NVCC COLLEGE-WIDE COURSE CONTENT SUMMARY
ITP 240
Server Side Programming (4 cr.)

Course Description
ITP 240 - Centers on instruction in fundamentals of Internet application design, development, and deployment. Course content includes implementation of server component models, security, and database connectivity using server-side programming. Lecture 4 hours per week.

Recommended Co-requisites or Pre-requisites
ITP 140

Course Objectives
Upon completion of this course, the student will be able to:

- Acquire fundamentals of Web application design, development, and deployment using a variety of technologies.
- Implement server component models, security, database connectivity, and server-side programming.
- Gain a working knowledge of Web and Internet applications

Course Content
- Introduction to Web Server Technology and Web-based applications
- Extensible Markup Language (XML)
- Database Principles
- Perl and CGI (Common Gateway Interface)
- PHP web development
- Accessibility
- Security

Student Learning Outcomes

Introduction to Web Server Technology and Web-based applications
- Terminology and standards
- Theory of web architecture
- Implications for application design
- Client-Side Scripting versus Server-Side Scripting
- Web Server access
- Microsoft Internet Information Services (IIS)
- Apache Web Server

Extensible Markup Language (XML)
- XML Vocabularies and Structuring data
- The Document Object Model
- XML Namespaces
- Document Type Definitions and Schemas
- Extensible Stylesheet Language (XSL)
- Simple Object Access Protocol (SOAP)

Database Principles
- Relational Database Model
- SQL overview
- MySQL operations
- DBI (The Perl Database Interface Module)
- PHP dbx module (PHP database interface Module)

**Perl and CGI (Common Gateway Interface)**
- Perl programming language
- Constructs, string processing, and regular expressions
- Using Client/Server environment variables
- Forms processing and business logic
- Database connectivity with DBI
- Cookies

**PHP web development**
- PHP programming language
- Constructs, string processing, and regular expressions
- Using Client/Server environment variables
- Forms processing and Business Logic
- Database connectivity with dbx
- Cookies

**Accessibility**
- Web accessibility issues
- Laws and initiatives
- Image alternatives
- Maximizing readability by focusing on structure
- Accessibility tools
- Voice Synthesis, alternative input devices

**Security**
- General security issues and requirements
- Legal and ethical responsibilities
- “Safe” scripting
- Authentication and verification
- Public-Key Cryptography
- Secure Sockets Layer (SSL)
- Attacks and defenses