सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय
DEVELOPMENT COMMISSIONER
MINISTRY OF MICRO, SMALL & MEDIUM ENTERPRISES
MSME TECHNOLOGY CENTRE

MODEL CURRICULUM

Qualification Name: Jr. Web Designer

Qualification Code:

Version: 1.0

NSQF Level: 4.0

Model Curriculum Version: 1.0

Submitted By:

MSME TECHNOLOGY CENTRE
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NOS / MODULE TEMPLATE

NOS /Module: Gaining proficiency in Web Technologies

NOS /Module Code: MSME/CCWD/01

Outcomes:

After completion of course Student should be able to:

- Understand Core Web Concepts: Grasp fundamental concepts, such as the client-server model, HTTP/HTTPS, and DNS, to comprehend how the web functions.
- Create and Style Web Pages: Demonstrate the ability to create web pages using HTML and CSS, and style them effectively to ensure a visually appealing and user-friendly interface.
- Implement Responsive Design: Design web pages that adapt to various screen sizes and devices, employing techniques like CSS media queries and Bootstrap.
- Utilize JavaScript and jQuery: Develop interactive web content with JavaScript, understanding the basics of scripting and utilizing jQuery for efficient client-side scripting.

Theory Hours: 30 **Practical Hours: 150** **Viva Marks: - NA** **Practical Marks: 100**

Unit No.	Unit Name	Unit level outcomes	Contents (chapters/topics)	TH Hours	PR hours	PR Marks
1	Web Introduction	They will be able to explain the concept of URLs (Uniform Resource Locators) and describe the intricate process of how data travels from web servers to their local devices. Additionally, students will be equipped with the knowledge and skills required to set clear goals for their studies in the course, aligning their learning objectives with a deeper comprehension of the internet's inner workings.	• Course introduction • Goal setting • The Internet • URLs How a web page gets to your computer	2	10	4
2	HTML - Structuring Websites	They will be proficient in creating and structuring web pages, having gained expertise in the utilization of HTML tags, attributes, and elements. Students will also be well-versed in the proper formatting of text, creating hyperlinks, embedding images, and applying basic styling using HTML, including working with colors.	• Introduction HTML • HTML Basics • HTML Elements • HTML5 Semantic • HTML Attributes • HTML Headings • HTML Paragraph • HTML Styles • HTML Formatting • HTML Quotations • HTML Computer Code • HTML Comments & Colours • HTML CSS, Links and Images • HTML Lists • HTML Blocks • HTML Classes	2	10	10

			• HTML Layout • HTML Responsive • HTML iframes • HTML JavaScript • HTML Head • HTML Entities and URI Code • HTML Symbols and XHTML HTML Charset and Forms			
3	CSS - Styling Websites	They will be well-versed in the distinctions between CSS and HTML, understanding the pivotal role CSS plays in web design and layout. Students will have acquired proficiency in using CSS selectors to precisely target and modify HTML elements, including selecting by tag, class, and id.	<u>INTRODUCTION ABOUT THE CONCEPT OF CSS</u> • Introduction CSS3 • CSS3 Syntax • CSS3 How To • CSS3 Colours • CSS3 Backgrounds • CSS3 Boarders • CSS Padding • CSS Height/Width • CSS3 Gradients • CSS3 Shadows • CSS3 Text • CSS3 Fonts • CSS3 2D Transforms • CSS3 3D Transforms • CSS Links • CSS Lists • CSS Tables • CSS Box Model • CSS Outline • CSS Display • CSS Max-width • CSS Position • CSS Float • CSS Inline-block • CSS Align • CSS Combinators • CSS Pseudo-class • CSS Pseudo-element • CSS Navigation Bar • CSS Dropdowns • CSS Tooltips • CSS3 Images • CSS Attr Selectors • CSS Forms • CSS Counters • CSS3 Animations • CSS3 Buttons • CSS3 Pagination • CSS3 Multiple Columns • CSS3 User Interface • CSS3 Box Sizing • CSS3 Filters • CSS3 Media Queries • CSS3 Responsive	2	10	10

