SPM TRAINING

Social Program Management (SPM) Training Paths and Courses

Description

This document shows the main courses in the SPM business and technical paths. It then provides detail for each course. If you need a detailed breakdown of each lesson and exercise, we can provide the full course abstracts on request. Note that course paths refer to “Merative SPM”, while the course titles refer to the original course titles “IBM Cúram SPM”.

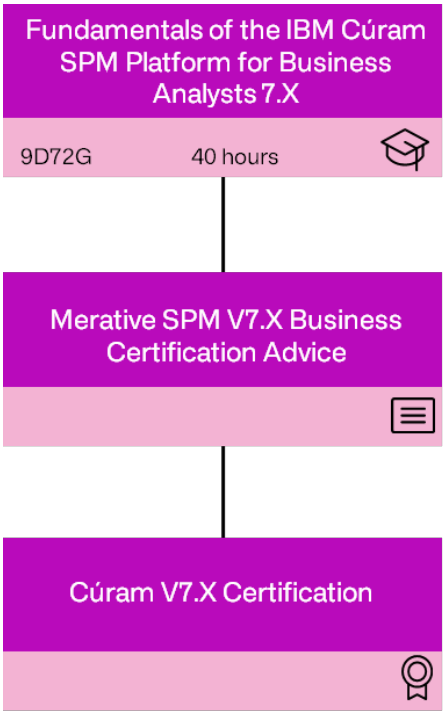
Summary of Changes:

Revision	Date	Created by	Short Description of Changes
1.0	21-Mar-23	Paddy Meyler	Initial release based on ESDC document. Add paths and additional courses.

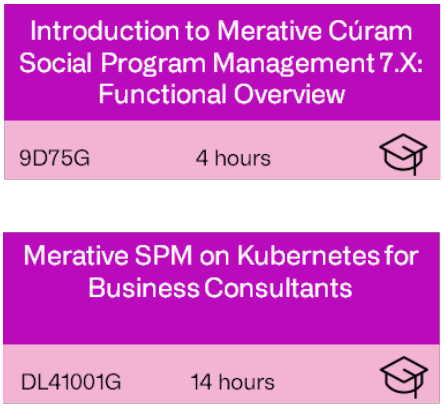
Contents

Business Paths

Business Analyst V7.X (Certified)



Functional User V7.X (Non-Certified)



Technical Paths

Technical Fundamentals V7.X

The first two courses are recommended for all technical roles.

V7.X Developer Certification

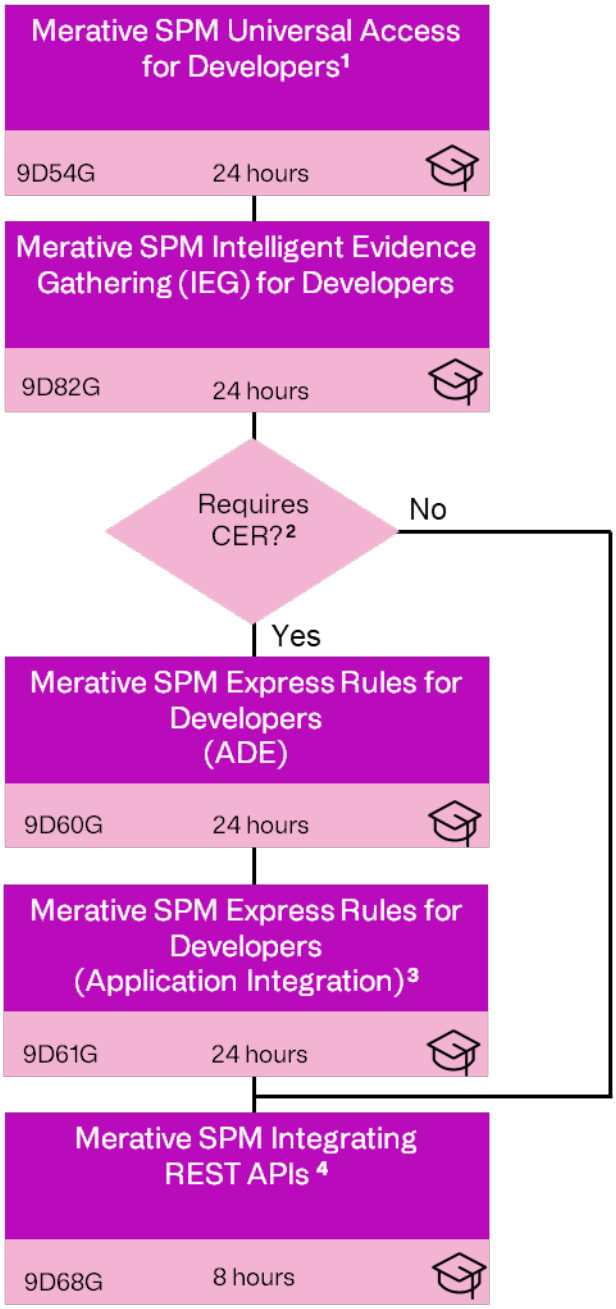
The first two courses are recommended for all developers on customer projects. The remaining elements are for people who want to take a certification test.

