ILLINOIS TECH CERTIFIED

ENTRI elevate

Software Testing **Program**

Contents

About

Entri Elevate

Entri Elevate is an immersive training program meticulously crafted to enhance your skill set and transform you into a job-ready candidate. This program is designed and led by seasoned trainers who provide comprehensive guidance throughout your journey. With access to expert mentors from diverse top industries, Entri Elevate ensures you gain invaluable industry exposure essential for success in your chosen field.

In addition to technical classes, Entri Elevate offers soft skills sessions to equip you with the essential interpersonal and communication skills vital for succeeding in today's competitive job market. Through Entri Elevate, you'll not only gain proficiency in your chosen field but also develop the holistic skills necessary to excel in interviews and beyond.

Why Software Testing

In 2024, software testing remains a crucial aspect of software development, ensuring the quality, reliability, and security of digital products and services. Here's an overview of why software testing is essential and its scope in 2024:

a. **Quality Assurance:** Software testing is essential for ensuring that software meets quality standards and performs as expected. In 2024, with increasing competition and user expectations, delivering high-quality software is imperative for organizations to maintain their competitive edge and reputation.

b. **Customer Satisfaction:** In the digital age, customer experience is paramount. Software testing helps identify and rectify defects and usability issues before software is released to end-users, ensuring a positive user experience and enhancing customer satisfaction.

c. **Risk Mitigation:** Testing helps mitigate risks associated with software failures, security breaches, and regulatory non-compliance. By identifying and addressing vulnerabilities and defects early in the development process, organizations can minimize the likelihood of costly errors and reputational damage.

d. **Accelerating Time-to-Market:** Effective testing practices, including test automation and continuous testing, enable organizations to streamline the software development lifecycle and accelerate time-to-market. By automating repetitive testing tasks and integrating testing into the CI/CD pipeline, organizations can release software faster without compromising quality.

e. **Adoption of Agile and DevOps:** In 2024, agile methodologies and DevOps practices continue to gain traction, emphasizing collaboration, flexibility, and rapid iteration. Software testing plays a crucial role in supporting these approaches by ensuring that testing is integrated throughout the development process and aligns with the pace of continuous delivery.

f. **Expansion of Test Automation:** Test automation is increasingly prevalent in 2024, driven by the need for faster releases and improved test coverage. Organizations are leveraging automation tools and frameworks to automate functional testing, regression testing, and performance testing, thereby reducing manual effort and increasing efficiency.

g. **Focus on Security Testing:** With the proliferation of cyber threats and data breaches, security testing is a priority in 2024. Organizations are investing in security testing tools and techniques to identify vulnerabilities, assess risks, and protect sensitive data from unauthorized access and exploitation.

h. **Shift-left Testing:** In 2024, there is a shift towards shifting testing activities earlier in the development process, known as shift-left testing. By involving testers in requirements gathering, design, and development phases, organizations can proactively identify and address issues, reducing the cost and effort of fixing defects later in the lifecycle.

i. **Integration of AI and ML:** Artificial intelligence (AI) and machine learning (ML) technologies are increasingly integrated into testing processes in 2024. AI-driven testing tools analyze vast amounts of data, identify patterns, and predict potential defects, enabling more effective testing strategies and improved test coverage.

In summary, software testing is essential in 2024 for ensuring quality, mitigating risks, accelerating time-to-market, and supporting agile and DevOps practices. The scope of software testing encompasses various aspects, including quality assurance, customer satisfaction, risk mitigation, test automation, security testing, and integration of emerging technologies like AI and ML. By prioritizing testing and adopting modern testing practices, organizations can deliver high-quality software products that meet user expectations and business objectives.