4	Project - Create Your Homepage	They will be empowered to think creatively and innovatively about the practical applications of HTML and CSS, employing these technologies to design and build a web page from the ground up. This final module will serve as a culmination of their learning, challenging them to integrate their knowledge to craft unique, visually appealing, and functional web pages.	• Combination of the concepts learned thus far • Allow students to think creatively about the applications of the concepts they have learned Designing a web page from scratch	3	10	10
5	Advanced HTML and CSS	They will be adept at creating more organized and efficient web pages by splitting content into reusable components. Additionally, students will gain expertise in combining CSS selectors and using special CSS selectors to precisely target and style elements. They will develop the competence to read and comprehend documentation, an essential skill in staying current in the dynamic world of web development	• Splitting your site into separate files • iframes and embedding • • • Combining CSS selectors • Special CSS selectors • Reading documentation Avoiding repeated code	5	10	8
6	Designing User Interfaces	They will be well-versed in various UI design techniques and will appreciate the significance of designing for accessibility and readability to ensure inclusivity. Students will also have acquired knowledge about designing "lite" sites that prioritize speed and performance, as well as the ability to employ rapid prototyping to quickly iterate and refine design concepts.	• What makes an engaging interface? • Various User Interface (UI) Design techniques • Accessibility issues • Readability • Lite sites • Rapid prototyping User testing	2	20	10

7	Final Project	This module empowers them to think creatively and critically about applying the concepts they have learned, inspiring them to scope, design, and build a website from scratch. Through incremental development and iterative prototyping, students will grasp the value of an agile approach, adapting and refining their creations in response to real-world needs and user feedback.	• Allow students to think creatively about the applications of the concepts covered in the course • Scoping a project • Designing a website from scratch • Incremental development • Creating and iterating on prototypes • User testing Collaboration	2	20	10
8	Responsive Web Design with Bootstrap	They will have gained a deep understanding of design concepts for various devices, allowing them to create user interfaces that adapt seamlessly to different screen sizes and orientations. Students will be able to install and configure Bootstrap effectively, and they will have a firm grasp of the essential components, including the grid system, view-port settings, and form design	• Introduction to Responsive Design • Introduction to Bootstrap • Design concepts (Mobile & Desktop) • Installation of Bootstrap • Common Device Dimensions • Grid System • View-Port Tag • Forms • CSS Media Queries • Buttons • Menu Conversion Script • Icons Integration • Custom Layout CSS3 in Layout	3	15	10
9	Java Script	They will have mastered JavaScript's various data types, become proficient in declaring variables, and understand how to use operators to manipulate data. Additionally, students will have the ability to create conditional statements and loops in JavaScript, making their code more dynamic and responsive.	<u>INTRODUCTION ABOUT JAVA SCRIPT</u> • JS Statements • JS Syntax • JS Comments • JS Variables • JS Operators • JS Arithmetic • JS Assignment • JS Data Types • JS Functions • JS Objects • JS Numbers • JS Number Methods • JS Math <u>EVENT HANDLING</u> • JavaScript events • Event handler	3	15	10

			• Event flow • Event bubbling and capturing • Event listeners • Event types <u>DOCUMENT OBJECT MODEL (DOM)</u> • Introduction to DOM • Types of DOM • DOM standards and methods • Manipulating documents using DOM • Handling images • Table manipulation • Animation • Node and Node-list handling <u>BROWSER OBJECT MODEL (BOM)</u> • Introduction to BOM • DOM vs BOM differences • Window object and methods • BOM navigator • BOM history • BOM location • BOM timer • Introduction to Cookies • Session and persistent cookies <u>FORM HANDLING</u> • Introduction to forms • Form processing • Forms object • Accessing data from forms • Form validation • Additional features in forms • Validation APIs <u>DEBUGGING TECHNIQUES</u> • JavaScript Errors • Error handling mechanisms • Introduction to Google Chrome debugger • Deep dive into debugger window • Introduction to Breakpoints • Changing variable values in runtime Avoiding mistakes			
10	jQuery	They will understand the core features and benefits of jQuery and be proficient in its installation and syntax. Students will have the ability to employ jQuery selectors and actions to manipulate the DOM (Document Object Model) effectively. They will also be familiar with using	• Introduction to jQuery • jQuery Features • Installing jQuery • jQuery Syntax • jQuery Ready Function • jQuery Selectors • jQuery Actions • jQuery plugins • jQuery Validation plugin • jQuery Slideshow	2	10	8

