Course Description and Objectives

Covers logical and physical access control policy and mechanisms for cyber systems. Also covers the role of authorization, identification, authentication, and monitoring in access control.

Course Requirements

Prerequisites: CSEC 2310 - System Security

Modality

CSEC 2320 is only offered as Flex. You have the option to participate In-person, Online Synchronously and Asynchronously. All course assignments, quizzes, exams will be completed and submitted through Blackboard. All Lectures will be recorded using Zoom.

Class Time: MW 12:15 – 1:30
Location: EIT 417

Student Learning Outcomes

Upon successful completion of this course, students will be familiar with

- Describe the distinction between access control, authorization, and authentication
- Describe an access control list
- Demonstrate the understanding of design principles of least privilege and separation of privileges
- Demonstrate an understanding of mandatory access control and where it is used
- Perform implementation of role-based access control for a sample system
- Perform an audit of existing access controls and identify different policy violations

PROFESSOR INFO

Faculty: William (Bill) Cox
Email: wcox@ualr.edu
Phone: (501) 502-0334
Virtual Office: Teams/Meets/Slack
Meetings available upon request

TEXTBOOK RECOMMENDATION

Title: Access Control and Identity Management, Third Edition
Authors: Chapple, Mike
ISBN: 8220123997632

Course Activities

Course Objective

- Define access control and identity management concepts.
- Analyze how an information classification standard impacts an IT infrastructure's access control requirements and implementation.
- Define proper security controls and techniques to mitigate risks and threats in an IT infrastructure.
- Design appropriate authentication solutions throughout an IT infrastructure.
- Implement appropriate access controls and identity management techniques within IT infrastructures.
- Implement a secure remote access solution.
- Implement PKI and encryption solutions to ensure the confidentiality of business communications.
- Mitigate risk from unauthorized access to IT systems through proper testing and monitoring.
- Develop an access control policy framework consisting of best practices for policies, standards, procedures, and guidelines to mitigate unauthorized access.
- Assess the consequences of failed access controls and mitigate unauthorized access.

Orientation and Course Schedule

All course assignments and exams will be through Blackboard. Reading assignments, slides, and deadlines can be found on Blackboard in a link to the Course Schedule. **You should link to the course schedule and check it regularly.**

Technology

You will use the **UA Little Rock Cyber Gym** for your course projects. This is an NSF funded application used for hands-on cybersecurity labs in a cloud environment. You will be provided with your own networking environment accessible from most browsers, but I recommend using Google Chrome. Links will be sent out to you University email account for access to your Cyber Gym.

IT related questions, including problems with your computer or technology, can be directed to IT Services. The service desk can be reached by calling (501) 916-3011 or you can submit a request to **help@ualr.edu**. IT assistance is available Monday – Friday from 7:00 am – 5:00 pm.

The Blackboard Student Support can be accessed in three ways:

- Helpdesk can answer questions about Blackboard and online classes. They can be reached at (501) 916-3602 Monday – Friday from 8:00 am – 5:00 pm.
- New for the Fall 2021 semester, Blackboard now offers a smart help BOT feature that is available 24x7. [[Chris, please insert info here when we get it from the STaR Office.]]
- You can also submit support requests to **https://ualr.edu/blackboard/contact/**.

Assessments

The assessment for this course is primarily lab-based with milestone assessments for the project listed in the Course Schedule. All assignments must be submitted through Blackboard. We will have weekly quizzes and one final exam available through Blackboard.

Grading Policy

Grades are calculated as shown in the Grading Scale.

Late and Make-up Work

Each Assignment will have a due date and you are expected to meet that date. Assignments must be submitted by 11:59 p.m. (Central time) on the due date. Any late work will be assessed with a 10% penalty for each day past the due date.

Extra Credit

Extra Credit is rarely provided, but opportunities may be made available to all students in certain cases. If you have concerns about your grade, contact me as soon as possible.

Feedback

Grades will be posted on Blackboard within a week of the completion deadline.

