Program: **Intelligent Systems**

Term and Year: 2025

Course Title: **AI Security Issues**

Intrusion Detection System Using Deep Learning

Description:

 It's required to implement deep learning model to apply Intrusion Detection System

Requirements:

1. Select a suitable intrusion detection dataset and apply appropriate preprocessing (**2 mark**)
2. Build a deep learning model, then train, test, and evaluate it using accuracy and loss (**2 mark**)
3. Use the Scapy library to sniff live network packets, analyze each packet in real-time using your trained dee learning model to detect whether it's normal or potentially an attack. (**4 mark**)
4. Implement logging functionality to record network activity and save it to a text file (**2 mark**)
5. Secure your model using the Adversarial Robustness Toolbox (ART) (**Bonus**)
6. Each team should consist of **2 to 3 students**.
7. The **submission deadline** is **Sunday, May 25 2025**
8. Discussion date is **Tuesday 27 May 2025**

Good Luck