Notes:

1. The sandbox provides the 9D73G/9D74G environment, where you can practice development and customization.
2. The case study is a series of development and customization exercises to help you prepare for certification. The exercises deliberately do not provide detailed steps.

Specialized Developer – Universal Access (Backend)

The SPM Intelligent Evidence Gathering course is useful for other areas besides Universal Access.



Notes:

Parts of course 9D54G will make more sense if you take IEG (9D82G) and CER (9D60G and 9D61G) first. However, 9D54G was developed before the responsive front-end. Therefore, it would be best to take 9D54G first, followed by 9D82G and then take the front-end training. You can take CER and REST APIs after the front-end training.

1. 9D54G was last updated for V6, which used the Classical front-end. However, the backend core concepts, and configuration is the same. Therefore, it is worth taking this course or simply using the PDF as a reference. See the abstract for detailed guidance.

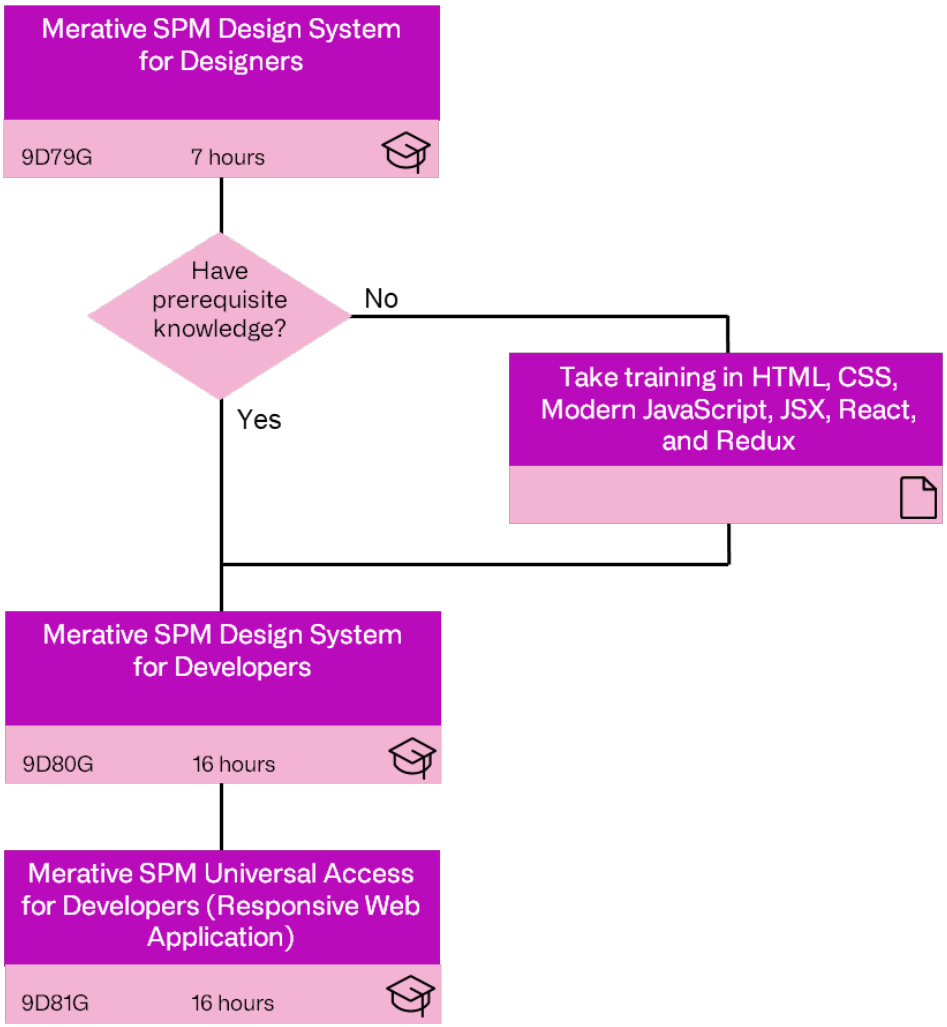
2. Some projects have developers who specializes in CER rules. Therefore, not all UA developers need to be able to develop CER rules.

