PLO(b)	Problem Analysis	√			

PLO(c)	Design/ Development of Solutions		√	√	√
PLO(d)	Conduct investigations of complex problems	√			
PLO(e)	Modern Tool Usage		√	√	
PLO(f)	The Engineer and Society			√	
PLO(g)	Environment and Sustainability		√	√	
PLO(h)	Ethics			√	
PLO(i)	Individual and Team Work			√	√
PLO(j)	Communication			√	√
PLO(k)	Project Management and Finance		√		
PLO(l)	Life-long Learning		√		

Relationship between Curricular Elements and PEOs:

Curricular Elements	Program Educational Objectives PEO1- Expertise PEO2-Enhancement PEO3-Engagement PEO4-Communication			
	PEO-1	PEO-2	PEO-3	PEO-4
Basic science, math and general education courses	**	*	***	*
Core courses	***	***	*	*
Elective Courses	***	***	*	*
Laboratory experiments	**	**	*	**
Capstone/Design project	***	**	*	***
Intern/Coop/Directed Research	*	***	**	***
Seminar, workshop, meetings, presentations etc.	*	*	**	***

Note: *slightly, **moderately, ***highly relevant

9.   KPA Definitios

Curriculum Knowledge Profile:

The knowledge profile should have eight attributes (K1 to K8), indicating the volume of learning and attributes against which graduates must be able to perform.

K1: A systematic, theory-based understanding of the natural sciences applicable to the discipline.

K2: Conceptually-based mathematics, numerical analysis, statistics and formal aspects of computer and information science to support analysis and modelling applicable to the discipline.

K3: A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline.

K4: Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline; much is at the forefront of the discipline.

K5: Knowledge that supports engineering design in a practice area.

K6: Knowledge of engineering practice (technology) in the practice areas in the engineering discipline.

K7: Comprehension of the role of engineering in society and identified issues in engineering practice in the discipline: ethics and the professional responsibility of an engineer to public safety; the impacts of engineering activity: economic, social, cultural, environmental and sustainability.

K8: Engagement with selected knowledge in the research literature of the discipline.

Complex Engineering Problems:

Engineering problems that involve wide-ranging or conflicting technical, engineering, and other issues, have no obvious solution, and require abstract thinking and originality in analysis to formulate suitable models are defined as complex engineering problems. The abilities to solve complex problems in engineering are essential in the curriculum of engineering education. The list of complex engineering problems (P1 to P7) clarifies the definition of Complex Engineering Problem by establishing seven range, or characteristics, of problem solving.

Indicator	Title	Description	*Related POs/PLOs*
P1	Depth of knowledge required	Cannot be resolved without in-depth engineering knowledge at the level of one or more of K3, K4, K5, K6 or K8 which allows a fundamentals-based, first principles analytical approach	**a, b, c, d, e, f, g**
P2	Range of conflicting requirements	Involve wide-ranging or conflicting technical, engineering and other issues	**a, b, c, d**
P3	Depth of analysis required	Have no obvious solution and require abstract thinking, originality in analysis to formulate suitable models	**a, b, c, d, e, f**
P4	Familiarity of issues	Involve infrequently encountered issues	**d, e**
P5	Extent of applicable codes	Are outside problems encompassed by standards and codes of practice for professional engineering	**d, e**
P6	Extent of stakeholder involvement and conflicting requirements	Involve diverse groups of stakeholders with widely varying needs	**a, c, g**
P7	Interdependence	Are high level problems including many component parts or sub-problems	**a, b, c, d, e, f**

Engineering Activities:

There are five attributes of activities students can be involved in when solving Complex Engineering Problem. A Complex Engineering Activity or Project is that which has some or all of the following attributes:

Indicator	Title	Description	*Related POs/PLOs*
A1	Range of resources	Involve the use of diverse resources (and for this purpose resources include people, money, equipment, materials, information and technologies)	j
A2	Level of interaction	Require resolution of significant problems arising from interactions between wide-ranging or conflictin technical, engineering or other issues	
A3	Innovation	Involve creative use of engineering principles and research-based knowledge in novel ways	
A4	Consequences for society and the environment	Have significant consequences in a range of contexts, characterized by difficulty of prediction and mitigation	
A5	Familiarity	Can extend beyond previous experiences by applying principles-based approaches	

10. Teaching-Learning-Assessment in three domains of Bloom's Taxonomy

• **Cognitive Domain:** Focuses on intellectual skills such as knowledge acquisition, critical thinking, and problem-solving. It involves processes like remembering, understanding, applying, analyzing, evaluating, and creating. Teaching-learning-assessment in this domain emphasizes lectures, discussions, problem-based learning, and assessments like quizzes and projects.

• **Affective Domain:** Relates to emotions, attitudes, values, and motivation in learning. It involves receiving, responding, valuing, organizing, and characterizing by values. Teaching-learning-assessment in this domain includes activities like discussions, role-playing, reflection exercises, and peer evaluations to develop emotional intelligence and ethical reasoning.

• **Psychomotor Domain:** Involves physical skills, coordination, reflexes, and precision in performing tasks. It includes imitation, manipulation, precision,

articulation, and naturalization of skills. Teaching-learning-assessment in this domain incorporates hands-on practice, lab work, demonstrations, and skill-based assessments to enhance execution accuracy and efficiency.

Action Verb Appropriate for Cognitive Domain

Level	Definition	Example	Action Verbs
Remember	Recall previously learned information	Identify the syntax of a for loop in C; list the components of a computer network.	define, describe, identify, know, label, list, name, outline, recall, recognize, reproduce, select, state
Understand	Comprehend the meaning, translation, or interpretation of instructions	Explain how the OS manages memory; summarize the working of the TCP/IP model.	clarify, comprehend, convert, describe, discuss, defend, distinguish, estimate, explain, extend, generalize, illustrate, interpret, summarize, translate
Apply	Use learned material in new and concrete situations	Write a Python program to sort an array; apply Dijkstra's algorithm to a network graph.	apply, change, choose, classify, compute, construct, demonstrate, discover, manipulate, modify, operate, solve, use, write
Analyze	Break down material into parts to understand its structure	Analyze a faulty program to debug; differentiate between stack and queue memory usage.	analyze, categorize, classify, compare, contrast, deconstruct, differentiate, dissect, divide, examine, inspect, infer, outline, relate, separate
Evaluate	Judge the value of material for a given purpose based on criteria	Assess the performance of two sorting algorithms; critique the security of a login system.	appraise, assess, choose, compare, conclude, contrast, criticize, defend, evaluate, explain, interpret, justify, summarize, support
Create	Put parts together to form a new whole or propose original solutions	Design a new web application; develop a machine learning model for spam detection.	build, categorize, combine, compile, compose, create, devise, design, generate, improve, plan, propose, reconstruct, reorganize, solve, write

In the provided list of action verbs for cognitive domain, those up to "apply" correspond to lower-order thinking skills, while the remaining verbs indicate higher-order thinking skills. **Lower-order thinking skills (LOTS)** involve basic cognitive processes such as remembering, understanding, and applying knowledge, while **higher-order thinking skills (HOTS)** require more complex cognitive processes such as analyzing, evaluating, and creating new ideas.

Action Verb Appropriate for Affective Domain:

Level	Definition	Example	Action Verbs
Receiving	Being aware of or attending to something in the environment	A student listens attentively during a lecture on cybersecurity or attends a seminar on AI.	Accept, Attend, Develop, Recognize
Responding	Showing some new behavior as a result of experience	A student participates in a class discussion on ethical hacking or completes an online coding challenge.	Complete, Comply, Cooperate, Discuss, Examine, Obey, respond
Valuing	Showing some definite involvement or commitment	A student voluntarily joins the university coding club or participates in a hackathon.	Accept, Defend, Devote, Pursue, Seek
Organization	Integrating a new value into one's general set of values, giving it some ranking among one's general priorities	A student organizes a seminar on open-source contributions or leads a team in a software development project.	Codify, Discriminate, Display, Order, Organize, Systematize, Weigh
Characterization by value	Acting consistently with the new value	A student consistently promotes ethical computing practices and mentors juniors in tech initiatives.	Internalize, Verify

Action Verb Appropriate for Psychomotor Domain:

Level	Definition	Example	Action Verbs
Imitation	Observing and patterning behavior after someone else	Watch a lab instructor demonstrate how to write a basic C program and then replicate it on your own computer	copy, follow, replicate, repeat, adhere
Manipulation	Reproduce activity from instruction or memory	Write a Python script to sort a list based on instructions given in class	re-create, build, perform, execute, implement

Precision	Execute skill reliably, independent of help	Independently develop and debug a program that reads data from a file and processes it correctly	demonstrate, show, complete, perfect, calibrate, control
Articulation	Adapt and integrate expertise to satisfy a non-standard objective	Combine database operations and web development to build a dynamic student management system	construct, solve, adapt, combine, coordinate, integrate, develop, formulate, modify, master
Naturalization	Mastering a high-level performance until it becomes second nature or natural.	Lead a team in developing and deploying a full-stack web application with CI/CD and automated testing	Define aim, approach and strategy for use of activities to meet

11. Structure of the Curriculum

a) **Duration of the Program: 4 Years, 8 Semesters.**

b) **Total minimum credit requirement to complete the program:** According to BNQF (Part B) for Higher Education: 150

c) **Minimum CGPA requirements for graduation:** 2.0

d) **Maximum academic years of completion:** 7 academic years

e) **Category of Courses:**

There are five different types of Courses in the Curriculum:

1. General Education Courses:

     I. Language and General Education Courses.

     II. Basic Science and Mathematics Courses.

     III. Other Engineering Courses.

2. Core Courses.

3. Capstone Courses.

4. Major Elective Courses.

5. Minor Elective Courses

The elective courses will be offered in seven (7) major areas:

a)   Software Engineering

b)   Data Science

c)   Computing Theory

d)   Communication and Networking

e)   Hardware Engineering

f)   Information and Communication Engineering

g)   Systems

For Major specialization, students have to complete three theory courses and two laboratory courses from any major areas.

For Major specialization, students have to complete two theory courses and two laboratory courses from any minor areas (other than major specialization).

A list of course types and assigned credits:

SL. No.	Course Type		Credits	Percentage of Total Credits (Approximate)
1.	General Education	Language and General Education Courses	22	14.67%
2.		Basic Science and Mathematics Courses	20.25	13.5%
3.		Other Engineering Courses	12.75	8.5%
4.	Core Courses (Including Capstone Courses)		74	49.33%
5.	Elective Courses		21	14%

12.   Distribution of Courses

Coding system for different courses of B. Sc. in CSE program is as follows:
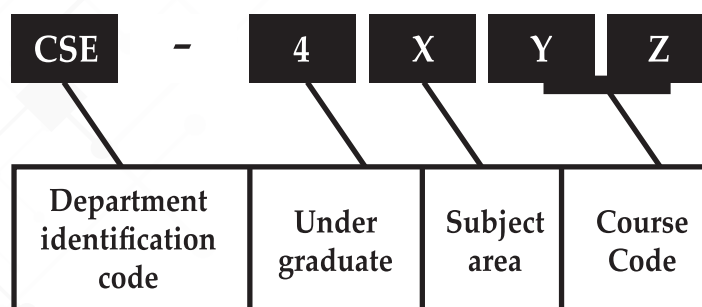
Subject area	Description
0	Thesis
1	General Courses
2	Database and Software Engineering
3	Artificial Intelligence and Data science
4	Algorithm and Graph theory
5	Communication and Networking
6	Computer and Network Security
7	Systems
8	Hardware Engineering

A) Language and General Education Courses (22 credits)

Compulsory (13 credits)

SL.	As BNQF	Course Code	Course Title	Credits
1	0231-1101	ENG 1101	General English	3
2	0232-1101	BAN 1101	Functional Bengali Language (প্রায়োগিক বাংলা ভাষা)	2
3	0231-1102	ENG 1102	Communicative English	1.5
4	0417-4104	ENG 4104	Technical Writing and Presentation	1.5
5	0314-1101	SSC 1101	Bangladesh Studies	2
6	0223-3101	HUM 3101	Society, Engineering Ethics, and Environmental Protection	3

GED Optional (Any three, 9 credits)

SL.	As BNQF	Course Code	Course Title	Credits
1	0311-1101	ECO 1101	Engineering Economics	3
2	0314-1109	SOC 1109	Sociology for Science and Technology	3
3	0411-1501	ACC 1501	Financial and Managerial Accounting	3
4	0413-3301	MGT 3301	Project Management and Entrepreneurship	3
5	0413-4562	MGT 4562	Operational Management	3
6	0417-2413	BUS 2413	Business Communication	3
7	0222-1101	HUM 1101	History of the Emergence of Bangladesh	3

B) Basic Science and Mathematics Courses (20.25 credits)
Compulsory (17.25 credits)

SL.	As BNQF	Course Code	Course Title	Credits
1	0533-1103	PHY 1103	Introduction to Classical & Modern Physics	3
2	0533-1104	PHY 1104	Physics Laboratory	0.75
3			Basic Science Option I	3
4	0541-1203	MAT 1203	Differential and Integral Calculus	3
5	0541-1205	MAT 1205	Coordinate Geometry & Vector Analysis	3
6	0541-2304	MAT 2304	Numerical Methods	1.5
7	0541-2207	MAT 2207	Matrix, Linear Algebra, Differential Equation	3
8	0542-2107	STA 2107	Statistics and Probability	3

Basic Science Optional (Any one, 3 credits)

SL.	As BNQF	Course Code	Course Title	Credits
1	0511-2101	BIO 2101	Biology for Engineers.	3
2	0531-1101	CHE 1101	Chemistry	3
3	0533-2211	EEE 2211	Semiconductor Physics & Device	3

C) Other Engineering Courses (12.75 credits)

SL.	As BNQF	Course Code	Course Title	Credits
1	0715-1104	ME 1104	Mechanical Engineering Drawing	0.75
2	0713-1101	EEE 1101	Introduction to Electrical Engineering	3
3	0713-1102	EEE 1102	Introduction to Electrical Engineering Laboratory	1.5
4	0714-1201	EEE 1201	Electronics Device and Circuits	3
5	0714-1202	EEE 1202	Electronics Device and Circuits Laboratory	1.5
6	0714-4427	CSE 4427	Data Communication	3

