**Pokhara University**

**Bachelor of Computer Engineering**

**Curriculum Structure- 2022**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S. N. | Course Code | | Subject | | Credit | L | T | P | Remarks |
| **Year** | **I** |  | **Semester I** | |  |  |  |  |  |
| 1 |  | MTH 110 | Calculus I | | 3 | 3 | 2 | 0 |  |
| 2 |  | ELX 110 | Digital Logic | | 3 | 3 | 1 | 2 |  |
| 3 |  | CMP 124 | Programming in C | | 3 | 3 | 1 | 3 |  |
| 4 |  | ELE 120 | Basic Electrical Engineering | | 3 | 3 | 2 | 2 |  |
| 5 |  | CMP 122 | Computer Workshop | | 1 | 0 | 0 | 3 |  |
| 6 |  | ENG 110 | Communication Technique | | 2 | 2 | 1 | 0 |  |
| 7 |  | ELX 120 | Electronics Devices and Circuits | | 3 | 3 | 2 | 2 |  |
|  |  |  | **Sub-total** | | **18** | **17** | **9** | **12** |  |
| **Year** | **I** |  | **Semester II** | |  |  |  |  |  |
| 1 |  | MTH 150 | Algebra and Geometry | | 3 | 3 | 2 | 0 |  |
| 2 |  | PHY 110 | Applied Physics | | 3 | 3 | 2 | 2 |  |
| 3 |  | CHM 110 | Applied Chemistry | | 2 | 2 | 1 | 2 |  |
| 4 |  | MEC 116 | Basic Engineering Drawing | | 1 | 0 | 0 | 3 |  |
| 5 |  | CMP 162 | Object Oriented Programming in C++ | | 3 | 3 | 1 | 3 |  |
| 6 |  | CMP 160 | Data Structure and Algorithm | | 3 | 3 | 1 | 3 |  |
| 7 |  | ELE 172 | Instrumentation | | 3 | 3 | 1 | 2 |  |
|  |  |  | **Sub-total** | | **18** | **17** | **8** | **15** |  |
| **Year** | **II** |  | **Semester III** | |  |  |  |  |  |
| 1 |  | MTH 210 | Calculus II | | 3 | 3 | 2 | 0 |  |
| 2 |  | CMP 222 | Database Management System | | 3 | 3 | 1 | 3 |  |
| 3 |  | CMP 232 | Operating Systems | | 3 | 3 | 1 | 2 |  |
| 4 |  | CMP 224 | Microprocessor and Assembly Language Programming | | 3 | 3 | 1 | 2 |  |
| 5 |  | CMP 234 | Computer Graphics | | 3 | 3 | 1 | 2 |  |
| 6 |  | CMM 220 | Data Communication |  | 3 | 3 | 1 | 2 |  |
|  |  |  |  | **Sub-total** | **18** | **18** | **7** | **11** |  |
| **Year** | **II** |  | **Semester IV** |  |  |  |  |  |  |
| 1 |  | MTH 250 | Applied Mathematics |  | 3 | 3 | 2 | 0 |  |
| 2 |  | MTH 252 | Numerical Methods |  | 2 | 2 | 1 | 2 |  |
| 3 |  | CMP 228 | Advanced Programming with Java |  | 3 | 3 | 1 | 3 |  |
| 4 |  | CMP 264 | Theory of Computation |  | 3 | 3 | 1 | 0 |  |
| 5 |  | CMP 262 | Computer Architecture |  | 3 | 3 | 1 | 1 |  |
| 6 |  | CMP 270 | Research Fundamentals |  | 2 | 2 | 0 | 2 |  |
|  |  |  |  | **Sub-total** | **16** | **16** | **6** | **8** |  |
| **Year** | **III** |  | **Semester V** |  |  |  |  |  |  |
| 1 |  | MTH 216 | Probability and Statistics |  | 3 | 3 | 2 | 0 |  |
| 2 |  | ELX 320 | Embedded System |  | 2 | 2 | 1 | 3 |  |
| 3 |  | MGT 320 | Engineering Management |  | 2 | 2 | 1 | 0 |  |
| 4 |  | CMP 346 | Artificial Intelligence |  | 3 | 3 | 1 | 3 |  |
| 5 |  | CMM 344 | Digital Signal Analysis and Processing |  | 3 | 3 | 1 | 2 |  |
| 6 |  | CMP 348 | Software Engineering |  | 3 | 3 | 1 | 2 |  |
|  |  |  |  | **Sub-total** | **16** | **16** | **7** | **10** |  |
| **Year** | **III** |  | **Semester VI** |  |  |  |  |  |  |
| 1 |  | CMP 362 | Image Processing and Pattern Recognition |  | 3 | 3 | 1 | 2 |  |
| 2 |  | CMP 364 | Machine Learning |  | 3 | 2 | 1 | 3 |  |
| 3 |  | CMP 360 | Data Science and Analytics |  | 2 | 2 | 1 | 2 |  |
| 4 |  | CMP 344 | Computer Networks |  | 3 | 3 | 1 | 2 |  |
| 5 |  | CMP 338 | Simulation and Modeling |  | 3 | 3 | 1 | 2 |  |
| 6 |  |  | Elective I |  | 3 | 3 | 1 | 2 |  |
| 7 |  | PRJ 360 | Project I |  | 1 | 0 | 0 | 4 |  |
|  |  |  |  | **Sub-total** | **18** | **16** | **6** | **17** |  |
| **Year** | **IV** |  | **Semester VII** |  |  |  |  |  |  |
| 1 |  | MGT 332 | Entrepreneurship and Professional Practice |  | 2 | 2 | 1 | 0 |  |
| 2 |  | MGT 250 | Engineering Economics |  | 3 | 3 | 2 | 0 |  |
| 3 |  | CMP 426 | Network and Cyber Security |  | 3 | 3 | 1 | 2 |  |
| 4 |  | CMP 424 | Cloud Computing and Virtualization |  | 2 | 2 | 2 | 2 |  |
| 5 |  | CMP 422 | Compiler Design |  | 2 | 2 | 2 | 2 |  |
| 6 |  |  | Elective II |  | 3 | 3 | 1 | 2 |  |
|  |  |  |  | **Sub-total** | **15** | **15** | **9** | **8** |  |
| **Year** | **IV** |  | **Semester VIII** |  |  |  |  |  |  |
| 1 |  | | Elective III |  | 3 | 3 | 1 | 2 |  |
| 2 | INT 492 | | Internship |  | 3 | 0 | 0 | 6 |  |
| 3 | PRJ 452 | | Project II |  | 3 | 0 | 0 | 6 |  |
|  |  | |  | **Sub-total** | **9** | **3** | **1** | **14** |  |
|  |  | |  | **Total Credits** | **129** |  |  |  |  |