

NFC ACADEMY



NEW APPLICATIONS: WEB DEVELOPMENT IN THE 21ST CENTURY

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COURSE OVERVIEW

New Applications introduces students to the rapidly evolving world of apps, or applications. The introduction of the Apple II in 1977 followed by the IBM PC and scores of compatible computers just four years later created strong consumer demand for software programs, as these applications were referred to at the time. Capable of formatting spreadsheets, composing and proofing hundreds of lines of text, or supporting classroom instruction, computer programs were initially sold by specialty stores, college bookstores, or through the mail.

The explosive growth of the Internet that followed at the beginning of the twenty-first century with the introduction of high-speed networking, the dynamic World Wide Web, and most recently the development of affordable smartphones and web tablets have all contributed to global, cultural, and societal change.

This course begins with a historical tour of the Internet and World Wide Web as well as the programs and applications that made it possible for computer users on every continent to begin to explore and better understand their world. Then, through a step-by-step introduction to WordPress, students gain the tools and insight necessary to create their own web pages and discover their online voice.

In addition to learning how to use WordPress and other applications that promote students' presence on the World Wide Web, this course discusses how

the web has become the foremost channel for the distribution of applications that increase the functionality of the web and support a global hub of social networking and communication. Students are introduced to the evolution of networking and data-transfer capabilities beginning with early HTTP protocols continuing through to the recent introduction of smartphones capable of connecting to sites on the World Wide Web without having to rely on a browser for navigation.

The course concludes with a survey of the continuing explosion of new apps, or applications, designed to operate on one or more of the proprietary mobile devices (smartphones, tablets, and netbooks). Students are given an opportunity to track fundamental changes in this growing industry as development has moved from the original model of a single experienced programmer developing a single app for distribution at little or no cost to a model in which retailers, non-profit organizations, government agencies, and Fortune 500 companies contract with mid-sized marketing and communications firms to develop sophisticated apps designed to raise global market and public awareness of institutions and issues. Additionally, students have an opportunity to understand that career opportunities in app development have evolved from programming and coding to now include marketing, public relations, creative arts, project and product management and sales, with a growing number of careers in the industry requiring little if any actual programming experience.

New Applications is a survey course that travels from the first software programs developed to facilitate communication on the Internet to the new generation of mobile and native apps that access the Internet without a reliance on a web browser. New Applications is also a practical course in how to develop a presence on the World Wide Web using WordPress and other available web-application tools. The goal of the course is to provide the learner insight into the rapidly evolving universe of programming and application development so that he or she can make informed career decisions in an industry that is changing as quickly as it is growing.

Objectives

- Describe major advances in network and communications technology beginning with the early Internet and continuing through the introduction of web-enabled smartphones and other devices.
- Create a web presence using simple applications.
- Evaluate and select from a variety of web development tools and apps those most appropriate for their interests and needs.
- Design a current generation app for use on a smartphone or tablet.
- Evaluate the education and training qualities and experiences essential to secure a position with growth potential in the app industry

This is an introductory course in the history and development of new applications for use on web-enabled devices including personal computers, tablets, smartphones, and ultrabooks. While there are no specific prerequisites for this course, students should have a basic understanding of the Internet, the World Wide Web, browsers, file formats, hardware, and software applications. Students who have working knowledge of IP addressing, programming, the differences among local, wide-area, and cloud-computing networks as well as the current state of mobile devices will be well prepared to complete this course.

New Applications Outline

Unit One: The World Wide Web: History and Definitions

- Chapter One: Defining the Web
 - Lesson 1: History of the Web in a Nutshell
 - Lesson 2: File Sizes and Resolution
 - Lesson 3: What Does This Do? Hosted vs. Local Computing
 - Project 1: The Interconnected Internet
 - Project 2: Consulting
- Chapter Two: Hosted and Non-Hosted Applications
 - Lesson 4: Manual Transmission: HTML (Part One)
 - Lesson 5: The Editor's Two Flavors: HTML (Part Two)
 - Lesson 6: The Wave of the Present – WordPress
 - Project 1: Developing HTML
 - Project 2: On Assignment as a Web Developer

Unit Two: Web Site Design on Content Managed Platforms

- Chapter One: WordPress Components
 - Lesson 1: WordPress Roles
 - Lesson 2: WordPress Themes
 - Lesson 3: Typography
 - Project 1: Developing a WordPress Account
 - Project 2: Marketing to a Potential Client
- Chapter Two: Website Elements
 - Lesson 4: Detailed Editors
 - Lesson 5: Widgets
 - Lesson 6: Third-party Add-ons
 - Project 1: Bringing It All Together
 - Project 2: A Comparative Study of Apps, Plug-ins, and Extensions

Unit Three: Managing Site Creation

- Chapter One: Bringing It All Together

- Lesson 1: Assigning Roles
- Lesson 2: Designing the Publication
- Lesson 3: Developing the Content
 - Project 1: Photos, Videos, and Sound Files in WordPress
 - Project 2: Creating Posts
- Chapter Two: Working Together
 - Lesson 4: Publishing Deadlines
 - Lesson 5: Approvals, Change Orders, and Last-minute Edits
 - Lesson 6: Self-Evaluation and Your Projects
 - Project 1: Creating a Statement of Work
 - Project 2: Baseline, Benchmark, Objective, and Goal