D) Core Courses (67.25 credits)

SL.	As BNQF	Course Code	Course Title	Credits
1	0613-1113	CSE 1113	Programming Fundamentals	3
2	0613-1114	CSE 1114	Programming Fundamentals Laboratory	1.5
3	0613- 1115	CSE 1115	Object Oriented Programming	3
4	0613-1116	CSE 1116	Object Oriented Programming Laboratory	1.5
5	0613- 1110	CSE 1110	Competitive Programming	0.75
6	0714-2201	EEE 2201	Digital Electronics and Pulse Technique	3
7	0714-2202	EEE 2202	Digital Electronics and Pulse Technique	1.5
8	0714-3815	CSE 3815	Microprocessors and Microcontrollers	3
9	0714-3816	CSE 3816	Microprocessors and Microcontrollers Laboratory	1.5
10	0613-3737	CSE 3737	Computer Organization & Architecture	3
11	0541-1411	CSE 1411	Discrete Mathematics and Number Theory	3
12	0613-1413	CSE 1413	Data Structures	3
13	0613-1414	CSE 1414	Data Structures Laboratory	1.5
14	0613-2415	CSE 2415	Algorithms	3
15	0613-2416	CSE 2416	Algorithms Laboratory	1.5
16	0612-2221	CSE 2221	Database Management Systems	3
17	0612-2222	CSE 2222	Database Management Systems Laboratory	1.5
18	0613-3211	CSE 3211	Information System Design	3
19	0613-3233	CSE 3233	Software Engineering	3
20	0613-3234	CSE 3234	Software Engineering Laboratory	0.75
21	0613-2210	CSE 2210	Mobile Application Development	1.5

22	0613-3210	CSE 3210	Internet Programming	1.5
23	0611-1111	CSE 1111	Computer Fundamental and Ethics	1.5
24	0613-3733	CSE 3733	Operating Systems	3
25	0613-3734	CSE 3734	Operating Systems Laboratory	0.75
26	0612-3567	CSE 3567	Computer Networks	3
27	0612-3568	CSE 3568	Computer Networks Laboratory	1.5
28	0619-3317	CSE 3317	Artificial Intelligence	3
29	0619-3318	CSE 3318	Artificial Intelligence Laboratory	1.5
30	0612-3637	CSE 3637	Computer and Cyber Security	3
31	0613-3409	CSE 3409	Theory of Computation	2

E) Capstone Courses (6.75 credits)

SL.	As BNQF	Course Code	Course Title	Credits
1	0613-3000	CSE 3000	Software Development Project	2
2	0613-4000	CSE 4000	Final Year Design Project	4
3	0613-4001	CSE 4001	Industrial Attachment/Internship/Professional Training	0.75

F) Elective Courses:

Software Engineering

SL.	As BNQF	Course Code	Course Title	Credits
1	0613-4293	CSE 4293	Software Testing and Quality Assurance	3
2	0613-4294	CSE 4294	Software Testing and Quality Assurance Laboratory	1.5
3	0613-4283	CSE 4283	Game Design and Development	3
4	0613-4284	CSE 4284	Game Design and Development Laboratory	1.5
5	0613-4215	CSE 4215	Object Oriented Design	3
6	0613-4216	CSE 4216	Object Oriented Design Laboratory	1.5
7	0612-4223	CSE 4223	Advanced Database System	3
8	0612-4224	CSE 4224	Advanced Database System Laboratory	1.5
9	0613-4251	CSE 4251	Human Computer Interaction	3
10	0613-4291	CSE 4291	Software Architecture	3
11	0613-4297	CSE 4297	Software Requirement Specifications & Analysis	3

Data Science

SL.	As BNQF	Course Code	Course Title	Credits
1	0619-4311	CSE 4311	Machine Learning	3
2	0619-4312	CSE 4312	Machine Learning Laboratory	1.5
3	0613-4371	CSE 4371	Digital Image Processing	3
4	0613-4372	CSE 4372	Digital Image Processing Laboratory	1.5
5	0612-4345	CSE 4345	Big Data Analytics	3
6	0612-4346	CSE 4346	Big Data Analytics Laboratory	1.5
7	0714-4791	CSE 4791	Digital Signal Processing	3
8	0714-4792	CSE 4792	Digital Signal Processing Laboratory	1.5
9	0714-4367	CSE 4367	Internet of Things	3
10	0714-4368	CSE 4368	Internet of Things Laboratory	1.5
12	0613- 4333	CSE 4333	Data Mining	3
13	0613-4321	CSE 4321	Introduction to Bioinformatics	3
14	0619- 4373	CSE 4373	Artificial Neural Networks and Fuzzy Systems	3

Computing Theory

SL.	As BNQF	Course Code	Course Title	Credits
1	0613-4483	CSE 4483	Distributed Systems and Algorithms	3
2	0613-4484	CSE 4484	Distributed Systems and Algorithms Laboratory	1.5
3	0613-4411	CSE 4411	Compiler Design	3
4	0613-4412	CSE 4412	Compiler Design Laboratory	1.5
5	0613-4473	CSE 4473	Computer Graphics	3
6	0613-4474	CSE 4474	Computer Graphics Laboratory	1.5
7	0613-4491	CSE 4491	Combinatorial Optimization	3
8	0613-4413	CSE 4413	Computational Geometry	3
9	0613-4401	CSE 4401	Computer Arithmetic	3
10	0613-4463	CSE 4463	Graph Theory	3

Communication and Networking

SL.	As BNQF	Course Code	Course Title	Credits
1	0714-4511	CSE 4511	Communication Engineering	3
2	0714-4512	CSE 4512	Communication Engineering Laboratory	1.5
3	0613-4523	CSE 4523	Cloud Computing	3
4	0613-4524	CSE 4524	Cloud Computing Laboratory	1.5
5	0612-4591	CSE 4591	Network Security	3
6	0612-4592	CSE 4592	Network Security Laboratory	1.5
7	0714-4517	CSE 4517	Wireless Communication	3
8	0714-4367	CSE 4367	Internet of Things	3
9	0613-4573	CSE 4573	Green Computing	3
10	0612-4593	CSE 4593	Web Application Security	3

Hardware Engineering

SL.	As BNQF	Course Code	Course Title	Credits
1	0714-4825	CSE 4825	Digital System Design	3
2	0714-4826	CSE 4826	Digital System Design Laboratory	1.5
3	0714-4833	CSE 4833	Introduction to Robotics Engineering	3
4	0714-4834	CSE 4834	Introduction to Robotics Engineering Laboratory	1.5
5	0714-4815	CSE 4815	Computer Interfacing	3
6	0714-4816	CSE 4816	Computer Interfacing Laboratory	1.5
7	0714-4817	CSE 4817	Embedded System Design	3
8	0714-4818	CSE 4818	Embedded System Design Laboratory	1.5
9	0714-4843	CSE 4843	Control Systems	3
10	0714-4844	CSE 4844	Control Systems Laboratory	1.5
11	0714-4367	CSE 4367	Internet of Things	3
12	0714-4791	CSE 4791	Digital Signal Processing	3

Information and Communication Technology

SL.	As BNQF	Course Code	Course Title	Credits
1	0613-4735	CSE 4735	Visualizing Complex Information	3
2	0613-4736	CSE 4736	Visualizing Complex Information Laboratory	1.5

3	0613-4253	CSE 4253	UI: Concepts and Design	3
4	0613-4254	CSE 4254	UI: Concepts and Design Laboratory	1.5
5	0613-4573	CSE 4573	Green Computing	3
6	0613-4574	CSE 4574	Green Computing Laboratory	1.5
7	0613-4743	CSE 4743	Multimedia Technology	3
8	0613-4744	CSE 4744	Multimedia Technology Laboratory	1.5
9	0613-4295	CSE 4295	Enterprise Systems: Concepts and Practice	3
10	0688- 4299	CSE 4299	IT Audit: Concepts and Practice	3
11	0612-4593	CSE 4593	Web Application Security	3

Systems

SL.	As BNQF	Course Code	Course Title	Credits
1	0613-4523	CSE 4523	Cloud Computing	3
2	0613-4524	CSE 4524	Cloud Computing Laboratory	1.5
3	0613-4731	CSE 4731	Simulation and Modeling	3
4	0613-4732	CSE 4732	Simulation and Modeling Laboratory	1.5
5	0613-4483	CSE 4483	Distributed Systems and Algorithms	3
6	0613-4484	CSE 4484	Distributed Systems and Algorithms Laboratory	1.5
7	0613-4473	CSE 4473	Computer Graphics	3
8	0613-4474	CSE 4474	Computer Graphics Laboratory	1.5
9	0714-4367	CSE 4367	Internet of Things	3
10	0613-4743	CSE 4743	Multimedia Technology	3
11	0613-4371	CSE 4371	Digital Image Processing	3
12	0613-4573	CSE 4573	Green Computing	3

13. Notional Hour:

Each notional hour corresponds to one credit hour. The notional hours for a one-credit course vary depending on the type of academic activity, such as theory classes, laboratory sessions, industrial attachments, and final year projects. The notional hours for one credit of theory, lab, industrial attachment and final year project:

For Theory:

Learning Activities	Hour/Credit
Class (14 weeks)	14 hours
Independent Learning	14 hours
Tutorial	5 hours
Home Assignment	2 hours
Mid Exam	30 mins
Class Test	30 mins
Case Study/ Group Dissuasion	5 hours
Exam Preparation	8 hours
Final	1 hour
Total	**50 hours**

For Lab:

Learning Activities	Hour/Credit
Class (14 weeks)	28 hours
Independent Learning	14 hours
Tutorial	3 hours
Report Writing	22 hours
Lab Exam	3 hours
Group Discussion	3 hours
Exam Preparation	2 hours
Total	**75 hours**

For Industrial Training:

Learning Activities	Hour/Credit
Intern Period (15 days minimum)	75 hours
Report Writing	3 hours
Case Study/ Discussion with Teachers/Supervisors	2 hours
Defense Preparation	1 hour 30 min
Presentation	30 min
Total	**82 hours**

For Project:

Learning Activities	Hour/Credit
Project Work	60 hours
Report Writing	5 hours
Case study/ Discussion with Teachers/Supervisor	10 hours
Defense Preparation	5 hours
Presentation	1 hours
Total	**81 hours**

14.   Year/Semester wise distribution of courses

First Year /Semester 1				
Course Code	Course Title	Theory Hrs./Week	Sessional Hrs./week	Credits
CSE 1111	Computer Fundamentals and Ethics		3	1.50
CSE 1113	Programming Fundamentals	3		3.00
CSE 1114	Programming Fundamentals Laboratory		3	1.50
EEE 1101	Introduction to Electrical Engineering	3		3.00
EEE 1102	Introduction to Electrical Engineering Laboratory		3	1.50
ME 1104	Mechanical Engineering Drawing		1.5	0.75
MAT 1203	Differential and Integral Calculus	3		3.00
ENG 1101	General English	3		3.00
BAN 1101	Functional Bengali Language (প্রায়োগিক বাংলা ভাষা)	2		2.00
Total		**14**	**10.5**	**19.25**

First Year /Semester 2				
Course Code	Course Title	Theory Hrs./Week	Sessional Hrs./week	Credits
CSE 1413	Data Structures	3		3.00
CSE 1414	Data Structures Laboratory		3	1.50
EEE 1201	Electronics Devices and Circuits	3		3.00
EEE 1202	Electronics Device and Circuits Laboratory		3	1.50
CSE 1411	Discrete Mathematics and Number Theory	3		3.00
	GED Option I	3		3.00
CSE 1110	Competitive Programming Laboratory		1.5	0.75
PHY 1103	Introduction to Classical & Modern Physics	3		3.00
PHY 1104	Physics Laboratory		1.5	0.75
Total		**15**	**9**	**19.50**

GED Option: Any three from the following courses

Course Code	Course Title	Credits
ECO 1101	Engineering Economics	3.00
SOC 1109	Sociology for Science and Technology	3.00
ACC 1501	Financial and Managerial Accounting	3.00
MGT 3301	Project Management and Entrepreneurship	3.00
MGT 4562	Operational Management	3.00
BUS 2413	Business Communication	3.00
HUM 1101	History of the Emergence of Bangladesh	3.00

Second Year /Semester 1				
Course Code	Course Title	Theory Hrs./Week	Sessional Hrs./week	Credits
EEE 2201	Digital Electronics and Pulse Technique	3		3.00
EEE 2202	Digital Electronics and Pulse Technique Laboratory		3	1.50
CSE 1115	Object Oriented Programming	3		3.00
CSE 1116	Object Oriented Programming Laboratory		3	1.50
MAT 1205	Coordinate Geometry & Vector Analysis	3		3.00
SSC 1101	Bangladesh Studies	2		2.00
CSE 3210	Internet Programming		3	1.50
ENG 1102	Communicative English		3	1.50
MAT 2304	Numerical Methods		3	1.50
Total		11	15	18.50

Second Year /Semester 2				
Course Code	Course Title	Theory Hrs./Week	Sessional Hrs./week	Credits
CSE 2415	Algorithms	3		3.00
CSE 2416	Algorithms Laboratory		3	1.50
MAT 2207	Matrix, Linear Algebra, Differential Equation	3		3.00
	Basic Science Option I	3		3.00
CSE 2221	Database Management Systems	3		3.00
CSE 2222	Database Management Systems Laboratory		3	1.50
CSE 3815	Microprocessors & Microcontrollers	3		3.00
CSE 3816	Microprocessors & Microcontrollers Laboratory		3	1.50
Total		15	9	19.50

Elective Basic Science & Mathematics Courses (One course)

Course Code	Course Title	Credits
BIO 2101	Biology for Engineers	3
CHE 1101	Chemistry	3
EEE 2221	Semiconductor Physics & Device	3

Third Year /Semester 1				
Course Code	Course Title	Theory Hrs./Week	Sessional Hrs./week	Credits
CSE 3211	Information System Design	3		3.00
CSE 3317	Artificial Intelligence	3		3.00
CSE 3318	Artificial Intelligence Laboratory		3	1.50
CSE 2210	Mobile Application Development		3	1.50
CSE 3733	Operating Systems	3		3.00
CSE 3734	Operating Systems Laboratory		1.5	0.75
CSE 3737	Computer Organization & Architecture	3		3.00
STA 2107	Statistics and Probability	3		3.00
Total		15	7.5	18.75

