

**Faculty of Computing and Information Technology** 

Department of Computer Science

Spring 2018

# **CPCS-462** Syllabus

# **Catalog Description**

Computing Accreditation Commission

CPCS-462 Operating Systems (II) Credit: 3 (Theory: 3, Lab: 0, Practical: 0) Prerequisite: CPCS-361 Classification: Elective

The objective of this course is to familiarize students with the modern alternative operating models such as distributed processing, parallel processing, and real-time processing. Topics include virtual memory, thread scheduling, Security systems and their requirements, shared security systems, performance quality, system reliability, system failure, pre-failure warning, and system recovery.

#### **Class Schedule**

Meet 50 minutes 3 times/week or 80 minutes 2 times/week Lab/Tutorial 90 minutes 1 times/week

### Textbook

### **Grade Distribution**

| Week | Assessment | Grade % |
|------|------------|---------|
|      |            |         |

## **Topics Coverage Durations**

| Topics   | Weeks |  |  |  |  |
|--|-------|--|--|--|--|
| Virtual memory                                 | 1     |  |  |  |  |
| Thread scheduling                              |       |  |  |  |  |
| Distributed, parallel and real-time processing |       |  |  |  |  |
| Security systems and their requirements        |       |  |  |  |  |
| Shared security systems                        | 3     |  |  |  |  |
| Performance quality and system reliability     |       |  |  |  |  |
| System failure                                 | 1     |  |  |  |  |
| Pre-failure warning                            | 1     |  |  |  |  |
| System recovery                                | 1     |  |  |  |  |

### Last Articulated

### **Relationship to Student Outcomes**

| a | b | c | d | e | f | g | h | i | j | k |
|---|---|---|---|---|---|---|---|---|---|---|
| x | х | х |   |   |   |   |   |   |   |   |

### **Course Learning Outcomes (CLO)**

By completion of the course the students should be able to

- 1. To be familiar with modern operating systems. ()
- 2. To know the requirements of real-time operating systems. ()
- 3. To know the requirements of distributed and parallel operating systems. ()
- 4. To be able to measure system performance. ()
- 5. To be able to optimize and improve system performance. ()
- 6. To know how to protect operating systems. ()
- 7. To know how to perform system recovery. ()

### **Coordinator(s)**