Outcome Based Education (OBE) Curriculum

**BACHELOR OF SCIENCE IN COMPUTER SCIENCE  
Revised Curriculum**

*Academic Year 2024-2025*

|  |
| --- |
| **CURRICULUM DESCRIPTION** |

|  |  |  |
| --- | --- | --- |
| **COURSE**  **Bachelor of Science in Computer Science** | **Required Minimum Number as per CMO. No 25, series of 2015** | **Institution** |
| General Education | 36 | 42 |
| Common Courses | 18 | 18 |
| Professional Courses | 48 | 57 |
| Professional Electives | 9 | 12 |
| Additional Math Requirement | 3 | 3 |
| PATHFIT | 8 | 8 |
| NSTP | 6 | 6 |
| Minimum Total Units | 128 | 146 |

|  |  |  |
| --- | --- | --- |
| 1. **General Education** | | **27** |
| Purposive Communication | 3 |  |
| The Contemporary Word | 3 |  |
| Art Appreciation | 3 |  |
| Understanding the Self | 3 |  |
| Mathematics in the Modern world | 3 |  |
| Ethics | 3 |  |
| Readings in the Philippine History | 3 |  |
| Life and Works of Rizal | 3 |  |
| Science, Technology and Society | 3 |  |
| 1. **General Education Electives** |  | **9** |
| Mathematics, Science & Technology (Living in the IT Era) | 3 |  |
| Social Science and Philosophy (Philippine Indigenous Communities) | 3 |  |
| Arts & Humanities (Peace Studies and Education) | 3 |  |
| 1. **Others General Education Courses Prescribed by the Institution** |  | **6** |
| Fundamentals of Accounting | 3 |  |
| Fundamentals of Entrepreneurship | 3 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 1. **COMMON COURSES** | | | **18** |
| CC 101 | Introductions to Computing | 3 |  |
| CC 102 | Fundamentals of Programming (Prog. 1) | 3 |  |
| CC 103 | Intermediate Programming (Prog.2) | 3 |  |
| CC 104 | Data Structures and Algorithms | 3 |
| CC 105 | Information Management | 3 |  |
| CC 106 | Application Development and Emerging Technologies | 3 |  |

|  |  |  |
| --- | --- | --- |
| **BACHELOR OF SCIENCE IN COMPUTER SCIENCE (BSCS)** | **Date Developed:**  **June 2024** | **COMPUTER COMMUNICATION DEVELOPMENT INSTITUTE- Legazpi** |
|  | | *Page* ***1*** *of* ***7*** |

|  |  |  |  |
| --- | --- | --- | --- |
| 1. **PROFESSIONAL COURSES** | | | **57** |
| DS 101 | Discrete Structure 1 | 3 |  |
| DS 102 | Discrete Structure 2 | 3 |  |
| SDF 104 | Object Oriented Programming | 3 |  |
| AL 101 | Algorithm & Complexity | 3 |  |
| AL 102 | Automata Theory & Formal Language | 3 |  |
| AR 101 | Architecture & Organization | 3 |  |
| IAS 101 | Information Assurance and Security | 3 |  |
| HCI 101 | Human Computer Interaction | 3 |  |
| NC 101 | Networks & Communications | 3 |  |
| OS 101 | Operating System | 3 |  |
| PL 101 | Programming Languages | 3 |  |
| PRC 101 | Practicum (OJT) | 3 |  |
| SE 101 | Software Engineering 1 | 3 |  |
| SE 102 | Software Engineering 2 | 3 |  |
| SP 101 | Social Issues and Professional Practice | 3 |  |
| THS 102 | CS Thesis Writing 1 | 3 |  |
| THS 103 | CS Thesis Writing 2 | 3 |  |
| CSP 101 | IT Software Solutions for Business | 3 |  |
| SEMTOUR | Seminar and Tour | 3 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 1. **PROFESSIONAL ELECTIVES** | | | **12** |
| CN 101 | Computational Science | 3 |  |
| GV 101 | Graphic & Visual Computing | 3 |  |
| IS 101 | Intelligent System | 3 |  |
| SF 101 | System Fundamentals | 3 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 1. **ADDITIONAL MATH REQUIREMENT** | | | **3** |
| STAT 1 | Fundamentals Principles (Probability & Statistics) | 3 |  |

|  |  |  |
| --- | --- | --- |
| **BACHELOR OF SCIENCE IN COMPUTER SCIENCE (BSCS)** | **Date Developed:**  **June 2024** | **COMPUTER COMMUNICATION DEVELOPMENT INSTITUTE- Legazpi** |
|  | | *Page*  ***2 of 7*** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. **PHYSICAL EDUCATION** | | | | **8** |
| PE 1 (PATHFIT 1) | Movement Competency Training (MCT) | | 2 |  |
| PE 2 (PATHFIT 2) | Exercise-based Fitness Activities | | 2 |  |
| PE 3 (PATHFIT 3) | Dance (Folk Dance) | | 2 |  |
| PE 4 (PATHFIT 4) | Sports (Volleyball/Basketball) | | 2 |  |
|  | | |  |  |
| 1. **NSTP** | | |  | **6** |
| NSTP 1 | | Civil Welfare and Training Service 1 | 3 |  |
| NSTP 2 | | Civil Welfare and Training Service 2 | 3 |  |

|  |  |  |
| --- | --- | --- |
| **BACHELOR OF SCIENCE IN COMPUTER SCIENCE (BSCS)** | **Date Developed:**  **June 2024** | **COMPUTER COMMUNICATION DEVELOPMENT INSTITUTE- Legazpi** |
|  | | *Page 3 of 7* |

