COAP - Computer Applications | Undergrad

Global Citizenship Program Knowledge Areas **(....)**	
ARTS	Arts Appreciation
GLBL	Global Understanding
PNW	Physical & Natural World
QL	Quantitative Literacy
ROC	Roots of Cultures
SSHB	Social Systems & Human Behavior

Global Citizenship Program Skill Areas (....)	
CRI	Critical Thinking
ETH	Ethical Reasoning
INTC	Intercultural Competence
OCOM	Oral Communication
WCOM	Written Communication
** Course fulfills two skill areas	

COAP 1020 Introduction to Computer Applications (3)

This course is appropriate for any student interested in using computer applications in an academic, professional or personal setting. It provides an introduction to word processing, electronic spreadsheet and database management software.

COAP 2000 Introduction to Web Programming (3)

This course covers the most current markup language used for developing web pages. Students will also be introduced to the various methods of styling page content.

COAP 2010 Applications Topics (3)

This course covers a variety of computer applications and web topics appropriate for students with some computer experience. May be repeated for credit when content differs. **Prerequisites**: Vary by topic.

COAP 2100 Web Technology Principles (3)

This course will focus on the core technologies students need to know in order to start designing professional webpages. The course will cover basic web development principles and serve as an introduction to the technologies required in client-side web design and programming concepts and practices. **Prerequisite**: COAP 2000 or HTML proficiency.

COAP 2110 Web Animation (3)

This course covers animation techniques used in the creation of webpages. Students will use a current animation tool for webpage design and Animation development. **Prerequisite**: COAP 2000 (or concurrently) or HTML proficiency.

COAP 2120 Web Editors (3)

This course teaches students how to build, maintain and support a website using various web editing tools. Topics will include incorporating traditional page components including video and social media, creating flexible layouts and publishing to a web server. Students will also follow a defined web design process of planning, design, development, launch and post-launch. **Prerequisite**: COAP 2000 or XHTML proficiency.

COAP 2130 Web Scripting (3)

This course teaches web scripting and programming techniques needed to develop dynamic webpages and interactive websites. Students will learn how to use a client-side scripting language such as JavaScript to work with well-formed webpages. Basic scripting language concepts such as functions, arrays and object-oriented programming are covered and applied. **Prerequisite**: COAP 2000 or HTML proficiency.

COAP 2145 Web Usability (3)

This course introduces students to the field of web usability. Students will learn how to design usable websites based on human-centered design principles. Students will also learn how to make sites accessible. **Prerequisite**: COAP 2000 or HTML proficiency.

COAP 2150 Design Principles I (3)

This course covers the agile development process for the creation of successful responsive websites. Students will learn the basics of information architecture, methods of website navigation, the creation of user personas and other artifacts common in the design process. Students will also be introduced to SEO principles. **Prerequisites**: COAP 2000 or HTML proficiency and COAP 2145.

COAP 2160 Advanced Web Animation (3)

This course is a study of web publishing with an emphasis on mastery of animation using Flash and the internal scripting capabilities of Flash, ActionScript. Animation on websites will be studied via splash opening home pages, animated navigation graphics and interactive animations developed as the primary content of websites. Students will learn the basic commands, functions and operators used in ActionScript, building on their introductory knowledge of Flash to work with code that extends the boundaries of Flash's built-in tools, objects and properties. **Prerequisites**: COAP 2000, COAP 2110 and COAP 2130.

COAP 2180 Introduction to XML (3)

This course is designed to introduce students to the building blocks of XML, a markup language that is used to structure documents for delivery on the web. Students will learn how to structure data with XML, how to validate data with data type definitions (DTDs) and schemas, and how to create and apply namespaces. Students will also learn how to create both CSS and XSLT style sheets to display the XML documents. **Prerequisite**: COAP 2000 or HTML proficiency.

COAP 2190 Mobile Web Design (3)

This course introduces students to the design concepts associated with mobile websites. Students will be introduced to the technologies necessary for programming the mobile web. Students will learn how to design and implement website(s) that are de-signed specifically for mobile devices. **Prerequisite**: COAP 2000.

COAP 3000 Advanced Web Scripting (3)

This course provides students with a comprehensive understanding of topics in HTML, XHTML and dynamic HTML (DHTML). Students will learn and apply advanced concepts in

Course Descriptions

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DHTML to expand their knowledge and skills in creating dynamic and interactive webpages and sites. This course discusses the structure of Dynamic HTML and emphasizes the main areas of innovation in web development technology. **Prerequisite**: COAP 2130.

COAP 3010 Advanced Applications Topics (3)

This course covers a variety of computer applications topics appropriate for students with considerable computer experience. May be repeated for credit if content differs. **Prerequisites:** Vary by topic.

COAP 3110 Interactive Site Development (3)

This course provides an introduction to website development and server-side programming technologies. Students will learn how to integrate server technologies to produce web applications that not only interact with users, but also integrate other computer applications. It is designed for students who want to create and maintain webpages as well as manipulate database information. Students will learn how to incorporate database in their websites, as well as how to update and query those databases. **Prerequisite**: COAP 3000.

COAP 3120 Cascading Style Sheets (CSS) (3)

This course covers the styling of web pages as defined in the latest CSS specification. Students will develop style sheets in real-world exercises and master the skills to create effective style sheets for the web. **Prerequisite**: COAP 2000 or permission of instructor.

COAP 3150 Design Principles II (3)

This course is a continuation of COAP 2150. Students will continue the design process, which began in COAP 2150 by implementing their designs. Students will also be introduced to digital graphic techniques, such as the use of layers, masks, filters and special effects. **Prerequisites**: COAP 2150 and COAP 3120 (or concurrently).

COAP 3180 Web Databases (3)

This course teaches students how to create database-driven websites, implementing the latest technologies to integrate databases with web applications. Students will also learn the basic database concepts with special emphasis on hands-on learning skills necessary to implement XML databases on the web. **Prerequisites**: COAP 3110.

COAP 3200 Advanced Web Programming (3)

This course teaches advanced programming skills and gain knowledge to successfully implement responsive and more usable websites. **Prerequisites**: COAP 2000 and COAP 3120.

COAP 4910 Senior Applications Project (3)

This course teaches students to develop an advanced application that uses and synthesizes previous learning. **Prerequisite**: Permission of department.