## Programming 4

|  |  |  |  |
| --- | --- | --- | --- |
| *SMS Code* | IN628001 | *Directed Learning hours* | 60 |
| *Level* | 6 | *Workplace or Practical Learning hours* | 0 |
| *Credits* | 15 | *Self-Directed Learning hours* | 90 |
| Prerequisites | IN511001 | *Total Learning Hours* | 150 |
| *This course partially replaces IT220001*  *Name of other Programme: Bachelor of Information Technology (version 2)* | | | |

***Aims***

To expose students to a wide range of programming languages and paradigms, and continue the development of their understanding of algorithms, architecture, and data structures.

***Learning Outcomes***

At the successful completion of this course, students will be able to:

1. Program effectively in C++ (or equivalent industry-relevant language)
2. Implement intermediate data structures and algorithms
3. Discuss the importance of good programming practices independent of the environment or tools used
4. Analyse and evaluate programming paradigms
5. Explain the theoretical issues surrounding programming language design and development

***Indicative Content***

* Functional programming
* Logic programming
* Multi-paradigm languages
* Intermediate level algorithms and data structures
* Complex object-oriented architectures

***Assessment***

|  |  |  |
| --- | --- | --- |
| **Assessment Activity** | **Weighting** | **Learning Outcomes** |
| Checkpoints | 15% |  |
| Software projects | 70% |  |
| Exam | 15% |  |

***Resources***

No required text