Web Technologies, Semester B

Credits: 0.5

Course Overview and Goals

This one-semester course is intended as a practical, hands-on guide to help you understand the concepts of website design and development. This course guides you on how to plan, design, and create a website. You will also learn about online security guidelines, copyright laws, and licensing agreements.

This course has 12 lessons organized into 4 units, 4 Unit Activities and 4 discussions. Additionally, there is one Course Activity and one Course Project that you need to work on at the end of the course. Each lesson contains one or more Lesson Activities. You will grade your work in the lesson activities by comparing them with sample responses. You will submit the unit activities, course activity, and course project to your teacher for grading.

By the end of this course, you will be able to do the following:

- Describe online security guidelines.
- Describe copyright laws and licensing agreements.
- Describe different search strategies.
- Describe the importance of planning in website development and create a project plan.
- Explain website architecture.
- Create a website.
- Describe the basic features of JavaScript and create basic scripts in JavaScript.
- Create DHTML and XML documents.
- Create an attractive web page using a WYSIWYG editor.
- Design the process of website development.
- Describe how to launch a website.
- Describe the administration of web servers.

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UNIT 1: ONLINE SECURITY AND ETHICAL ISSUES (DAYS 1 – 21)

In this unit, you will learn about the risks of cyberbullying and learn safety guidelines for online use and how to minimize the risks of online harassment and bullying. You will learn the legal and ethical aspects relating to the use of information and examine copyright laws. You will also learn how search engines work and how to apply search engine optimization (SEO) to increase a site's visibility.

Lesson	Lesson Objective
Syllabus and Orientation	Review the Student Orientation and Course Syllabus at the beginning of this course.
Online Security	Describe online security guidelines.
Legal and Ethical Issues	Describe copyright laws and licensing agreements.
Search Strategies	Describe different search strategies.

UNIT 2: WEBSITE ARCHITECTURE AND DESIGN (DAYS 22 – 41)

In this unit, you will create and implement a written plan of action for developing a web product. You will learn best practices for creating website architecture and learn how to create a prototype. You will use storyboarding techniques to design a website. Finally, you will also learn to evaluate the functionality of web pages and websites.

Lesson	Lesson Objective
Planning for Website Development	Describe the importance of planning in website development and create a project plan.
Website Architecture	Explain website architecture.
Website Design	Create a website.

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UNIT 3: JAVASCRIPT, DHTML, AND WYSIWYG EDITORS (DAYS 42 – 59)

In this unit, you will learn about standard scripting languages. You will create a basic script in JavaScript, and create and validate forms in JavaScript. You will also create a dynamic and interactive web page using DHTML. In addition, you will learn the advantages and disadvantages of using a WYSIWYG editor and create an effective web page using a WYSIWYG editor.

Lesson	Lesson Objective
Using JavaScript	Describe the basic features of JavaScript and create basic scripts in JavaScript.
DHTML and XML	Create DHTML and XML documents.
WYSIWYG Editors	Create an attractive web page using a WYSIWYG editor.

UNIT 4: WEBSITE DEVELOPMENT AND ADMINISTRATION (DAYS 60 – 90)

In this unit, you will learn the stages of the web-development life cycle and the roles of various members of a web-development team. You will also learn how to publish a website and evaluate it for usability and accessibility issues. Additionally, you will learn about the hardware and software required for web servers and learn how to perform administration of web servers.

Lesson	Lesson Objective
The Website Development Process	Describe the process of website development.
Launching a Website	Describe how to launch a website.
Web Administration	Describe the administration of web servers.
Course Activity	Research and summarize a few articles that you find about web design and development.
Course Project	Create a tutorial on how to use a WYSIWYG editor.

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