

**CS 309 – Operating Systems**

**Credit Hours:** 3

**Scheduled hours per week**

Lecture: 3

Lab:

Other:

**Catalog Course Description:** Students learn the history and internal workings of operating systems software, the fundamentals of UNIX operating system, and learn the C programming language

**Pre-requisites:** CS 221 must be passed with a grade of C or higher

**Co-requisites:**

**Course Learning Outcomes:**

Students should have an understanding of and be able to apply the following concepts:

- Process execution, memory management, and security in an operating system
- Filesystems, disk I/O, and Access Control for resources

**Topics to be studied:**

<ul style="list-style-type: none"> <li>• Processes and Threads</li> <li>• Memory Management</li> <li>• File Systems</li> <li>• Input and Output</li> <li>• Deadlocks</li> <li>• Virtualization</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-Processor Systems</li> <li>• Security</li> <li>• UNIX, Linux, and Android</li> <li>• Windows</li> <li>• Operating System Design</li> </ul>
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**Relationship of Course to Program or Discipline Learning Outcomes:**

BAT-Software Engineering

	Ability to understand, plan, and execute good Project Management
	Ability to recognize and apply industry recognized code of ethics to various situations
✓	Ability to understand and apply Information Security concepts and best practices
✓	Ability to understand, plan, and implement good Systems Analysis and Software Engineering
	Ability to understand, plan, implement, and troubleshoot Mobile Applications and related technologies
	Ability to understand, plan, implement, and troubleshoot Advanced Web Design and Web Services technologies

For general education courses, a listing of the general education competencies that are met.)

<b>Relationship of Course to General Education Learning Outcomes:</b>	
<b>Composition and Rhetoric</b> Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	
<b>Science &amp; Technology</b> Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	✓
<b>Mathematics &amp; Quantitative Skills</b> Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	✓
<b>Society, Diversity, &amp; Connections</b> Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	
<b>Human Inquiry &amp; the Past</b> Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	✓
<b>The Arts &amp; Creativity</b> Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	
<b>5/3/2016</b>	

**Special requirements of the course:**

You will need a computer with an Internet connection

**Additional information:**

**Prepared by:** Charles Almond

**Date:** 10/20/2017