3. CER training was last updated for V6. However, there have been very few changes to CER since then. The main change is that Key Decision Factor rules were deprecated in V7. The remaining exercises were validated on V7 and run fine.

4. 9D68G describes how to create REST APIs in Cúram. This course was created for V6.1, when REST APIs were introduced for mobile applications. Since then, REST APIs are used in SPM for responsive web apps other many other uses. Therefore, you If you are taking this course, you can ignore the sections about mobile application development, which brings the course down to 1 day. IBM Cúram SPM for Developers (Customization) 7.X summarizes REST development, so that might contain enough information about REST for you.

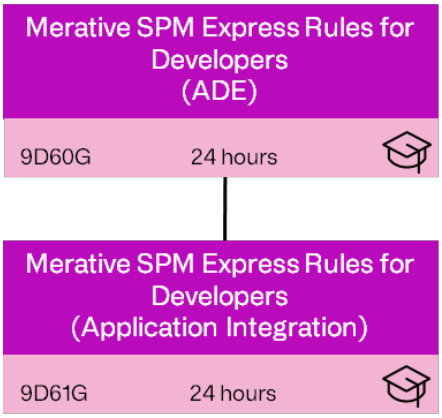
Configuring and Customizing Universal Access (Front End)

The courses build on each other, so must be taken in the order below.



Other Specialized Paths

Rules

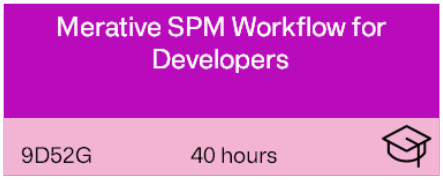


Notes:

Learners should complete SPM Application Developer training (9D73G and 9D74G) before taking CER Rules training.

Cúram Express Rules for Developers (Application Integration) contains a unit about Dynamic Evidence, which can be taken as a standalone unit.

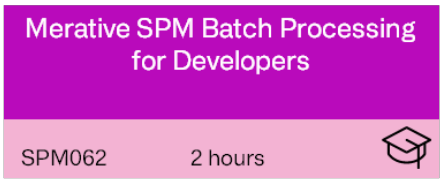
Workflow



Notes:

Learners should complete SPM Application Developer training (9D73G and 9D74G) before taking Workflow training.

Batch Processing



Notes:

Learners should complete SPM Application Developer training (9D73G) before taking this course.

Courses

9D75G – Introduction to IBM Cúram Social Program Management 7.X: Functional Overview

Duration: 6 hours

Course description: IBM Cúram offers products that SPM agencies need to provide government-funded social, health, and other services to citizens. The course provides a high-level summary of the IBM Cúram SPM Platform and the IBM Cúram Application Modules. The course describes the main components of the Cúram SPM Platform. It also describes the respective functions of the Cúram Application Modules. The course explains the SPM Platform and Application Modules by describing their respective functions in the context of the citizen and agency needs that they address. This web-based course has no virtual lab associated with it.

Audience: This course is intended primarily for anyone who needs a general overview of the features and functionality of the IBM Cúram SPM Platform 7.X, including testers, project managers, and product administrators.