		jQuery plugins, with a focus on the jQuery Validation plugin for form validation and the creation of dynamic elements such as slideshows and dropdown menus.	jQuery Dropdown			
11	Adobe Flash / Animate	They will understand the basics of animation principles, including shape tweening, motion tweening, and frame-based animation, allowing them to bring static designs to life. Students will be proficient in utilizing the various tools and effects available in Adobe Flash, enabling them to craft animated banners, intros, and even entire websites that captivate and inform the audience.	• Introduction to Animation • Introduction to Adobe Flash • Tools in Adobe Flash • Shape Tween and Motion Tween • Frame Animation • Various Flash Effects • Creating Flash Banners • Creating Flash Intro's • Creating Flash Website Basics of Action Scripting.	2	10	5
12	Web Hosting	They will understand the various types of hosting packages available, making informed decisions when selecting hosting services. Students will be proficient in registering domain names and configuring name servers to link domains to hosting accounts. They will also gain practical experience in using web hosting control panels, creating email accounts, and managing website files via FTP clients.	• Web Hosting Basics • Types of Hosting Packages • Registering domains • Defining Name Servers • Using Control Panel • Creating Emails in cPanel • Using FTP Client Maintaining a website	2	10	5

NOS / MODULE TEMPLATE

NOS /Module: Mastering UI/UX design tools like Figma & Adobe XD

NOS /Module Code: MSME/CCWD/02

Outcomes:

After completion of course Student should be able to:

- Understand User-Centered Design: Embrace the user-centered approach to design, putting user needs and preferences at the forefront of the design process.
- Conduct User Research: Plan, execute, and analyze user research, including user interviews, surveys, and usability testing to inform design decisions.
- Create Wireframes and Prototypes: Develop wireframes and interactive prototypes to visualize and test design concepts and user interactions.
- Design User-Friendly Interfaces: Craft aesthetically pleasing and intuitive user interfaces that facilitate efficient and enjoyable user experiences.
- Implement Interaction Design: Apply principles of interaction design to create meaningful and engaging user interactions through elements like buttons, navigation, and forms.
- Design for Mobile and Responsive Web: Develop designs that are responsive and adaptive, ensuring a seamless experience across various devices and screen sizes.
- Information Architecture: Organize content effectively, creating clear hierarchies and navigation structures that aid user understanding and content discoverability.

Theory Hours: 30 **Practical Hours: 150** **Theory Marks: NA** **Practical Marks: 100**

Unit No.	Unit Name	Unit level outcomes	Contents (chapters/topics)	TH Hours	PR Hours	PR Marks
1	**Figma** Unit 1	You will be able to differentiate between UX and UI, recognizing their distinct roles in the design process. Additionally, you will be introduced to Figma, a popular design tool, and will have successfully downloaded and installed it on your desktop. You will become familiar with the Figma interface and dashboard, gaining the foundational knowledge required to begin creating user-centered designs and prototypes efficiently.	1. The difference between UX and UI 2. Intro To Figma and Download & Install Figma to your desktop 3. Figma Interface/Dashboard	2	10	5
2	Unit 2	You will have learned how to efficiently import existing Figma files, facilitating collaboration and version control within your design projects. Moreover, you will become proficient in utilizing a variety of essential design tools within Figma, enabling you to create and modify visual elements with precision.	4. Import Figma Files in Figma 5. Tools in Figma 6. Figma Layers Panel 7. Figma Components	2	10	5
3	Unit 3	You will become proficient in using the Text Tool and manipulating fonts to create appealing and legible text elements within your designs. Furthermore, you will acquire the skills needed to incorporate images seamlessly into your Figma projects, whether for visual content or as part of your design compositions.	8. Design Tab/Panel 9. Text Tool and Fonts 10. Images in Figma	2	10	5
4	Unit 4	You will also learn to harness the power of Figma Team Libraries, enabling seamless collaboration with colleagues and maintaining design consistency across projects. Moreover, this unit will introduce you to the Code Panel in Figma, providing you with the skills to generate and inspect code for design elements, enhancing your ability to work effectively with developers and engineers.	11. Boolean Operations in Figma 12. Alignment & Distribution Figma 13. Figma Team Libraries 14. The Code Panel in Figma	2	10	10

