Government of Pakistan

**National Vocational and Technical Training Commission**

**Blended International IT Trainings –**

**BIITT 2025**



**Course Contents/ Lesson Plan**

**Course Title:** Meta Front-End Developer Professional Certificate

 Professional Certificate

**Duration: 3** Months

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| **Trainer Name** |  |
| **Course Title** | **Meta Front-End Developer Professional Certificate** |
| **Objective of Course** | This certificate, designed by the software engineering experts at Meta, the creators of Facebook and Instagram, will prepare you for a career as a front-end developer.In this program, you’ll learn: * How to code and build interactive web pages using HTML5, CSS and JavaScript.
* In-demand design skills to create professional page layouts using industry-standard tools such as Bootstrap, React, and Figma.
* GitHub repositories for version control, content management system (CMS) and how to edit images using Figma.
* How to prepare for technical interviews for front-end developer roles.

By the end, you’ll put your new skills to work by completing a real-world project where you’ll create your own front-end web application. Any third-party trademarks and other intellectual property (including logos and icons) referenced in the learning experience remain the property of their respective owners. Unless specifically identified as such, Coursera’s use of third-party intellectual property does not indicate any relationship, sponsorship, or endorsement between Coursera and the owners of these trademarks or other intellectual property. |
| **Course Execution Plan** | Total Duration of Course: **3 Months (12 Weeks)** |
| Class Hours: **3 Hours per day** |
| **Theory: 30% Practical: 70%** |
| Weekly Hours: **15 Hours Per week** |
| Total Contact Hours: **200 Hours** |

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| **Learning Outcome of the Course** | From the program, you will learn:* Create a responsive website using HTML to structure content, CSS to handle visual style, and JavaScript to develop interactive experiences.
* Learn to use React in relation to Javascript libraries and frameworks.
* Learn Bootstrap CSS Framework to create webpages and work with GitHub repositories and version control.
* Prepare for a coding interview, learn best approaches to problem-solving, and build portfolio-ready projects you can share during job interviews.
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| **Companies Offering Jobs in the respective trade** | * Accenture
* Cognizant
* Infosys
* Capgemini
* Amazon
* Turing
* Andela
* Deel
* 10Pearls
* Arbisoft
* NetSol Technologies
* Systems Limited (Pakistan)
* TkXel (Pakistan)
* Freelancing.

These companies value hands-on, project-based learning, strong understanding of modern frontend technologies, and proven skills in HTML, CSS, JavaScript, React, responsive design, and UI/UX best practices. |
| **Job Opportunities** | Over the past decade, front-end development has become a cornerstone of the digital experience, shaping how users interact with websites and applications. As businesses increasingly focus on responsive, user-friendly, and visually appealing interfaces, skilled front-end developers are in high demand across industries. This certification equips learners with the practical skills to design, build, and optimize modern web applications using HTML, CSS, JavaScript, React, and UI/UX principles. Graduates are prepared to contribute to dynamic development teams or launch independent careers in the global digital economy. Graduates of this certification can pursue roles such as:* Front-End Developer
* Web Developer
* React.js Developer
* JavaScript Developer
* UI/UX Developer
* Junior Software Engineer (Frontend)
* Website Designer & Developer
* Responsive Web Designer
* Freelance Web Developer
* Front-End Support Engineer
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| **No of Students** |  25-30 |

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| **Learning Place** | Labs |
| **Instructional Resources** | The following link will be accessible for students once they are enrolled in the program:https://www.coursera.org/professional-certificates/meta-front-end-developer |
| **Scheme of Study** |

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| **Sr. No**  | **Main Topics**  | **Theory Hrs.** | **Practical Hrs.** | **Total Hrs.** |
| **1.** | Introduction to Front-End Development /Programming with JavaScript  | **5** | **10** | **15** |
| **2.** | Programming with JavaScript | **5** | **10** | **15** |
| **3.** | Programming with JavaScript | **5** | **10** | **15** |
| **4.** | Programming with JavaScript / Version Control | **7** | **8** | **15** |
| **5.** | Version Control / HTML and CSS in depth | **5** | **10** | **15** |
| **6.** | HTML and CSS in depth / React Basics | **5** | **10** | **15** |
| **7.** | React Basics | **4** | **11** | **15** |
| **8.** | React Basics / Advanced React | **4** | **11** | **15** |
| **9.** | Advanced React / Principles of UX/UI Design | **4** | **11** | **15** |
| **10.** | Principles of UX/UI Design / Front-End Developer Capstone | **3** | **12** | **15** |
| **11.** | Front-End Developer Capstone  | **2** | **13** | **15** |
| **12.** | Front-End Developer Capstone / Coding Interview Preparation | **5** | **10** | **15** |
| **Total** | **54** | **126** | **180** |

