STUDIES COMPUTER PROGRAMMING (SCP)

SCP 100 Selected Topics (1-6 Credits)
Professional Studies
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable 6 times for 6 credits maximum

SCP 103 Introduction to Computing Systems (3 Credits)
Professional Studies
This course introduces students to basic computer concepts, software, hardware, computer security, databases, e-commerce, and other technologies in the program. This course will cover ethical, social, legal issues related to the use of technology and computer systems.
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

SCP 200 Selected Topics (1-6 Credits)
Professional Studies
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable 6 times for 6 credits maximum

SCP 220 Basic Principles of Computer Programming (3 Credits)
Professional Studies
This course is an introduction to the history, foundational concepts, and overall process of computer programming.
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

SCP 225 Concepts in Digital Graphics (3 Credits)
Professional Studies
Introduction to the necessary skills, the graphic design process, planning and communication, tools and software used in graphic design. Students will learn how to design media for both online and print consumption.
Shared Competencies: Communication Skills (https://coursecatalog.syracuse.edu/shared-competencies/communication-skills/)

SCP 285 Object-Oriented Programming (3 Credits)
Professional Studies
This course is an introduction to the concepts of object-oriented programming. Students will be provided with a detailed overview of data types, classes, inheritance, file access, and the languages which utilize object-oriented programming.
Prereq: SCP 220
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

SCP 295 Esports Fundamentals (3 Credits)
Professional Studies
This course serves as an introduction. Students will learn about some of the popular categories of esports games, and major esports tournaments. This course will introduce students to the management side of esports including fulfilling consumer needs and wants.

SCP 300 Selected Topics (1-6 Credits)
Professional Studies
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable 6 times for 6 credits maximum

SCP 305 Database Management (3 Credits)
Professional Studies
This course is an introduction to databases and database design and management. Students will learn about data modeling techniques utilizing UML, utilize SQL programming language, and analyze database management systems. Students will also learn about database design and creation using UML concepts and diagrams.
Shared Competencies: Communication Skills (https://coursecatalog.syracuse.edu/shared-competencies/communication-skills/); Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

SCP 350 Introduction to HTML/CSS (3 Credits)
Professional Studies
This course will introduce students to using HTML (Hyper Text Markup Language) and CSS (Cascading Style Sheets) in order to design and develop a website. Students will learn how to develop responsive web pages through the use of CSS and media queries and how to use CSS for multiple HTML pages.
Prereq: SCP 220

SCP 355 Introduction to Javascript/jQuery (3 Credits)
Professional Studies
Introduces students to JavaScript and how to use it to build interactive webpages. Students will also learn about the jQuery library and how to use this resource for more rapid development. Additionally, students will learn how to develop a website that works across multiple web browsers.
Prereq: SCP 220 and SCP 350
Shared Competencies: Information Literacy and Technological Agility (https://coursecatalog.syracuse.edu/shared-competencies/information-literacy-and-technological-agility/)

SCP 360 Introduction to Mobile Applications (3 Credits)
Professional Studies
Introduction to the basics of mobile application development. Mobile applications are used in a wide variety of industries from banking to healthcare. Students will be given general overview of the two major mobile operating systems.
Prereq: SCP 220 and SCP 350 and SCP 355

SCP 400 Selected Topics (1-6 Credits)
Professional Studies
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable 6 times for 6 credits maximum

SCP 405 Programming in C++ (3 Credits)
Professional Studies
Introduction to the object-oriented programming language, C++. Students will learn about the use of classes and objects, overloading, inheritance, and exception handling as it relates to C++. Students expected to be familiar with these concepts in other languages.
Prereq: SCP 220 and SCP 285

SCP 418 Programming in Java (3 Credits)
Professional Studies
Introduces the basics of software development using the Java programming language. Use of arrays, strings, hash tables, and queues as it relates to the use of the Java programming language. It is expected that students entering this course are familiar with these concepts in other languages.

SCP 420 Web Application and Design (3 Credits)
Professional Studies
Introduces a variety of web tools that can be used to organize, create, publish, and manage websites that are created through HTML, CSS, JavaScript, and PHP server-side scripting. Covers more advanced concepts related using PHP to connect to and query real-time data from an online MySQL database.
Prereq: SCP 220 and SCP 360 and SCP 350 and SCP 355

SCP 435 Multiplayer Game Design Competition (3 Credits)
Professional Studies
Prepares students to design multiplayer games. Students will learn how to take a video game concept and bring it to life using a game engine. This course will provide in-depth knowledge of server-side scripting and explain the difference between server-side and client-side interactions.
Preerq: SCP 220 and SCP 225 and SCP 285 and SCP 295 and SCP 405

SCP 445 Cross Platform Mobile Application Deployment (3 Credits)
Professional Studies
This course will provide students with the information and tools needed to develop and deploy mobile applications that are compatible with iOS and Android. Students will learn about the cross-platform development tools and techniques used today including web application development.
Prereq: SCP 220 and SCP 350 and SCP 355 and SCP 360

SCP 482 System Software Design for Professionals (3 Credits)
Professional Studies
This course provides an overview of software design principles. This course will analyze software design techniques from the perspective of a software engineer developing system software. Additionally, software modeling techniques using UML will be covered.
Prereq: SCP 220 and SCP 285 and SCP 305 and SCP 350 and SCP 355 and SCP 360 and SCP 405 and SCP 418 and SCP 420