Outcome Based Education (OBE) Curriculum

**BACHELOR OF SCIENCE IN COMPUTER SCIENCE  
Revised Curriculum**

*Academic Year 2024-2025*

**PROGRAM STRUCTURE**

**FIRST YEAR**

**First Semester**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | | **COURSE TITLE** | **LEC UNIT(S)** | **LAB**  **UNIT(S)** | **UNIT(S)** | **PRE-**  **REQUISITES** |
| English 1 | | Purposive Communication | 3 | 0 | 3 |  |
| Math 1 | | Mathematics in the Modern World | 3 | 0 | 3 |  |
| Literature 1 | | The Contemporary World | 3 | 0 | 3 |  |
| CC 101 | | Introduction to Computing | 2 | 1 | 3 | None |
| CC 102 | | Fundamentals of Programming (Prog. 1) | 2 | 1 | 3 | None |
| CSP 101 | | IT Software Solution for Business | 2 | 1 | 3 |  |
| PE1  (PATHFIT1) | | Movement Competency Training -(MCT) | 2 | 0 | (2) |  |
| NSTP 1 | | Civil Welfare and Training Service | 3 | 0 | (3) |  |
|  |  | | 20 | 3 | 23 |  |

**Second Semester**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | | **COURSE TITLE** | **LEC UNIT(S)** | **LAB**  **UNIT(S)** | **UNIT(S)** | **PRE-**  **REQUISITES** |
| Philo 1 | | Understanding the Self | 3 | 0 | 3 |  |
| GE. Elec. 1 | | Mathematics, Science & Technology (Living in the IT Era) | 3 | 0 | 3 |  |
| HCI 101 | | Human Computer Interaction | 2 | 1 | 3 | CC 102 |
| NC 101 | | Networks & Communications | 2 | 1 | 3 | CC 103 |
| CC 103 | | Intermediate Programming 2 | 2 | 1 | 3 | CC 102 |
| CN 101 | | Computational Science | 2 | 1 | 3 |  |
| PE 2 (PATHFIT2) | | Exercise-based Fitness Activities | 2 | 0 | (2) | PE 1 |
| NSTP 2 | | Civil Welfare and Training Service | 3 | 0 | (3) |  |
|  |  | | 19 | 4 | 23 |  |

|  |  |  |
| --- | --- | --- |
| **BACHELOR OF SCIENCE IN COMPUTER SCIENCE (BSCS)** | **Date Developed:**  **June 2024** | **COMPUTER COMMUNICATION DEVELOPMENT INSTITUTE- Legazpi** |
|  | | *Page 4 of 7* |

**BACHELOR OF SCIENCE IN COMPUTER SCIENCE  
Revised Curriculum**

*Academic Year 2024-2025*

**SECOND YEAR**

**First Semester**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | **COURSE TITLE** | **LEC UNIT(S)** | **LAB**  **UNIT(S)** | **UNIT(S)** | **PRE-**  **REQUISITES** |
| History 1 | Readings in the Philippine History | 3 | 0 | 3 |  |
| Social Science 1 | Life and Works of Rizal | 3 | 0 | 3 |  |
| CC 104 | Data Structure and Algorithms | 2 | 1 | 3 | CC 103 |
| CC 105 | Information Management | 3 | 0 | 3 | CC 103 |
| SDF 104 | Object Oriented Programming | 2 | 1 | 3 | CC 103 |
| DS 101 | Discrete Structure 1 | 3 | 0 | 3 |  |
| SF 101 | System Fundamentals | 3 | 0 | 3 |  |
| PE 3 (PATHFIT 3) | Dance (Folk Dance) | 2 | 0 | (2) | PE 2 |
|  |  | 21 | 2 | 23 |  |

