

# COMPUTER SOFTWARE ENGINEE (CEN)

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## CEN 3024 Software Development 1

**Credit Hours:** 3

**Prerequisites:** COP 2805 or COP 3330 with a grade of "C" or higher and departmental approval or admission to Bachelor's program required

**Lab Fee:** Yes

The course builds upon the concepts of object-oriented programming (OOP). Major topics include Agile software development methods, software development process models, software engineering process requirements, systems modeling development tools, architecture-driven software development techniques, the OOP design and implementation process, software testing methodologies and the software evolution process.

## CEN 4025 Software Development 2

**Credit Hours:** 3

**Prerequisites:** COP 2805 or COP 3330 and CEN 3024 with a grade of "C" or higher and departmental approval or admission to Bachelor's program required

**Lab Fee:** Yes

The course builds upon the concepts of object-oriented programming and CEN 3024. Major topics include sociotechnical systems (STS) general concepts, dependability and security engineering, security specifications, security assurance, developing dependable STS, designing secure STS application systems, using application frameworks, software product lines, component based software reuse and distributed STS architectural reuse patterns.

## CEN 4341 Platform Technologies

**Credit Hours:** 3

**Prerequisites:** CNT 3403, CTS 1321 and CTS 1383 - all courses with a grade of "C" or higher

**Lab Fee:** Yes

Information Technology (IT) professionals will encounter a variety of platforms in their career. The role of the IT professional is to select, deploy, integrate, and administer platforms or components to support the organization's IT infrastructure. This knowledge area includes the fundamentals of hardware and software and their integration as essential components of IT systems. In support of this goal, students will build an intranet, linking an organization's web server, application server, database server, and enterprise resource planning (ERP) system.

## CEN 4722 Human Computer Interaction

**Credit Hours:** 3

**Prerequisites:** ISM 3113 and ISM 4041 - both courses with a grade of "C" or higher

**Lab Fee:** Yes

This course examines the elements of Human-Computer Interaction (HCI) within the field of Information Technology. Students will learn user-centered methodologies for the design, development, evaluation, and employment of human-computer interactions, and methods for evaluating the usability of human-computer interaction interfaces.

## CEN 4802 Software Integration, Configuration, and Testing

**Credit Hours:** 3

**Prerequisites:** CEN 3024 with a grade of "C" or higher

**Lab Fee:** Yes

This course explores issues associated with, and common approaches used, when integrating software subsystems.

## CEN 4949 Internship

**Credit Hours:** 3

**Lab Fee:** Yes

Course must be taken during the last semester of the student's program.

In this course students will participate in a 96 hour internship. The internship is a valuable work experience in an approved training environment. The internship provides an opportunity for students to develop the appropriate attitudes and skills necessary for success in the Information Technology (IT) world. Students will submit weekly logs documenting their activities and an Internship experience paper for the course.