RARITAN VALLEY COMMUNITY COLLEGE
ACADEMIC COURSE OUTLINE

IDMX – 232 Internet & Web Architecture

I. Basic Course Information

    A. Course Number and Title: **IDMX-232 Internet & Web Architecture**

    B. New or Modified Course: **Modified**

    C. Date of Proposal: Semester: **Fall**   Year: **2018**

    D. Effective Term: Fall 2019

    E. Sponsoring Department: Visual and Performing Arts (VAPA)

    F. Semester Credit Hours: **3**

    G. Weekly Contact Hours: **4**   Lecture: **2**
                                            Laboratory: **2**
                                            Out of class student work per week: **5**

    H. Prerequisites/Corequisites: **IDMX-225 Web Development I**

    I. Laboratory Fees: **Yes, at current rate.**

    J. Name and Telephone Number or E-Mail Address of Department Chair and Divisional Dean at time of approval: **Vandana Nadkarni vnadkarn@raritanval.edu & John A. Sichel john.sichel@raritanval.edu (Co-Chairs); Patrice Marks patrice.marks@raritanval.edu (Dean of Liberal and Fine Arts)**

II. Catalog Description

Prerequisite: IDMX-225 Web Development I. Students gain an appreciation for the architectural factors that a Web Manager must consider when implementing Web servers and services accessible on the Internet. This course discusses relevant aspects of the Internet architecture including the Domain Name System, how to obtain domain names and IP addresses, access technologies, and TCP/IP. Web Servers, including Operating Systems, Server Software and Services, Security Services, and Server Performance are also covered in detail.

III. Statement of Course Need

    A. As businesses strive to incorporate Web-based strategies into their Business Plans, the demand for Web site professionals continues to grow. The creation of Web pages on the Internet has generated a great need for people with the technical knowledge to do Web page development. Individuals, business, and government agencies increasingly turn to the World Wide Web to advertise, inform, sell, and communicate. This course enables students to create interactive and complex Web sites to meet the needs of today's society.

    B. A central tools in Web Development are hardware and software skills. Hands-on experience in a computer lab setting is required.

    C. This course generally transfers as a computer science program elective.

IV. Place of Course in College Curriculum

    A. Free Elective
    B. This course does not serve as a General Education course
    C. This course serves as a Computer Elective on the Computer and Programming Electives List
    D. This course meets a program requirement for…
        a. Computer Support Certificate
        b. Interactive Digital Media & Web Development A.A.S. Degree
        c. Interactive Digital Media & Web Development A.S. Degree
        d. Interactive Digital Media & Web Development Certificate

    E. To see course transferability: a) for New Jersey schools, go to the NJ Transfer website, www.njtransfer.org; b) for all other colleges and universities, go to the individual websites.

V. Outline of Course Content

    1. Architectural factors for Web management
    2. Implementing Web servers and services
        a. Building a Web Site
        b. Adding multimedia to Web Sites
        c. Creating Dynamic Web Pages
        d. Implementing databases and Web Hosting
        e. Implementing Network Security
    3. Internet Infrastructure
        a. Domains and domain naming
        b. Domain Name System (DNS)
        c. Network Communication Servers
        d. Access technologies
        e. TCP/IP Basics
    4. Web servers

a. Software
b. Security
c. Secure online transactions
5. Current industry standard web languages and scripting tools, such as:
   a. Java
   b. JavaScript
   c. HTML
   d. CSS
   e. PHP
   f. MySQL

VI. General Education and Course Learning Outcomes

A. General Education Learning Outcomes:

At the completion of the course, students will be able to:
1. Demonstrate proficiency in designing and developing Web servers that can deliver Internet content (G.E. 1)
2. Communicate and collaborate with others creating and managing Web Servers that are more power and add functionality to Web sites (G.E. 2)
3. Demonstrate proficiency in using the Web server software for delivery of Internet content (G.E. 2, 3)
4. Demonstrate knowledge and skills necessary to design, develop manipulate, and manage Web servers (G.E. 2, 3)
5. Apply knowledge from other disciplines to develop web servers that can be used in problem solving or decision making (G.E. 4)
6. Recognize the ethical issues surrounding the use of computers in creating web pages (G.E. 5)

B. Course Learning Outcomes:

At the completion of the course, students will be able to:
1. Discuss the features of well-designed web sites to meet the communication needs of the client from a Web architectural point of view.
2. Design and develop Web servers and services
3. Design domain architecture with Web server access technologies
4. Describe Web server software and security.
5. Design and publish secure web pages for ecommerce
6. Connect to remote databases to download information
7. Link web pages to other pages on the Internet
8. Interpret current copyright laws concerning information
9. Design and develop Web sites using standard Web server tools. …

C. Assessment Instruments

1. demonstrations
2. portfolios
3. computer programs

VII. Grade Determinants

A. Computer Projects – in and out of class
B. Exams – hands-on software exams
C. Presentations
D. Homework
E. Final Exam

A. lecture/discussion
B. laboratory

VIII. Texts and Materials

A. Suggested textbook:
   o *Learning PHP, MySQL & JavaScript: With jQuery, CSS & HTML5 (Learning Php, Mysql, Javascript, Css & Html5) 4th Edition* by Robin Nixon
   Publisher: O'Riley
   ISBN-13: 978-1491918661

B. Other computer-based sources:
   o Appropriate Open Access Web Development resources (these resources change rapidly over time so the professor will have to assess what is currently available).

(Please Note: The course outline is intended only as a guide to course content and resources. Do not purchase textbooks based on this outline. The RVCC Bookstore is the sole resource for the most up-to-date information about textbooks.)

IX. Resources

A. Computer access …
B. Access to and webspace on the RVCCMCCS01 (or other appropriate) server.
C. Modern web browsers (Chrome, Safari, Mozilla, Edge, etc.)
D. Modern industry-standard web development software.

(Resources may change from semester to semester, due to the pace of the industry.)