**MAKERERE UNIVERSITY BUSINESS SCHOOL**

**FACULTY OF COMPUTING AND INFORMATICS**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING.**

**ACADEMIC YEAR : 2024/2025**

**YEAR OF STUDY : TWO (II)**

**SEMESTER : TWO**

**PROGRAMME : Diploma in Computer Science (DCS)**

**COURSE NAME : Web Programming**

**COURSE CODE : DCS2201**

**FACILITATOR : Benedict Ogot-[0700-163939]**

**COURSE DESCRIPTION**

Due to an increase in startups and the usage of smart devices which are app-based or web-based, there is a huge increase in the demand for front end developers. For any commercial websites or apps, a front-end developer is needed for any application because that matters more. Front-end development constitutes the visual layout, UX/UI, interaction, and user interface everything that users touch, see, use, and click. All you need to function accurately and efficiently pages also links, images, consists of buttons and client-side software it is. This course is carefully designed to provide the learner with the foundations of front-end development [HTML and CSS] and some Basics of Backend development using PHP and MySql.

**COURSE OBJECTIVES**

• To give a better understanding of how the web works

• To equip learners with skills needed for web development

• To give learners a firm ground for front-end development and Basics of Back-end Development

• To give learners solid knowledge in developing and working web applications

• To lay a solid foundation for learners willing to further with web development

**LEARNING OBJECTIVES**

By the end of this course the learners will be able:

• To Understand how the web works

• To Differentiate between front-end and back-end development

• To Explain different elements of HTML and CSS

• To Create a responsive web project using HTML, CSS, PHP and MySQl•

• To Deploy web applications to open sources servers

**CONTENT**

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| **WEEK/S** | **TOPIC** | **COVERAGE** | HOURS |
| 1 | Introduction to Web  Programming | * Introduction to Web Programming. * How the Internet works * Front-end and back-end * What do HTML/CSS do * Setting up the developer environment [Sublime/VS Code] | 4 |
| 2&3 | Introduction to Basic  HTML | * Declare the DOCTYPE of an HTML document * Define the head and body of an HTML document Our Very First HTML page * Paragraph Elements * Heading Elements * List Elements [Ordered and Unordered lists] * Anchor Elements [Link to external pages, internal * sections of a page, dead links, within a paragraph] Images * **Assignment: Create a photo gallery with descriptive text linking to other pages** | 8 |
| 4&5 | **Intermediate HTML** | * Divs and spans Elements * HTML Table Elements * HTML Form Elements * Common Input Types * HTML Buttons * Radio Buttons, * Select and Checkbox * **Assignment: Create a registration form** | 8 |
| 6&7 | **Introduction to Basic**  **CSS** | * Including CSS [inline style and external style] * Common CSS selectors [ID, Class, Universal selectors] * The CSS Cascade * Color and background properties * Common text properties * Common font properties * Box Model [width and height] * **Assignment: Develop your personal blog using HTML & CSS** | 8 |
| 8&9 | **Intermediate CSS** | * Borders properties * Padding properties * Margin properties * Hover effect * CSS Units [px, em, %] * Display property * **Assignment: Improve your blog using CSS you’ve learnt in this section** | 8 |
| 10&11 | **Responsive CSS** | * Introduction to Flexbox * Flex-Direction * Justify-Content * Flex-Wrap * Align-Items * **Assignment: Improve your blog using CSS you’ve learnt in this section [Use flexbox]** | 8 |
| 12,13 &14 | PHP and MySql | • Basics of PHP  • Database Connection using (MySQL) | 12 |
| 15 | Deployment of the web Project | * Deploying of web projects using free servers * [ [https://www.infinityfree.com/](https://www.infinityfree.com/%20) [https://codesandbox.io/ ]](https://codesandbox.io/) | 4 |
| Total Hours |  |  | 60Hrs |

**COURSE MATERIALS**

All students are expected to install a copy of Sublime Text Editor 3 or any other editor of their choice on their computers. The copy of this software will be provided during class or you can download it from https://www.sublimetext.com/download You can select either a 32bit or 64bit version depending on your computer. All the relevant learning materials shall be uploaded and available to every student

on the e-learning platform ([www.mubsep.ac.ug](http://www.mubsep.ac.ug)).

**DELIVERY METHOD**

To learn HTML/CSS, students must practice code writing and code analyzing. To enhance learning, techniques and concepts covered in this course, we will work on writing and analyzing hundreds of small, well-annotated mini projects. To convey the bulk of the knowledge required to succeed as a Web Programmer, we will rely on the textbooks, class lectures, class discussions, in-class exercises, and case studies. To further facilitate learning, each lecture is complemented with quizzes, exercises, other Q&A. Homework assignments and class projects challenge the student to apply the knowledge learned in class.

**ATTENDANCE AND PARTICIPATION**

Please come on time and stay for the entire class. If you come to class late you may miss important announcements. Regular student attendance and participation are essential. Because the material covered in class is cumulative, missing classes will put students at a disadvantage. Major concepts will be discussed, and time will be spent on hands-on application. If you are ill or have a family emergency contact me and make arrangements to make up what you missed.

**ASSESSMENT:**

Assessment methods include individual and group-based coursework assignments, class-tests, individual presentations and written examinations. Make-up tests and course works will not be given unless prior notification is given and there is a legitimate, documented reason for missing the scheduled exam.

Course Work (30%)

Final Exam (70%)

Pass Mark (50%)

**RECOMMENDED ONLINE TEXT AND REFERENCES** <https://www.freecodecamp.org/learn>

<https://www.w3schools.com/>

<https://www.codecademy.com>

<https://www.khanacademy.org/computing/computer-programming/html-css>

Pouncey, I. and York, R., 2011. Beginning CSS. Indianapolis, Ind.: Wiley Pub.

Larsen, R., n.d. Beginning HTML & CSS.

McGrath, M., 2018. HTML, CSS & Javascript.