Introduction:

The **Web Mapping to Build Web-Based Applications Using Experience Builder for ArcGIS** course is designed to provide participants with the necessary knowledge and skills to create interactive and dynamic web mapping applications using **Experience Builder for ArcGIS**. This tool allows users to build customized applications with no coding required, enabling the development of visually appealing and functional web maps.

In this course, participants will explore the fundamental concepts of web mapping, the significance of web maps in the modern digital world, and how to use **Experience Builder** for ArcGIS to create engaging applications. Practical exercises will guide participants step-by-step through the process of building, customizing, and sharing web-based mapping applications, offering insights into the various features of the **ArcGIS Web Map Builder**.

Targeted Groups

This course is suitable for individuals and professionals involved in Geographic Information Systems (GIS) and web development, including:

- **GIS Professionals**: Individuals working with GIS technologies who wish to enhance their skills in web mapping and application development.
- **Developers**: Web developers and programmers interested in exploring web mapping technologies and learning how to create mapping applications without the need for coding.

Targeted Competencies

By the end of this course, participants will have developed the following competencies:

- **Fundamental Web Mapping Concepts**: Understanding the key principles and applications of web mapping in a professional context.
- **Experience Builder for ArcGIS**: Ability to use **Experience Builder for ArcGIS** to design and customize web mapping applications.
- **Data Integration**: Expertise in incorporating various data sources into web maps, such as shapefiles, geodatabases, and online services.
- **Customization and Styling**: Proficiency in styling web maps with base maps, symbols, and labels.
- **Interactive Web Applications**: Capability to create dynamic and interactive web applications using built-in widgets and tools.
- **Advanced Features**: Knowledge of advanced web mapping techniques, including filtering, querying, spatial analysis, and using time-aware features.
- **Publishing and Sharing**: Understanding how to deploy, share, and collaborate on web applications across platforms.
- **Optimization**: Ability to optimize web mapping applications for various

devices and screen sizes, ensuring compatibility and performance.

Course Objectives

Upon completing this course, participants will be able to:

- **Understand Web Mapping**: Gain a comprehensive understanding of web mapping concepts, their significance, and applications.
- **Use ArcGIS Tools**: Master the use of Experience Builder for ArcGIS to create and customize web-based mapping applications.
- **Data Integration**: Learn how to integrate and style data from various sources to build dynamic maps.
- **Create Interactive Applications**: Develop dynamic, interactive applications by utilizing widgets for enhanced functionality.
- **Deploy Web Applications**: Deploy web applications and share them securely with others through platforms like **ArcGIS Online**.
- **Advanced Features**: Implement advanced features such as filtering, querying, and spatial analysis in web maps.
- **Optimize for Devices**: Design and optimize applications for different devices and screen sizes to ensure maximum accessibility.

Course Outline

Unit 1: What is Web Mapping?

- Overview of **Web Mapping** concepts.
- Introduction to **Experience Builder for ArcGIS** and its capabilities.
- Understanding the key components of web applications.
- Exploring the benefits and real-world applications of web mapping.
- Reviewing successful **web mapping projects** as case studies.

Unit 2: Getting Started with Experience Builder

- Installation and setup of **Experience Builder**.
- Familiarization with the **user interface** and workspace.
- Creating a new project and configuring project settings.
- Navigating the main components of **Experience Builder**.
- Understanding the layout options and templates available.

Unit 3: Building and Customizing Web Maps

- Adding **data sources** (shapefiles, geodatabases, online services) to web maps.
- Configuring symbology, labels, transparency, and map themes.
- Customizing base maps and themes to match project requirements.
- Understanding and applying **map projections**, spatial reference systems, and coordinate systems.

Unit 4: Creating and Configuring Widgets

- Adding and configuring **interactive tools and widgets** (e.g., search, zoom, identify).
- Implementing search functionality for locating features within the map.
- Adding navigation tools (pan, zoom, extent).
- Customizing pop-ups for map features.
- Using widgets for **spatial analysis** and **measurements**.

Unit 5: Advanced Web Mapping Techniques

- **Filtering** and **querying** data based on attributes and spatial relationships.
- Applying **advanced symbology** and thematic mapping techniques.
- Performing **spatial analysis** and **geoprocessing** operations.
- Incorporating charts and graphs to visualize data patterns.
- Configuring **time-aware applications** and animations.

Unit 6: Publishing and Sharing Web Applications

- Deploying web applications to different platforms (web servers, cloud services).
- Sharing and collaborating with others using **ArcGIS Online** or **ArcGIS Enterprise**.
- Understanding security settings, access control, and user authentication.
- Embedding web maps into websites or other applications.

Unit 7: Responsive Design and Optimization

- Designing responsive web applications that work across various devices and screen sizes.
- **Optimizing performance** to ensure fast loading times for web maps.
- Implementing adaptive layouts for user interfaces.
- Ensuring compatibility across different **web browsers** and platforms.
- Testing and troubleshooting web applications to ensure usability and performance.

Unit 8: Case Studies and Practical Projects

- Analyzing real-world examples of successful web mapping applications.
- Working on hands-on projects to apply learned concepts and skills.
- Collaborating with peers to solve practical challenges.
- Presenting completed projects and receiving feedback from instructors and peers.

Conclusion:

This **Web Mapping to Build Web-Based Applications Using Experience Builder for ArcGIS** course is designed for GIS professionals and developers looking to enhance their skills in building dynamic, interactive web applications using

Experience Builder. By the end of the course, participants will have the expertise to create robust web-based mapping applications that are highly customizable and optimized for performance across different platforms.