Prepared by: Saad Barghouth (GIS Team Leader)

Duration: 1 Month

To enhance advanced practical competencies in ArcGIS Online applications by focusing on application proficiency, seamless integration between ArcGIS Online tools, efficient field data workflows, and professional presentation of spatial information.

Week 1: Advanced Web Mapping & Data Visualization (Map Viewer & Field Maps)

Objective: Deepen practical skills in Map Viewer (modern and classic) and prepare maps and forms for field workflows using Field Maps.

Applications: Map Viewer (Modern), Map Viewer Classic, Feature Layers, Field Maps

Topics and detailed study items:

1. Map Viewer modern interface: layers panel, contents, and settings; differences to Map Viewer Classic.
2. Create and manage web maps: layer order, layer properties, attribute tables, and attachments.
3. Symbology techniques: Unique Values, Graduated Colors, Proportional Symbols; best practices for cartographic hierarchy.
4. Arcade expressions for symbology, labels and pop-ups: conditional formatting, calculated attributes, and concise labeling logic.
5. Pop-up design: formatted text, attribute label templates, embedded images and charts, and linked resources.
6. Filters, definition queries, and feature layer views for creating focused perspectives on single datasets.
7. Prepare web maps for field use: enable editing, set domains and subtypes, default values, and form organization.
8. Offline settings and Areas: create and manage offline areas; considerations for basemap and attachments in offline use.
9. Capture settings and snapping behavior when used in Field Maps.
10. Best practices: naming conventions, metadata completeness, and content organization in Groups and Folders.

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Practical Tasks:

For detailed step-by-step instructions and all operational procedures for this task, please refer to the designated document: **[Week 1 Practical Tasks – Web Maps & Field Operations]**. Follow the instructions there carefully to complete the project.

Week 2: Dashboards, Experience Builder and Data Integration

Objective: Create interactive dashboards and integrate them into Experience Builder applications for decision support.

Applications: ArcGIS Dashboards, ArcGIS Experience Builder, Web Maps

Topics and detailed study items:

1. Dashboard design principles: user goals, KPIs, layout balance and mobile considerations.
2. Widgets and their use cases: Indicators, Serial Charts, Pie Charts, Lists, Maps, Values, and Selectors.
3. Data expressions in Dashboards (Arcade) for calculated indicators and derived metrics.
4. Actions and interactivity: selection-based filtering, filter actions, and linked navigation.
5. Performance considerations: limiting data queries, using layer views and scale dependencies.
6. Experience Builder fundamentals: pages, views, layout templates and responsive design.
7. Widgets in Experience Builder: Map, List, Chart, Text, Button, Embed, and Dashboard embed.
8. Data sources and filters in Experience Builder; connecting widgets via actions and state.
9. Branding and theming: corporate colors, logos, and consistent UI elements.

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Practical Tasks:

For detailed step-by-step instructions and all operational procedures for this task, please refer to the designated document: **[Week 2 Practical Tasks – Dashboards & Experience Builder]**. Follow the instructions there carefully to complete the project.

Week 3: Storytelling, Instant Apps, and QuickCapture

Objective: Develop communication artifacts (StoryMaps, Instant Apps) and rapid field capture workflows using QuickCapture.

Applications: ArcGIS StoryMaps, ArcGIS Instant Apps, ArcGIS QuickCapture, Experience Builder

Topics and detailed study items:

1. StoryMaps structure and best practices: sections, sidecar, map tour, and embedding interactive content.
2. Narrative writing for GIS: concise descriptions, callouts, and data-context alignment.
3. Media integration: images, videos, embedded dashboards and maps.
4. Instant Apps templates: when to use Media Map, Portfolio, Interactive Legend, Minimalist, and others.
5. App configuration: choosing tools, widget settings, and map-focused templates for public consumption.
6. QuickCapture project planning: button structure, project organization, and required attributes.
7. Linking QuickCapture layers to other AGOL content: web maps, dashboards, and Experience Builder.
8. Design for speed and accuracy in QuickCapture: icons, button grouping, photo and GPS capture settings.
9. Testing capture workflows and verifying incoming data fields and attachments.

