| Course Title: Open Source Programming | | | |
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| **Course Code:** UDS 204 | **No. of credits: 4** | **L-T-P:** 30-15-30 | **Learning hours: 60** |
| | | | **L:** Lectures; **T:** Tutorials; **P:** Practicals |
| **Pre-requisite (if any):** Problem-Solving and Python Programming (UDS 102) and Fundamentals of Information Technology (UDS 104) | | | |
| **Department:** Natural and Applied Sciences | | | |
| **Course Coordinator:** | | **Course Instructor:** | |
| **Contact Details:** | | | |
| **Course Type**: Major | | **Course Offered in:** Semester 4 | |

**Course Description**

This course provides a comprehensive understanding of the methods, challenges, and tools used in open-source software development. The students will explore the significance of open-source contributions, and the collaborative dynamics to drive innovation. The course covers object-oriented programming techniques and API-based integration using open-source language, like Python, Linux, Gawk, etc. The learners will understand the significance of version control systems, like Git, to facilitate collaborative development and continuous deployment. By the end of the course, students will be equipped with the skills needed to contribute to open-source projects.

**Course Objectives**
- Understand the need for open-source development, and its associated challenges.
- Perform object-oriented and API-based programming with open-source language.
- Develop version control system using Git for collaborative and continuous deployments