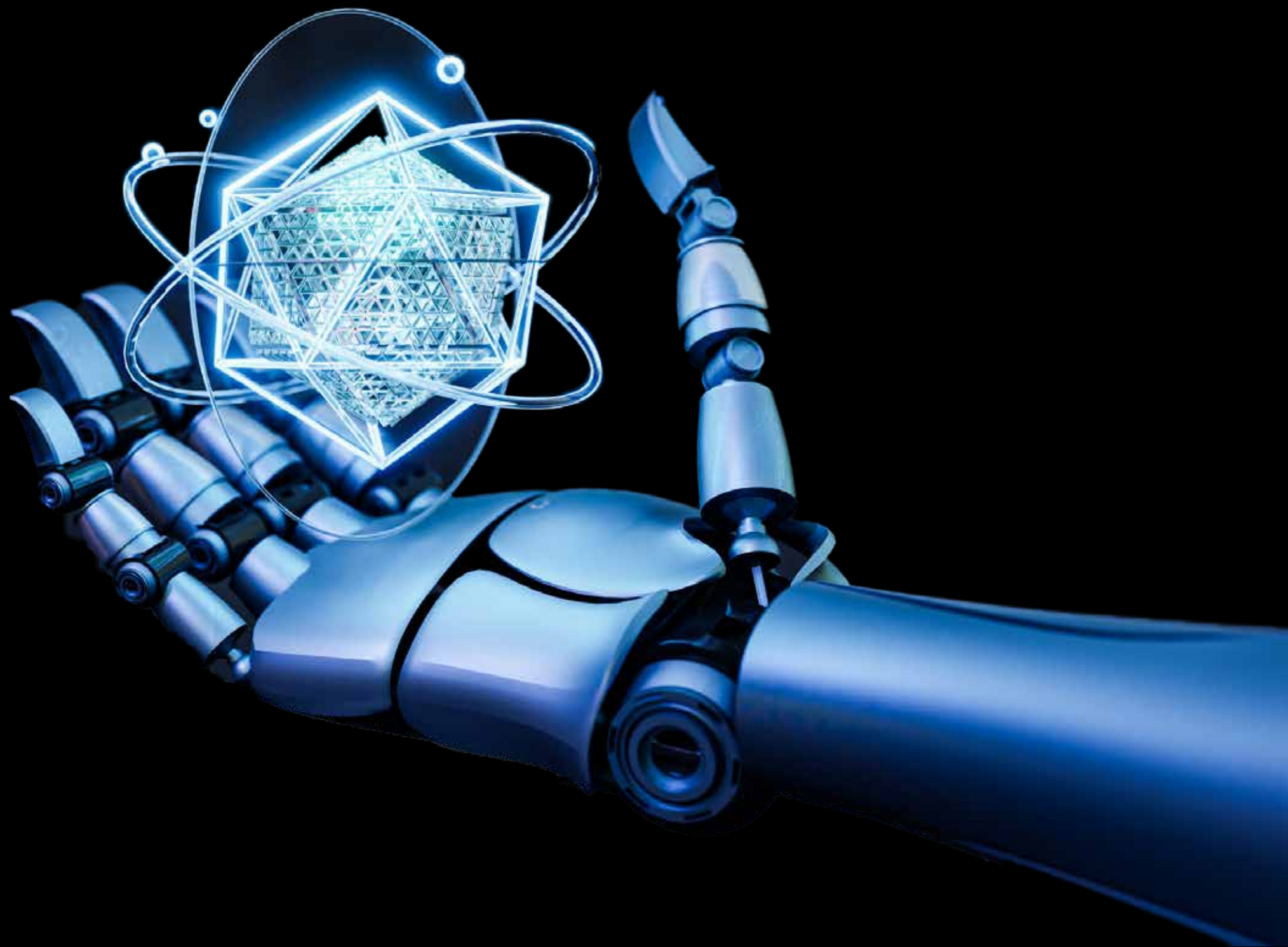# ROBOTIC PROCESS AUTOMATION (RPA)

Course Curriculum

Course Content

Module-1: Introduction To RPA

- What is RPA?
- Benefits and applications of RPA
- Difference between RPA and traditional automation
- Popular RPA tools in the market

Module-2: UiPath Intro and Installation

- Installing UiPath Studio
- UiPath Studio interface overview
- Types of UiPath licenses
- Creating your first project