**Second Semester**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | | **COURSE TITLE** | **LEC UNIT(S)** | **LAB**  **UNIT(S)** | **UNIT(S)** | **PRE-**  **REQUISITES** |
| Humanities | | Art Appreciation | 3 | 0 | 3 |  |
| Ethics | | Ethics | 3 | 0 | 3 |  |
| GE Elec. 2 | | Social Science and Philosophy ( Philippine Indigenous Communities) | 3 | 0 | 3 |  |
| Accounting | | Fundamentals of Accounting | 3 | 0 | 3 |  |
| CC 106 | | Application Development & Emerging Technologies | 2 | 1 | 3 | CC105 |
| DS 102 | | Discrete Structures 2 | 3 | 0 | 3 | DS 101 |
| MATH 2 | | Fundamentals Principles (Probability & Statistics) | 3 | 0 | 3 | SDF 104 |
| PE 4 (PATHFIT) | Sports (Volleyball/Basketball | | 2 | 0 | (2) | PE3 |
|  |  | | 22 | 1 | 23 |  |

|  |  |  |
| --- | --- | --- |
| **BACHELOR OF SCIENCE IN COMPUTER SCIENCE (BSCS)** | **Date Developed:**  **June 2024** | **COMPUTER COMMUNICATION DEVELOPMENT INSTITUTE- Legazpi** |
|  | | *Page 5**of* ***7*** |

**BACHELOR OF SCIENCE IN COMPUTER SCIENCE  
Revised Curriculum**

*Academic Year 2024-2025*

**THIRD YEAR**

**First Semester**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | | **COURSE TITLE** | **LEC UNIT(S)** | **LAB**  **UNIT(S)** | **UNIT(S)** | **PRE-**  **REQUISITES** |
| SOCSCI | | Science, Technology and Society | 3 | 0 | 3 |  |
| ENTREP | | Fundamentals of Entrepreneurship | 3 | 0 | 3 |  |
| GE Elec. 3 | | Arts & Humanities (Peace Studies and Education) | 3 | 0 | 3 |  |
| SE 101 | | Software Engineering 1 | 2 | 1 | 3 | SDF 104/IM 101 |
| IS 101 | | Intelligent System | 2 | 1 | 3 |  |
| AL 101 | | Algorithm & Complexity | 2 | 1 | 3 | DS 101/ CC 103 |
| GV 101 | | Graphics &Visual Computing | 2 | 1 | 3 |  |
|  |  | | 17 | 4 | 21 |  |

**Second Semester**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | **COURSE TITLE** | **LEC UNIT(S)** | | **LAB**  **UNIT(S)** | | **UNIT(S)** | | **PRE-**  **REQUISITES** | |
| THS 102 | CS Thesis Writing 1 | 2 | | 1 | | 3 | |  | |
| AL 102 | Automata Theory & Formal Languages | 3 | | 0 | | 3 | | AL 101 | |
| AR 101 | Architecture & Organization | 3 | | 0 | | 3 | | DS 101 | |
| PL 101 | Programming Languages | 2 | | 1 | | 3 | | CC 103 | |
| SE 102 | Software Engineering 2 | 2 | | 1 | | 3 | | SE 101 | |
| IAS 101 | Information Assurance and Security | 2 | | 1 | | 3 | |  | |
| SemTour | Seminar and Tours | 3 | | 0 | | 3 | |  | |
|  |  | | 17 | | 4 | | 21 | |  | |

|  |  |  |
| --- | --- | --- |
| **BACHELOR OF SCIENCE IN COMPUTER SCIENCE (BSCS)** | **Date Developed:**  **June 2024** | **COMPUTER COMMUNICATION DEVELOPMENT INSTITUTE- Legazpi** |
|  | | *Page 6 of* ***7*** |

**BACHELOR OF SCIENCE IN COMPUTER SCIENCE  
Revised Curriculum**

*Academic Year 2024-2025*

**FOURTH YEAR**

**First Semester**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | | **COURSE TITLE** | **LEC UNIT(S)** | **LAB**  **UNIT(S)** | **UNIT(S)** | **PRE-**  **REQUISITES** |
| THS 103 | | CS Thesis Writing 2 | 2 | 1 | 3 | THS 102 |
| OS 101 | | Operating System | 2 | 1 | 3 | CC 103 |
|  |  | | 4 | 2 | 6 |  |

**Second Semester**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | **COURSE TITLE** | **LEC UNIT(S)** | **LAB**  **UNIT(S)** | **UNIT(S)** | **PRE-**  **REQUISITES** |
| SP101 | Social Issues and Professional Practice | 3 | 0 | 3 | SE 102 |
| Prac. 101 | Practicum (162hrs) | 3 | 0 | 3 |  |
|  |  | 6 | 1 | 6 |  |

*PREPARED BY: NOTED BY: REVIEWED BY: NOTED BY:*

Engr. Jay A. Dadea, MIT Ramon S.L. Moraleda, LLB Alicia M. Nieto, MIT Rachel D. Casimero

**Dean Administrator/RMO Education Supervisor Chief Education Program Specialist**

|  |  |  |
| --- | --- | --- |
| **BACHELOR OF SCIENCE IN COMPUTER SCIENCE (BSCS)** | **Date Developed:**  **June 2024** | **COMPUTER COMMUNICATION DEVELOPMENT INSTITUTE- Legazpi** |
|  | | *Page* ***7*** *of* ***7*** |