Why **Illinois Institute of Technology?**

In 1890, Chicago minister Frank Wakeley Gunsaulus delivered the "Million Dollar Sermon," envisioning a school accessible to students of all backgrounds. Inspired by this vision, Philip Danforth Armour Sr. donated $1 million to establish Armour Institute in 1893, offering courses in engineering, chemistry, architecture, and library science. In 1940, Armour Institute merged with Lewis Institute to form Illinois Institute of Technology (Illinois Tech), combining liberal arts with science and engineering courses. This merger, finalized by a Cook County circuit court decision in April 1940, marked the creation of Illinois Tech.
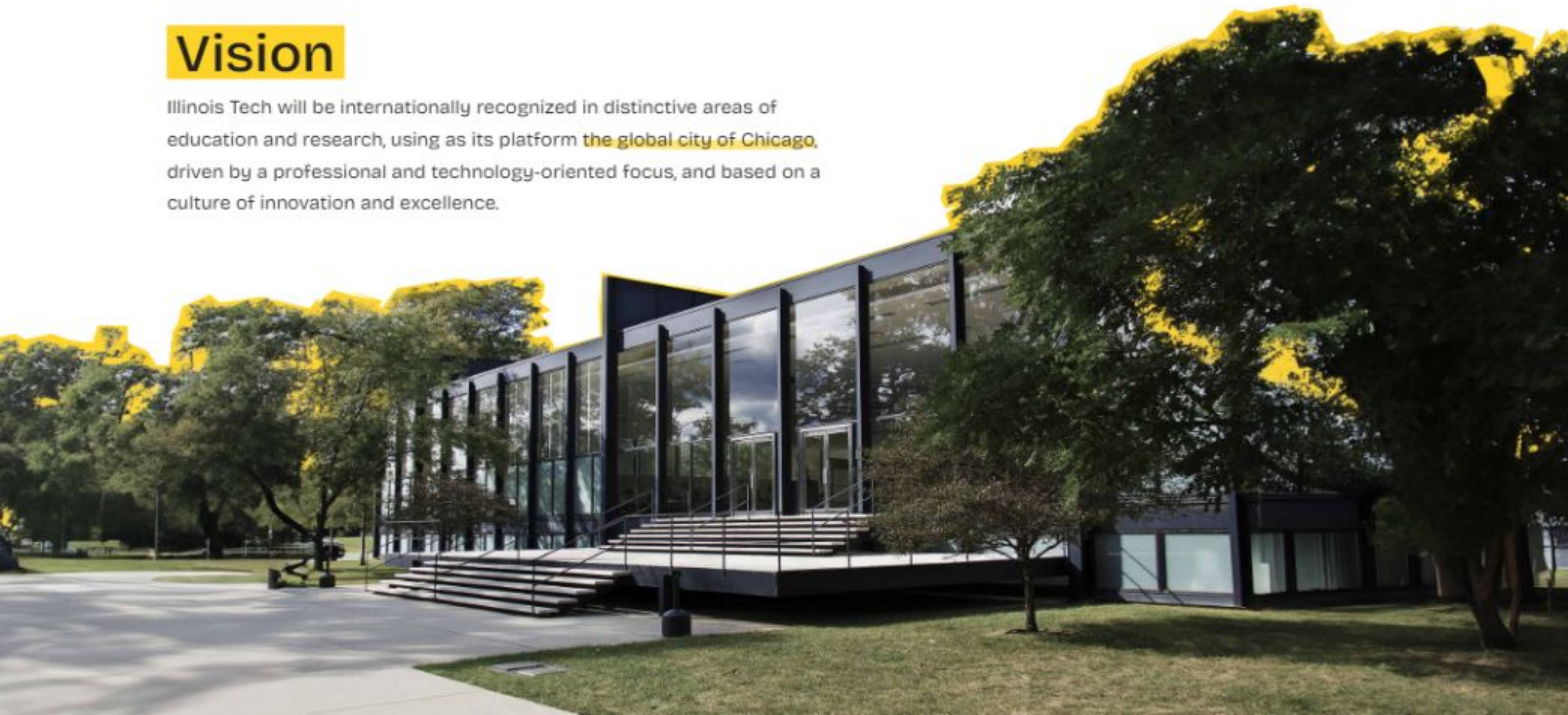
Mission

> To provide distinctive and relevant education in an environment of scientific, technological, and professional knowledge creation and innovation.

