

# NETWORK ADMINISTRATOR

## NETWORK ADMINISTRATOR CERTIFICATE

18 credits

This program answers a need in the local region from educational and financial institutions as well as small business for people with the basic skills to effectively manage microcomputer networks. SUNY Ulster is designated as a Regional Academy for Cisco Systems training and a member of the Microsoft IT Academy program.

For non-credit version of Networking Fundamentals & Intro to Routing and Switching, contact [reerb@sunyulster.edu](mailto:reerb@sunyulster.edu)

## NETWORKING FUNDAMENTALS - NET 101

Students are introduced to the architecture, structure, functions, components, and models of the Internet and other computer networks following Cisco Academy recommendations. Dedicated labs allow students to analyze real world data without affecting production networks. Emphasis is given to the use of decision making and problem solving techniques. This is the first course in the four semester CISCO Systems CCNA Exploration program. Prerequisite: MAT 098. Corequisite: CIS 100 or equivalent computer experience.

Course available Fall 2019.

## INTRO TO ROUTING & SWITCHING - NET 102

This course is the second course of the four semester Cisco Systems CCNA preparation program. This track is a robust implementation that follows the proven, world recognized Cisco Networking Academy curriculum and incorporates significant online components, including testing. It is designed for students seeking a technical degree in the field of Computer Networking, and for the student seeking CCNA/CCNP certification. Prerequisite: NET 101. Course available Fall 2019.

## COMPUTER MATHEMATICS - MAT 120

This course is designed for students in the Network Administration Program. Topics essential to solving problems associated with computers and computer networks are covered. Prerequisites: MAT 098, high school equivalent (see Guidelines for Mathematics Placement), or Entering Student Assessment at MAT 100 (or higher).

Course available Fall 2019.

## OPERATING SYSTEMS & UTILITIES - CIS 116

Students will obtain a mastery of operating systems concepts and a foundation of the boot process in this broad background course. They will apply their skills to maintaining disks and files, and building and maintaining shell scripts/batch programs. Examples of the role, scope, and complexity of operating systems are provided. Effective use of utility software is emphasized. The course is taught using MS Windows and Redhat Linux software. Course available Fall 2019.



## IBM Community College Skills Accelerator Program for New Collar Jobs

IBM has partnered with select community colleges including SUNY Ulster to build “new collar” skills for employment. This program provides SUNY Ulster faculty and staff access to IBM technical resources and an educational pathway that prepares students for “new collar” roles. IBM locally hires apprentices for Hardware Design Technicians, Mainframe System Administrators, Electronics Engineer Lab Technicians, Software Engineers and Chemical Technicians. Graduates of SUNY Ulster are able to apply for these apprentice positions at <https://careers.ibm.com/ListJobs/All/Search/jobtitle/apprentice/new-collar-role/yes/>

## RECRUIT SUNY Ulster's TOP NOTCH Talent

### WAYS TO RECRUIT SUNY ULSTER STUDENTS

SUNY Ulster would like to partner with you to explore, engage, and recruit our best talent. Services and resources we offer to benefit and support your recruiting efforts.

- College Central Network - an online tool that allows local employers to recruit SUNY Ulster students and graduate. Register at [collegecentral.com/sunyulster](http://collegecentral.com/sunyulster)
- SUNY Ulster is sponsoring a spring career fair, Wed, April 10. This event can provide a great opportunity to educate students and alumni about your company and network with potential future employees.
- Tabling is a great way to increase visibility and raise awareness about opportunities with your organization.
- We will help arrange company visits. Company visits are designed to take a small and select group of students to your place of business for a tour of the facility, to attend a presentation on career opportunities, and to network with your employees.



For more information, contact Career Services  
845-802-7188 / [careerservices@sunyulster.edu](mailto:careerservices@sunyulster.edu)

# COMPUTER SCIENCE & WEB DEVELOPMENT



## COMPUTER SCIENCE I

This course covers the fundamentals of computer programming using the JAVA language. **This course will be offered Fall 2019.**

## COMPUTER SCIENCE II

This course covers the fundamentals of algorithms and object oriented software development. For a full course description refer to catalog at [catalog.sunyulster.edu](http://catalog.sunyulster.edu). **Price includes fees.**

CSC 180-01B M/W/F 1/22-5/17 12-12:55pm SRC  
CSC 180-S01 Online

## WEB APPLICATION DEVELOPER CREDENTIAL

16 credits

This credential is designed to prepare students for a career in Web Application development. Educational and financial institutions and small businesses of all types have expressed this need. This program is designed to fit within SUNY Ulster's Network A.S. Computer Science and A.S. Computer Science (Online) degree programs. The program curriculum is made up of two courses in Computer Science and two courses in Web Development.