Module-3: Basic To Start

- Types of workflows (Sequence, Flowchart, State Machine)
- Activities panel overview
- Managing dependencies
- Running and debugging a basic workflow

Module-4: Loops and Conditions

- Types of loops: For Each, While, and Do While
- If-Else conditions
- Switch activity
- Nested loops and conditions

Module-5: Introduction To Variables

- Types of variables (String, Int, Boolean, Array, etc.)
- Variable scope and naming conventions
- Default values and initialization
- Managing complex data with DataTables

Module-6: Word Automation

- Opening and editing Word documents
- Extracting text and data from Word files
- Automating templates with dynamic data
- Managing formatting and styles programmatically

Module-7: PDF Automation

- Reading text from PDFs using OCR
- Extracting structured data from PDFs
- Merging and splitting PDFs
- Automating PDF form filling

Module-8: Web Automation

- Recording web actions
- Working with dynamic web elements
- Automating form filling and data scraping
- Handling pop-ups and browser settings

Module-9: Selectors

- Understanding UiPath selectors
- Dynamic vs. static selectors
- Wildcards and variables in selectors
- Validating and troubleshooting selectors

Module-10: Window Automation

- Automating desktop applications
- Working with pop-up windows
- Clipboard and keyboard shortcuts automation
- Handling multiple application windows

Module-11: Excel Automation

- Reading and writing data to Excel sheets
- Data filtering and manipulation in Excel
- Automating formulas and charts
- Managing large datasets

Module-12: Application and File Automation

- Opening and interacting with applications
- File system operations (copy, move, delete)
- Monitoring folders for changes
- Automating ZIP and archive files

Module-13: Email Automation

- Sending and receiving emails
- Filtering emails based on criteria
- Extracting attachments and email content
- Integrating with Outlook and Gmail

Module-14: Database Automation

- Connecting to databases with UiPath
- Executing SQL queries
- Inserting and updating records
- Retrieving data into DataTables

Module-15: Debugging

- Using breakpoints and watch panels
- Output panel insights
- Managing workflow exceptions during debugging
- Common debugging techniques and tools

Module-16: Exception Handling

- Try-Catch activity
- Throwing and rethrowing exceptions
- Creating custom exception messages
- Best practices for robust error handling

Module-17: Recording and User Events

- Types of recording (Basic, Desktop, Web, Citrix)
- Customizing recorded workflows
- Handling mouse and keyboard events
- Triggering workflows with user events

Module-18: Arguments

- Difference between variables and arguments
- Direction types: In, Out, In/Out
- Passing data between workflows
- Best practices for using arguments

Module-19: Data Manipulation

- Working with String manipulations
- Sorting and filtering DataTables
- Using LINQ in UiPath
- Combining and splitting datasets

Module-20: Thin Client (Citrix) Automation

- Introduction to Citrix environments
- Automating virtual desktops using OCR
- Using image-based automation
- Troubleshooting Citrix-specific challenges

Module-21: RPA Life Cycle

- Phases: Analysis, Design, Development, Testing, Deployment, Maintenance
- Identifying automation opportunities
- Gathering requirements

Module-22: Measuring ROI for RPA projects Robots Intro

- Types of robots: Attended, Unattended, Hybrid
- Deploying a robot in UiPath
- Running processes on robots
- Managing robot configurations

Module-23: Orchestrator

- Creating and managing tenants
- Publishing processes to Orchestrator
- Monitoring robot logs and jobs

◦ Scheduling workflows in Orchestrator

Module-24: RE-framework

◦ Overview of RE-framework structure

◦ Understanding State Machine workflow

◦ Customizing the RE-framework for specific projects

◦ Exception handling and retry mechanisms in RE-framework

Added Advantages of the Course

◦ Additional topics for students to explore independently.

◦ Detailed explanation of projects included in the curriculum.

◦ Assignments, videos, and documents provided for each topic with explanations.

◦ Best practices for using UiPath effectively.

◦ Guidance on creating resumes, including sample resumes.

◦ Curated links for deeper exploration of UiPath concepts.

◦ Mock tests to prepare for assessments.

◦ Extra 35 assignments and 5 projects available post-course completion.

◦ Post-completion interview assistance for career opportunities.

◦ Lifetime access to course-related materials, including interview questions, PPTs, and videos, shared via Google Drive.