**Green University of Bangladesh**

**Department of Computer Science and Engineering**

Program: B.Sc. in Computer Science and Engineering (DAY)

Checklist for Requirements of Degree Completion (171 to 173 Batches)

**Student Name: Student ID:**

|  |  |  |  |
| --- | --- | --- | --- |
| Course Code | Course Title | Credit | Grade obtained |

**General Education: 15 Credits**

|  |  |  |  |
| --- | --- | --- | --- |
| **Language Courses (Those Courses are Compulsory):** | | | |
| EAP 009 | English for Academic Purpose | 0.0 |  |
| EAP 101 | English for Academic Purpose I | 3.0 |  |
| EAP 102 | English for Academic Purpose II | 3.0 |  |
| **GED Courses (PSD 400 and Any two courses from below):** | | | |
| GED 101 | Engineering Economics | 3.0 |  |
| GED 301 | Financial and Managerial Accounting | 3.0 |  |
| GED 303 | IT Industry Management | 3.0 |  |
| PSD 400 | Professional Life Skills Development | 0.0 |  |
| **GED Optional Course (Minimum one course is Compulsory):** | | | |
| GED 401 | Sociology | 3.0 |  |
| GED 403 | Bangladesh Studies | 3.0 |  |
| GED 405 | Business Law | 3.0 |  |
| GED 407 | Ethics | 3.0 |  |

**Basic Sciences (All are Compulsory): 34.5 Credits**

|  |  |  |  |
| --- | --- | --- | --- |
| PHY 101 | Physics | 3.0 |  |
| PHY 102 | Physics Lab | 1.5 |  |
| MATH 101 | Differential and Integral Calculus | 3.0 |  |
| MATH 103 | Ordinary and Partial Differential Equations | 3.0 |  |
| MATH 105 | Linear Algebra and Complex Variable | 3.0 |  |
| MATH 201 | Coordinate Geometry and Vector Analysis | 3.0 |  |
| MATH 203 | Introduction to Statistics and Probability | 3.0 |  |
| EEE 101 | Introduction to Electrical Engineering | 3.0 |  |
| EEE 102 | Introduction to Electrical Engineering Lab | 1.5 |  |
| EEE 201 | Electronic Devices and Circuits | 3.0 |  |
| EEE 202 | Electronic Devices and Circuits Lab | 1.5 |  |
| EEE 203 | Digital Electronics and Pulse Techniques | 3.0 |  |
| EEE 204 | Digital Electronics and Pulse Techniques Lab | 1.5 |  |
| CSE 306 | Engineering Drawing | 1.5 |  |

**CSE Core Courses (All are Compulsory): 82.5 Credits**

|  |  |  |  |
| --- | --- | --- | --- |
| CSE 102 | Introduction to Computer Systems Lab | 1.5 |  |
| CSE 103 | Structured Programming Language | 3.0 |  |
| CSE 104 | Structured Programming Language Lab | 1.5 |  |
| CSE 105 | Discrete Mathematics | 3.0 |  |
| CSE 201 | Object Oriented Programming | 3.0 |  |
| CSE 202 | Object Oriented Programming Lab | 1.5 |  |
| CSE 203 | Data Structures | 3.0 |  |
| CSE 204 | Data Structures Lab | 1.5 |  |
| CSE 205 | Digital Logic Design | 3.0 |  |
| CSE 206 | Digital Logic Design Lab | 1.5 |  |
| CSE 207 | Algorithms | 3.0 |  |
| CSE 208 | Algorithms Lab | 1.5 |  |
| CSE 209 | Mathematical Analysis for Computer Science | 3.0 |  |
| CSE 211 | Numerical Methods | 3.0 |  |
| CSE 300 | Technical Writing and Presentation | 1.5 |  |
| CSE 301 | Database System | 3.0 |  |
| CSE 302 | Database System Lab | 1.5 |  |
| CSE 303 | Computer Architecture and Organization | 3.0 |  |
| CSE 307 | Data Communication | 3.0 |  |
| CSE 308 | Data Communication Lab | 1.5 |  |
| CSE 309 | Microprocessor and Assembly Language | 3.0 |  |
| CSE 310 | Microprocessor and Assembly Language Lab | 1.5 |  |
| CSE 311 | Computer Networks | 3.0 |  |
| CSE 312 | Computer Networks Lab | 1.5 |  |
| CSE 313 | Operating System | 3.0 |  |
| CSE 314 | Operating System Lab | 1.5 |  |
| CSE 315 | Compiler Design | 3.0 |  |
| CSE 403 | Computer Graphics | 3.0 |  |
| CSE 404 | Computer Graphics Lab | 1.5 |  |
| CSE 405 | Software Engineering | 3.0 |  |
| CSE 406 | Software Development and Testing Lab | 1.5 |  |
| CSE 409 | Artificial Intelligence | 3.0 |  |
| CSE 410 | Artificial Intelligence Lab | 3.0 |  |
| CSE 400 | Project & Thesis | 6.0 |  |

Students have to select either A or B.

1. **Four (4) courses from Option-I**
2. **One (1) Course from Option-I and Two (2) courses with corresponding labs from Option-II.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Optional I** | | | |
| CSE 411 | Introduction to Natural Language Processing | 3.0 |  |
| CSE 413 | Wireless Networks | 3.0 |  |
| CSE 415 | Cryptography and Network Security | 3.0 |  |
| CSE 417 | Introduction to Graph Theory | 3.0 |  |
| CSE 419 | Computational Geometry | 3.0 |  |
| CSE 421 | Multimedia Systems | 3.0 |  |
| CSE 423 | System Analysis and Design | 3.0 |  |
| CSE 425 | Software Quality Assurance | 3.0 |  |
| CSE 427 | Parallel and Distributed Computing | 3.0 |  |
| CSE 447 | Introduction to Cloud Computing | 3.0 |  |
| CSE 449 | Introduction to Internet of Things | 3.0 |  |
| CSE 451 | Data Mining | 3.0 |  |
| CSE 453 | Cyber Security | 3.0 |  |
| **Total Credits:** | |  | |
| **Optional II** | | | |
| CSE 429 | Simulation and Modeling | 3.0 |  |
| CSE 430 | Simulation and Modeling Lab | 1.5 |  |
| CSE 431 | Pattern Recognition | 3.0 |  |
| CSE 432 | Pattern Recognition Lab | 1.5 |  |
| CSE 433 | Microcontrollers & Computer Interfacing | 3.0 |  |
| CSE 434 | Microcontrollers & Computer Interfacing Lab | 1.5 |  |
| CSE 437 | Web Engineering | 3.0 |  |
| CSE 438 | Web Engineering Lab | 1.5 |  |
| CSE 439 | VLSI Design | 3.0 |  |
| CSE 440 | VLSI Design Lab | 1.5 |  |
| CSE 441 | Mobile Application Development | 3.0 |  |
| CSE 442 | Mobile Application Development Lab | 1.5 |  |
| CSE 443 | Software Design Pattern | 3.0 |  |
| CSE 444 | Software Design Pattern Lab | 1.5 |  |
| **Total Credits:** | |  | |

**Total credits completed at Green University of Bangladesh:**

**Total credits waived by Green University of Bangladesh:**

**Total credits transferred from other institution(s):**

**Total credit requirement completed to obtain B.Sc. in CSE: 144 CGPA:**