FAU™
DEPARTMENT OF
ELECTRICAL ENGINEERING
AND COMPUTER SCIENCE
College of Engineering & Computer Science
Florida Atlantic University

Professional Program
2024–2025 Course Offering

Fall 2024

CNT 5109 Sensor Networks and Smart Systems (3 credits)
August 17th – September 13th
On-campus lecture days: Saturday, August 17th & August 31st
Prerequisite: Permission of instructor
This research-oriented course focuses on smart system applications and discusses sensor networks and their use in smart systems.

COP 5339 Object-Oriented Software Design (3 credits)
September 14th – October 11th
On-campus lecture days: Saturday, September 14th & September 28th
Prerequisite: Proficiency in C or C++ programming
Classes and objects as the basis of software development. Object-oriented analysis and design using OMT, implementation using C++ and Java. Credit will not be given for both COP 4331 and 5339.

COP 6819 Advanced Internet Systems (3 credits)
October 12th – November 8th
On-campus lecture days: Saturday, October 12th & October 26th
This course introduces present and new internet technologies including middleware, web services, cloud computing, fog and edge computing, distributed ledger techniques, and Internet of Things (IoT). Specific internet and web applications will be presented including Search Engine Optimization, applications of distributed ledger technology, and IoT applications for smart cities and homes.

CIS 6370 Computer Data Security (3 credits)
November 9th – December 11th
On-campus lecture days: Saturday, November 9th & November 23rd
On-campus lecture days: Saturday August 20st & September 3rd
The class will start with preliminary material and mathematical foundations of data security. It will then cover private-key encryptions, public-key encryptions, and fundamental security protocols. Finally, it will

focus on emerging technologies such as (a) digital currencies and their implementations, (b) blockchain and its applications, e.g., in supply chain and information sharing, and (c) privacy enhancing technologies using security protocols, e.g., in autonomous systems, auctions and financial paradigms.

Spring 2025

CEN 5086 Cloud Computing (3 credits)
Jan 4th- Jan 31st
On-campus lecture days: Saturday, Jan 4th & Jan 18th
Prerequisite: Graduate standing
Cloud computing is concerned with the use and architecture of this model of computation. Study the services provided by clouds, their internal structure, and their possibilities and limitations. We use UML as a language to describe architectures and patterns to help the design of software applications using clouds and to describe cloud architectures.

COT 6930 Generative AI and Software Development Lifecycles (3 credits)
Feb 1st - Feb 28th
On-campus lecture days: Saturday, Feb 1st & Feb 15th
This course explores Generative Intelligence and Multi-Agent Systems in Software Development Lifecycles. Students will learn to use GenAI tools for ideation, design, and development, simulating startup founders creating IT solutions. The course emphasizes practical labs, focusing on AI-driven software development and innovative methodologies.

CAP 6635 Artificial Intelligence (3 credits)
March 8th - April 4th
On-campus lecture days: Saturday, March 8th & March 29th
This course introduces core concepts, techniques, and applications of artificial intelligence (AI). Course subjects include intelligent agents, problem solving by search, search strategies, game playing, knowledge representation and reasoning, learning from examples, and deep learning. The class also discusses ethical and societal implications of the increasing use of AI.

CAP 5768 Introduction to Data Science (3 credits)
April 5th - May 2nd
On-campus lecture days: Saturday, April 5th & April 26th
This course provides a comprehensive introduction to the tools and analysis workflows employed by data scientists that include data wrangling, visualization, exploration, and modeling. Specific topics include an overview of the field of data science and analytics, data visualization, exploratory data analysis, data transformation, parameter estimation, hypothesis testing, linear regression analysis, logistic regression classification, model selection, feature selection, dimensionality reduction, and clustering. The practical application of these techniques to real data, as well as the interpretation and presentation of analysis results will be emphasized throughout the course.

Summer 2025

COT 6930 Internet of Things (3 credits)
May 10th -June 6th
On-campus lecture days: Saturday, May 10th and May 24th
Prerequisite: Permission of instructor
This research-oriented course covers technical and operational aspects of the Internet of Things (IoT) and includes a discussion on the most recent advances and innovative applications.