Prerequisites: None.

Objectives:

- Describe the IBM Cúram approach to SPM.
- Describe the participant management and case management functionality that the IBM SPM Platform provides.
- Describe the financial management functionality that the IBM SPM Platform provides.
- Provide a high-level overview of Cúram Intake.
- Identify the different components of Cúram Workflow and outline their roles.
- Provide an overview of how communications are handled in Cúram.
- List and describe the following IBM Cúram Application Modules:
    - Cúram Appeals
    - Cúram Archiving
    - Cúram Business Intelligence and Analytics
    - Cúram Child Welfare
    - Cúram Evidence Broker
    - Cúram Identity Intelligence
    - Cúram Income Support
    - Cúram Income Support for Medical Assistance
    - Cúram Life Event Management
    - Cúram Outcome Management
    - Cúram Provider Management
    - Cúram Social Enterprise Collaboration
    - Cúram Universal Access
    - Cúram Verification Engine

9D72G – Fundamentals of the IBM Cúram SPM Platform for Business Analysts 7.X

Duration: 40 hours

Course description: This course introduces the fundamentals of the IBM Cúram Social Program Management (SPM) Platform 7.X. It presents a business analyst (BA) and caseworker overview that introduces the key components of IBM Cúram SPM, namely, SPM Platform User Interface, Participant Management, Case Management, Evidence Framework, Financial Management, System Administration, Verification Engine, Evidence Broker, Provider Management, Outcome Management, Rules Management, Workflow Management, and Universal Access.

Audience: This course is intended primarily for BAs who will work on IBM Cúram implementation projects. The course is also useful for anyone who needs a general overview of the features and functionality of the IBM Cúram SPM Platform 7.X, including testers, project managers, and product administrators.

Prerequisites: Learners should have a working knowledge of health and human services programs and exposure to and experience of typical business process analysis activities related to system implementations.

Objectives:
After completing the course, learners should be able to:

- Identify the main functional components of the IBM Cúram SPM Platform V7.X.
- Describe participant, case, administration, and workflow management.
- Explain how rules and evidence are defined and used.
- Describe financial processing and outcome management.
- Describe how evidence verification and brokerage are handled.
- Provide an overview of IBM Cúram Universal Access.
- Identify IBM Cúram Enterprise Modules.
- Identify IBM Cúram Solutions.
- Navigate components that are ready for immediate use in Cúram, as well as use the basic functionality.

DL41001G – IBM Cúram SPM on Kubernetes for Business Consultants

Duration: 8 hours

Course description: This course explains the essential terminology, concepts, and business benefits of cloud, DevOps, and containerization technologies, including Docker, Kubernetes, and Helm. After introducing these concepts, the course focuses on the SPM on Kubernetes solution and its benefits. These topics are technical in nature and therefore require a technical explanation. However, the topics are explained at a high-level, and you do not require previous technical knowledge to understand them.

Audience: This course is intended primarily for BAs who will work on IBM Cúram implementation projects. The course is also useful for anyone who needs a general overview of the features and functionality of the IBM Cúram SPM Platform 7.X, including testers, project managers, and product administrators.

Prerequisites: None

Objectives:
After completing the course, learners should be able to:

- Define key cloud terms and concepts.
- Briefly describe the cloud service models and deployment models.
- Distinguish between monolithic solutions, virtual machines, containerized solutions, and microservices.
- Outline the continuous integration/continuous delivery (CI/CD) process and where it fits into DevOps.
- Briefly describe the SPM Kubernetes offering.
- List the business benefits of deploying SPM on containers by using Kubernetes.
- Summarize the importance of non-functional requirements, such as security and elasticity, for containerized and cloud solutions.

9D76G – IBM Cúram Social Program Management (SPM) 7.X Technical Overview

Duration: 16 hours

Course description: Cúram SPM provides a feature-rich development environment that allows organizations to implement social program management solutions. A good understanding of the Cúram SPM development environment, its technologies, and associated concepts is essential for all technical roles involved with Cúram SPM. This course provides an overview of Cúram SPM in terms of its architecture, technical features, and the support it provides for developing custom solutions. During the course, learners will explore the technologies and services that are used to build end-user features.

