**In CO-PO mapping 3 -- strong, 2 -- Moderate and 1 -- Weak**

**Programming Fundamentals and Object Oriented Programming (2nd Year 1st Sem):**

CO1: Understand and utilize the concept of structure, pointer and functions in C. [K2, K3]

CO2: Develop programs for file processing in C. [K2, K3]

CO3: Understand and realize OOP features through C++ [K1, K2]

CO4: Design and implement the object oriented solution for problems using C++ [K3, K4]

CO5: Understand and utilize the concept of namespace and STL classes in C++ [K2, K3]

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| **Programming Fundamentals and Object Oriented Programming** | CO1 | 3 | 2 | 2 | 2 |  |  |  | 1 | 1 |  |  | 2 |
| CO2 | 2 | 1 | 3 | 1 |  |  |  | 1 | 2 |  |  | 2 |
| CO3 | 3 | 2 | 2 | 1 |  |  |  | 1 | 1 |  | 1 | 2 |
| CO4 | 2 | 2 | 3 | 1 | 1 |  |  | 1 | 2 | 1 | 2 | 2 |
| CO5 | 1 | 2 | 2 | 3 | 2 |  |  | 2 | 1 |  | 2 | 2 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | PSO1 | PSO2 | PSO3 | PSO4 |
| **Programming Fundamentals and Object Oriented Programming** | CO1 | 3 |  | 1 | 2 |
| CO2 | 3 |  | 1 | 2 |
| CO3 | 3 |  | 1 | 2 |
| CO4 | 3 |  | 1 | 2 |
| CO5 | 3 |  | 1 | 2 |