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| **Scheduled Week** | **Module Title** | **Day** | **Learning Units** | **Home Assignment** |
| Week 1/12 | Introduction to Front-End Development /Programming with JavaScript  | Day 1 | Get started with web development | Improve your Bio page with Bootstrap |
| Day 2 | Introduction to HTML and CSS |
| Day 3 | UI Frameworks |
| Day 4 | End-of-Course Graded Assessment |
| Day 5 | Introduction to Javascript |
| Week 2/12 | Programming with JavaScript | Day 1 | Introduction to Javascript - Continued | JavaScript arrays, objects and functions |
| Day 2 | The Building Blocks of a Program |
| Day 3 | The Building Blocks of a Program – Continued |
| Day 4 | Programming Paradigms |
| Day 5 | Programming Paradigms – Continued |
| Week 3/12 | Programming with JavaScript | Day 1 | Programming Paradigms – Continued | JavaScript Essentials: Spread, Rest, and Concise Array Operations |
| Day 2 | Programming Paradigms – Continued |
| Day 3 | Programming Paradigms – Continued |
| Day 4 | Programming Paradigms – Continued |
| Day 5 | Programming Paradigms - Continued |
| Week 4/12 | Programming with JavaScript / Version Control | Day 1 | Testing | Little Lemon Receipt Maker |
| Day 2 | End-of-Course Graded Assessment |
| Day 3 | Software collaboration |
| Day 4 | Command Line |
| Day 5 | Working with Git |
| Week 5/12 | Version Control / HTML and CSS in depth | Day 1 | Graded Assessment | Managing a project in GitHub  |
| Day 2 | HTML in depth |
| Day 3 | HTML in depth – Continued |
| Day 4 | HTML in depth – Continued |
| Day 5 | Interactive CSS |
| Week 6/12 | HTML and CSS in depth / React Basics | Day 1 | Interactive CSS - Continued | Transforming and transitioning elements |
| Day 2 | Interactive CSS – Continued |
| Day 3 | Graded Assessment |
| Day 4 | React Components |
| Day 5 | React Components - Continued |
| Week 7/12 | React Basics | Day 1 | React Components - Continued | Dynamic Component Rendering in React: A Login/Logout App |
| Day 2 | Data and State |
| Day 3 | Data and State – Continued |
| Day 4 | Navigation, Updating and Assets in React.js |
| Day 5 | Navigation, Updating and Assets in React.js – Continued |
| Week 8/12 | React Basics / Advanced React | Day 1 | Your first React app | Build a calculator app |
| Day 2 | Components |
| Day 3 | Components - Continued |
| Day 4 | React Hooks and Custom Hooks |
| Day 5 | React Hooks and Custom Hooks - Continued |
| Week 9/12 | Advanced React / Principles of UX/UI Design | Day 1 | JSX and testing | Create your portfolio |
| Day 2 | JSX and testing - Continued |
| Day 3 | Final project |
| Day 4 | Introduction to UX and UI design |
| Day 5 | Evaluating interactive design |
| Week 10/12 | Principles of UX/UI Design / Front-End Developer Capstone | Day 1 | Applied Design Fundamentals | Booking a table on the Little Lemon website |
| Day 2 | Applied Design Fundamentals – Continued |
| Day 3 | Designing your UI |
| Day 4 | Course summary and final assessment |
| Day 5 | Starting the project |
| Week 11/12 | Front-End Developer Capstone  | Day 1 | Starting the project – Continued | Capstone Project |
| Day 2 | Project foundations |
| Day 3 | Project foundations – Continued |
| Day 4 | Project functionality |
| Day 5 | Project functionality – Continued |
| Week 12/12 | Front-End Developer Capstone / Coding Interview Preparation |  Day 1 | Project functionality – Continued | Capstone Project |
| Day 2 | Project Assessment |
| Day 3 | Introduction to the coding interview |
| Day 4 | Introduction to Data Structures |
| Day 5 | Introduction to Algorithms |

List of Machinery / Equipment

1. **Software List**

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| --- | --- |
| **Sr. No** | **Software Name** |
| 1. | MS Office(Installed on each PC) |
| 2. | Operating System (Windows, Linux or other Operating Systems) |
| 3. | Programming Languages including PyCharm, Notebook |

1. **Minimum Qualification of Teachers / Instructor**

The qualification of teachers / instructor of this course should be a minimum of bachelor’s in computer science / software engineering with minimum 3 years of development experience in relevant trade.

1. **List of Machinery/Equipments**

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| **Sr. No** | **Name of item as per curriculum** | **Quantity physically available at the training location** |
| 1 | Computers Minimum Core-i5 8th Generation* LCD Display 17” with built in speakers
 | 25 |
| 2 | DSL Internet Connection (Minimum 5 MB) | Available on every PC |
| 3 | **Accessories/Devices*** Connectors
* Multimedia
* Audio/visual aid
* White Board
* Flip Chart Board
 | 25 each |
| 4 | **Wires, data cables, power plugs, power supply** | For every PC |
| 5 | **UPS** | Available |
| 6 | **Generator / Solar Backup** | Available |
| 7 | **Air Conditioner (2 Tons)** | Available |