Unit Four: Internet Distributed Applications

- Chapter One: Introduction to Internet Distributed Applications
 - Lesson 1: What Are Internet Distributed Applications?
 - Lesson 2: Distribution of Internet Applications
 - Lesson 3: The Internet as a Revolutionary Path to Application Development
 - Project 1: What Is Cloud Computing?
 - Project 2: Are You Online or Offline?
 - Project 3: New Technology: Autos vs. Internet
- Chapter Two: Emerging Trends
 - Lesson 4: Strategies for Keeping Well-informed about New Trends and Developments
 - Lesson 5: Report on the Present
 - Lesson 6: Evaluating Products and Services
 - Project 1: RSS Feed Comparisons
 - Project 2: Find Your Own Trends

Unit Five: New Apps: Creativity and Careers

- Chapter One: A New Industry
 - Lesson 1: The Mobile Apps Industry
 - Lesson 2: Building Apps
 - Lesson 3: Health Considerations in Developing Apps
 - Project 1: Apps Review
 - Project 2: The Ergonomic App Development Office
- Chapter Two: Career Choices: Solo or Solid
 - Lesson 4: Entrepreneurial App Development
 - Lesson 5: Expanding Career Opportunities in a New Industry
 - Lesson 6: Technology Advances, Careers Redefined
 - Project 1: Researching Network Operating Systems
 - Project 2: Next Year's App Solution

This course requires independent research and work from the student. Students should have a high interest in this course for the most success.

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- **UNIT 1 - THE WORLD WIDE WEB: HISTORY AND DEFINITIONS**
 - **Course Overview**
 - **History of the Web in a Nutshell**
 - **Project: The Interconnected Internet – Complete the project assignment The Interconnected Internet.**
 - **File Sizes and Resolution**
 - **Project: Consulting - Complete the project assignment Consulting.**
 - **What Does This Do? Hosted vs. Local Computing**
 - **Quiz 1: Defining the Web**
 - **Manual Transmission: HTML (Part One)**
 - **Project: Developing HTML - Complete the project assignment Developing HTML.**
 - **The Editor's Two Flavors: HTML (Part Two)**
 - **The Wave of the Present – WordPress**
 - **Quiz 2: Hosted and Non-Hosted Applications**
 - **Unit 1 Test**
 - **Course Project Part 1: The Home Page - Complete the project assignment for the Course Project.**
 - **Glossary and Credits**

- **UNIT 2 -WEB SITE DESIGN ON CONTENT MANAGED PLATFORMS**
 - **WordPress Roles**
 - **Project: Developing a WordPress Account Complete the project assignment Developing a WordPress Account.**
 - **WordPress Themes**
 - **Topography**
 - **Quiz 1: WordPress Components**
 - **Detailed Editors**
 - **Widgets**
 - **Project: Bringing It All Together Complete the project assignment Bringing It All Together.**

- **Third Party Add-ons**
 - **Quiz 2: Website Elements**
 - **Unit 2 Test**
 - **Course Project Part 2: Planning the Site**
 - **Glossary and Credits**
- **UNIT 3 - MANAGING SITE CREATION**
 - **Assigning Roles**
 - **Project: Photos, Videos, and Sound Files in WordPress**
Complete the project assignment Photos, Videos, and Sound Files in WordPress.
 - **Designing the Website**
 - **Project: Creating Posts - Complete the project assignment Creating Posts.**
 - **Developing the Content**
 - **Quiz 1: Bringing It All Together**
 - **Publishing Deadlines**
 - **Approvals, Change Orders, and Last-Minute Edits**
 - **Self-Evaluation and Your Projects**
 - **Quiz 2: Working Together**
 - **Unit 3 Test**
 - **Course Project Part 3: Under Construction - Complete the project assignment for the Course Project.**
 - **Glossary and Credits**
- **UNIT 4 - INTERNET DISTRIBUTED APPLICATIONS**
 - **What Are Internet Distributed Applications?**
 - **Project: What Is Cloud Computing? - Complete the project assignment Cloud Computing.**
 - **Distribution of Internet Applications**
 - **Project: Are You Online or Offline? - Complete the project assignment Are You Online or Offline.**
 - **The Internet Is a Revolutionary Path to Application Development**
 - **Quiz 1: Introduction to Internet Distributed Applications**
 - **Strategies for Keeping Well-informed about New Trends and Developments**
 - **Project: RSS Feed Comparisons Complete the project assignment RSS Feed Comparisons.**
 - **Evaluating Products and Services**
 - **Quiz 2: Emerging Trends**
 - **Unit 4 Test**

- **Course Project Part 4: Reviewing Web Applications - Complete the project assignment for the Course Project.**
- **Glossary and Credits**

- **UNIT 5 - NEW APPS: CREATIVITY AND CAREERS**
 - **The Mobile Apps Industry**
 - **Project: Apps Review - Complete the project assignment Apps Review.**
 - **Building Apps**
 - **Health Considerations in Developing Apps**
 - **Quiz 1: A New Industry**
 - **Entrepreneurial App Development**
 - **Project: Researching Network Operating Systems - Complete the project assignment Researching Network Operating Systems.**
 - **Expanding Career Opportunities in a New Industry**
 - **Technology Advances, Careers Redefined**
 - **Quiz 2: Career Choices: Solo or Solid**
 - **Unit 5 Test**
 - **Course Project Part 5: The Mobile App Hall of Fame - Complete the project assignment for the Course Project.**
 - **Glossary and Credits**

- **UNIT 6 - COURSE REVIEW AND EXAM**
 - **Course Project Part 6: The Future of Apps Blog - Complete the project assignment for the Course Project.**
 - **Review**
 - **Exam**