

CERTIFICATE PROGRAM IN INFORMATION, TECHNOLOGY, & COMMUNICATION

Criteria for Admission Application is made to the College of Adult Scholars. Since admission requirements differ from one program to another and depend on prior training and background, each applicant is considered on a case-by-case basis. Courses may be substituted or waived when appropriate, and 3 credits may be transferred from other programs. Certified students may enroll in a maximum of 11 credits per semester. Communication & Information Management (17 credits) *Communication & Information Management* is an 17-credit program designed for individuals wanting to develop proficiency in a variety of electronic applications related to communication and information. Certified students would possess an array of current technological skills relevant to publication, publicity, interoffice and electronic communication, and data management. They could understand and develop websites; work with desktop publishing; create, maintain, and manipulate data files; plan and design graphic presentation; and oversee office information systems.

Core Requirements		14 credits
COMM 110	Introduction to Internet Communication	3 cr
COMM 121	Communication Law	3 cr
COMM 210	Organizational Communication	3 cr
COMM 230	Desktop Publishing	3 cr
IDS 110	Business Spreadsheet Applications	1 cr
IDS 111	Business Application Programming	1 cr
Electives		3 credits
COMM 261	Media Writing Styles	3 cr
COMM 265	Principles of Public Relations	3 cr
COMM 302	Communicatio Law & the Internet	3 cr
COMM 330	Advanced Desktop Publishing	3 cr
ENGL 300	Introduction to Professional Writing	3 cr
IDS 310	e-Commerce and e-Business Technology	3 cr

Digital Systems (15 credits) This program prepares students to design small digital circuits, write programs for microcomputers and controllers, develop web pages, or analyze computer networks.

Core Requirements		12 credits
ECE 221	Digital Logic Design	3 cr
ECE 251	Algorithms & Programming	3 cr
ECE 322/PHYS 322	Embedded Microcontrollers	3 cr
ECE 450	Digital Communication Systems	3 cr
Electives		3 credits
ECE 222	Advanced Logic Design	3 cr
ECE 252	Algorithms & Abstract Data Types	3 cr

Software Design (20 or 21 credits) Software Design is a 20 to 21-credit certificate for developing proficiency in computer programming and design of software. This certificate is particularly appropriate for natural science business, and engineering professionals needing to broaden their understanding of software design. A certified student possesses fundamental skills for general programming and in-depth knowledge of the current programming language JAVA. Graduates are able to adapt to new programming environments with a minimum of training and if desired, are prepared for entry into graduate study in computer science.

Core Requirements		17 credits
CS 157	Algorithms & Programming	4 cr
CS 158	Algorithms & Abstract Data Types	4 cr
CS 246	Computer Architecture & Programming	3 cr
CS 257	Data Structures & Programming Language	4 cr
CS 358	Software Design & Development	4 cr
Electives		3-4 credits
CS 332	Database & Artificial Intelligence	4 cr
CS 347	Operating Systems & Networking	4 cr
CS 365	Interactive Computer Graphics	3 cr

Information Technology (20 credits) Information Technology is a 20-credit certificate on how to "use" rather than how to "design" computer systems. It combines software coursework in programming with several applications courses

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that deal with software systems and how they work. The 250 College of Adult Scholars program is open to any individual having an undergraduate degree (with some basic math), but is most useful to science and business majors. A certified student could work with digital communication systems as a programmer or analyst, understand communication protocols and manage computer networks or internet resources. Digital Systems is for individuals who need to refresh or upgrade an existing engineering or science education by learning more about computer systems. This 20-credit program provides modest depth of exposure to a variety of computer engineering topics. Certified students would understand computer software and hardware well enough to apply them to their primary discipline. They would be able to design small digital circuits, write programs for both microcomputers and controllers, develop web pages and analyze computer networks.

Core Requirements		20 credits
CS 157/ECE 251	Algorithms & Programming	3 cr
CS 158/ECE 252	Algorithms & Abstract Data Types	3 cr
CS 246	Computer Architecture & Programming	3 cr
CS 257	Data Structures & Programming Languages	4 cr
CS 347	Operating Systems & Networking	3 cr
ECE 450	Digital Communication Systems	3 cr

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