Third Year /Semester 2				
Course Code	Course Title	Theory Hrs./Week	Sessional Hrs./week	Credits
CSE 3000	Software Development Project		4	2.00
CSE 3233	Software Engineering	3		3.00
CSE 3234	Software Engineering Laboratory		1.5	0.75
CSE 3567	Computer Networks	3		3.00
CSE 3568	Computer Networks Laboratory		3	1.50
CSE 4637	Computer and Cyber Security	3		3.00
EEE 4427	Data Communication	3		3.00
	GED Option II	3		3.00
Total		15	8.5	19.25

Fourth Year /Semester 1				
Course Code	**Course Title**	**Theory Hrs./Week**	**Sessional Hrs./week**	**Credits**
CSE 4000A	Final Year Design Project		2	1.00
CSE XXXX	Elective: Major I	3		3.00
CSE XXXX	Elective: Major I Laboratory		3	1.50
CSE XXXX	Elective: Major II	3		3.00
CSE XXXX	Elective: Major II Laboratory		3	1.50
CSE 3409	Theory of Computation	2		2.00
ENG 4104	Technical Writing and Presentation		3	1.50
HUM 3101	Society, Engineering Ethics and Environmental Protection	3		3.00
CSE XXXX	Elective: Minor I	3		3.00
CSE XXXX	Elective: Minor I Laboratory		3	1.50
Total		**14**	**14**	**21.00**

Fourth Year /Semester 2				
Course Code	**Course Title**	**Theory Hrs./Week**	**Sessional Hrs./week**	**Credits**
CSE 4000B	Final Year Design Project		6	3.00
CSE 4001	Industrial Attachment / Internship / Professional Training		1.5	0.75
CSE XXXX	Elective: Major III	3		3.00
	GED Option III	3		3.00
CSE XXXX	Elective: Minor II	3		3.00
CSE XXXX	Elective: Minor II Laboratory		3	1.50
Total		**9**	**10.5**	**14.25**

15. Brief Course Description

ENG 1101 - General English: ENG 1101 is designed to enhance students' proficiency in the English language, focusing on the development of fundamental skills such as grammar, vocabulary, reading comprehension, writing, and speaking. The course encourages students to engage in both structured and creative writing activities, improve their ability to articulate ideas clearly, and understand various genres of texts. Through classroom discussions and interactive tasks, students work towards becoming confident communicators, equipped with the necessary skills for academic and professional success in English-speaking environments.

BAN 1101 - Functional Bengali Language (প্রায়োগিক বাংলা ভাষা): BAN 1101 emphasizes the practical aspects of the Bengali language, enabling students to use it effectively in academic, professional, and everyday contexts. The course focuses on enhancing students' skills in reading, writing, and speaking Bengali, with an emphasis on functional language use such as drafting letters, reports, and formal documents. Additionally, it integrates aspects of Bengali culture, literature, and communication, preparing students to interact proficiently in both personal and professional Bengali-speaking environments.

ENG 1102 - Communicative English: ENG 1102 focuses on improving students' verbal and written communication in English through interactive learning. The course aims to refine students' ability to communicate fluently and confidently in a variety of settings, from casual conversations to formal presentations. Emphasis is placed on the practical use of English in real-life situations, with activities like group discussions, debates, and role-playing. Students also work on listening skills, pronunciation, and non-verbal communication, preparing them to engage effectively in both personal and professional interactions.

ENG 4104 - Technical Writing and Presentation: ENG 4104 equips students with the essential skills required to communicate technical information clearly and professionally. The course covers the structure and style of technical writing, including writing research papers, reports, manuals, and proposals. Students are trained in using technical language appropriately and effectively for different audiences. In addition to writing skills, the course includes a focus on technical presentation techniques, teaching students how to deliver organized, concise, and visually engaging presentations in front of an audience, with a focus on clarity and impact.

SSC 1101 - Bangladesh Studies: SSC 1101 provides a comprehensive overview of Bangladesh's history, geography, culture, politics, and socio-economic development. The course offers insights into the nation's past, from its liberation war to its present-day challenges and achievements. Students explore Bangladesh's role in the global context, its political structure, economic growth, and social issues. The course fosters a deep understanding of the country's identity and its contributions to regional and global affairs, while encouraging students to reflect on its diverse cultural heritage and contemporary challenges.

HUM 3101 - Society, Engineering Ethics, and Environmental Protection: HUM 3101 explores the intersection of engineering practices, ethical responsibility, and environmental sustainability. The course introduces students to the principles of engineering ethics, highlighting the moral obligations of engineers in their

professional lives. Through case studies and discussions, students examine the impact of engineering decisions on society and the environment. The course also covers the critical role of engineers in promoting sustainable development, focusing on how ethical considerations and environmental protection are integral to responsible engineering practices. By the end of the course, students are expected to think critically about their future roles as engineers in a socially and environmentally responsible manner.

ECO 1101 - Engineering Economics: ECO 1101 introduces students to the principles of economics as applied to engineering projects and decision-making. The course focuses on understanding the financial aspects of engineering work, such as cost estimation, budgeting, and economic analysis for project feasibility. Topics like time value of money, depreciation, investment analysis, and risk management are covered to equip students with the tools to make economically sound decisions in engineering and technological fields. Students learn how to evaluate costs and benefits, ultimately developing skills to balance financial and technical considerations in engineering projects.

SOC 1109 - Sociology for Science and Technology: SOC 1109 examines the social dimensions of science, technology, and innovation. The course explores how societal values, cultural beliefs, and social structures influence the development and application of technology. It also looks at the social impact of technological advancements, including ethical concerns, environmental considerations, and issues of access and inequality. By studying the relationship between society and technology, students gain a deeper understanding of how technological progress shapes, and are shaped by, social contexts and human behavior.

ACC 1501 - Financial and Managerial Accounting: ACC 1501 provides an introduction to both financial and managerial accounting, focusing on the key concepts, principles, and practices used in business and management. The financial accounting component teaches students how to prepare and analyze financial statements, while managerial accounting focuses on using accounting information for decision-making, budgeting, and performance evaluation. Through case studies and practical exercises, students develop the ability to interpret financial data and use it to inform business strategies and operations.

MGT 3301 - Project Management and Entrepreneurship: MGT 3301 is designed to provide students with the essential skills and knowledge needed to manage projects and develop entrepreneurial ventures. The course covers project planning, scheduling, budgeting, and risk management, along with the tools and techniques required for successful project execution. It also explores the fundamentals of

entrepreneurship, including identifying opportunities, developing business plans, and launching new ventures. By the end of the course, students are equipped to manage complex projects and pursue entrepreneurial goals effectively.

MGT 4562 - Operational Management: MGT 4562 focuses on the efficient management of operations in both manufacturing and service organizations. The course examines core concepts such as process optimization, supply chain management, quality control, inventory management, and production planning. Students learn to design, analyze, and improve business operations to increase productivity and reduce costs. The course emphasizes the application of operational strategies in real-world business environments, preparing students to manage and streamline operational processes in diverse sectors.

BUS 2413 - Business Communication: BUS 2413 is designed to improve students' communication skills in the context of business. The course covers key areas of written and oral communication, including email etiquette, business writing, report creation, and presentation skills. Students learn how to communicate effectively in professional settings, ensuring clarity, conciseness, and professionalism in their interactions. The course also explores communication strategies for teamwork, negotiations, and conflict resolution, enabling students to navigate complex business environments with confidence.

HUM 1101 - History of the Emergence of Bangladesh: HUM 1101 provides an in-depth study of the historical events leading to the creation of Bangladesh. The course examines the political, social, and cultural factors that contributed to the emergence of the nation, starting from its early history to the independence movement and the eventual liberation war of 1971. Students gain insight into the challenges and aspirations of the Bengali people throughout history, the role of key figures, and the broader global context of independence movements. This course fosters an understanding of Bangladesh's history and the formation of its national identity.

PHY 1103 - Introduction to Classical & Modern Physics: PHY 1103 provides a foundational understanding of both classical and modern physics, covering essential topics such as mechanics, thermodynamics, electromagnetism, relativity, and quantum theory. The course introduces the fundamental principles governing the physical world, emphasizing both theoretical concepts and practical applications. Students explore the evolution of physics from Newtonian mechanics to the more contemporary developments in quantum and relativistic physics. This course helps students develop critical thinking skills and a deeper understanding of how the physical world operates.

PHY 1104 - Physics Laboratory: PHY 1104 is a hands-on laboratory course designed to complement the theoretical knowledge gained in PHY 1103. Students engage in experiments that demonstrate key concepts in classical and modern physics, such as measuring forces, investigating energy transformations, and observing wave phenomena. The course emphasizes experimental design, data collection, and analysis, helping students develop practical skills in scientific inquiry, critical thinking, and problem-solving. It also encourages teamwork and communication of scientific results.

MAT 1203 - Differential and Integral Calculus: MAT 1203 is an introductory course in calculus, focusing on the fundamental concepts of differentiation and integration. Students learn how to calculate the rates of change of functions and solve problems related to areas under curves and volumes of solids. The course covers limits, continuity, derivatives, integrals, and their applications in real-world problems. By the end of the course, students develop the mathematical tools necessary for solving complex problems in engineering, science, and economics.

MAT 1205 - Coordinate Geometry & Vector Analysis: MAT 1205 introduces students to the study of geometric properties using algebraic methods, focusing on coordinate geometry and vector analysis. Topics include the Cartesian coordinate system, lines, circles, conic sections, and three-dimensional geometry. The course also covers vector operations, including dot and cross products, and their applications in physics and engineering. Students develop skills in solving geometric and algebraic problems using analytical techniques, which are foundational for advanced studies in mathematics and applied sciences.

MAT 2304 - Numerical Methods: MAT 2304 focuses on numerical techniques used to solve mathematical problems that cannot be solved analytically. The course covers methods such as root-finding algorithms, numerical integration and differentiation, solving systems of equations, and interpolation. Students learn to implement these methods using computational tools, gaining experience in algorithm development and problem-solving. This course is particularly valuable for fields like engineering, physics, and computer science, where numerical simulations are essential for practical applications.

MAT 2207 - Matrix, Linear Algebra, Differential Equation: MAT 2207 is a comprehensive course that integrates key concepts from matrix theory, linear algebra, and differential equations. Students study matrices, vector spaces, eigenvalues, and eigenvectors, which are essential tools for solving systems of linear equations and understanding higher-dimensional spaces. The course also covers

first-order and higher-order differential equations, focusing on methods for solving them and applying them to real-world problems in science and engineering. This course builds critical mathematical skills necessary for tackling complex systems and models.

STA 2107 - Statistics and Probability: STA 2107 introduces students to the fundamental concepts of statistics and probability theory, focusing on methods for analyzing and interpreting data. The course covers probability distributions, descriptive statistics, hypothesis testing, and regression analysis. Students learn how to apply statistical methods to real-world data, draw conclusions from data sets, and understand the role of uncertainty in decision-making. The course provides a strong foundation for fields such as economics, engineering, biology, and social sciences, where data analysis plays a critical role.

BIO 2101 - Biology for Engineers: BIO 2101 is a specialized course designed to provide engineering students with a foundational understanding of biological concepts relevant to their field. The course covers topics such as cell biology, genetics, physiology, and microbiology, with a focus on applications in biomedical engineering, environmental engineering, and biotechnology. Students learn how biological systems function, interact with technology, and influence engineering solutions, particularly in areas like bioengineering, environmental sustainability, and medical devices.

CHE 1101 - Chemistry: CHE 1101 introduces students to the fundamental principles of chemistry, focusing on the composition, properties, and reactions of matter. The course covers topics such as atomic structure, chemical bonding, stoichiometry, thermodynamics, and chemical kinetics. Students also explore organic and inorganic chemistry, with practical applications in engineering processes, material science, and environmental chemistry. By the end of the course, students are equipped with a solid understanding of chemical concepts that are critical for solving engineering problems and conducting laboratory work.

EEE 2211 - Semiconductor Physics & Device: EEE 2211 delves into the physics of semiconductors and the principles behind semiconductor devices, which are central to modern electronics. The course covers the electronic properties of semiconductors, energy bands, and the behavior of charge carriers. Topics also include the working principles of semiconductor devices like diodes, transistors, and integrated circuits. Students gain an understanding of how semiconductor materials are used to build devices that power modern technology, including computers, communication systems, and renewable energy solutions. This course is essential for students pursuing careers in electronics, telecommunications, and electrical engineering.

ME 1104 - Mechanical Engineering Drawing: ME 1104 introduces students to the fundamentals of mechanical drawing and design, focusing on the creation of technical drawings used in engineering projects. The course covers topics such as orthographic projection, isometric drawing, dimensioning, and the use of CAD (Computer-Aided Design) tools. Students learn to represent mechanical components, assemblies, and systems accurately and clearly, ensuring that designs can be effectively communicated to manufacturers, engineers, and other stakeholders in the project lifecycle.

EEE 1101 - Introduction to Electrical Engineering: EEE 1101 provides a comprehensive introduction to the field of electrical engineering, covering the fundamental concepts, theories, and applications of electrical systems. Topics include basic electrical circuits, electrical quantities like voltage, current, resistance, power, and energy, as well as an overview of electrical machines and power systems. The course helps students understand the core principles that underpin modern electrical technologies and prepares them for more advanced studies in areas like electronics, telecommunications, and power engineering.

EEE 1102 - Introduction to Electrical Engineering Laboratory: EEE 1102 is the laboratory component that complements the theoretical knowledge gained in EEE 1101. Students engage in practical experiments that reinforce concepts such as Ohm's Law, Kirchhoff's laws, and circuit analysis. They work with basic electrical components like resistors, capacitors, and inductors, and use instruments such as oscilloscopes and multimeters. The lab sessions also emphasize safety practices, measurement techniques, and data analysis, helping students develop hands-on skills essential for electrical engineering.

EEE 1201 - Electronics Device and Circuits: EEE 1201 introduces students to the fundamental principles of electronics, focusing on the behavior and applications of semiconductor devices such as diodes, transistors, and operational amplifiers. The course covers the analysis of electronic circuits, including rectifiers, amplifiers, and oscillators. Students learn to design and analyze circuits for various electronic applications, preparing them for work in fields like telecommunications, consumer electronics, and microelectronics.