Illinois Tech's mission is to provide a relevant education focused on preparing students for meaningful careers addressing societal challenges. They prioritize a supportive and collaborative community, valuing diversity of backgrounds and experiences. Their commitment ensures all members can thrive and contribute to the university's mission.

Vision

Illinois Tech will be internationally recognized in distinctive areas of education and research, using as its platform the global city of Chicago, driven by a professional and technology-oriented focus, and based on a culture of innovation and excellence.

Program
Highlights

》 Structured Curriculum Aligned With Industry Standards

》 Inclusive & Immersive Hybrid Training Sessions

》 Self Paced Learning Contents in Native Language (Malayalam)

》 Technical Core Sessions

》 Industry Expert Sessions

》 Soft Skills Sessions and Conversation Labs

》 Placement and Internship Assistance

》 Community Linking

Elevate
Software Testing Program

Project Based Program in Software Testing with Entri Elevate in Associated with Illinois Institute of Technology is one of the most advanced certificates available to those in the field.

Format

Online (Recorded Video Lectures + Interactive Mentored Learning)

Student Support

◉ Student support is available all day through Mediums like Slack, Google Classroom

◉ For urgent queries, use call back options

Time Commitment 6-10 Hrs/Week
Duration 6 Months + 1 Month Capstone Project

Assesment & Tasks

◉ Section wise Assignments   ◉ Summative Exams

◉ Captsone Project   ◉ Weekly Tasks

Software Testing
Learning Path

- Programming Fundamentals
- Software Testing Fundamentals
- Manual Testing
- Java Programming
- Automation Testing

- Selenium WebDriver
- Performance Testing
- Mobile Application Testing
- Project Development
- Placement Training & Softskills

LEARN FROM BEST OF **ACADEMIA**

Trainers

Meera Mathew - Academic Innovation Head

Experienced IT Trainer with a demonstrated history of working in the IT Industry. Skilled in Research, Training, Full Stack Development and Cyber Security. Strong education professional with a Master of Technology (M.Tech) focused in Computer Science from Mar Baselios College of Engineering and Technology.

Arya Sreedevi

Software Testing Mentor at Entri App, Arya Sreedevi is a seasoned Software Testing Mentor at Entri App with over 5 years of experience. Specializing in both manual and automation testing, Arya excels in guiding individuals to master software testing methodologies and tools. Her dedication to continuous learning and staying updated with industry trends makes her a valuable asset to the Entri team.

Expert Mentors

Dineshkartik Raveendran

Senior Data Engineer, Tesla

Focused on building & improving configuration-based format for managing complex data pipelines.

Anil Unnikrishnan

Engineering Lead, Samsung's Technology And Advanced Research (STAR) Lab, SAMSUNG

Conceptualizes and architects how humans interact with NEONS, computationally created virtual beings.

Narayan Babu

Head Of Product & Engineering, Zeta

Creating new waves in banking tech.

PHP

```php
<?php
echo "Hello World!";
?>
```

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Curriculum

Module	Topic
Foundation Module	Program Orientation
	Pre-Learning
Software Testing Fundamentals	Introduction to Software Testing
	Importance of Testing in Software Development
	Types of Testing: Manual vs. Automation
	Software Development Life Cycle (SDLC) and Testing (STLC)
	Assignment 1

Module	Topic
Manual Testing	Test Planning and Strategy
	Test Case Design and Execution
	Types of Testing: Functional & Non-Functional
	Defect Reporting and Tracking
	Test Documentation
	Demo: Manual Testing
	Assignment 2

Test Management & Reporting	Test Metrics and Reporting
	Test Dashboards
	Test Closure
	Test Summary Reports
	Assignment 3

JAVA	Introduction to JAVA & Installation
	JDK,JRE, JVM
	JAVA Basics
	Control Statements
	Exception Handling
	Assignment 4
	Data Structures
	OOP in JAVA
	Collections
	Java Database Connectivity