GRADING SCALE

Activities	%
Labs	40%
Quizzes	55%
Final	5%
Total	100%

Letter	Percentage
A	90–100
B	80–89
C	70–79
D	60–69
F	59 and below

University Policies
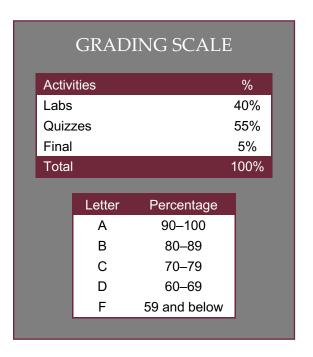
COVID-19 Policies

Covid Policy can be found **here**

The University of Arkansas at Little Rock is continuously working to provide you with accurate and reliable information regarding the coronavirus pandemic.

Attendance and Participation

The complete University class attendance and withdrawal policy can be found **here**.

- Students are expected to attend class regularly and complete all assignments and examinations. Students who miss class are responsible for finding out about the material covered, homework assignments, and any announcements or examinations.
- A student can drop a course up to the 5th day of classes through the schedule change process. Dropping a course in this period will not result in a record of the drop on the student's transcript.
- From the 6th day through the 41st day of classes, except as noted below, a student wishing to drop a class submits a request to the Office of Records and Registration.
- On or before the 10th day of classes, students who have not attended or who have not met their payment obligations will be administratively withdrawn.
- Students may be withdrawn from a class by the instructor at any time during the semester due to non-attendance (or non-participation in an online course) or extenuating circumstances, such as medical or family emergencies or excessive absences.

- Students voluntarily withdrawing from UA Little Rock must complete the University Withdrawal Form and have an exit interview with a staff member in the office responsible for financial aid if the student is receiving financial aid.

Plagiarism & Academic Integrity

The complete University Academic Integrity and Grievance Policy (501.13) can be found **here**.

Students may not gain undue advantage over their classmates by deceptive or dishonest means. Throughout their education students should be impressed with the facts that cheating, duplicity, unauthorized reproduction of classroom materials, and plagiarism are morally degrading and that such practices seriously interfere with learning and intellectual development Any student in this class who submits work they did not produce for the given assignment will be assigned a grade of zero points (F) for the assignment in question and may possibly fail the class. Categories of offenses that are subject to grade penalty and disciplinary action include but are not limited to cheating on an examination or quiz, plagiarism, collusion, and duplicity. For more information, please see the Code of Student Rights and Responsibilities **here**.

Students with Disabilities

Your success in this class is important to me, and it is the policy and practice of the University of Arkansas at Little Rock to create inclusive learning environments consistent with federal and state law. If you have a documented disability (or need to have a disability documented), and need an accommodation, please contact me privately as soon as possible, so that we can discuss with the Disability Resource Center (DRC) how to meet your specific needs and the requirements of the course. The DRC offers resources and coordinates reasonable accommodations for students with disabilities. Reasonable accommodations are established through an interactive process among you, your instructor(s) and the DRC. Thus, if you have a disability, please contact me and/or the DRC, at 501-569-3143 (V/TTY) or 501-683-7629 (VP). For more information, please visit the DRC website at **https://ualr.edu/disability/**

Web Accessibility

It is the policy and practice of UALR to make all web information accessible to students with disabilities. If you, as a student with a disability, have difficulty accessing any part of the electronic course materials for this class, please notify me immediately.

Inclement Weather Policy

The complete inclement weather policy can be found **here**.

- During inclement weather, UA Little Rock will decide whether to close based on all available information.
- The chancellor will decide whether conditions warrant canceling classes and activities and closing the campus or whether classes and activities will be canceled but with specified campus offices open. Online or web-enhanced classes will continue as scheduled at the discretion of the faculty member.
- The UA Little Rock website, UA Little Rock email, the university's main telephone number (501-916-3000), and the Rave campus alert notification are the official means of communicating information concerning weather-related closings.
- When necessary, the university will announce a separate decision about canceling night classes (those classes starting at 4:40 pm or later) by 2 pm, if possible.