## WEB APPLICATION DEVELOPMENT I

This course explores the web development processes and tools used to support the creation of websites and web applications including HTML, CSS, JavaScript and Ruby on Rails. **This course will be offered Fall 2019.**

## WEB APPLICATION DEVELOPMENT II

This course covers advanced web application development frameworks, languages and techniques such as Ruby on Rails, jQuery, AngularJS, PHP, and Node.js or equivalent. For a full course description refer to catalog at [catalog.sunyulster.edu](http://catalog.sunyulster.edu).

CSC 132-01B M/W/F 1/22-5/17 10:55-11:50am SRC  
CSC 132-S01 Online 1/22-5/17

## COMPUTER GAME DESIGN CREDENTIAL

16 credits

This credential is designed to prepare students for a career in designing and developing computer games. This 16-credit program is designed to fit within SUNY Ulster's A.S. Computer Science and A.S. Computer Science (Online) degree programs. The program curriculum is made up of two courses in Computer Science and two courses in Computer Game Design.

## COMPUTER GAME DESIGN I

This course is an introduction to the principles of computer game development. As such, it draws on the student's background in math and physics and enables a creative expression in addition to building on computer science concepts of object oriented programming.

For a full course description refer to catalog at [catalog.sunyulster.edu](http://catalog.sunyulster.edu).

CSC 220-01B T/R 1/22-5/17 10:10-11:30am SRC  
CSC 220-S01 Online 1/22-5/17

## COMPUTER GAME DESIGN II

This course expands on the fundamental computer game concepts and techniques introduced in CSC 220, Computer Game Design I. It advances use of the C# programming language to animate and handle interactions with the game environment, game elements and the players. Special emphasis will be given to ensuring good game performance. Physical principles of mechanics and lighting will be enlarged to include more natural movement, interaction among objects such as wind and lighting with shading and textures. Computer programming scripts will interact in advanced ways with objects composed of curves, and coverings such as clothed human actors in the game. Prerequisite: CSC 220 or permission of the instructor.

**This course will be offered Fall 2019.**

## MOBILE APPLICATION DEVELOPER CREDENTIAL

16 credits

This credential is designed to prepare students for a career in developing mobile applications for tablets and smartphones using both the Android and Apple iOS Operating Systems. This 16-credit program is designed to fit within SUNY Ulster's A.S. Computer Science and A.S. Computer Science (Online) degree programs. The program curriculum is made up of two courses in Computer Science and two courses in Mobile Application Development.

## ANDROID APP DEVELOPMENT

Android is now the most widely used operating system among smartphones, tablets, and PCs. This course prepares the student to be a professional Android software developer.

**This course will be offered Fall 2019.**

## APPLE iOS DEVELOPMENT

This course prepares the student to be a mobile application developer for Apple iOS devices such as the iPhone and iPad using Swift, a new programming language from Apple. For a full course description refer to catalog at [catalog.sunyulster.edu](http://catalog.sunyulster.edu).

CSC 215-S01 Online 1/22-5/17

# WEB DEVELOPMENT MINI BOOTCAMP

Each course in this mini bootcamp delivers real-world skills essential in website development. Courses can be taken separately based on your previous experience, but no experience is necessary. Taken all together, these courses will provide a solid foundation in website development and the holistic business perspective one needs to implement a truly effective online business strategy, for your own project or for clients.

All our instructors are local, experienced professionals in the field of website development and technology, and are passionately involved in growing the local tech community. The technology skills presented in these courses are current, relevant to today's job market, and based on industry best practices.

## INTRODUCTION TO INFORMATION ARCHITECTURE/WEBSITE PLANNING

Not all websites are created equal. For your online business presence to yield maximum benefit to your business, all content on the site must be designed to communicate value to your ideal customer in an easy and natural way. In this course, students will learn how to define and plan their website content for the optimal conversion to business goals. This course covers: content blocks and flow, user journey, graphic branding, calls to action, online marketing strategy, mockups and wireframes.