Automation Testin	Introduction to Automation Testing
	Automation Testing Frameworks (e.g., Selenium, Appium, TestNG)
	Setting up the Test Environment
	Basic Automation Scripting
	Hands-On: Automate simple test cases
	Assignment

Selenium WebDriver	Selenium WebDriver Basics
	Locators (XPath, CSS, ID, etc.)
	Handling Web Elements
	Page Object Model (POM)
	Advanced WebDriver Techniques (e.g., handling pop-ups, frames, waits)
	Assignment

Test Automation Frameworks	Introduction to Test Automation Frameworks
	Data-Driven Framework
	Keyword-Driven Framework
	Hybrid Framework
	Setting up a Test Automation Framework
	Hands-on: Building a simple automation framework
	Assignment

JIRA & CICD	JIRA Basics
	JIRA Tool
	Introduction to CI/CD
	Jenkins and other CI tools
	Test Automation in CI/CD pipeline
	Cucumber Framework
	Hands-on: Integration of test automation with Jenkins
	Assignment

Performance Testing	Introduction to Performance Testing
	Tools like JMeter or LoadRunner
	Creating and Executing Performance Tests
	Analyzing Performance Metrics
	Practical Assignment: Performance testing a web application

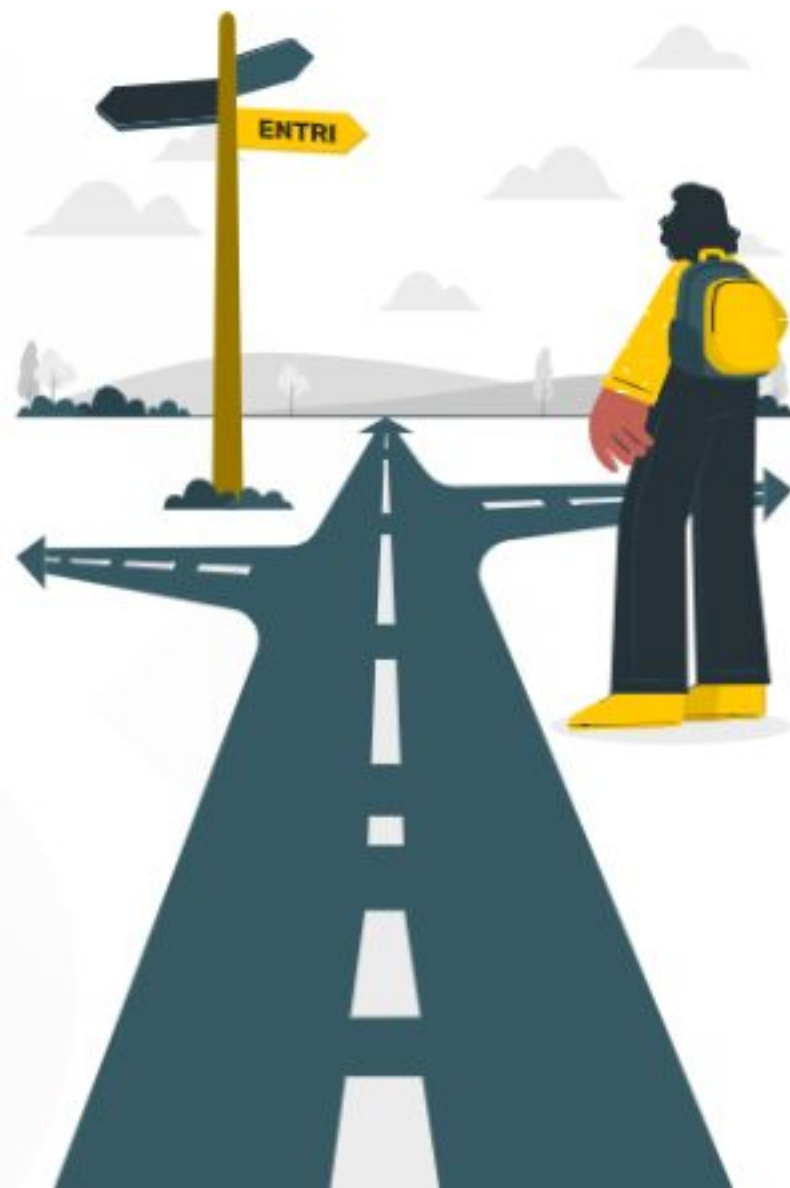| Mobile App Testing | Introduction to Mobile App Testing |
	Testing on Real Devices
	Testing on Emulators
	Mobile Test Automation with Appium
	Hands-on: Mobile app testing and automation