Student Resources

Blackboard Support

The Blackboard Support website was designed to assist students with information about the Blackboard system including tutorials, helpful resources, downloads, and answers to their frequently asked questions. In addition to the website, students can also find help within the Blackboard system using the Help tab or through their social media outlets on Facebook and Twitter.

For assistance with Blackboard, please visit **ualr.edu/blackboard**.

IT Services

For technical support with other UALR systems, including logging into Blackboard, BOSS, or your UALR email, please contact the IT Help Desk at **ualr.edu/itservices** or by calling 501.916.3011.

Their business hours are Monday through Thursday from 7:00 am to 6:00 pm, and on Fridays from 7:00 am to 5:00 pm.

Disabilities Resource Center

The Disability Resource Center recognizes disability as an aspect of diversity that is integral to society and to the campus community. To this end, the DRC collaborates with students, faculty, staff, and community members to create usable, equitable, inclusive, and sustainable learning environments. The DRC also promotes and facilitates awareness and access through training, partnerships, innovative programs and accommodations.

Visit UALR's **Disability Resource Center website** for more information about their mission and services.

Textbooks and Campus Bookstore

UALR's Bookstore can help you order the books for this course. Tell them what course you have, and they will find the books you need. If you need to search for a particular book by title, author, or publisher, please **visit UALR's bookstore website**.

Textbooks must be ordered and received prior to the beginning of the class.

Ottenheimer Library

Ottenheimer Library collects, organizes, and provides access to information resources and library services that enrich and support the University's research and teaching mission, foster intellectual development, and promote academic excellence.

Visit the **Ottenheimer Library website** for information about the library and its collections, and view available services.

Online Writing Lab

You can submit a paper electronically to the OWL (Online Writing Lab). Make sure that the document is saved as a .doc and not any other formats such as .docx or .rtf. Then e-mail the document as an attachment to owl.ualr@gmail.com.

Visit the **Online Writing Lab** for more information about the services they provide, their online submission guidelines, and virtual writing conferences.

Course Schedule

Week	Assignment	Points	Due Date
1	Discussion- Smart Card versus Authenticator App Quiz	10 15	1/22/23
2	Discussion - Information Classification Schemes Assignment -Implementation of an Information Classification Policy Quiz	10 20 15	1/29/23
3	Discussion - Resistance Behavior Lab - Designing an Access Control System Quiz	10 20 15	2/5/23
4	Discussion - Technical Controls versus User Behavior Project Part 1: Infrastructure Assessment and Risk Assessment Lab - Conducting a Risk Assessment of an Access Control System Quiz	10 50 20 15	2/12/23
5	Discussion - Multifactor Authentication Assignment - Achieving Zero Trust Lab - Configuring an Active Directory Domain Controller Quiz	10 20 20 15	2/19/23
6	Discussion - Privileged Accounts Quiz	10 15	2/26/23
7	Discussion - Identity as a Service (IDaaS) Project Part 2: Role-Based Access Control (RBAC) and Single Sign-On (SSO) Lab - Managing Windows Accounts and Organizational Units Quiz	10 50 20 15	3/5/23
8	Discussion - Protecting Executables Assignment - Developing Access Control Strategies for Data and File Systems Quiz	10 20 15	3/12/23
9	Discussion - Biometrics and Global Identity Quiz	10 15	3/19/23
10	Spring Break (3/20 - 3/26)		
11	Discussion - Remote Access Solutions Project Part 3: Remote Access and Physical Security Quiz	10 50 15	4/2/23

12	Discussion - Testing and Common Criteria Lab - Scanning an Active Directory Domain Controller for Vulnerabilities Quiz	10 20 15	4/9/23
13	Discussion - SIEM Systems Project Part 4: Testing and Monitoring Lab - Enabling Audit Trails to Enforce Accountability Quiz	10 50 20 15	4/16/23
14	Discussion - Security of Medical Records Lab - Applying the Security Policy Framework to an Access Control Environment Quiz	10 20 15	4/23/23
15	Discussion - Security Breach Safeguards for Victims Assignment - Security Breach Quiz	10 20 15	4/30/23
16	Final	200	5/8/23