Available Fall 2019

## WEBSITE DEVELOPMENT I WEBSITE CONSTRUCTION PRINCIPLES HTML5 & CSS

Students are provided with a hands-on introduction to the universal architecture of the web. This course covers website construction with HTML5 and CSS, file structure and hierarchy, design and usability concepts, accessibility-conscious coding, and website hosting and administration. Students will learn website development fundamentals hands-on by building a simple, professional-class website in class. **Instructor: S. White**

DCB 2171-01 M 2/18-3/25 6-9pm SRC \$499  
No class 3/11

## WEBSITE DEVELOPMENT II MULTIPAGE WEBSITES, CSS STRATEGIES

Students will extend their knowledge of HTML5 & CSS in building multi page websites. Students will explore CSS strategies for managing multi-column layout, responsive design principles, and how to code a website from a design mockup. The course will also cover CSS drop-down menus, tables, forms, and embedded media. Prerequisite: Website Development – Part I or equivalent knowledge (instructor-approved). **Instructor: S. White**

DCB 2172-01 M 4/1-29 6-9pm SRC \$499  
No class 5/27

## WEBSITE DEVELOPMENT III BUILDING BLOCKS OF DYNAMIC WEBSITES

Students will discover the power of dynamic website coding with an introductory examination of PHP and MySQL. In this course, students will implement basic dynamic functions with PHP, and will hand-code a simple PHP-MySQL application to produce a dynamically-generated blog page. Students will examine similarities between their application and open source Content Management Systems like WordPress, and use what they learned to migrate an existing WordPress website. Prerequisite: Website Development II or equivalent knowledge (instructor-approved).

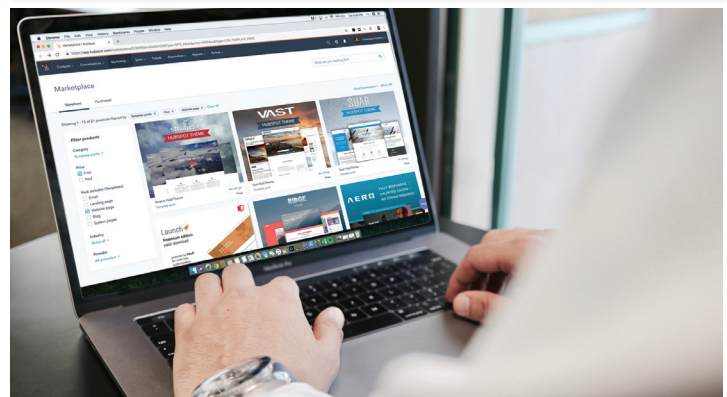
Students must bring a laptop to class. **Instructor: S. White**

DCB 2225-01 M 1/7-2/11 6-9pm SRC \$499  
No class 1/21  
DCB 2225-01 M 5/6-6/10 6-9pm SRC \$499  
No class 5/27

## WEB DEVELOPMENT INFO SESSIONS

Learn about the options for web development training.

DCB 2167-01	W	1/16	6:30pm	KSU	FREE
DCB 2167-02	W	1/30	6:30pm	KSU	FREE
DCB 2167-03	W	2/6	6:30pm	KSU	FREE



## INTRODUCTION TO JAVASCRIPT & JQUERY

This course is designed for JavaScript novices who have little or no experience with the language. Students will learn the structure of JavaScript variables, scope, control flow and functions. Students will create code that interacts with DOM and adds interactive behavior to a website. The course will discuss best practices and introduce jQuery – a widely used JavaScript library. Prerequisite: knowledge of HTML and CSS or Website Development II. **This course will be offered Fall 2019.**

## WEBSITE OPTIMIZATION FOR GOOGLE

This course examines the interplay between clear business messaging and search engine optimization. Principles covered include: Niche Service, Location, Speed, Proper Website Structure, Blogs, Target Keywords, Tags, Metadata, Google Analytics basics, Google Search Console basics, AdWords basics and Tips and Tricks. **This course will be offered Fall 2019.**

# CAREER PATHWAYS

## Web Developer / Computer Science

In 1 year

Computer Game Design Credential  
Web Application Developer Credential  
Mobile Application Developer Credential

In 2 years

Computer Science (A.S.)

M - MONDAY • T - TUESDAY • W - WEDNESDAY • R - THURSDAY • F - FRIDAY • S - SATURDAY • U - SUNDAY