Audience: This introduction-level course is aimed at anyone who requires a technical overview of Cúram SPM, including developers, architects, project executives, database administrators, testers, system administrators (technical), and other technical personnel.

Prerequisites: Learners must have a basic understanding of n-tier application development and architectures, including object-oriented development and web development technologies. It is recommended that learners complete the following functional course before taking this course:

- *Introduction to IBM Cúram Social Program Management 7.X: Functional Overview (9D75G).*

Objectives:

After completing the course, learners should be able to:

- Define the key components of IBM Cúram SPM.
- Outline the runtime architecture and deployment architecture.
- Access documentation tools and information sources.
- Explore services for data-gathering and intake.
- Explore services for supporting the case lifecycle and managing outcomes.
- Describe the underlying business and technical services.
- List the features of the application development environment (ADE).
- Describe how organizations configure and customize Cúram SPM.
- Outline the release, upgrade, and support processes.
- Outline the features provided by the application modules.

9D73G – IBM Cúram SPM for Developers (ADE) 7.X

Duration: 40 hours

Course description: A practical grasp of the IBM Cúram ADE is essential for teams wishing to build IBM Cúram-compliant solutions that provide high-quality citizen services. This course provides a solid grounding in the IBM Cúram model-driven development approach and ADE. It presents an architectural overview of the IBM Cúram application and introduces ADE features and tools for modeling, coding, building, and troubleshooting applications. During the course, learners will design and implement a simple end-to-end application using many ADE client and server features.

Audience: This course is intended primarily for developers and technical architects who will work on IBM Cúram implementation projects. The course is also useful for anyone who needs a technical understanding of IBM Cúram SPM Platform 7.X, including testers and support engineers.

Prerequisites: Learners should have a working knowledge of object-oriented concepts, Java, XML, SQL, and n-tier enterprise applications. The following courses are recommended to gain a broad functional and technical view of Cúram SPM:

- *Introduction to IBM Cúram Social Program Management 7.X: Functional Overview (9D75G)*
- *IBM Cúram Social Program Management (SPM) 7.X Technical Overview (9D76G)*

Objectives:

After completing the course, learners should be able to:

- Use features and tools in the Cúram ADE for the following tasks:
    - Modeling classes and relationships.
    - Implementing server-side features.
    - Creating client pages and navigation.
- Implement simple, end-to-end solutions using the Cúram SPM model-driven development approach and development tools.
- Access and interpret developer guidelines contained in the Cúram SPM product documentation.

9D74G – IBM Cúram SPM for Developers (Customization) 7.X

Duration: 40 hours

Course description: Teams building Cúram SPM solutions for customers must be able to analyze and customize out-of-the-box (OOTB) solutions. The first part of the course describes the approach that Cúram SPM uses for customizing OOTB applications compliantly. The main part of the course describes how to customize client and server artifacts, including source code and non-source code artifacts. The final part of the course outlines how REST and web services are used for integrating with external applications and how custom features can be implemented using events, deferred processes, and batch processes. During the course, learners will perform impact analysis on OOTB applications and implement compliant customizations.

Audience: This course is intended primarily for developers and technical architects who will work on IBM Cúram implementation projects. The course is also useful for anyone who needs a technical understanding of IBM Cúram SPM Platform 7.X, including testers and support engineers.

Prerequisites: Before taking this course, learners must have completed the following course:

- *IBM Cúram SPM for Developers (ADE) 7.X (9D73G).*

Objectives:

After completing the course, learners should be able to:

- Describe the approaches for customizing Cúram SPM artifacts.
- Perform impact analysis to determine the changes required for customizations.
- Customize out-of-the-box client artifacts compliantly:
    - Non-source code server artifacts.
    - Modeled application classes.
    - Non-modeled application classes.
- Describe how web services and REST APIs can be used for real-time integration.
- Outline how to develop custom events, deferred processes, and batch jobs.