EEE 1202 - Electronics Device and Circuits Laboratory: EEE 1202 is the laboratory course that provides hands-on experience with electronic devices and circuits. Students conduct experiments related to the topics covered in EEE 1201, such as the construction and analysis of amplifier circuits, rectifiers, and signal processing circuits. The laboratory sessions focus on developing skills in circuit assembly, measurement techniques, and troubleshooting, and provide a practical understanding of how electronic components are used to create functional systems.

EEE 4427 - Data Communication: EEE 4427 focuses on the principles and technologies behind data communication systems. The course covers topics such as data transmission, encoding, modulation techniques, error detection and correction, and communication protocols. Students explore both wired and wireless communication systems, learning about network architectures, data transfer methods, and the role of protocols in ensuring efficient and secure communication. The course prepares students for careers in telecommunications, networking, and the design of communication systems, with an emphasis on modern technologies like the internet of things (IoT) and wireless communication networks.

CSE 1113 - Programming Fundamentals: CSE 1113 introduces students to the basics of programming, focusing on developing skills to write, test, and debug code. The course covers fundamental programming concepts such as variables, data types, control structures (if-else, loops), functions, and arrays. Students use a high-level programming language to solve simple problems, building a solid foundation for more advanced programming topics. The course encourages logical thinking and problem-solving, essential skills for any aspiring software developer.

CSE 1114 - Programming Fundamentals Laboratory: CSE 1114 complements CSE 1113 by providing hands-on experience with programming tasks. Students apply the concepts learned in the theory class by writing and testing programs to solve practical problems. The laboratory provides a platform for students to experiment with different programming techniques, debugging methods, and software development tools. Through individual and group activities, students reinforce their understanding of programming and develop their coding skills.

CSE 1115 - Object Oriented Programming: CSE 1115 introduces students to the principles of object-oriented programming (OOP), which includes concepts such as classes, objects, inheritance, polymorphism, and encapsulation. The course teaches students to design and implement software using an object-oriented approach, emphasizing modularity, reusability, and maintainability. Students work with a widely-used object-oriented programming language (such as Java or C++) to create structured, scalable, and efficient code for real-world applications.

CSE 1116 - Object Oriented Programming Laboratory: CSE 1116 is the practical laboratory course that complements CSE 1115. Students work on hands-on projects that require them to implement object-oriented concepts such as creating classes, defining methods, and managing relationships between objects. Through exercises and group projects, students learn to apply OOP principles to solve complex software engineering problems, improving both their programming and design skills.

CSE 1110 - Competitive Programming: CSE 1110 focuses on developing problem-solving and algorithmic skills in the context of competitive programming. The course prepares students for programming contests and challenges by teaching them how to approach complex problems efficiently. Students learn advanced algorithms, data structures, and optimization techniques to solve problems quickly and accurately. The course enhances students' ability to think critically and analytically, which is crucial for excelling in coding competitions and real-world software development.

EEE 2201 - Digital Electronics and Pulse Technique: EEE 2201 introduces students to the fundamentals of digital electronics, focusing on binary logic, digital circuits, and pulse techniques. Topics include Boolean algebra, logic gates, flip-flops, multiplexers, decoders, and counters. The course provides a strong foundation for understanding how digital systems work and prepares students for more advanced topics in electronics and computer engineering. Applications in fields like digital communication and computer hardware are also explored.

EEE 2202 - Digital Electronics and Pulse Technique Laboratory: EEE 2202 is the laboratory course that complements the theory in EEE 2201. Students engage in hands-on experiments where they design, implement, and test digital circuits, using tools like logic analyzers and oscilloscopes. The lab sessions provide practical experience in building digital systems and troubleshooting issues, helping students to understand theoretical concepts through experimentation.

CSE 3815 - Microprocessors and Microcontrollers: CSE 3815 covers the architecture and operation of microprocessors and microcontrollers, which are the core components of embedded systems. Students learn about the internal structure of microprocessors, instruction sets, interfacing, and programming techniques. The course also includes the study of peripheral devices, memory management, and real-time systems. Practical applications, such as controlling devices or automating processes, are explored through real-world examples.

CSE 3816 - Microprocessors and Microcontrollers Laboratory: CSE 3816 complements CSE 3815 by offering practical experience with microprocessor and microcontroller systems. Students perform hands-on experiments where they program microcontrollers to interface with hardware components like sensors, motors, and displays. The laboratory gives students the opportunity to design, implement, and debug embedded systems, deepening their understanding of microprocessor operations and embedded applications.

CSE 3737 - Computer Organization & Architecture: CSE 3737 focuses on the structure and operation of computer systems, including the design and function of processors, memory systems, and input/output devices. Students learn about the fundamental concepts of computer organization, such as data representation, instruction sets, CPU architecture, and system performance optimization. The course also introduces the principles of assembly language programming and machine- level operations, providing a deeper understanding of how computers execute programs and manage resources.

CSE 1411 - Discrete Mathematics and Number Theory: CSE 1411 covers mathematical concepts essential for computer science, focusing on discrete structures such as sets, logic, relations, graphs, and combinatorics. The course also delves into number theory, including prime numbers, modular arithmetic, and cryptographic algorithms. Students learn how to apply these mathematical principles to solve problems in computer algorithms, data structures, and cryptography.

CSE 1413 - Data Structures: CSE 1413 introduces students to essential data structures used in computer science, including arrays, linked lists, stacks, queues, trees, and graphs. The course emphasizes the importance of choosing appropriate data structures for different computational problems, as well as the analysis of their time and space complexities. Students also learn how to implement and manipulate these structures efficiently to solve complex problems in software development.

CSE 1414 - Data Structures Laboratory: CSE 1414 is the hands-on lab course that accompanies CSE 1413. In the lab, students implement and test data structures such as lists, stacks, and trees, and gain experience in optimizing and analyzing their performance. The laboratory provides practical experience in writing code to manage and process data, giving students a solid foundation in both the theoretical and practical aspects of data structures.

CSE 2415 - Algorithms: CSE 2415 covers algorithm design, analysis, and optimization. Students learn about common algorithmic techniques such as divide and conquer, dynamic programming, greedy algorithms, and backtracking. The course emphasizes the importance of algorithm efficiency, focusing on time and space complexity analysis using Big O notation. Students gain the skills needed to solve complex computational problems efficiently, making them proficient in developing algorithms for a variety of applications.

CSE 2416 - Algorithms Laboratory: CSE 2416 provides a practical, hands-on approach to algorithm implementation. Students work on coding and testing the

algorithms they study in CSE 2415, learning how to implement them in programming languages like C++ or Python. The laboratory focuses on algorithm optimization, performance analysis, and real-world applications, allowing students to understand how theoretical algorithms can be used in practical programming scenarios.

CSE 2221 - Database Management Systems: CSE 2221 introduces students to the fundamentals of database systems, including database design, query languages (particularly SQL), and data modeling techniques. Students learn how to design relational databases, structure data for efficient querying, and ensure data integrity and security. The course covers database normalization, indexing, transactions, and concurrency control, providing students with the knowledge to develop and manage databases in a variety of applications.

CSE 2222 - Database Management Systems Laboratory: CSE 2222 is the practical laboratory course that complements CSE 2221. Students work with database management software, such as MySQL or PostgreSQL, to design and implement databases based on real-world requirements. The lab sessions focus on writing SQL queries, creating tables, optimizing database performance, and ensuring data consistency, allowing students to gain practical experience in managing databases.

CSE 3211 - Information System Design: CSE 3211 teaches students how to design and develop information systems for organizations. The course covers topics such as system analysis, requirement gathering, system modeling, and database design. Students learn how to apply methodologies like the systems development life cycle (SDLC) to create efficient, user-centered information systems that meet organizational needs. The course emphasizes the integration of software, databases, and user interfaces in system design.

CSE 3233 - Software Engineering: CSE 3233 focuses on the principles and practices of software development, covering software life cycles, project management, requirements engineering, design patterns, testing, and maintenance. The course emphasizes team collaboration, agile methodologies, and best practices for delivering high-quality software. Students also learn to apply software engineering techniques to build reliable, maintainable, and scalable software systems.

CSE 3234 - Software Engineering Laboratory: CSE 3234 provides practical experience in software engineering, where students work on group projects to develop software applications using industry-standard tools and techniques. The lab emphasizes the software development lifecycle, including planning, coding, testing,

and deployment. Students gain hands-on experience with version control, debugging, and collaborating in teams, simulating real-world software engineering practices.

CSE 2210 - Mobile Application Development: CSE 2210 introduces students to the development of mobile applications for platforms such as Android and iOS. The course covers topics like mobile UI/UX design, app functionality, and mobile development frameworks. Students learn how to create mobile applications, integrate APIs, and handle data storage and communication. By the end of the course, students have the skills to design and build functional, user-friendly mobile apps.

CSE 3210 - Internet Programming: CSE 3210 focuses on the technologies and techniques used to develop web applications. The course covers both front-end (HTML, CSS, JavaScript) and back-end (server-side scripting, databases) development. Students learn how to design, build, and deploy dynamic websites and web applications.

CSE 1111 – Computer Fundamentals and Ethics: CSE 1111 provides an introduction to computer systems, covering hardware, software, operating systems, and business applications. It explores trending technologies like AI, ML, IoT, robotics, cloud computing, and their societal impacts. The course includes hands-on training in office applications (word processing, spreadsheets, databases, presentations), basics of number systems and character encoding (ASCII, Unicode, JIS), and emphasizes ethics, privacy, cybersecurity, and intellectual property to promote responsible use of technology.

CSE 3733 - Operating Systems: CSE 3733 introduces core OS concepts, including system structure, kernel, and hardware interaction. Topics include process management, CPU scheduling, multithreading, memory management, deadlock handling, file systems, and virtualization. The course also covers cloud computing, distributed systems, and OS security, with case studies of real-world operating systems.

CSE 3734 - Operating Systems Laboratory: CSE 3734 provides hands-on experience with core operating system concepts through practical implementation. Students will work on process creation, inter-process communication, CPU scheduling, memory management, file systems, and deadlock handling. The lab also includes experiments on multithreading, virtualization, and basic system-level programming, reinforcing theoretical knowledge through real-world simulations and case studies.

CSE 3567 - Computer Networks: CSE 3567 offers a detailed understanding of the Internet, its architecture, and core networking concepts. The course covers protocol layers, packet and circuit switching, delay and throughput, and the evolution of computer networks. It explores the application layer, including HTTP, DNS, email, P2P, and video streaming. Key transport layer protocols such as TCP and UDP are examined alongside multiplexing and demultiplexing. The network layer includes IP addressing, routing algorithms, subnetting, DHCP, NAT, and IPv6. Students learn about SDN, BGP, OSPF, and traffic engineering. The link layer introduces error detection, MAC protocols, Ethernet, ARP, VLANs, and switching. The course also covers wireless and mobile networks like Wi-Fi, Bluetooth, 4G/5G, and concludes with essential network security concepts and defense mechanisms.

CSE 3568 - Computer Networks Laboratory: CSE 3568 offers practical experience through lab exercises and project work based on the theory course CSE 3567. Students will implement and analyze key networking concepts such as socket programming, client-server communication, DNS resolution, and HTTP transactions. The lab also includes experiments with TCP/UDP protocols, packet sniffing using tools like Wireshark, subnetting, routing algorithms, ARP, and DHCP. Additionally, students will explore basic network simulation, wireless communication, and network security practices, enhancing their understanding of network design, operation, and troubleshooting.

CSE 3317 - Artificial Intelligence: CSE 3317 introduces the foundational concepts, techniques, and applications of AI. The course covers intelligent agents, search strategies (both uninformed and informed), local search, and constraint satisfaction problems. Students explore game theory, adversarial search, and optimization strategies like alpha-beta pruning and Nash equilibrium. It delves into knowledge representation using first-order logic and predicate logic, as well as planning problems and algorithms. The reasoning module includes expert systems, probabilistic reasoning, and hidden Markov models. Learning paradigms such as supervised learning, Bayesian methods, genetic algorithms, and reinforcement learning are discussed. The course also introduces Natural Language Processing (NLP), covering syntactic structures, grammar formalisms, semantics, language models, word embeddings, and machine translation, providing students with a broad and practical understanding of modern AI systems.

CSE 3318 - Artificial Intelligence Laboratory: CSE 3318 provides hands-on experience with AI techniques like A* and Greedy Best-First Search, Hill Climbing, Simulated Annealing, Genetic Algorithms, Minimax Algorithm, and Alpha-Beta Pruning. Students will implement rule-based systems, Hidden Markov Models, and

work with Python libraries such as Numpy, NLTK, Scikit-learn, and spaCy. The lab covers classification algorithms (Naive Bayes, SVM, Decision Trees, KNN, Neural Networks), clustering (K-Means, OPTICS), and model evaluation using metrics like accuracy and F1-score. The course includes a final project where students develop and present AI models.

CSE 3637 - Computer and Cyber Security: CSE 3637 covers fundamental concepts of computer security, focusing on the CIA Triad (Confidentiality, Integrity, Availability) and various threats and attacks, including passive and active types. Students will learn about classical encryption techniques, cryptography, symmetric and asymmetric key encryption, including DES, AES, RSA, and Diffie-Hellman key exchange. The course delves into message authentication, hash functions, digital signatures, and authentication protocols. Network security practices such as IPsec, SSL/TLS, HTTPS, SSH, and wireless security (WEP, WPA, WPA2) are also explored. System security issues like malware, DDoS, Trojan horses, buffer overflow, and social engineering are addressed, along with intrusion detection systems (IDS), firewalls, and recovery methods.

CSE 3409 - Theory of Computation: CSE 3409 introduces foundational concepts in language theory and automata. The course covers regular languages, including deterministic and nondeterministic finite automata, their equivalence, and conversion techniques. It explores regular expressions, closure properties, and the pumping lemma. Students will study context-free grammars, pushdown automata, and parse trees, along with Turing machines and their configurations. The course also includes applications of the pumping lemma for context-free languages and Chomsky Normal Forms. Topics on decidability and the undecidability of the halting problem are addressed, along with reductions to other computational problems.

