| Course Name | SYSTEM ADMINISTRATION | Course Code | | ITEC-454 | |
|---|---|---|---|---|---|

| Credit Hours | 3 | Contact Hours | Lec | Lab | Total |
|---|---|---|---|---|---|
| | | | 2 | 2 | 4 |

| Offered as | ☐ University Requirement ☐ College Requirement ☒ Program Requirement ☒ Core ☐ Elective |
|---|---|
| | ☒ ITEC              ☐ COMP              ☐ CNET |

| Level | 7 | Prerequisite | COMP333 |
|---|---|---|---|

**Course Description:**

System administration is an essential ingredient of modern computing practice. Knowledge of this topic can be helpful in managing a home computer network, a small business network, or enterprise systems. In addition, knowledge of system administration is a necessary aspect of experimental computing, including embedded software development, cluster computing, and distributed systems, where users often need to set up their own systems software. This course addresses the basic principles of system administration focusing on contemporary operating systems such as Linux or Microsoft Windows.

**Upon completion, the student will be able to:**

♦ Gain a thorough understanding of the fundamental concepts and principles of system administration.

♦ Learn to manage user accounts, groups, and permissions to ensure secure and efficient system operations.

♦ Develop skills in managing file systems, including disk partitions, file permissions, and storage solutions.

♦ Acquire the ability to monitor and optimize system performance, including CPU, memory, and network resources.

♦ Implement effective backup and recovery strategies to protect data and ensure business continuity.

♦ Configure and manage network settings, including IP addressing, routing, and network services.

♦ Apply security best practices to protect systems from threats and vulnerabilities

| Assessment Methods | ☒ Mid-Exam1 | 15% | ☒ Assignment-1 | 10% | ☒ Assignment-2 | 15% |
|---|---|---|---|---|---|---|
| | | | ☒ Lab Exam | 20% | ☒ Final Exam | 40% |

**Text Book:**

♦ William Von Hagen, Ubuntu Linux Bible, ISBN:- 9780470604502, Wiley Publishing, 3rd Edition, 2010.

**Reference Books:**

♦ Eleen Frisch, Essential System Administration, O'Reilly Publishing, 3rd Edition, 2002 | ISBN-0596003439.

♦ Evi Nemeth, Garth Snyder, Unix and Linux System Administration, ISBN:-13: 9780134277554, Pearson, 5th Edition, 2018.