



## Directions

- A. Due Date: 7 April 2025 at 8:00am
- B. The assignment must be done by individual students.
- C. The assignment includes several submission elements, including an in-class presentation. The in-class presentation is required in order to receive a grade for the assignment. Students who do not perform the in class presentation on the days listed below will not receive a grade.
- D. The 2-page summary must be submitted in PDF or DOCX format via Moodle.
- E. The presentation file must be submitted in PDF or PPTX format via Moodle.

# Cyber Security in Computer Networks

## 1 Overview

In this assignment, we will start to research the realm of cyber security in computer networks. You must select a topic related to the field, read a peer-reviewed academic paper from a reputable conference or journal on the topic, and present your findings in a 20-minute in class presentation. Your presentation must provide an overview of the topic in general and a detailed discussion of the chosen paper's techniques and findings.

### 1.1 Preparation Sessions

Five 2-hour class periods will be dedicated to in-class research work and preparation, sessions number 2–6. I will be in class during those sessions to help with topic selection, analysis, and preparation. There will not be new lecture during those sessions.

Those sessions correspond to: 17 March, 23 March, 24 March, 31 March, 6 April.

### 1.2 Presentation Sessions

Four 2-hour class periods will be dedicated to the research presentations, sessions number 7–11. Sign up for a presentation slot on Moodle.

Those sessions correspond to: 7 April, 20 April, 21 April, 27 April

## 2 What to do

1. **Topic Selection:** Identify a pertinent and contemporary topic related cyber security in computer networks. Submit the topic for approval via Moodle. Once approved, you may begin work on the topic.
2. **Research:** Locate a peer-reviewed academic paper from the past 4 years (2021-2025) that offers substantial insights into your selected topic. Good sources for high quality free academic papers include:
  - USENIX conferences: <https://www.usenix.org/publications/proceedings>
  - NDSS symposium: <https://www.ndss-symposium.org>
  - Google Scholar
3. **Analysis:** Read the paper carefully, with an emphasis on its abstract, introduction, results, and conclusions sections. Conduct a critical analysis of the paper, focusing on its methodology, results, and broader implications.
4. **Presentation Preparation:** Create a presentation that encapsulates the essence of the paper and situates it within the wider context of your topic. The related work section of the paper will help you here.
5. **In Class Quiz:** Create a quiz with 3-5 multiple choice questions that relate to your presentation. See Section 5 below for more details.

## 3 Submission Requirements

- A **two-page summary** of the paper, including of your critical analysis. The summary must include the following sections:
  1. Header info: Your name, course name, semester and year

2. Subject name: What is the subject you chose
  3. Relation to network cyber security: how does it relate to network cyber security?
  4. Background (300-500 words)
  5. Paper's contribution (200-300 words)
  6. Personal reflection on the topic and the paper's contribution (300-500 words)
  7. A **reference list** for all utilized sources, formatted according to APA guidelines. The reference list is in addition to the two-page length.
- A **presentation slide deck** (see below for details)
  - A link to the quiz and grade file with grades for all students, including which questions they answered correctly and which they did not.

## 4 Presentation Guidelines

- **Duration:** The presentation must be precisely 20 minutes.
- **Content:** Include 7-20 slides. Required slides include:
  1. Cover slide: your name, the topic name, course name, semester and year
  2. Introduction slide: background on the topic
  3. Paper technical details: title, authors, year, conference or journal
  4. Paper summary: A synopsis of the paper - what they did, how they did it, results
  5. Analysis: Your personal analysis of the significance of the results
  6. Reflection: What you learned about the topic from your research
  7. Conclusion: What do you want the audience to take away from your presentation.

You may add additional slides as necessary.

- **Delivery:** Maintain clarity, eye contact, and audience engagement throughout your presentation. **Do not** just read the slide to the audience. Face the audience when you present. You may bring a page of notes or text to recite if necessary, but face the audience when doing so.
- **Visuals:** Support your presentation with images and visuals. Ensure the slides are not overloaded with text - minimum font size is 18 on slides!

## 5 In-Class Quiz

To test how well the class understood your presentation and demonstration, you will create a quiz to give to everyone. The quiz must be multiple choice and run on a platform that enables you to ask questions, automatically grade the responses, and record who answered what. Potential platforms include Google Forms and Quizlet. Try out the quiz tool before you actually give the quiz to ensure it meets the requirements.

The quiz must include 3–5 multiple choice questions that check for understanding of the topic and paper you presented. The quiz questions must be clearly written and be challenging. They should force the students to recall your presentation and the results you presented.

The questions may be in English or Hebrew, but must be clearly written and presented. Use spell check and grammar check on all questions and answers.

The quiz will take place after your presentation. The quiz will be 10 minutes long at most, so ensure the questions can be answered within that time frame.

## 6 Grading Rubric

Criteria	Excellent (5)	Good (4)	Satisfactory (3)	Needs Improvement (2-0)
Content	Comprehensive and insightful coverage of the topic and paper.	Adequate coverage with insightful moments.	Basic coverage of the topic and paper.	Incomplete or inaccurate coverage.
Analysis	Deep and critical analysis with original insights.	Solid analysis with some originality.	Surface-level analysis with basic insights.	Lacks depth or originality in analysis.
Delivery	Engaging, clear, and well-paced.	Clear but could be more engaging.	Understandable but lacks engagement.	Unclear, rushed, or monotonous.
Oral Presentation	Looks at the audience except when necessary, presents material well.	Looks at the audience most of the time, but reads some slides.	Mostly looks at the slides, speaking to the audience occasionally.	Reads the words on the slide without addition.
Visuals	Professional and effective visuals.	Good visuals with minor issues.	Adequate visuals but could be improved.	Poor visuals or too much text.
Timing	Adheres perfectly to the time limit.	Mostly adheres to the time limit.	Minor deviations from the time limit.	Major deviations from the time limit.
Reflection	Deep personal insight that shows understanding of the topic and paper.	Some personal insight and thought.	Superficial insight that does not show deep understanding.	Cursory remarks that do not show insight at all.
Quiz	Challenging but fair questions that cover all the topic.	Fair questions that cover most of the topic.	Easy questions that cover the topic.	Unclear or incorrect questions that cannot be answered based on the presentation.

## 7 Notes

- **Academic Integrity:** All work must be original, with proper citations for all sources.
- You may use Artificial Intelligence (AI) tools to help you with your work and summary, but the presentation must be your own.
- If you use AI tools in your 2-page summary, include a section at the end documenting which tools you used, what prompts you input in to them, and how you edited their outputs.