CSE 3000 - Software Development Project: CSE 3000 offers students the opportunity to apply their software development skills in a real-world context by working on a complete software development project. The course emphasizes teamwork, project management, and the full software development life cycle, including requirements gathering, design, coding, testing, and deployment. Students work on a significant project that could involve creating a web or mobile application, developing a desktop software tool, or implementing an enterprise-level system. This course helps students develop practical experience and prepares them for the challenges of working in the software development industry.

CSE 4293 - Software Testing and Quality Assurance: CSE 4293 focuses on the principles and practices of software testing and quality assurance (QA). Students

learn about different types of testing (unit, integration, system, acceptance) and testing methodologies like black-box, white-box, and regression testing. The course emphasizes quality assurance techniques to ensure that software is reliable, functional, and meets user requirements. Students also explore software quality metrics, error detection, debugging, and tools for automating the testing process. This course is critical for ensuring that software products are free from defects and perform as expected.

CSE 4294 - Software Testing and Quality Assurance Laboratory: CSE 4294 provides students with hands-on experience in applying software testing techniques and tools. In this laboratory, students design and conduct tests on software systems, perform debugging, and utilize automated testing tools. They learn how to identify defects, evaluate software quality, and improve the overall performance of software applications. The lab emphasizes practical skills in testing methodologies and tools that are essential for a career in software development and quality assurance.

CSE 4283 - Game Design and Development: CSE 4283 introduces students to the field of game design and development, covering the principles, techniques, and tools used to create interactive digital games. The course explores topics such as game mechanics, game engines, interactive storytelling, 3D modeling, and artificial intelligence in games. Students learn how to design engaging gameplay experiences and develop games using industry-standard game development platforms like Unity or Unreal Engine. By the end of the course, students have a solid understanding of the game development process, from concept to completion.

CSE 4284 - Game Design and Development Laboratory: CSE 4284 is the laboratory component of CSE 4283, where students work on practical game development projects. They apply the concepts learned in the theory course to design, develop, and test interactive games. The lab focuses on using game engines, programming for gameplay, and integrating multimedia elements (e.g., graphics, sound, animation) into games. Students also gain experience working in teams, managing game development projects, and addressing technical challenges related to game performance and interactivity.

CSE 4215 - Object Oriented Design: CSE 4215 focuses on the principles of object- oriented design (OOD) and emphasizes the use of OOD techniques to solve complex software development problems. The course covers topics such as class design, design patterns, the Unified Modeling Language (UML), and object relationships (inheritance, composition, etc.). Students learn to apply best practices in object-oriented analysis and design, enabling them to create scalable, maintainable, and reusable software systems. The course emphasizes the importance of design principles in building efficient software architectures.

CSE 4216 - Object Oriented Design Laboratory: CSE 4216 complements CSE 4215 by providing students with hands-on experience in object-oriented design. In this laboratory, students work on projects that involve designing and implementing object-oriented software systems using programming languages like Java or C++. The lab focuses on applying OOD concepts such as encapsulation, inheritance, and polymorphism, as well as creating UML diagrams to document design decisions. Students also engage in code reviews and collaborative design work, improving their ability to work in teams and produce high-quality software solutions.

CSE 4223 - Advanced Database System: CSE 4223 explores advanced concepts in database systems, such as distributed databases, database optimization, transaction management, and big data technologies. The course delves into database architectures, query optimization algorithms, and the challenges of managing large-scale data in real-world applications. Students learn about NoSQL databases, data warehousing, and advanced data models, preparing them for roles in database administration and data management in modern computing environments.

CSE 4224 - Advanced Database System Laboratory: CSE 4224 provides students with practical experience in working with advanced database systems. Students conduct experiments involving database design, optimization, and performance tuning. They also gain hands-on experience with technologies such as distributed databases and NoSQL systems. The lab emphasizes the application of theoretical concepts from CSE 4223, allowing students to develop skills in managing and optimizing complex database environments used in big data applications and enterprise systems.

CSE 4251 - Human Computer Interaction: CSE 4251 focuses on the design and evaluation of user interfaces for software applications. The course covers the principles of human-computer interaction (HCI), including usability, accessibility, and the psychology of user behavior. Students learn how to design user-friendly interfaces by considering factors like cognitive load, task flow, and user feedback. The course also explores tools and techniques for evaluating user interfaces and improving the user experience (UX). Students gain practical experience in designing intuitive and effective user interfaces for various platforms, including mobile, web, and desktop applications.

CSE 4291 - Software Architecture: CSE 4291 provides an in-depth study of software architecture, focusing on the structure and organization of software systems. The course covers architectural patterns, design principles, and the trade-offs involved in system design. Topics include modularization, layering, service-oriented

architecture (SOA), microservices, and cloud-based architectures. Students learn how to create scalable, maintainable, and secure software architectures that meet the functional and non-functional requirements of complex systems. This course is critical for software developers and engineers involved in building large-scale software applications.

CSE 4297 - Software Requirement Specifications & Analysis: CSE 4297 focuses on the process of gathering, analyzing, and documenting software requirements. Students learn how to interact with stakeholders to define the functional and non-functional requirements of software systems. The course covers techniques for requirements analysis, such as use cases, user stories, and requirement elicitation methods. Students also explore tools for managing and tracking requirements throughout the software development life cycle. This course equips students with the skills necessary to create comprehensive and accurate software requirements specifications, a crucial step in ensuring successful software development projects.

CSE 4311 - Machine Learning: CSE 4311 introduces students to the foundational concepts of machine learning, including supervised, unsupervised, and reinforcement learning techniques. The course covers key algorithms such as decision trees, support vector machines, k-nearest neighbors, and neural networks. Students also explore the mathematical foundations behind these algorithms and learn to apply them to real-world datasets for classification, regression, and clustering problems. This course is essential for students pursuing careers in data science, artificial intelligence, and analytics.

CSE 4312 - Machine Learning Laboratory: CSE 4312 provides students with hands-on experience in implementing machine learning algorithms. In this laboratory course, students work on practical projects where they apply machine learning techniques to solve real-world problems. The lab emphasizes using popular tools and libraries such as Python, TensorFlow, and scikit-learn. Students learn how to preprocess data, select appropriate algorithms, and evaluate model performance, gaining valuable skills for building and deploying machine learning models.

CSE 4371 - Digital Image Processing: CSE 4371 focuses on the theory and techniques of digital image processing. Students learn about image representation, enhancement, filtering, and restoration methods. The course covers image segmentation, feature extraction, and object recognition. Students explore advanced topics such as image compression and morphological image processing. This course is valuable for those interested in applications like computer vision, medical imaging, and remote sensing.

CSE 4372 - Digital Image Processing Laboratory: CSE 4372 provides practical experience in digital image processing. In this laboratory, students implement algorithms for image enhancement, filtering, segmentation, and feature extraction using programming tools and libraries like MATLAB and OpenCV. The lab allows students to work on projects involving real-world images, giving them a hands-on understanding of how digital image processing techniques are applied in various fields.

CSE 4345 - Big Data Analytics: CSE 4345 introduces students to the principles and practices of big data analytics. The course covers data mining, predictive analytics, and the use of distributed computing frameworks such as Hadoop and Spark. Students learn how to process and analyze large datasets, extract meaningful insights, and make data-driven decisions. The course also explores the challenges of managing big data, including scalability, storage, and real-time processing, preparing students for careers in big data engineering and analytics.

CSE 4346 - Big Data Analytics Laboratory: CSE 4346 provides students with hands-on experience in big data analytics. In this laboratory, students work with large datasets and apply tools like Hadoop, Spark, and NoSQL databases to perform data analysis. The lab emphasizes practical skills in data preprocessing, visualization, and model building, helping students gain expertise in working with big data technologies and solving complex data analytics problems.

CSE 4791 - Digital Signal Processing: CSE 4791 covers the fundamental concepts and techniques of digital signal processing (DSP). Topics include discrete-time signals, linear time-invariant systems, z-transforms, Fourier analysis, filtering, and convolution. Students also learn about DSP applications in audio and video processing, communications, and speech recognition. This course is important for students pursuing careers in communications, multimedia, and signal processing.

CSE 4792 - Digital Signal Processing Laboratory: CSE 4792 provides practical experience in applying DSP techniques. In this laboratory course, students implement signal processing algorithms using tools like MATLAB and Python. The lab focuses on hands-on projects such as filtering, frequency analysis, and signal reconstruction. Students also work with real-world signals, such as audio and sensor data, to deepen their understanding of DSP concepts.

CSE 4367 - Internet of Things: CSE 4367 introduces students to the Internet of Things (IoT) and its applications. The course covers IoT architecture, sensors, communication protocols, data processing, and cloud computing. Students learn

how to design and build IoT systems, integrating hardware and software components to create smart devices and networks. Topics include IoT security, data privacy, and real-time analytics, preparing students for careers in the growing field of IoT technology.

CSE 4368 - Internet of Things Laboratory: CSE 4368 is the laboratory component of CSE 4367, where students gain hands-on experience in developing IoT systems. In this lab, students work with sensors, microcontrollers, and IoT platforms like Raspberry Pi and Arduino. They learn to collect data from physical devices, process it, and send it to cloud servers for analysis. The lab emphasizes the practical skills required to design, implement, and deploy IoT solutions.

CSE 4333 - Data Mining: CSE 4333 introduces students to the field of data mining, focusing on techniques for discovering patterns and relationships in large datasets. Topics include classification, clustering, association rules, anomaly detection, and dimensionality reduction. The course covers both theoretical foundations and practical algorithms used in data mining, preparing students for roles in data science and analytics.

CSE 4321 - Introduction to Bioinformatics: CSE 4321 introduces students to bioinformatics, the intersection of computer science and biology. The course covers techniques for analyzing biological data, such as DNA and protein sequences, using computational methods. Students learn about algorithms for sequence alignment, gene prediction, and protein structure prediction. This course is valuable for students interested in the applications of computing in healthcare, biotechnology, and genomics.

CSE 4373 - Artificial Neural Networks and Fuzzy Systems: CSE 4373 explores artificial neural networks (ANNs) and fuzzy systems, two important topics in artificial intelligence. The course covers the theory and application of ANNs, including feedforward, recurrent, and deep learning networks. It also introduces fuzzy logic systems and their applications in decision-making and control systems. Students learn how to design and train neural networks and fuzzy systems for real-world applications such as pattern recognition, robotics, and predictive modeling.

CSE 4483 - Distributed Systems and Algorithms: CSE 4483 introduces students to the fundamental concepts of distributed systems and algorithms. The course covers topics such as distributed communication, consensus algorithms, distributed databases, and fault tolerance. Students learn how to design and implement

algorithms for coordinating tasks across distributed systems and ensuring consistency in large-scale environments. The course also delves into challenges such as latency, scalability, and synchronization, preparing students for careers in cloud computing, networked systems, and distributed software development.

CSE 4484 - Distributed Systems and Algorithms Laboratory: CSE 4484 provides hands-on experience in the design and implementation of distributed systems and algorithms. Students work on practical projects that involve building and testing distributed applications, exploring topics like replication, load balancing, and distributed data storage. The lab emphasizes the use of programming languages and frameworks commonly used in distributed systems development, such as Java, Python, and Apache Kafka, giving students practical skills for working with complex networked systems.

CSE 4411 - Compiler Design: CSE 4411 focuses on the theory and practice of compiler design. Students learn about the phases of a compiler, including lexical analysis, syntax analysis, semantic analysis, optimization, and code generation. The course covers formal languages, context-free grammars, and parsing techniques. Students also explore compiler construction tools like Lex and Yacc and implement a simple compiler for a programming language. This course provides students with a deep understanding of how high-level programming languages are translated into executable code.

CSE 4412 - Compiler Design Laboratory: CSE 4412 is the laboratory component of CSE 4411, providing students with hands-on experience in building a compiler. In this lab, students implement various phases of a compiler, such as lexical analyzers, parsers, and code generators. They also test and debug their compilers to ensure they handle different programming constructs efficiently. This laboratory enables students to apply the theoretical concepts learned in CSE 4411 and gain practical experience in the field of compiler construction.

CSE 4473 - Computer Graphics: CSE 4473 covers the principles and techniques of computer graphics, focusing on the mathematical and algorithmic foundations of 2D and 3D graphics. The course explores topics such as geometric transformations, rendering, shading, texture mapping, and the use of graphics APIs like Open GL. Students learn how to create realistic computer-generated images and animations, with applications in video games, simulations, and computer-aided design (CAD).

CSE 4474 - Computer Graphics Laboratory: CSE 4474 provides practical experience in computer graphics through hands-on projects. Students use tools like OpenGL

and other graphics programming libraries to implement rendering algorithms, create 2D and 3D visualizations, and develop interactive graphics applications. The lab emphasizes problem-solving skills in creating graphical interfaces, animations, and visual effects, providing students with the skills to develop advanced graphics software.

CSE 4491 - Combinatorial Optimization: CSE 4491 introduces students to combinatorial optimization techniques used to solve problems involving the optimization of discrete structures. Topics include graph algorithms, dynamic programming, greedy algorithms, and integer programming. The course covers classic optimization problems like the traveling salesman problem, knapsack problem, and maximum flow problem. Students learn how to apply these methods to solve complex optimization problems encountered in fields like logistics, operations research, and network design.

CSE 4413 - Computational Geometry: CSE 4413 explores the field of computational geometry, which focuses on geometric algorithms and data structures used to solve problems in areas such as computer graphics, computer-aided design (CAD), and robotics. Topics include convex hulls, Voronoi diagrams, geometric searching, and spatial data structures. Students learn how to apply computational geometry techniques to real-world problems that involve spatial data, such as collision detection, map analysis, and geographic information systems (GIS).

CSE 4401 - Computer Arithmetic: CSE 4401 focuses on the design and analysis of arithmetic operations in digital computers. The course covers number representations (binary, floating-point, etc.), arithmetic algorithms for addition, subtraction, multiplication, and division, and error analysis. Students learn about the limitations of computer arithmetic and techniques for improving the precision and efficiency of numerical computations. This course is essential for understanding the underlying hardware and software used in high-performance computing and scientific applications.

CSE 4463 - Graph Theory: CSE 4463 introduces students to graph theory, focusing on the study of graphs, their properties, and algorithms for solving graph-related problems. Topics include graph traversal, connectivity, shortest path algorithms, network flow, and graph coloring. Students learn how to apply graph theory to problems in areas such as computer networking, social network analysis, and scheduling. The course provides a solid foundation for students interested in fields like data structures, algorithms, and optimization.