9D52G – IBM Cúram Workflow for Developers

Duration: 40 hours

Course description: This five-day course provides you with a technical understanding of developing IBM Cúram workflows. Workflow supports the automation of business processes and allows work to be routed among individuals, departments, and the automated parts of the system. IBM Cúram Social Program Management (SPM) applications provide workflow process definitions to support a range of business processes that bring efficiency benefits to organizations. This course describes how to design and implement workflow process definitions. At the end of the course, you will design and implement a workflow for a business process.

Audience: This intermediate course is aimed at developers and technical architects.

Prerequisites: You should have completed IBM Cúram technical fundamentals training:

- *IBM Cúram SPM for Developers (ADE) 7.X (9D73G), and*
- *IBM Cúram SPM for Developers (Customization) 7.X (9D74G)*

Objectives:

After completing the course, learners should be able to:

- Use the IBM Cúram PDT to create and manage process definitions.
- Define Workflow Data Objects (WDO) and data mappings.
- Configure flow control features.
- Enact workflow process instances.
- Configure manual activities.
- Configure decision activities and notifications.
- Implement a work allocation strategy to allocate tasks.
- Troubleshoot workflow design and implementation issues.
- Customize an IBM Cúram application workflow.

9D54G – IBM Cúram SPM Universal Access for Developers

Duration: 32 hours

Course description: SPM Universal Access enables citizens to determine suitable services and programs, apply for programs, and manage their interactions with agencies via citizen accounts. This course describes how to configure and customize SPM Universal Access features for agencies. During the course, students will design and implement a simple end-to-end application that allows citizens to perform Triage, Screening, multi-program application, and submit Life Events.

Audience: This intermediate course is aimed at developers and technical architects.

Prerequisites: You should have completed IBM Cúram technical fundamentals training:

- *IBM Cúram SPM for Developers (ADE) 7.X (9D73G), and*
- *IBM Cúram SPM for Developers (Customization) 7.X (9D74G)*

Objectives:

After completing the course, learners should be able to:

- Use SPM Universal Access client features.
- Configure Triage and Screening.
- Configure multi-program Application and Intake.
- Map application data to entities and PDF forms.
- Configure Citizen Account.
- Configure Life Events.
- Configure Motivations.
- Configure the look and feel of SPM Universal Access
- Outline the security features of SPM Universal Access.
- Customize SPM Universal Access features and provided artifacts compliantly.
- Troubleshoot configuration issues.

Note: This course was last updated for SPM V6, which used the Classical front-end for Universal Access. The Responsive Web App front end was released during SPM V7. However, the backend core concepts and configuration is the same. Parts of the course can be omitted if you are working with the Responsive Web App.

9D60G – IBM Cúram Express Rules for Developers (ADE)

Duration: 24 hours

Course description: The course describes how to develop IBM CER rules using the IBM CER Application Development Environment (ADE) and covers the following topics: CER editor; defining rule elements; CER development approach; testing and debugging CER rules; Timelines, and advanced CER features. During the course, students will design and implement a simple end-to-end application by using CER features.

Audience: This intermediate-level course is aimed at developers and technical architects.

Prerequisites: You should have completed IBM Cúram technical fundamentals training:

- *IBM Cúram SPM for Developers (ADE) 7.X (9D73G), and*
- *IBM Cúram SPM for Developers (Customization) 7.X (9D74G)*

Objectives:

- Select IBM CER elements to implement rule logic.
- Use Developer and Administrator tools to configure, test, and debug rule sets.
- Access and interpret product guides for implementing CER rules.

9D61G – IBM Cúram Express Rules for Developers (Application Integration)

Duration: 24 hours

Course description: This course provides students with a technical understanding of integrating CER with IBM Cúram SPM applications. Fundamentals of IBM Cúram Express Rules for Developers (Application Integration) 6.0.5 describes how to develop IBM CER rules by using the IBM CER Application Development Environment (ADE). This course describes how to integrate CER rules with IBM Cúram Applications and covers the following topics: rules for Triage, Screening, and Intake; Dynamic Evidence; rules for Eligibility and Entitlement; rules for other applications; customizing rules and evidence. During the course, students will develop rules and evidence for a simple product.

Audience: This intermediate-level course is aimed at developers and technical architects.

