# Faculty of Sciences and Engineering (FSE)

## Bachelor of Science
## in Computer Science (B.Sc. in CS)

### I. Why Choose this Program?

The Bachelor of Science in Compuer Science (B.Sc. in CS) program was designed to:

- Develop Strong Technical Skills
- Provide Hands-on Learning Experience
- Prepare Students for High-Demand Careers
- Promote Innovation and Problem-Solving
- Support Lifelong Learning and Career Growth

### II. Future Career Prospects

Graduates from this program will be able to pursue careers such as:

1. Software Developer / Software Engineer
2. Web and Mobile Application Developer
3. Artificial Intelligence and Data Science Specialist
4. Cybersecurity Analyst
5. Database and Cloud Engineer
6. Network and Systems Administrator
7. Technology Entrepreneur or IT Consultant

### III. Course Structure

The four-year program consists of **120 credits** and is structured to provide students with a comprehensive academic foundation through a well-balanced curriculum of foundation, functional, pre-major, and major courses.

To fulfill the graduation requirements, students must successfully complete the following coursework:

| YEAR 1 | | |
|---|---|---|
| **Course Title** | **Credits** | **Priority** |
| English I: Reading and Composition + Lab | 4 | Required |
| Gender Studies | 3 | Required |
| Khmer Studies | 3 | Required |
| Digital Literacy + Lab | 4 | Required |

| | | |
|---|---|---|
| English II: Reading and Composition + Lab | 4 | Required |
| Introduction to Technology and Innovation | 4 | Required |
| Python Programming | 3 | Required |
| Multimedia and Web Design | 3 | Required |
| **YEAR 2** | | |
| **Course Title** | **Credits** | **Priority** |
| Personal Growth and Development | 4 | Required |
| Database Design | 3 | Required |
| C++ Programming Language | 3 | Required |
| Logic and Critical Thinking | 3 | Required |
| Linea Algebra | 3 | Required |
| ASEAN Government, Politics and Economics | 4 | Required |
| Data Structure and Algorithm | 3 | Required |
| Web Application Development | 3 | Required |
| Database Management System | 3 | Required |
| **YEAR 3** | | |
| **Course Title** | **Credits** | **Priority** |
| Statistics for Science | 3 | Required |
| Data Communication and Networking | 3 | Required |
| Introduction to IoT | 3 | Required |
| Cloud Computing | 3 | Required |
| Object Oriented Programming | 3 | Required |
| Introduction to Ethics | 3 | Required |
| Research Methodology | 3 | Required |
| Network System Administration | 3 | Required |
| Big Data Technologies | 3 | Required |
| Introduction to Cyber Security | 3 | Required |

| YEAR 4 | | |
|---|---|---|
| **Course Title** | **Credits** | **Priority** |
| Advance Web Development | 3 | Required |
| UI/UX Design | 3 | Required |
| Mobile Application Development | 3 | Required |
| Data Analysis and Visualization | 3 | Required |
| AI and Machine Learning | 3 | Required |
| Digital Product Innovation & Entrepreneurship | 4 | Required |
| Software Engineering | 3 | Required |
| Blockchain and Distributed Ledger | 3 | Required |
| Computer Vision | 3 | *Elective* |
| Data Science | 3 | *Elective* |
| DevOps and Software Deployment | 3 | *Elective* |
| Embedded Systems | 3 | *Elective* |
| Geographic Information Systems (GIS) | 3 | *Elective* |
| Business Intelligence | 3 | *Elective* |

**Note:* *Students need to choose **ONE** elective course.*

| GRADUATION PATH | | |
|---|---|---|
| **Option I:** Senior Project | 6 | Required |
| **Option II:** Internship | 6 | Required |
| **Option III:** Exit Exam | 6 | Required |

**Note:* *Graduation Path: Students choose only **ONE** option.*