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Practical Tasks:

For detailed step-by-step instructions and all operational procedures for this task, please refer to the designated document: **[Week 3 Practical Tasks – StoryMaps, Instant Apps & QuickCapture]**. Follow the instructions there carefully to complete the project.

Week 4: Survey123, Workforce, and ArcGIS Hub Integration

Objective: Complete the end-to-end field workflow: structured surveys, task assignment

Applications: Survey123 (Web), ArcGIS Workforce, ArcGIS Hub, Dashboards, Field Maps

Topics and detailed study items:

1. Survey123: advanced form design, question types, repeat sections, geopoints and image handling.
2. Conditional logic and relevance expressions in Survey123 web designer.
3. Calculations, constraints, and data validation to ensure high quality submissions.
4. Survey123 integration: setting the feature service target, view layers and attachments.
5. Workforce fundamentals: roles (Dispatcher, Worker), assignment lifecycle, task templates and status states.
6. Assignment scheduling, priority, and spatial allocation strategies.
7. Integration patterns: Workforce tasks triggering Field Maps edits, Survey123 linking to assignments, and dashboards showing assignment status.
8. ArcGIS Hub: creating a Hub site, pages for Projects and Data, and embedding dashboards and surveys.
9. Permissions and sharing models for public vs organization-only access in Hub.

Practical Tasks:

For detailed step-by-step instructions and all operational procedures for this task, please refer to the designated document: **[Week 4 Practical Tasks – Survey123, Workforce & ArcGIS Hub]**. Follow the instructions there carefully to complete the project.

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Final Evaluation and Assessment

Skill Area	Weight	Description
Web Maps & Visualization	15%	Proficiency in Map Viewer, Arcade expressions, and Field Maps configuration.
Dashboards & Experience Builder	20%	Design and integration of interactive analytical apps.
StoryMaps & Instant Apps	15%	Clarity and engagement in public-facing content.
Survey123 & Workforce	20%	Structured field data collection and task workflow management.
QuickCapture & Hub	15%	Rapid field capture workflows and public/organizational delivery.
Integration & Documentation	15%	Ability to link all apps into a coherent solution and produce clear documentation.

Recommended Learning Resources

ArcGIS Dashboards

- Working with ArcGIS Dashboards – Esri Training
- ArcGIS Dashboards Fundamentals – Esri Training
- Build Your First Operations Dashboard – Learn ArcGIS
- Get Started with Advanced Formatting in ArcGIS Dashboards – Learn ArcGIS

ArcGIS Experience Builder

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- Building Web Apps with ArcGIS Experience Builder – Esri Training
- Try ArcGIS Experience Builder – Learn ArcGIS
- ArcGIS Experience Builder Resources – Tutorials and Documentation

ArcGIS Instant Apps

- ArcGIS Instant Apps Resources – Tutorials and Documentation
- Try ArcGIS Instant Apps – Learn ArcGIS

ArcGIS StoryMaps

- ArcGIS StoryMaps Fundamentals – Esri Training
- Telling Stories with GIS Maps – Esri Training
- Best Practices for Designing Interactive StoryMaps – Esri Blog

ArcGIS Survey123

- ArcGIS Survey123 Basics – Esri Training
- ArcGIS Survey123: Creating and Publishing Surveys – Esri Training
- Design Smart Forms with ArcGIS Survey123 – Learn ArcGIS

ArcGIS Field Maps

- Get Started with Field Maps Designer – Esri Training
- Take Your Web Maps Offline with ArcGIS Field Maps – Esri Training
- ArcGIS Field Maps Resources – Tutorials and Documentation
- Field Data Collection and Management Using ArcGIS – Esri Training

ArcGIS QuickCapture

- Get Started with ArcGIS QuickCapture – Esri Training
- Collecting and Visualizing Data with ArcGIS QuickCapture – Esri Training
- Try QuickCapture – Learn ArcGIS
- ArcGIS QuickCapture Resources – Tutorials and Documentation

ArcGIS Hub and Online Fundamentals

- ArcGIS Hub Fundamentals – Esri Training
- ArcGIS Online Basics – Esri Training
- Managing and Sharing Content in ArcGIS Online – Esri Blog
- Best Practices for Configuring and Securing ArcGIS Online – Esri Documentation

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