Prerequisites: You should have completed the following course:

- *Fundamentals of IBM Cúram Express Rules for Developers (ADE) 6.0.5 (9D60G)*

Objectives:

- Configure rule sets for the following IBM Cúram SPM applications:
    - Triage, Screening, and Intake
    - Dynamic Evidence
    - Eligibility and Entitlement (Determination and Explanation)
    - Advice
    - Other applications
- Use the Dynamic Evidence Editor to define evidence types.
- Outline the approach to customize Application rule sets and evidence types.
- Access and interpret product guides for integrating CER rules into IBM Cúram SPM Applications.

9D68G – IBM Cúram SPM 6.1 Integrating Cúram REST APIs

Duration: 16 hours

Course description: This two-day course provides students with a technical understanding of developing REST APIs for IBM Cúram. IBM Cúram Mobile applications provide flexible access to Cúram for health and social care workers while visiting clients. The main change in IBM Cúram SPM 6.1 is the provision of REST APIs and an infrastructure to create REST APIs to allow mobile applications access Cúram resources. This course describes how to develop REST APIs for IBM Cúram by using recommended practices. During the course, students will design and implement a simple REST API that can be called from a mobile application.

Audience: This intermediate course is aimed at developers and technical architects.

Prerequisites: You should have completed IBM Cúram technical fundamentals training:

- *IBM Cúram SPM for Developers (ADE) 7.X (9D73G), and*
- *IBM Cúram SPM for Developers (Customization) 7.X (9D74G)*

Objectives:

- Outline the changes that were introduced in IBM Cúram to support mobile applications.
- Access out-of-the-box REST APIs.
- Design, implement, and test a REST API.
- Add error handling to a REST API.
- Outline mobile development approaches and tools.
- Investigate a mobile application to see where it calls REST APIs.
- List references and resources for developing REST APIs and mobile applications.

Note: REST API is used in SPM for other areas besides mobile applications. Therefore, the parts of this course that refer to mobile applications can be omitted to create an 8-hour REST API course.

9D79G – IBM SPM Design System for Designers

Duration: 7 hours

Course description: The course explains the importance of design in the development of usable web apps and digital services. It also places the importance of design in the context of governments in Canada, the U.K., and U.S. setting up national web design systems. The course also introduces the IBM Design Thinking framework and the IBM SPM Web Design System.

Audience: This course is intended for a mixed audience includes business analysts (BA), Developers, and Graphic Designers who will work on SPM implementation projects that use the IBM SPM Web Design System. For BAs who find themselves tasked with design work, it will provide the background information that they need on design and how essential it is to application development. For Developers, it introduces them to basic design concepts and IBM Design Thinking. Graphic Designers will also benefit from an introduction to IBM Design Thinking and the structure and contents of the IBM SPM Web Design System.

Prerequisites: Basic Knowledge of IBM Design Thinking (Recommended).

Objectives:
After completing the course, learners will be able to:

- Explain the purpose of government web design systems.
- State general design guidelines, including accessibility and theming.
- Provide an overview of IBM Design Thinking.
- Identify the components in the IBM Social Program Management (SPM) Design System.
- Interpret guidelines for using IBM Web Design System components.

9D80G – IBM SPM Design System for Developers

Duration: 16 hours

Course description: The SPM Design System is built specifically to help create government web applications to the highest usability and accessibility standards. The Design System includes best practices, design principles, imagery, and brand style. Developers need a practical understanding of the SPM Design System so that they can develop high-quality web applications for citizens and other users. During the course, learners will install the SPM Design System, set up the development environment, develop pages by using Design System components, integrate with the Cúram SPM server, and test their pages. At the beginning of the course, learners will review the main third-party technologies that are used during the course.

Audience: This course is intended primarily for developers and technical architects who will work on IBM Cúram implementation projects that use the SPM Design System. This course is also useful for testers and support staff who will work with the SPM Design System.

