

# COMPUTER SCIENCE AND EDUCATION (CSED)

---

Discover, search, courses (<https://catalog.luc.edu/course-search/>)!

## **CSED 301 Introduction to Programming/Computer Science (3 Credit Hours)**

This course provides an introduction to programming with an overview of other topics in computer science.

*Outcomes:*

Basic programming skills in a computer language such as VB.NET or Logo that may be suitable for teaching to young programmers; understanding of other fundamentals of how computer hardware and software tools work

## **CSED 317 Social Issues in Computing (3 Credit Hours)**

This course covers social, legal, and ethical issues commonly arising in key areas related to computing technologies.

*Outcomes:*

Understanding of laws and issues in areas such as privacy, encryption, freedom of speech, copyrights and patents, computer crime, and computer/software reliability and safety; understanding of philosophical perspectives such as utilitarianism versus deontological ethics and basics of the U.S. legal system

## **CSED 330 Technical Administration PC Clusters (3 Credit Hours)**

This course covers technical knowledge and practical skills needed to administer a PC cluster in a school or similar environment, focusing on security issues such as firewalls, viruses, and external and internal attacks, and also covers server and LAN configuration and storage management.

*Outcomes:*

Students will be familiar with the procedures and design tradeoffs involved in configuring a computer lab

## **CSED 331 Management of PC Cluster (3 Credit Hours)**

Further topics in management of school-based PC clusters are covered: purchasing, staffing, troubleshooting, configuration, copyright and software licensing, facilities and resource management, use of IT outsourcing, acceptable-use policies, account management, content filtering, and reliability.

*Outcomes:*

Students will be familiar with issues and conflicts, both technical and social, that arise in school lab management, and with ways of addressing them

## **CSED 343 Introduction to Computer Networks (3 Credit Hours)**

How a computer network is put together, from lowest to highest levels. TCP/IP protocols and the construction of the internet; LAN protocols such as Ethernet and ATM; internetworking protocols such as IP; transit protocols such as TCP and UDP; congestion and security issues.

## **CSED 401 Intro to Programming & Computer Science (3 Credit Hours)**

This course provides an introduction to programming with an overview of other topics in computer science.

*Outcomes:*

Basic programming skills in a computer language such as VB.NET or Logo that may be suitable for teaching to young programmers; understanding of other fundamentals of how computer hardware and software tools work

## **CSED 430 Technical Administration of PC Cluster (3 Credit Hours)**

This course covers technical knowledge and practical skills needed to administer a PC cluster in a school or similar environment, focusing on security issues such as firewalls, viruses, and external and internal attacks, and also covers server and LAN configuration and storage management.

*Outcomes:*

Students will be familiar with the procedures and design tradeoffs involved in configuring a computer lab

## **CSED 431 Management of PC Cluster (3 Credit Hours)**

Further topics in management of school-based PC clusters are covered: purchasing, staffing, troubleshooting, configuration, copyright and software licensing, facilities and resource management, use of IT outsourcing, acceptable-use policies, account management, content filtering, and reliability.

*Outcomes:*

Students will be familiar with issues and conflicts, both technical and social, that arise in school lab management, and with ways of addressing them