Bachelor of Technical-Vocational Teacher Education
MAJOR IN COMPUTER PROGRAMMING:
WEB DEVELOPMENT 1

COURSE MODULE	COURSE UNIT	WEEK
1	8	10
Bootstrap (Properties)		

CHECKLIST

- ✓ Read course and unit objectives
- ✓ Read study guide prior to class attendance
- ✓ Read required learning resources; refer to unit terminologies for jargons
- ✓ Proactively participate in classroom discussions
- ✓ Participate in weekly discussion
- ✓ Answer and submit course unit tasks

UNIT EXPECTED OUTCOMES (UEOs)

At the end of this unit, the students are expected to:

Cognitive:
1. Identify web development, bootstrap and bootstrap properties.
2. Implement bootstrap properties into the webpage.
3. Examine bootstrap properties into the webpage.

Affective:
1. Listen attentively during class discussions
2. Demonstrate tact and respect when challenging other people's opinions and ideas
3. Accept comments and reactions of classmates on one's opinions openly and graciously.

Psychomotor:
1. Participate actively during class discussions and group activities
2. Express opinion and thoughts in front of the class

REQUIRED READINGS

Bootstrap 5 Tutorial. (n.d.). https://www.w3schools.com/bootstrap5/index.php

STUDY GUIDE

Web development or web application frameworks
- ➢ refer to a set of resources and tools available to software and web developers.
- ➢ give web developers the ability to build and manage web applications, web services and websites.
- ➢ It is a software framework that was developed in order to simplify the web development process and make it easier to build a website.
- ➢ It includes templating capabilities that allow you to present information within a browser, provides an environment for scripting how information flows and also contains many application programming interfaces (APIs) for gaining access to underlying data resources.
- ➢ also provide tools in order for web developers to build a content management system (CMS) for managing digital information on websites and the Internet.
- ➢ can be considered as a pre-built structure that handles the more repetitive processes and features involved with developing a website. This means that a web developer will spend most of their time interacting with the different parts of the web framework through the use of code.

Advantages of web frameworks
- ➢ Open source - very cost effective for both the developer and the client. This doesn't mean that they aren't of good quality. Most of the popular web frameworks used by developers are free for use.
- ➢ Efficient - web frameworks eliminate the need to write a lot of repetitive code allowing developers to build websites and applications much quicker.
- ➢ good level of support
- ➢ high level of security

A web framework also comes with a support team and advanced security features meaning that you can be rest assured knowing that if an issue does arise, it will be handled by a team of experts.
- ➢ Integration feature - ability to allow developers link other tools such as databases to the framework.

Disadvantages of web frameworks
- ➢ Limited - in terms of making changes to the web framework. Everything from coding paradigms and design is very restrictive.
- ➢ difficult to learn the language - web developers will learn the framework but will not know the coding language behind it making it difficult for them to fully understand everything about the web framework itself.

Bootstrap
- ➢ most popular and powerful front-end (HTML, CSS, and JavaScript) framework for faster and easier responsive web development.
- ➢ includes HTML and CSS based design templates
- ➢ originally created by a designer and a developer at Twitter in mid-2010. Before being an open-sourced framework, Bootstrap was known as Twitter Blueprint.

Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.

Advantages of Bootstrap:
- ➢ **Easy to use**: Anybody with just basic knowledge of HTML and CSS can start using Bootstrap
- ➢ **Responsive features**: Bootstrap's responsive CSS adjusts to phones, tablets, and desktops
- ➢ **Mobile-first approach**: In Bootstrap, mobile-first styles are part of the core framework
- ➢ **Browser compatibility**: Bootstrap 5 is compatible with all modern browsers (Chrome, Firefox, Edge, Safari, and Opera). Note that if you need support for IE11 and down, you must use either BS4 or BS3.
- ➢ **Save lots of time** — You can save lots of time and efforts using the Bootstrap predefined design templates and classes and concentrate on other development work.
- ➢ **Consistent design** — All Bootstrap components share the same design templates and styles through a central library, so the design and layout of your web pages will be consistent.
- ➢ **Open Source** — And the best part is, it is completely free to download and use.

Bootstrap Properties – are also the same with CSS Properties but can be classified into:
Contents, Forms, Components which are standardize as Classes.
See this additional reference links for the list of Bootstrap classes and examples:
1. https://bootstrapcreative.com/resources/bootstrap-5-cheat-sheet-classes-index/
2. https://www.w3schools.com/bootstrap4/bootstrap_ref_all_classes.asp
3. https://getbootstrap.com/docs/5.0/examples/cheatsheet/

TERMINOLOGIES

BROWSER - a computer program with a graphical user interface for displaying and navigating between web pages.

CLIENT - a program, person or things that are capable of obtaining services provided by another program.

CODING - sometimes called computer programming, is how we communicate with computers.

DOMAIN NAME - refers to your website address. This is what users type in a browser's search bar to directly access your website.

FRAMEWORK - a layered structure indicating what kind of programs can or should be built and how they would interrelate.

FRONT-END - refers to the user interface / client-side, everything with which the user interacts.

HYPERTEXT - a word, phrase or chunk of text that can be linked to another document or text.

HYPERTEXT TRANSFER PROTOCOL (HTTP) - The communications protocol used to connect to Web servers on the Internet or on a local network (intranet).

INTERNET PROTOCOL - a set of rules governing the format of data sent over the internet or other network.

IP ADDRESS (INTERNET PROTOCOL ADDRESS) - a series of numbers that identifies any device on a network.

SEARCH ENGINE - a program that searches for and identifies items in a database that correspond to keywords or characters specified by the user, used especially for finding particular sites on the World Wide Web.

SERVER - a computer or system that provides resources, data, services, or programs to other computers, known as clients, over a network.

WEB PAGES - a hypertext document on the World Wide Web.

WEBSITE - a set of related web pages located under a single domain name, typically produced by a single person or organization.

WIREFRAME - a simplified visual guide that represents the skeletal framework of a website.

WORLD WIDE WEB - an information system on the internet which allows documents to be connected to other documents by hypertext links, enabling the user to search for information by moving from one document to another.

FURTHER READINGS

Bootstrap 5 Tutorial. (n.d.). https://www.w3schools.com/bootstrap5/index.php

UNIT TASK

- Proactively participate in classroom discussions
- Answer and submit course unit tasks

REFERENCES

Bootstrap 5 tutorial. (n.d.). https://getbootstrap.com/docs/5.0/getting-started/introduction/

Bootstrap 5 tutorial. (n.d.). https://mdbootstrap.com/docs/standard/bootstrap-5-tutorial/

Bootstrap 5 Tutorial. (n.d.). https://www.w3schools.com/bootstrap5/index.php

Bootstrap Tutorial. (n.d.). https://www.tutorialrepublic.com/twitter-bootstrap-tutorial/

What is a web framework?. (n.d.). https://evolve.ie/q-and-a/what-is-a-web-framework/