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**IT Component- cybersecurity- CYS 1211**

2024G.

# Instructor Information

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| --- | --- | --- |
| Instructor | Email | Office Location and Office Hours |
| **Dr. Mohammed Zakariah** | mzakariah@ksu.edu.sa | Community College, Building 4 floor 3 office 15 |

# General Information

## Description

## This course provides general introduction to common information technology systems components and general cybersecurity implications associated with them. Specifically, it covers all security aspects of IT systems components such as Software, hardware, Architectures, Network, Cloud, Vulnerability Scanning and Intrusion Detection and Prevention Systems.

## Course Objectives

The objective of this class is to provide students with to common information technology systems components and general cybersecurity implications associated with them.

At the end of the course, the student will be able to:

* Identify common IT system components (both hardware and software) and illustrate their main functions.
* Explain main cybersecurity implications of the current and future IT environments.
* Express common cybersecurity systems, components, activities and their values to cybersecurity. Course Structure
* Ability to develop security system of computer and network system.
* Ability to use the security tools to solve problems.
* Work collaboratively, constructively and manage tasks with responsibility.

# Course Requirements

## Technical Requirements

* Computer and internet connection.
* Microphone and headphones.

## Digital Literacy Skills Requirements

* Knowing how to use Blackboard virtual classes.
* Knowing how to send emails through Blackboard.
* Knowing how to submit assignments and take quizzes in Blackboard.
* Knowing how to use digital libraries.
* Knowing how to write the source of information properly.

## Prerequisite Knowledge

# Basic computer system hardware and software, Basic computer architecture and organization and main computer security tools.

## Required Textbook

Information Security Management Handbook Sixth Edition VOLUME 2, AUERBACH PUBLICATIONS, Taylor & Francis Group, Boca Raton New York, Harold F. Tipton, CISSP. Micki Krause, CISSP

## Additional Resources (Optional)

# Management Functions of Information System Components as an Integration Model, Boy Subirosa Sabarguna.

# Elements of Computer Security (Undergraduate Topics in Computer Science), [David Salomon](https://www.amazon.com/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=David+Salomon&text=David+Salomon&sort=relevancerank&search-alias=books), Springer.

* Computer and Information security Handbook, John R, Vacca, Third Edition.2017 version, ScienceDirect.

# Course Schedule

| Week | Topic | Reading | Online Meeting |
| --- | --- | --- | --- |
| 1 | Endpoint protection | Lecture 01 - Part 1,2 | **Yes** |
| 2 | Storage Devices | Lecture 02 - Part 1,2 | **Yes** |
| 3 | - System Architectures  -Virtualization and Cloud | Lecture 03 - Part 1,3 | **Yes** |
| 4 | -SCADA, Real-Time and Critical Infrastructures Environments.  -Network Mapping | Lecture 04 - Part 1,2 | **Yes** |
| 5 | LANs, Internet and Wireless Networks | Lecture 05 - Part 1,2 | **Yes** |
| 6 | -Intrusion Detection and Prevention Systems.  -Incident Response | Lecture 06 - Part 1,2 | **Yes** |
| 7 | -Managed Service  -Software Security | Lecture 07 - Part 1,2 | **Yes** |
| 8 | -Configuration Management.  -Patching. | Lecture 08 - Part 1,2 | **Yes** |
| 9 | -Vulnerability Scanning  -People and Security | Lecture 09 - Part 1,2 | **Yes** |
| 10 | - Vulnerability Scanning  -People and Security | Lecture 010 - Part 1,2 | **Yes** |

# Exam Schedule

| Date | Subject |
| --- | --- |
| Week 3,5,7,9 | Quizzes. |
| Week 3,6,8 | Assignments. |
| Week 6 | Mid Exam. |
| Week 7 | Project, Report. |
| Week 7 | Major Exam. |

# Course Policies

## Attendance Policy

This course is delivered both online and on site; you will attend classes on campus or, you may attend the online classes and lab sessions through Blackboard Virtual Classroom. The attendance policy follows the guidelines stated in [KSU Regulations](https://dl.ksu.edu.sa/ar/Regulations).

## Grading Policy

Note: Not attending virtual classes for %25 of total course hours will result in banning you from taking the final exam.

| Subject | Grade |
| --- | --- |
| Quiz I | **2.5** |
| Quiz II | **2.5** |
| Quiz III | **2.5** |
| Quiz IV | **2.5** |
| Assignment (Homework 1) | **2** |
| Assignment (Homework 2) | **2** |
| Assignment (Homework 3) | **2** |
| Assignment (Homework 4) | **2** |
| Assignment (Homework 5) | **2** |
| Midterm I | **15** |
| Project, Report | **10** |
| Participation | **5 (Self-Assessment, % of the total marks (25) of self-evaluation and discussion)** |
| Final Exam | **50** |

## Netiquette Guidelines

Netiquette is a set of rules for behaving properly online. Your instructor and fellow students wish to foster a safe online learning environment. All opinions and experiences, no matter how different or controversial they may be perceived, must be respected in the tolerant spirit of academic discourse. You are encouraged to comment, question, or critique an idea but you are not to attack an individual. Working as a community of learners, we can build a polite and respectful course community.

The following netiquette tips will enhance the learning experience for everyone in the course:

* Do not dominate any discussion.
* Give other students the opportunity to be involved in the discussion.
* Do not use offensive language. Present ideas appropriately.
* Be cautious in using Internet language. For example, do not capitalize all letters since this suggests shouting.
* Popular emoticons such as :) or :/ can be helpful to convey your tone but do not overdo or overuse them.
* Avoid using vernacular and/or slang language. This could possibly lead to misinterpretation.
* Never make fun of someone’s abilities.
* Share tips with other students.
* Keep an “open-mind”; minority opinions must be respected.
* Think and edit before you press the “Send” button.
* Do not hesitate to ask for feedback.
* Using humor is acceptable

## Academic Integrity

As a student in this course (and at KSU) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class and also integrity in your behavior in and out of the classroom. Maintaining academic honesty and integrity are fundamental.

Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others’ academic endeavors. Students who violate these standards must be confronted and must accept the consequences of their actions.

Examples of academic misconduct include, but are not limited to: cheating on an examination; collaborating with others in work to be presented as one’s own work, contrary to the stated rules of the course; submitting a paper or assignment as one's own work when a part or all of the paper or assignment is the work of another; submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas; stealing examinations or course materials; submitting, if contrary to the rules of a course, work previously presented in another course; tampering with the laboratory experiment or computer program of another student; knowingly and intentionally assisting another student in any of the above, including assistance in an arrangement whereby any work, classroom performance, examination or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.

# Additional Information and Resources

## Important Note

This syllabus is subject to change with prior notice through course announcements or through email.