COMPUTER SCIENCE AND EDUCATION (CSED)

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CSED 301 Introduction to Programming/CS (3 Credit Hours)
This course provides an introduction to programming with an overview of other topics in computer science. Outcome: 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 Tech Admin 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. Outcome: 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. Outcome: 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 & CS (3 Credit Hours)
This course provides an introduction to programming with an overview of other topics in computer science. Outcome: 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 Tech Admin 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. Outcome: 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. Outcome: Students will be familiar with issues and conflicts, both technical and social, that arise in school lab management, and with ways of addressing them.