

MS in computer education courses mentioned in the two motions.

Course	Description
CED 511: Foundations of Computer Science	Provides an introduction to computer science as a discipline. The course presents an introduction to computer hardware and software, the history of computers, the Internet and the Web as well as computers and society. An emphasis will be placed on computer vocabulary. Topics include, but are not limited to, the study of how computers function, how the Internet works, an overview of programming languages and algorithms, basic number systems, Boolean expressions and ethical considerations.
CED 540 : Programming with C++	Introduces students to the C++ language in order to teach programming as a systematic discipline and problem solving tool. Topics will include structural programming concepts, basic syntax, source code style, programming process, formatting output, control structures, loops, functions and arrays. Students in the course will learn how to teach the essentials of C++ to their students.
CED 547: Artificial Intelligence and Robotics	Introduces students to the concepts, techniques and applications of Artificial Intelligence (AI). Topics include natural language processing, expert systems, heuristics, robotics, weak AI, strong AI, bottom-up and top-down approaches to AI. Students will learn to program a robot that can be used in their classes with their own students. Students in this class will learn how to teach the essentials of robotics to their students.
CED 549: Programming with Java	Introduces students to the Java programming language in order to teach programming as a systematic discipline and as a problem-solving tool. Topics include fundamental concepts of object-oriented programming, encapsulation, inheritance and polymorphism, classes, objects, files and aggregation. Students in this course will learn how to teach the essentials of Java to their students.
CED 560: The Fundamentals of Programming	Introduces students to current computer programming languages that are intuitive and easily learned by those with no previous programming background. The focus is on creative learning so that the student is able to teach students of all ages how to complete projects suitable to their interests and goals. Students will learn the fundamental concepts of computer programming, information processing and algorithms.
CED 565: The Internet and Education	Provides basic knowledge and guided practice to effectively use the Internet and telecommunications resources. Coursework will act as a springboard for valuable communication in the classroom and for personal use.
CED 566: Web Project Design Principles	Covers how to create web pages for web sites utilizing HTML programming and a current web page design tool. Students will learn professional web design rules and principles in addition to the creation and manipulation of original graphics and audio files. They will learn the differences between writing for print and writing for the web, a web-editing program, and the logistics of publishing a complete web site. This knowledge will enable students to be active participants on the web and

	intelligent viewers of web content and presentations. Students will also learn how to evaluate web sites and address accessibility issues.
CEC 571: Topics in Computer Science	Introduces students to some advanced topics in computer science, such as computer networks and security. Topics will also include an introduction to data structures (binary trees, linked lists). Other topics may include recursion, pointers, encryption, logic, and data storage. To assist classroom teachers, discussions of our changing world due to the advances in technology will also be a part of this course.
CEC 572: Web Programming	Introduces students to the programming technologies necessary to create a website. Students will be introduced to xhtml, css, javascript and php languages. Both xhtml and css are used to create a web page, javascript is used to bring interactivity to the page, and php is used for the server-side processing of data collected from the website.