5	Unit 5	In this unit, you will also become adept at using masks in Figma, allowing you to control and manipulate the visibility and appearance of specific design elements. You will learn to export your Figma projects in various formats, including .JPG, .PNG, .SVG, and .PDF, ensuring that your designs are ready for different use cases and platforms	15. Prototyping in Figma 16. Horizontal & Vertical Scrolling 17. Masks in Figma 18. Figma Exports | .JPG .PNG .SVG .PDF | Save Project into .fig	2	10	10
6	Unit 6	Additionally, you will delve into the world of Figma plugins, exploring the vast ecosystem of tools and extensions that can enhance your design workflow. Through the selection and implementation of five must-have plugins, you will learn how to streamline your design processes, boost productivity, and access powerful features that can significantly impact your design projects.	19. Mockup in photoshop 20. Plugins in Figma 21. 5 MUST HAVE Plugins For Figma Designers!	2	10	5
7	Unit 7	Through this unit, you will acquire the skills to transform design ideas and concepts into structured, low-fidelity visual representations, understanding the importance of wireframes in planning and communicating the layout and functionality of digital interfaces.	22. What Is Wireframing? 23. Wireframing with Figma 24. How To Create Wireframe in wireframe.cc	2	10	5
8	Unit 8	This unit equips you with the knowledge to set up and manage collaborative projects, enabling you to share and edit design files concurrently with colleagues, clients, or stakeholders. These skills are essential for fostering effective teamwork, increasing productivity, and ensuring that your design projects benefit from diverse perspectives and expertise.	25. Create a New Project and File in Figma 26. Collaborate in real-time(Teams)	2	10	5
9	**Adobe XD** Unit 9	They will be able to distinguish between user interface (UI) and UX, understanding the essential differences between the two. Additionally, students will have the knowledge and skills to create a UX brief and develop personas, demonstrating the ability to consider	• Introduction to UX • Getting started • What is UI vs UX • The UX brief & persona	2	10	5

		user needs and preferences in design processes.				
10	Unit 10	They will be able to create low-fidelity wireframes, effectively use UI kits, and make informed decisions regarding typography, color schemes, and button design. This unit equips students with the foundational skills necessary for UI design, allowing them to create user-friendly and visually appealing interfaces in various digital contexts.	• Wireframing (low fidelity) • Existing UI kits • Working with type • Basic colors & buttons	2	10	10
11	Unit 11	They will be proficient in incorporating relevant UI icons to enhance design aesthetics, crafting footers for websites or applications, and efficiently using Lorem Ipsum for content structuring.	• Free UI Icons • Footer & Lorem Ipsum • New Pages & Artboards • Project 01 - Wireframe • Prototyping & Interactivity	2	10	10
12	Unit 12	They will also be skilled in creating and managing repeat grids, allowing for the seamless replication of content and maintaining design consistency. Moreover, students will have the capability to update symbols and repeat grids, ensuring the flexibility and scalability of their digital projects.	• Create a Popup Modal • Project 02 - Prototype • Groups & Isolation Mode • How to use symbols • Production Video - Left Nav • Repeat Grid • Updating symbols and repeat grids	2	10	5
13	Unit 13	They will have a solid grasp of prototype tricks that enhance the user experience, making their interactive designs more engaging and functional. Students will be adept at employing navigation tips and tricks to create seamless and intuitive user journeys within their prototypes. Project 03 - Symbols will equip them with the ability to leverage symbols effectively, promoting design consistency and efficiency.	• Prototype Tricks • Navigation Tips and Tricks • Project 03 - Symbols • Mocking Up an app • XD App on your phone	2	10	5
14	Unit 14	They will be proficient in incorporating iPhone and Android status icons into their designs, ensuring that their prototypes align with the visual language of the respective platforms. Students will have	• iPhone & Android status icons • Fixing the position • Production Video - Login • Sharing wireframes	2	10	5

		mastered the techniques for precise positioning, fixing elements in place, and adapting designs to varying screen sizes, resulting in mobile app interfaces that are both visually appealing and responsive.				
15	Unit 15	They will have the ability to record and analyze user interactions, enabling them to gather valuable insights for refining user experiences. Through the class project involving wireframe feedback, students will gain practical experience in receiving and implementing constructive feedback, fostering a collaborative and iterative approach to design	• Recording your interactions • Class Project - Wireframe feedback • Columns or grids	2	10	10

COURSES / MODULE TEMPLATE

NOS /Module: Employability Skills

NOS /Module Code: MSME/ES/01

THEORY HOURS: 30 PRACTICAL HOURS: - THEORY MARKS: 100 PRACTICAL MARKS: -

Refer Standard Curriculum developed by NCVET. (30-hours-MC-Employability-Skills_v4-DGT)