Prerequisites: Learners must complete the following course before taking this course:

- *IBM SPM Design System for Designers (9D79G)*

In addition, learners must have some experience of using the following technologies:

- HTML, CSS, JavaScript (ES6)
- JSX and React

Objectives:
After completing the course, learners will be able to:

- Describe the purpose of the web app development technologies and tools that are used on the course.
- Outline the technical foundation of the IBM SPM Design System.
- Install the Design System and configure the development tools.
- Implement pages using Design System components.
- Configure the theme and style of pages.
- Use a JSON server to simulate server interactions via a REST API.
- Access a REST API on a Cúram Server.
- Write simple unit tests for a component.
- Troubleshoot page errors using the IDE debugger and browser tools.
- List considerations for adding custom and third-party components.
- List useful resources for front-end development.

9D81G – IBM Universal Access for Developers (Responsive Web Application)

Duration: 16 hours

Course description: The UA Responsive Web Application allows citizens to access the functions of Universal Access on any device. The UA Responsive Web Application is built using the SPM Design System, the React JavaScript library, and Redux. Developers must understand the structure of the UA Responsive Web Application so that they can customize and extend it to produce high-quality citizen services. During the course, learners will install the web application, add custom pages, fetch data from the server, and manage custom state using Redux. In addition, developers will investigate the server configuration and REST APIs that are necessary to support the web application.

Audience: This course is intended primarily for developers and technical architects who will work on IBM Cúram implementation projects that customize and extend the UA Responsive Web Application. This course is also useful for testers and support staff who will work with the UA Responsive Web Application.

Prerequisites: Learners must complete the following courses before taking this course:

- *IBM SPM Design System for Designers (9D79G)*
- *IBM SPM Design System for Developers (9D80G)*

In addition, learners must have some experience of using the following technologies:

- HTML, CSS, JavaScript (ES6)
- JSX and React
- Redux

Objectives:

After completing the course, learners will be able to:

- Describe the purpose of IBM Universal Access.
- Outline the features of the IBM Universal Access Responsive Web Application.
- Install the IBM Universal Access Responsive Web Application.
- Customize and extend the starter web application.
- Mock REST APIs using the Mock Server.
- Implement state management using Redux.
- Describe how the web app fetches configuration and server data from the SPM server.
- Describe the approach for handling and reporting exceptions.
- Describe the support for creating localized applications.
- Outline the security features of the web app.

9D82G – IBM Cúram SPM Intelligent Evidence Gathering (IEG) for Developers 7.X

Duration: 24 hours

Course description: Intelligent Evidence Gathering (IEG) is an IBM technology that is used to create dynamic scripts. IEG is used by Social Program Management (SPM) applications to gather data from internal workers and citizens who use fixed and mobile devices. This course describes how to develop IEG scripts and integrate these scripts into IBM Cúram SPM applications.

Audience: This course is intended primarily for developers and technical architects who will work on IBM Cúram implementation projects. The course is also useful for anyone who needs a technical understanding of IEG.

Prerequisites: It is recommended that learners complete the following course before taking the IEG course:

- *IBM Cúram Social Program Management (SPM) 7.X Technical Overview (9D76G)*

Objectives:

After completing the course, learners will be able to:

- Briefly describe the IBM Cúram features that use IEG scripts.
- Define Datastore schemas.
- Create scripts consisting of flow control, relationships, and summary pages.
- Configure validation and custom functions.
- Configure features specific to the Java-based and React-based players.
- Configure IBM Cúram Universal Access to run scripts.
- Customize out-of-the-box Datastore schemas and IEG scripts.
- Troubleshoot typical IEG scripting errors.
- Access reference information.

SPM062 - Merative SPM Batch Processing for Developers

Duration: 2 hours

Course description: The course provides an overview of batch processing in SPM. It also describes how batch jobs are developed and how streaming and chunking architecture can be used to improve performance. Finally, the course describes how SPM batch processes use the DB-JMS to access application server functions.

Audience: This course is intended primarily for developers and technical architects who will work on IBM Cúram implementation projects.

Prerequisites: It is recommended that learners complete the following course before taking the IEG course:

- *IBM Cúram SPM for Developers (ADE) 7.X (9D73G)*

Objectives:
After completing the course, learners will be able to:

- Provide an overview of batch processing in SPM.
- Outline how to manage and run batch jobs.
- Describe how to develop, configure, and run streamed batch jobs.
- Describe how SPM batch processes use the DB-to-JMS mechanism to access application-server functionality.
- List references for SPM batch processing.