STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK

COURSE OUTLINE
CITA 420 - PROGRAMMING FOR THE WEB

Revised By: MINHUA WANG

CANINO SCHOOL OF ENGINEERING TECHNOLOGY
INFORMATION TECHNOLOGY
May 2015
A. **TITLE**: Programming for the Web

B. **COURSE NUMBER**: CITA 420

C. **CREDIT HOURS**: 3

D. **WRITING INTENSIVE COURSE**: No

E. **COURSE LENGTH**: 15 weeks

F. **SEMESTER(S) OFFERED**: Fall

G. **HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY**: 2 lecture hours and 2 laboratory hours per week

H. **CATALOGUE DESCRIPTION**: This is a course on programming languages and techniques for Web development. Topics include server side programming, creating dynamic, database driven content, and developing Web based client/server database applications.

I. **PRE-REQUISITES/CO-REQUISITES**:
   a. Pre-requisite(s): CITA 310 Web Server Administration and CITA 330 Emerging Information Technology Applications
   b. Co-requisite(s): none

J. **GOALS (STUDENT LEARNING OUTCOMES)**:
   By the end of this course, the student will be able to:

<table>
<thead>
<tr>
<th>Course Objective</th>
<th>Institutional SLO</th>
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<tr>
<td>a. Develop secure, dynamic Websites by integrating and implementing the PHP scripting language</td>
<td>2. Crit. Thinking</td>
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<td>3. Prof. Competence</td>
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<td>b. Develop Websites with the support of MySQL database system</td>
<td>2. Crit. Thinking</td>
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<td>3. Prof. Competence</td>
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<td>c. Assemble technologies that may be integrated with PHP and MySQL in order to deliver a complete e-commerce solution</td>
<td>2. Crit. Thinking</td>
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<td>3. Prof. Competence</td>
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<td>d. Experiment troubleshooting in PHP</td>
<td>2. Crit. Thinking</td>
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<tr>
<td>e. Experiment troubleshooting in MySQL</td>
<td>2. Crit. Thinking</td>
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<td>3. Prof. Competence</td>
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<tr>
<td>f. Recognize various server-side Web programming frameworks</td>
<td>2. Crit. Thinking</td>
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<td>3. Prof. Competence</td>
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K. **TEXTS**:
L. **REFERENCES:** N/A

M. **EQUIPMENT:** computer classroom with virtual machine software installed

N. **GRADING METHOD:** A-F

O. **MEASUREMENT CRITERIA/METHODS:**
   - Exams
   - Quizzes
   - Participation

P. **DETAILED TOPICAL OUTLINE:**

I. Using PHP and MySQL
   A. PHP Crash Course
   B. Storing and Retrieving Data
   C. Using Arrays
   D. String Manipulation and Regular Expressions
   E. Reusing Code and Writing Functions
   F. Object-Oriented PHP
   G. Exception Handling
   H. Using MySQL

II. Advanced PHP Techniques
   A. Implementing Authentication with PHP and MySQL
   B. Implementing Secure Transactions with PHP and MySQL
   C. Interacting with the File System and the Server
   D. Using Network and Protocol Functions
   E. Managing the Date and Time
   F. Using Session Control in PHP

III. Building Practical PHP and MySQL Projects
   A. Using PHP and MySQL for Large Projects
   B. Building User Authentication and Personalization
   C. Building a Shopping
   D. Building a Content Management System
   E. Building a Web-Based Email Service
   F. Building Web Forums

Q. **LABORATORY OUTLINE:**

I. Installing and Configuring Apache/PHP/MySQL
II. Using PHP to Store and Retrieve Data
III. Using MySQL to Store and Retrieve Data
IV. Implementing Advanced Techniques with PHP and MySQL
V. Building Practical PHP and MySQL Project