CSE 4511 - Communication Engineering: CSE 4511 introduces students to the fundamentals of communication systems, focusing on both analog and digital communication techniques. Topics include modulation, demodulation, signal processing, error correction, and communication channels. Students learn about communication networks, wireless systems, and transmission technologies. This course is essential for students interested in careers in telecommunications, wireless communication, and networking.

CSE 4512 - Communication Engineering Laboratory: CSE 4512 provides hands-on experience in communication engineering. In this laboratory, students implement and test various communication systems, including both analog and digital systems. The lab focuses on experiments involving modulation techniques, signal generation, and error detection, helping students apply theoretical concepts to real-world communication scenarios. Students gain practical experience with tools used in communication system design and analysis.

CSE 4523 - Cloud Computing: CSE 4523 explores cloud computing technologies and their applications. Students learn about cloud architecture, virtualization, and service models such as IaaS, PaaS, and SaaS. The course covers distributed storage, load balancing, and security concerns in cloud environments. Students also study cloud platforms like AWS, Microsoft Azure, and Google Cloud, preparing them to design and deploy scalable applications in the cloud.

CSE 4524 - Cloud Computing Laboratory: CSE 4524 provides practical experience in cloud computing. Students work on projects involving the deployment of cloud applications, utilizing platforms like AWS and Google Cloud. The lab emphasizes hands-on skills in setting up virtual machines, managing cloud resources, and scaling applications. Students also explore cloud security and performance optimization techniques, preparing them for roles in cloud infrastructure management and cloud-based application development.

CSE 4591 - Network Security: CSE 4591 focuses on the principles and practices of network security. Topics include encryption, authentication, firewalls, intrusion detection systems, and secure network protocols. Students learn how to protect networks from cyber-attacks, prevent data breaches, and secure communication channels. The course prepares students for careers in network administration, cybersecurity, and information security, teaching them to identify and mitigate security threats in networked environments.

CSE 4592 - Network Security Laboratory: CSE 4592 provides hands-on experience in network security. In this laboratory, students implement security measures such as

encryption, access control, and firewalls. The lab also covers tools for vulnerability scanning, intrusion detection, and network traffic analysis. Students work on projects that involve securing networks and defending against cyber-attacks, applying theoretical knowledge to practical security challenges.

CSE 4517 - Wireless Communication: CSE 4517 covers the fundamentals of wireless communication systems. Topics include radio propagation, modulation techniques, wireless network protocols, and mobile communication. The course explores various wireless technologies such as Wi-Fi, Bluetooth, and cellular networks, as well as emerging trends in 5G and IoT communication. Students gain an understanding of the challenges and techniques involved in designing and managing wireless communication systems.

CSE 4593 - Web Application Security: CSE 4593 focuses on the security challenges associated with web applications. Topics include secure coding practices, web vulnerabilities (e.g., SQL injection, XSS), authentication and authorization, and web security protocols. Students learn how to identify, prevent, and mitigate common web security threats, and they gain hands-on experience in securing web applications. This course is essential for students pursuing careers in cybersecurity, web development, and secure software engineering.

CSE 4825 - Digital System Design: CSE 4825 focuses on the design of digital systems using both combinational and sequential logic. The course covers topics such as Boolean algebra, logic gates, flip-flops, multiplexers, counters, and finite state machines. Students learn to design and optimize digital circuits and systems, including the application of hardware description languages (HDLs) such as VHDL and Verilog. This course is essential for students interested in digital electronics, hardware design, and embedded systems development.

CSE 4826 - Digital System Design Laboratory: CSE 4826 is the laboratory component of CSE 4825, where students gain hands-on experience in designing and implementing digital systems. Students use simulation tools and hardware platforms like FPGAs to design and test digital circuits. They work on projects that involve the design of complex digital systems, such as data processing units and control circuits, applying the concepts learned in lectures to real-world digital design problems.

CSE 4833 - Introduction to Robotics Engineering: CSE 4833 introduces students to the fundamental concepts of robotics engineering. Topics include robot kinematics, dynamics, sensors, actuators, and control systems. The course explores various types

of robots, including mobile robots, industrial robots, and autonomous systems. Students learn about the principles of robot design, robot programming, and the integration of hardware and software in robotic systems, preparing them for advanced studies and careers in robotics and automation.

CSE 4834 - Introduction to Robotics Engineering Laboratory: CSE 4834 provides hands-on experience in robotics engineering. In this laboratory, students work on projects involving robot design, programming, and control. They build and test robotic systems, using platforms like Arduino or ROS (Robot Operating System) to control robot movements and sensors. Students also work on tasks related to robot localization, path planning, and obstacle avoidance, applying the theoretical knowledge from CSE 4833 to real-world robotics problems.

CSE 4815 - Computer Interfacing: CSE 4815 focuses on the principles of computer interfacing, where students learn how to connect and control external devices using a computer system. Topics include input/output systems, peripheral devices (e.g., sensors, actuators), and communication protocols such as UART, SPI, and I2C. Students gain experience in writing software to interact with hardware components, and learn how to design interfaces for applications like embedded systems, robotics, and industrial automation.

CSE 4816 - Computer Interfacing Laboratory: CSE 4816 is the laboratory component of CSE 4816, offering hands-on experience in interfacing external devices with computer systems. Students work on projects involving sensors, actuators, and communication protocols to design and implement interfaces for embedded systems. The lab emphasizes the use of microcontrollers and development boards like Arduino and Raspberry Pi to interface with real-world hardware and solve practical engineering problems.

CSE 4817 - Embedded System Design: CSE 4817 covers the design and development of embedded systems, focusing on microcontroller-based systems. Topics include system architecture, hardware-software integration, real-time operating systems (RTOS), and system debugging. Students learn how to design and implement embedded applications for various domains, such as automotive, consumer electronics, and industrial automation. This course prepares students for careers in embedded systems design and development.

CSE 4818 - Embedded System Design Laboratory: CSE 4818 provides practical experience in embedded system design. Students work on projects that involve programming and debugging microcontrollers, interfacing sensors and actuators,

and building embedded applications. The lab emphasizes hands-on skills with tools like development boards (e.g., Arduino, ESP32) and software for embedded systems, giving students the opportunity to apply the concepts learned in CSE 4818 to real-world embedded system projects.

CSE 4843 - Control Systems: CSE 4843 focuses on the analysis and design of control systems. Topics include feedback systems, stability analysis, transfer functions, and controller design techniques such as PID control and state-space methods. The course explores the use of control systems in applications like robotics, automation, and electronics. Students learn to model and analyze dynamic systems, and design controllers to meet desired performance specifications.

CSE 4844 - Control Systems Laboratory: CSE 4844 provides hands-on experience in designing and implementing control systems. In this laboratory, students work with real-time control systems, using tools like MATLAB/Simulink to simulate and design controllers. They build and test control systems for various applications, such as motor control and temperature regulation, applying the theoretical concepts learned in CSE 4844 to practical engineering challenges.

CSE 4735 - Visualizing Complex Information: CSE 4735 explores techniques for visualizing complex datasets and information. Students learn how to represent data in ways that make it easier to understand and analyze. Topics include data visualization principles, interactive visualization tools, and visualization of large-scale data. The course prepares students to apply visualization techniques to various fields like business intelligence, scientific research, and big data analytics.

CSE 4736 - Visualizing Complex Information Laboratory: CSE 4736 provides hands-on experience in creating visualizations for complex data. Students work on projects where they apply visualization techniques and tools to real-world datasets. The lab emphasizes the practical aspects of designing and implementing interactive visualizations, using software like Tableau, D3.js, and Python libraries. This lab helps students understand how to present data clearly and effectively for various applications.

CSE 4253 - UI: Concepts and Design: CSE 4253 covers the principles of user interface (UI) design. Students learn about the human-centered design process, UI components, usability, and accessibility. The course teaches design best practices for creating intuitive and effective user interfaces for web and mobile applications. Students gain knowledge of design tools and methodologies that are essential for UI designers in various industries.

CSE 4254 - UI: Concepts and Design Laboratory: CSE 4254 provides practical experience in designing and implementing user interfaces. In this lab, students work on UI design projects, applying the concepts learned in CSE 4253. They use prototyping tools, like Figma and Adobe XD, to create and test interactive UI designs. The lab emphasizes user-centered design principles and allows students to develop a portfolio of UI design work.

CSE 4573 - Green Computing: CSE 4573 explores the principles of green computing, focusing on energy-efficient computing systems and sustainable technologies. Topics include energy-efficient hardware, low-power software design, and the environmental impact of data centers and cloud computing. Students learn how to reduce the carbon footprint of computing systems while maintaining performance and reliability.

CSE 4574 - Green Computing Laboratory: CSE 4574 offers hands-on experience in the application of green computing principles. Students work on projects to design energy-efficient computing systems and software, measure energy consumption, and explore sustainable computing practices. The lab also covers topics like energy-aware algorithms and power-efficient hardware design, giving students practical skills in implementing green computing solutions.

CSE 4743 - Multimedia Technology: CSE 4743 introduces students to multimedia technologies and their applications. Topics include image and video processing, audio systems, multimedia data compression, and interactive multimedia systems. The course also covers the integration of multimedia into web and mobile applications. Students learn to design and implement multimedia content, exploring how it can enhance user experiences in digital systems.

CSE 4744 - Multimedia Technology Laboratory: CSE 4744 provides practical experience with multimedia technologies. Students work on projects that involve creating and processing multimedia content such as images, audio, and video. The lab covers topics like multimedia encoding, editing, and streaming, allowing students to gain hands-on skills in multimedia content creation and integration for applications like entertainment, education, and communications.

CSE 4295 - Enterprise Systems: Concepts and Practice: CSE 4295 introduces students to enterprise systems and their role in business operations. Topics include enterprise resource planning (ERP), customer relationship management (CRM), and supply chain management systems. The course explores the integration of business functions through technology and teaches students how to design and implement enterprise solutions. Students learn about the challenges and best practices in managing large-scale enterprise systems.

CSE 4299 - IT Audit: Concepts and Practice: CSE 4299 covers the principles and practices of IT auditing. Students learn how to assess and evaluate the effectiveness of an organization's IT systems, including security, compliance, and risk management. Topics include audit planning, controls, and IT governance. The course prepares students to conduct audits of IT infrastructure, applications, and policies, ensuring that they meet legal and regulatory requirements.

CSE 4731 - Simulation and Modelling: CSE 4731 focuses on the techniques used for simulating and modeling complex systems. Students learn about various simulation methods, including discrete-event simulation, Monte Carlo methods, and system dynamics. The course covers topics like model validation, simulation software, and applying simulation in areas such as manufacturing, logistics, and telecommunications. Students gain skills in designing and running simulations to analyze system behavior under different conditions.

CSE 4732 - Simulation and Modelling Laboratory: CSE 4732 provides hands-on experience in simulation and modeling. Students use simulation software to model and analyze real-world systems in various domains such as transportation, healthcare, and manufacturing. The lab focuses on implementing different simulation techniques learned in CSE 4731, allowing students to work on practical projects that involve simulating dynamic systems, analyzing performance metrics, and validating results.

CSE 4000 - Final Year Design Project:

Total Credit: 4.00

- CSE 4000A: 1.00 Credit in 7th Semester
- CSE 4000B: 3.00 Credits in 8th Semester

The Final Year Design Project (FYDP) consists of two parts: CSE 4000A and CSE 4000B. In CSE 4000A (7th semester), students propose a project that aligns with their academic and professional goals. The project proposal undergoes approval, ensuring that it meets the necessary academic standards and learning objectives. By the end of the semester, students are required to submit an interim project report (proposal report) and deliver a presentation that demonstrates the planning of their Final Year Design Project. In CSE 4000B (8th semester), students implement the approved proposal and develop the required soft skills such as effective communication, teamwork, ethical leadership, project management, and design methodology. The course culminates in the submission of a comprehensive final report and a formal presentation, which must cover the project's background, objectives, methodology

and implementation, achieved outcomes, implications and real-world applications, project scope and timeline, and economic decision-making considerations. Student performance, report and presentation will be evaluated based on specific learning outcomes and program objectives, using standard rubrics to ensure fair and consistent assessment.

CSE 4001 - Industrial Attachment / Internship /Professional Training:

This course is a core requirement for students of the B.Sc. in CSE program, offered in the 4th year (final year), second semester. It is designed to provide students with practical industry exposure through a two-week industrial attachment, internship, or professional training in a recognized organization from either the government or private sector. During this period, students work on trending technologies and participate in live projects under the supervision of industry professionals. The objective is to help students apply theoretical knowledge in real-world settings, develop technical expertise, and strengthen professional skills such as communication, teamwork, and ethical responsibility. The training is aligned with industry standards and serves as a key component of the program's capstone experience. The course culminates in the submission of a comprehensive final report and a formal presentation detailing the training experience, learning outcomes, and project involvement. Student performance, report and presentation will be evaluated based on specific learning outcomes and program objectives, using standard rubrics to ensure fair and consistent assessment across all trainees.

16. **Marks distribution of different types of courses**

   Marks distribution of Hardware Lab

Category	Marks %
Class Assessment	10
Lab Performance	40
Report	20
Quiz/Written Exam	20
Viva	10
Total	**100**

Marks distribution of Project-based Lab (Hardware/Programming)

Category	Marks %
Class Assessment	10
Lab Performance	20
Project	30
Presentation/Viva	20
Report	20
Total	**100**

Marks distribution of Programming-based Lab

Category	Marks %
Class Assessment	10
Lab Performance	20
Report	10
Lab Exam	30
Quiz/written Exam	20
Viva	10
Total	**100**

Marks distribution of Seminar-type Course

Category	Marks %
Class Assessment	10
Class Participation/Group Work	30
Quiz/Class Test/Assignment	30
Presentation	20
Viva	10
Total	**100**

Marks distribution of Final Year Project/Internship

Category	Marks %
Performance	40
Report	30
Presentation	30
Total	**100**

17. **Facilities**

Academic Facilities: The Department of Computer Science and Engineering (CSE) is committed to providing students with a dynamic and well-equipped learning environment. To support academic excellence, the department offers state-of-the-art classrooms, advanced laboratories, and extensive library resources. These facilities are designed to ensure that students receive a comprehensive education aligned with industry standards.