CAPSTONE
PROJECTS

》 Learn through various industry projects

》 Learn how to apply testing concepts through this exciting capstone project spanning 1 Month

The **Entri Way**

- Allocate a minimum of 12 hours per week for learning and practice

- Watch & practice all in-app videos for the current week before attending live sessions

- Join the live sessions on time and stay till the end

- Notify the course coordinator and mentor 24 hours in advance if you'll miss a session.

- Complete midweek tasks and module- end assignments on time

- Have a dedicated, distraction-free workspace for your practice and learning

- Use a 64-bit machine with a minimum of Windows 8.1 or OS X 10.

- Possess a headset with a microphone and a webcam for live sessions.

ESCALATION MATRIX

You may connect with the below members for any concerns:

- **Course Coordinator:** Queries related to your Fees, Attendance,In-App support

- **Batch Mentor:** Academic doubts &support

- **Lead Mentor:** If you cannot connect with the course coordinator or batch mentor

- **Placement Associate:** Regarding placement queries

Career Support

- Benefit from Comprehensive Placement Assistance: Gain Access to Diverse Job Opportunities Across Various Industries.

- Experience Industry Mentorship: Receive Guidance from Seasoned Mentors at Leading Companies such as Tesla, Google, Samsung, and Zeta to Propel Your Career Forward.

- Resume Review Obtain specific, personalized inputs on your resume structure and content

GENERAL GUIDELINES

- This is a 24-week strict program where you are expected to adhere to the program's timeline.
- According to our teaching model, you learn the concept from the In-app videos and learn the practical implementation in the Live session.
- It is mandatory to join the session through a laptop or a desktop computer.
- Ideal machine requirements: 64-bit Machine, Windows 8.1 above, OS X 10.
- A headset with a microphone and webcam is essential for virtual learning, facilitating visual communication in live sessions.
- Use your official full name as the Display Name and maintain a professional display picture when interacting with mentors on all platforms.
- If unable to attend a session, notify the course coordinator and mentor at least 24 hours in advance.
- Mentors won't repeat missed sessions; review VODs and recorded live sessions independently. Post doubts on the Slack channel if needed.
- We use Slack as our official communication platform and you will be required to use it for any communication outside of live sessions. Connect with the mentors strictly through Slack only and not any other media.
- You are supposed to react or respond to mentors' messages such as polls, intimations, and updates duly, and should ask for clarity if required.
- You should be able to unmute and speak when a question is directed to you from mentors.
- Join and stay for the entire live session for attendance to count. Attendance and in-app activity will be monitored for placement eligibility.
- A reliable internet connection (10 Mbps upload and download speed) is crucial for online classes. Download the necessary software, and communicate with mentors and fellow students.
- Mock interviews are mandatory for interview preparation. Notify the coordinator 24 hours in advance if unable to attend. Missing two mock interviews will result in exclusion from placements.

ELIGIBILITY

CERTIFICATE ELIGIBILITY

Learner can earn the course certificate only after meeting the below criteria:

- Learner should have minimum 85% attendance for the live sessions
- Learner should complete all the assignments, assessments and project as per the course agenda on time
- Learners should score 40% or above separately for the Formative, Comprehensive & Summative Assessment

PLACEMENT ELIGIBILITY

- Watch all video sessions on the app
- Maintain a minimum of 85% attendance in live sessions
- Complete all capstone and module-end assignments within the scope and time
- Meet the formative and comprehensive assessment
- Successfully complete the summative assessment
- Attend and pass mock interviews

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Thank you