



BAU

Faculty of Science

Department of Mathematics and Computer Science

ELEGANT Project: Computer Science Curriculum Improvement

In our CS curriculum, we have added a **Computer Security** course as core course and we have already added the **Artificial Intelligence** course as departmental elective course.

CMPS 455 - Computer Security (3Cr.: 2 Lec, 3Lab)

This course covers fundamental issues of computer security especially those related to confidentiality, integrity, and availability of information assets. Topics covered include basics of cryptography (symmetric, asymmetric), digital signatures, hashing, protection against external and internal threats, network protocols and Internet security.

CMPS 453 - Artificial Intelligence (3Cr.: 2 Lec, 3Lab)

The course aims to introduce and covers different aspects of artificial intelligence. The course begins within a revision for the basic concepts of trees and graphs. After, the course continues to introduce the artificial intelligence such as : Intelligent Agents, Solving Problems by Searching, Uninformed Search Strategies, Informed (Heuristic) Search Strategies, Adversarial Search, Machine Learning, and Introduction to Computer Vision.

An improvement on the content of the AI course by adding the following topics:

1. Overview on machine learning (supervised and Unsupervised Learning)
2. Supervised Learning
3. Overview on Computer vision
4. Image classification using machine Learning (supervised techniques)
5. Ask students to do projects in AI with implementation.