- **Classrooms:** The Department of Computer Science and Engineering (CSE) features a well-structured academic space spread across four floors, comprising 19 spacious classrooms and four wide corridors. Each classroom is designed to offer an engaging and comfortable learning atmosphere, equipped with essential amenities such as writing pad chairs, sturdy tables, ceiling fans, air conditioning, and adequate lighting. To facilitate effective teaching and interactive learning, classrooms are furnished with projectors, whiteboards, wall clocks, and high-quality speakers. Additionally, fire safety measures, including fire extinguishers, are strategically placed to ensure a secure environment. The presence of curtains, waste bins, and well-maintained interiors further enhances the overall functionality of the classrooms.

Floor	Rooms	Corridor
4th floor	403, 404, 405, 406, 408, 409, 410, 411 (8 rooms)	4th floor corridor (4 notice boards, 6 fire safety bottles)
5th floor	510 (1 room)	5th floor corridor
6th floor	609, 610, 611, 612, 613 (5 rooms)	6th floor corridor (2 notice boards, 5 fire safety bottles)
9th floor	901, 902, 903, 906, 910 (5 rooms)	9th floor corridor

- **Laboratory:** The Department of Computer Science and Engineering is equipped with ten well-structured laboratories designed to facilitate hands-on learning, research, and project-based activities. These labs are categorized based on their functionality:

➢ **Programming Labs**
These labs are dedicated to developing students' programming skills and computational thinking through hands-on practice and problem-solving exercises.

- **Computer Programming Lab-I – Room No. 605:** Focuses on fundamental programming concepts and structured problem-solving.

- **Computer Programming Lab-II – Room No. 608:** Provides an advanced programming environment for coursework and assignments.

- **Competitive Programming Lab – Room No. 909:** Designed for students preparing for coding competitions like ICPC and NGPC.

- **Operating Systems Lab – Room No. 905:** Offers a practical learning space for OS concepts, system programming, and kernel-based experiments.

- **High-Performance Computer Lab – Room No. 904:** Equipped with high-end machines for computational research, parallel processing, and algorithmic simulations.

➢ **Computer Networking Lab – Room No. 606:** Provides a hands-on learning experience on network configurations, cloud computing, cyber security, and network troubleshooting.

➢ **Hardware Lab**

This lab enables students to explore networking, hardware architecture, and system connectivity.

- **Microprocessor – Microcontroller & IoT Lab – Room No. 503:** Provides hands-on experience with microprocessors and microcontrollers, focusing on assembly language programming, interfacing techniques, and real-time applications.

- **Physics and Chemistry Lab – Room No. 505:** Equipped with modern instruments to help students conduct experiments related to mechanics, electromagnetism, optics, and waves oscillation. It provides hands-on experience to reinforce theoretical concepts and develop practical problem-solving skills.

- **Electrical Circuit Labs – Room No. 501, 506 and 508:** The Electrical Circuit Labs I (Room- 501), II (Room- 506), and III (Room-508) provide comprehensive hands-on training in electrical and electronic engineering, covering fundamental to advanced concepts. These courses introduce students to essential topics such as circuit analysis, semiconductor devices, amplifiers, logic circuits, and pulse techniques. Through practical experiments, students gain a deeper understanding of electrical engineering principles, electronics, and digital systems, preparing them for real-world applications and advanced studies in the field.

- **The Communication Engineering & Control Systems Lab – Room No. 509:** The Communication Engineering & Control Systems Lab trains students in system design, stability analysis, and communication technologies. It covers transfer functions, frequency response analysis, state-space

modeling, and PLC automation. Students also explore analog and digital modulation techniques like AM, FM, ASK, FSK, and PSK using advanced lab instruments.

➢ **Project-based Labs**

These labs encourage innovation and research-oriented projects in software development and artificial intelligence.

- **Software Development Lab – Room 604:** A dedicated space for software engineering projects, app development, and web-based applications.

- **Artificial Intelligence Lab – Room 601:** Supports AI and machine learning research, focusing on deep learning, data science, and automation projects.

These state-of-the-art labs create an immersive learning environment, enabling students to gain technical expertise and hands-on experience in cutting-edge technologies.

- **Libraries:** The Department of Computer Science and Engineering (CSE) provides access to a well-equipped library, covering an approximate area of 1,050 square feet. Designed to support academic and research activities, the library offers a comfortable and quiet study environment with a seating capacity of 50 students. The library houses an extensive collection of 3,876 printed books, covering 853 different titles, ensuring that students and faculty have access to a wide range of academic and technical resources. Additionally, the facility is equipped with five computers, enabling digital research and access to online academic materials. To complement its physical collection, the library provides online access to digital resources, e-books, and research journals, allowing students to explore the latest developments in computer science and engineering. Students can also benefit from various printed magazines, including *The Economist, Time, Frontline, Bangladesh Legal Times*, and the renowned Bangla literary magazine *Kali O Kolom*. Furthermore, the library maintains 10 titles of printed research papers, providing valuable reference materials for scholarly work. The library operates from Saturday to Wednesday, between 8:30 AM and 5:30 PM, offering students ample time to explore its resources and engage in research.

- **Student Support Facilities:** The Department prioritizes the academic and personal well-being of its students by offering a range of support services. These facilities are designed to provide guidance, assistance, and resources to help students excel in their studies and navigate university life with confidence.

- **Counseling:** The department offers academic and career counseling to guide students in making informed decisions about their studies, research interests, and professional goals. Faculty members and designated advisors provide support on course selection, project development, and career opportunities. The PUAIS software, managed by academic advisors, enables students to view results, enroll in courses, and manage course drops, enhancing the overall academic experience.

- **Dedicated Consultation Hours of Faculty Members:** Beyond regular weekly lectures, faculty members dedicate specific consultation hours and tutoring sessions to ensure personalized academic support. These sessions, outlined in the lesson plan at the start of each semester, provide students with opportunities for one-on-one guidance. Additionally, to enhance learning outcomes, faculty members conduct comprehensive review classes toward the end of each semester. These review sessions are either pre-scheduled in the lesson plan or arranged upon student request, ensuring thorough preparation for final assessments.

Career Opportunities: A degree in computer science opens doors to some of the world's most dynamic industries. Graduates from this program develop expertise in cutting-edge technologies, enabling them to secure roles in leading local and global tech companies, startups, and research institutions. The department is deeply committed to bridging the gap between academia and industry, ensuring students remain competitive, industry-ready, and in high demand. With strong ties to leading companies and emerging trends, students receive hands-on experience, career guidance, and exposure to real-world challenges that shape the future of technology.

To bridge academia and industry, the Extra-Curricular and Career Guidance Committee, Industry Advisory Panel, and American Corner (through strategic MoUs) play pivotal roles in preparing students for professional success. The Career Guidance Committee frequently shares job postings, research conference announcements, and training/workshop opportunities via the department's website and social media channels. Faculty members also leverage their professional networks to connect outstanding students with career opportunities.

The American Corner, a collaborative initiative, provides a dynamic platform for career enhancement. It organizes industry-focused workshops, technical training sessions, and networking events, fostering essential workplace skills and global communication abilities. These efforts collectively ensure that graduates are well-equipped to thrive in an evolving digital economy, whether in software engineering, artificial intelligence, cybersecurity, or academic research.

- **Enrollment:** The department facilitates a smooth and efficient enrollment process for new and returning students. Dedicated advisers assist with course registration, credit requirements, and academic guidelines, ensuring students can seamlessly go through their academic journey.

- **Teachers' Room:** Teachers' rooms 507, 607, and 907 serve as dedicated faculty spaces for academic discussions, student consultations, and research activities. Each room is equipped with essential facilities, including printers, photocopy machines, Wi-Fi, and desktop PCs, to support teaching, mentoring, and administrative tasks.

Administrative Facilities:

Section Office: The Section Office (Room 603) serves as the administrative hub for academic coordination, student inquiries, and departmental documentation. It facilitates course registrations, exam procedures, and other academic services.

Chairman's Office: The Chairman's Office (Room 602) is the office of the department head, where administrative decisions, faculty meetings, and student consultations take place. It is the central point for departmental leadership and coordination.

18. Program Stakeholders

The success of an engineering program relies on the contributions and feedback of various stakeholders, each playing a crucial role in shaping its structure, quality, and outcomes. The CSE department at Premier University actively engages with its key stakeholders to ensure the program remains relevant, industry-oriented, and aligned with national and global educational standards. The primary stakeholders include employers of graduates, alumni, current undergraduate students, faculty, professional bodies, and accreditation bodies.

1. Employers of graduates of the program
2. The alumni
3. Current undergraduate students
4. The faculty
5. The Accreditation Bodies

1. Employers of graduates of the program:

Employers of CSE graduates play a significant role in assessing the effectiveness of the program in preparing students for the professional world. Most of the employers

are also members of recognized international and national professional bodies such as IEEE, IEB, BASIS, BCS, etc. Their feedback provides insights into the skills and competencies required in the industry, enabling the department to refine its curriculum accordingly. Employers seek graduates who are not only proficient in technical knowledge but also demonstrate strong problem-solving abilities, teamwork, and communication skills. Industry collaborations, internships, and recruitment drives help bridge the gap between academia and real-world applications, ensuring that students gain practical exposure. Furthermore, employers' expectations drive the department to continuously update its courses, integrating emerging technologies and industry best practices to enhance graduates' employability.

2.   The alumni:

Alumni serve as a bridge between the academic environment and the professional world, offering valuable insights into industry trends and expectations. Their experiences in the workforce provide a critical perspective on the effectiveness of the education they received. By maintaining strong connections with alumni, the department benefits from their feedback, which helps in refining program objectives and course content. Alumni also play a vital role in mentoring current students, offering career guidance, and providing networking opportunities that enhance job placement prospects. Additionally, alumni contributions, whether in the form of guest lectures, collaborative research projects, or financial support, further strengthen the department's academic and professional standing..

3.   Current undergraduate students:

Current undergraduate students are the core beneficiaries of the engineering program, and their active participation is essential for continuous academic improvement. Their feedback on course content, teaching methodologies, laboratory facilities, and extracurricular activities helps the faculty identify areas that need enhancement. Engaging students in research projects, hackathons, and industry-led initiatives ensures they develop critical thinking, innovation, and practical skills. The department fosters an environment that encourages student participation in decision-making processes, ensuring that their academic and professional growth aligns with industry and societal needs. Moreover, student organizations and clubs create avenues for leadership, collaboration, and exposure to technological advancements, further enriching their learning experience.

4.   The faculty:

Faculty members are at the heart of academic excellence, responsible for designing and delivering the curriculum, conducting research, and guiding students toward

professional success. Their expertise, teaching methods, and continuous professional development directly impact the quality of education offered. Faculty members engage in research projects, publish scholarly articles, and collaborate with industry professionals to ensure the program remains dynamic and forward-thinking. In addition, their mentorship plays a crucial role in shaping students' technical and ethical perspectives, preparing them for both higher studies and professional careers The department encourages faculty members to actively participate in conferences, workshops, and collaborative research to stay updated with emerging technologies and pedagogical advancements.

5.   The Accreditation Bodies:

Accreditation bodies such as the Board of Accreditation for Engineering and Technical Education (BAETE) and Bangladesh Accreditation Council (BAC) set benchmarks that ensure the quality and credibility of the CSE program. These bodies evaluate the program based on various criteria, including curriculum structure, faculty qualifications, research output, student performance, and industry engagement. Regular accreditation assessments help maintain compliance with national and international educational standards, ensuring continuous improvement in teaching methodologies and program outcomes. Accreditation also enhances the global recognition of the degree, making graduates more competitive in both local and international job markets. The department remains committed to comply to accreditation requirements and always pursues to get the accreditation, fostering an environment of academic excellence and continuous progress.

19.   Social and Extracurricular

- **Clubs and Societies:** There are numbers of clubs functioning within the department to ensure the engagement and participation of the students in different extra and cocurricular activities. These activities enhance their leadership, teamwork, and creative skills. The major clubs are:

Computer Club:

The Computer Club at Premier University, established in 2015, serves as a dynamic hub for students to network, collaborate, and dive deep into tech-related projects, enhancing the campus's technological ecosystem. Through student-led groups focused on IoT, Embedded Systems, Deep Neural Research, DevOps, Linux-Based Networking, and Mobile/Game Development, the club fosters hands-on learning, collaboration, and skill development.

List of workshops and seminars:

Name of the Workshop	Year	Sponsors
Seminar on Unveiling Excellence: Crafting Research Masterpieces for Top Journals	2023	Dept. of CSE, PU in collaboration with American Corner, Chattogram
IEEE Xtreme 17.0 Info Session	2023	IEEE, PU Student Branch
Workshop on Graphic Design	2023	Dept. of CSE, PU
Level Up Your Software Quality	2023	IEEE, PU Student Branch
Workshop on Introduction to Video Game and XR Technology	2023	Dept. of CSE, PU
Workshop on Configuring a Cisco Meraki Router.	2023	Dept. of CSE, PU
Bdapps Hackathon Briefing Session	2023	Dept. of CSE, PU
Workshop on Mastering Wordpress installations: Unleashing the power of Standalone and Multisite on a live Server	2023	Dept. of CSE, PU
Workshop on "Routing, Switching & Networking Basics" & "Digital Marketing And Soft Skill Development"	2023	Dept. of CSE, PU
Webinar on Research: How to initiate?	2023	IEEE, PU Student Branch
Webinar on Harnessing Opportunities in Global Higher Education and Research.	2023	CSE-Alumni Association
Webinar on Compilation, Analysis and Application of Comprehensive Bangla Corpus	2023	IEEE Computer Society, Bangladesh Chapter
Webinar On Business Data Analytics: An Approach for Business Analyst	2023	IIBA Bangladesh Chapter
Webinar On Freelancing Career	2023	Dept. of CSE, PU
Sharing Ideas of Extra Curricular and Co-curricular Activities	2022	Dept. of CSE, PU
Workshop on analytical problems and solutions	2022	Dept. of CSE, PU

Achievements:

Event	Year	Position
ICPC Asia West Continent Championship	----	Qualified
Mujib 100 years Idea Contest	2022	Position in top 100
ICPC Dhaka Regional Contest	2022	52nd (5th in Chattogram)
NGPC Contest	2022	62nd
Ada Lovelace National Girls' Programming Contest	2020	2nd
EDU Programming Contest	2020	5th
14th Inter University Programming Contest	2020	Champion
IIT Techfest Bombay	2020	Champion (Bangladesh Zone)
JAXA KIBO Robot Programming Challenge (Online)	2020	Finalist
IIT Techfest, Bombay, India (Bangladesh Zonal Winner)	2019-2020	Winner

Robotics Club:

The Premier University Robotics Club is a hub for innovation, where students engage in cutting-edge robotics and automation projects. The club conducts hands-on robotics projects, participates in robotics challenges, and hosts workshops on automation and AI, equipping students with practical skills in robotics engineering.

The Robotics Club actively participates in national and international robotics competitions. Some key participation events include:

- 1st National Research Fair 2023 (CUET) – Project Showcasing & Poster Presentation.
- Chittagong Science Carnival 2023 – Robo-Soccer, Quiz, and Hackathon.
- Jamal Nazrul Islam National Conference 2022 – Oral Presentation.

List of workshops and seminars:

Workshop Title	Year
Seminar on Research Excellence	2023
Workshop on Video Game & XR Technology	2023
Digital Bangladesh Olympiad	2021
Workshop on Robotics and Automation	2023
Seminar on AI & Big Data	2017

Achievements:

Event	Year	Achievement
1st National Research Fair (CUET)	2023	2nd Runner-up (Project Showcasing)
Chittagong Science Carnival 2.0	2022	1st Runner-up (Poster Presentation & Quiz Winner)
Chattogram Robotics Olympiad	2021	Champion (Robo-Soccer), 1st Runner-up (Project Showcasing)

Cultural Club:

The Premier University Cultural Club is a dynamic platform for students to explore and showcase their talents in music, dance, drama, and other cultural arts. It actively organizes cultural events, drama productions, dance performances, and musical shows, providing opportunities for students to express their creativity.

Cultural Participation:

SL	Name of the Events	Venue	Year
01	Orientation Program 2019 35th Batch	Chittagong	2019
02	Farewell of 26th & 27th Batch	Chittagong	2021
03	Reception of 33rd ,34th & 35th Batch	Chittagong	2021
04	RAG 28th Batch	Chittagong	2019
05	Wall paper on Victory Day	Chittagong	2019
06	Dimik Adda	Chittagong	2018
07	RAG 27th Batch	Chittagong	2018
10	Bandarban Tour	Chittagong	2017
11	RAG 25th Batch	Chittagong	2017
12	15 Years Celebration	Chittagong	2017

Achievements:

Name of the Event	Venue	Year	Position
Prothom Alo Inter University Cultural Fest	Chittagong	2018	Runner-Up
Prothom Alo Inter University Cultural Fest	Chittagong	2017	Champion
Prothom Alo Cultural Competition	Chittagong	2017	Runner-Up
Prothom Alo Inter University Cultural Fest	Chittagong	2016	Champion
Prothom Alo Inter University Cultural Fest	Chittagong	2015	Champion
Inter-University Cultural Contest	Chittagong	2011	Runner-Up

Additionally, students perform in orientation and farewell programs, where both in-house and renowned artists are invited.

Premier University Debating Society:

The Premier University Debating Society (PUDS) is dedicated to nurturing critical thinking and eloquence among students by organizing seminars, workshops, and international-standard debate competitions. With strong ties to corporate sectors, cultural groups, and global forums, PUDS provides a platform for aspiring debaters to excel and make a mark in the debating arena.

Objectives:

- To organize seminars, workshops and debate competitions of international standard to shining young minds.
- To maintain liaison with entities in corporate sectors, cultural groups and different international forums.
- To excel in debating.

Achievements:

Event	Year	Achievement
Asian University – AUW IV	2023	Finalist
Action Aid & Daily Star Business Case Competition	2023	Finalist
Ispahani Drishty 12th Brainstorming Idea Contest	2023	Champion
East Delta University – Inter Club Debating Competition	2023	Champion
Prottoy Inter-University Debate Competition	2023	Champion
Dream Holiday - Dhaka University Debating Society Tourism Day Debating Competition	2022	Champion
Dhaka University Bangabandhu Inter Club Debate Competition	2022	Champion
Manusher Jonno Foundation – Sher-e-Bangla Agricultural University Debating Competition	2022	Runner-up
ICARUS-II Inter Club Debating Competition	2022	Runner-up
9th PUDS Debate Festival	2022	Runner-up
Robo-Adda Bijoy Ullash Bangla BP Debate Competition	2022	Finalist

International Endeavour:

PUDS has attended in different international tournaments at different Countries with satisfactory achievements.

1. 2023: Uhuru Worlds 2023 (China)
2. 2022: World University Debate Competition (Belgrade)
3. 2021: Nepal Australs (Nepal)
4. 2021: Shanghai-sido-hanoy ABP (China)
5. 2021: World University Debate Competition (Korea)
6. 2021: Uhuru World's (Africa)

IEEE Premier University Student Branch:

IEEE Premier University Student Branch is one of the newest Student Branches in Bangladesh Section having 50+ members. With highly active and hard-working executive committee members, motivated volunteers and supportive faculty members, they are in the path of keeping abreast of new and changing technologies, building a network revolving around profession, industry or projects and growing with IEEE continuing education benefits and other educational opportunities available to IEEE members. The section has been actively organizing seminars and workshops.

In short, the missions of this branch are as follows:

- Adopt technological innovation
- Create career opportunities.
- Build worldwide community

List of workshops and seminars:

Event	Year
Unleashing Entrepreneurial Mind	2023
IEEE Full Yearly Recruitment Drive Membership 2024	2023
IEEEXTREME Programming Competition 17.0	2023
IEEEXTREME 17.0 Info Session	2023
Level Up Your Software Quality	2023
Webinar on Research: How to initiate?	2023
Compilation, Analysis and Application of a Comprehensive Bangla Corpus	2023

Social Activities:

The department also engages in various social initiatives:

- Provided PPE for doctors and nurses in Chattogram (March 24, 2020).
- Donated a bicycle to support an individual's livelihood during the COVID-19 pandemic (June 26, 2020).

Sports Activities: The university has a central sports committee that organizes trials and training sessions for students to participate in local and national sports tournaments, including cricket and football. The university provides financial support for training, travel, accommodation, and equipment. Annual indoor games are also arranged for faculty members to foster camaraderie.

Achievements:

Name of Tournament	Year	Venue	Position
PUC FUTSAL 2023	2023	Chittagong	--
CDSA Dakhina Inter-University Cricket Tournament	2019	Chittagong	Champion
CDSA Dakhina Inter-University Cricket Tournament	2018	Chittagong	Runner-up
CJKS Dakhina Inter-University Football Tournament	2018	Chittagong	Semifinalist
Clemon Indoor Uni Cricket	2017	Dhaka	Group Stage
ULAB Fair Play Cup	2015	Dhaka	Group Stage

20. Technology and Connectivity

Wi-Fi Access: The university provides high-speed internet connectivity across the campus, ensuring seamless access to online learning platforms, research materials, and communication channels. Students and faculty members can connect to the secured university Wi-Fi network from classrooms, libraries, laboratories, and other common areas, facilitating uninterrupted academic work.

21. Infrastructure and Accessibility

The CSE department is committed to providing a well-structured and accessible infrastructure that enhances the student experience. The campus includes lift facilities, multi-purpose auditorium, transport services, prayer areas, and parking spaces to meet the diverse needs of students.

Transport Services: The university is at the heart of Chattogram city with each premises being located at the key or significant points of the town allowing the students to use public transport to access the campus easily and timely. The university own a bus to facilitate study or academic tours and support student and faculty special or emergency needs. These options make commuting to and from the campus easier, affordable, and safer for the students.

Accessibility Features: The university recognizes the diverse backgrounds and needs of its students and provides designated prayer rooms and religious spaces to accommodate different faiths. The campus has mosque, temple, pagoda and church. This inclusive approach ensures that students from all religious backgrounds can comfortably practice their faith.

Parking Facilities: The campus has dedicated parking spaces for students, faculty, and staff. The parking areas are well-organized and monitored to ensure safety and accessibility.

22. Safety and Security

Safety: Turnstile gates are strategically installed across the university premises, managed by a highly trained and dedicated security team. These gates ensure that only authorized individuals can access the campus, maintaining a safe and controlled environment. The security personnel conduct routine patrols, reinforcing campus safety and swiftly addressing any concerns.

Surveillance: To enhance security further, the university employs a 24/7 CCTV surveillance system, covering crucial areas such as entrance gates, academic buildings, auditoriums, hallways, parking lots, and even elevators. Interestingly, studies have shown that visible security measures, like surveillance cameras, can reduce misconduct rates significantly. With advanced monitoring in place, the university ensures a rapid response to incidents, fostering a secure and orderly atmosphere for students, faculty, and staff.

23. Canteen

The university ensures that students have access to affordable and diverse meal options that cater to various dietary preferences. At the Hazari Lane premises, the ground-floor canteen offers a range of freshly prepared meals, including breakfast, lunch, snacks, and beverages—all at student-friendly prices. Renowned for its hygienic and well-maintained dining space, the canteen provides a comfortable environment where students can enjoy their meals.

24. Prayer Room and Religious Observances

Premier University fosters an inclusive and respectful environment for students of all faiths. At the Hazari Lane Campus, dedicated prayer spaces are available for students:

- A combined prayer room separated by partition on the campus premises to serve students of Hindu, Buddhist, and Christian faiths.
- A Mosque is located within the campus premises for Muslim students.
- The university encourages and supports the observance of major religious events. With the assistance of the Premier University authority, students actively celebrate: Eid-e-Milad-un-Nabi, Saraswati Puja, and Buddha Purnima.

These celebrations promote cultural harmony, interfaith respect, and a sense of community among students.

25. Student Feedback

At the end of each semester, the Head of the Department (HoD) seeks students' feedback through the Premier University Academic Information System (PUAIS). This feedback covers various aspects such as class conduct, teaching effectiveness, course content delivery, and overall learning experience. It serves as a valuable tool for evaluating faculty performance, improving teaching quality, and enhancing the academic environment based on students' perspectives.

26. Project Supervision, Research, and Publication

At Premier University, students are provided with expert supervision for their academic projects, which may involve research, design, or practical implementation. In the 6th semester, students are assigned a supervisor who will guide them throughout their project journey. The 7th semester is dedicated to developing the project proposal, while the 8th semester focuses on the actual implementation of the project. Finally, in the last semester, students defend their projects.

Faculty mentors assist students in formulating research questions, conducting experiments, and presenting their findings, enhancing their critical thinking and problem-solving skills. The university encourages students to engage in research activities and collaborate on faculty-led projects, fostering a culture of innovation. Additionally, students are supported in publishing their research in high-impact journals, acclaimed book chapters, and presenting at prestigious conferences indexed in Scopus and DBLP, preparing them for advanced academic or industry careers.

27. Certified Courses Overview

Certified courses, also known as certificate programs, focus on skills development and job readiness. They are designed to equip learners with specific, in-demand skills and often include practical application projects to ensure students are prepared for real-world tasks and challenges. These programs are typically shorter in duration compared to degree programs, allowing individuals to gain expertise in a particular area more quickly and efficiently.

Cisco Certified Network Associate (CCNA): A comprehensive three-semester curriculum to prepare students for the CCNA 200-301 certification, focusing on networking, security, and automation.

- **Semester 1: Introduction to Networks** – Covers Networking fundamentals, IP addressing, routing, switching, and security with hands-on Cisco CLI experience.

- **Semester 2: Switching, Routing, and Wireless Essentials** – Covers Advanced switching, routing, wireless networking, VLANs, OSPF, and wireless LAN setup.

- **Semester 3: Enterprise Networking, Security, and Automation** – Covers Enterprise network design, advanced routing, security, automation with Python, and network management.

Amazon Web Service (AWS) Cloud Foundation: A one-semester program introducing students to cloud computing with a focus on AWS.

- **Course Objectives:** Learn AWS core services like EC2, S3, RDS, Lambda, VPC, and more. Understand cloud computing principles, AWS infrastructure, security, and pricing.

- **Key Topics:** Cloud computing basics, AWS services, identity and access management, deployment, and monitoring tools.

IoT and Data Analytics: A two-semester program combining IoT and data analytics concepts.

- **Semester 1:** Introduction to IoT – Learn IoT core concepts, applications in smart cities, healthcare, and security.

- **Semester 2:** Data Analytics – Foundations – Learn data collection, cleaning, visualization, and tools like Excel, Tableau, and Python.

28. Financial Support

Fee Waiver through Poor Fund (Free Studentship)

Premier University offers semester-based tuition fee waivers through its Poor Fund for financially disadvantaged students across all programs. The procedure to apply is as follows:

Application Process:

1. **Form Collection:** Students interested in receiving a waiver must collect the Poor Fund application form from the Student Affairs Department.

2. **Form Submission:** Completed forms, along with the required documents, must be submitted to the Departmental Office. The office reviews and forwards the applications to the Accounts Office. This helps determine the number of applicants and the total amount of waiver required for that semester.

3. **Document Verification:** Departments review submitted applications. If any documents are missing or incomplete, students will be notified and may be asked to meet with departmental representatives.

4. **Fund Availability Confirmation:** Each department confirms the allocated Poor Fund amount from the Student Affairs Department. The number of waivers issued is based on the available budget.

5. **Finalization of Waiver List:** Once the Student Affairs Authority approves the proposed list, a notice will be published containing the names of selected students and the waiver amount.

6. **Notification:** The finalized waiver list will be sent to:
   - o Accounts Department
   - o Student Affairs Department
   - o Concerned Academic Department

Scholarships & Financial Aids:

In addition to the Poor Fund, the university offers several other forms of financial assistance:

1. **Merit-Based Scholarships:** Top three students (1st, 2nd, and 3rd) in each semester final examination will receive merit scholarships.

2. **Children of Freedom Fighters:** Eligible students will receive tuition fee waivers.

3. **Poor but Meritorious Students:** Students demonstrating financial need and academic excellence are eligible for tuition fee waivers.

4. **Students with Disabilities:** Financial support is provided to ensure accessibility and inclusion.

5. **Tribal Students:** Eligible tribal students are considered for significant tuition fee waivers.