Secure Software Development Lifecycle Practices Professional Certification Program

C-DAC, Hyderabad and IIT Bhilai

Conduction Mode : Self-Paced Learning

Registration Link : https://forms.gle/zLhbGmZPVn4LfHaVA

Certification Link : https://forms.gle/2wnrJTQ3snB5UXen8

Instructions for Self-Paced Learning

Participants should go through the registration process, the course structure and the training requirements.

1. **Registration Process**

   a. Participants should register themselves for the self-paced learning at https://forms.gle/zLhbGmZPVn4LfHaVA
   b. The participant particulars, such as name, organization, designation, and contact details provided in the registration form, will be used for issuing a professional / participation certificate and communication purposes.
   c. Upon registration, the admin team will review and approve the request for access to the course content.
   d. Once approved, participants will be provided with manuals for the installation of prerequisite software or tools along with access to course material.

2. **Course Structure**

   a. The Secure Software Development Lifecycle course is spanned across seven lessons, with each lesson consisting specific number of topics **with a suggested time table of 2 hours per day** in self-learning mode as listed below –

List of Topics

Session	Module Name	Topic Name	Duration
Day 1			
Session 1		Need for Secure SDLC	30 min

Supporting Partners

Session 2	Introduction to Secure Software Development Lifecycle	CIAAA Defence in Depth and Resiliency Cryptography and Security Metrics	1 hour 30 minutes
Day 2			
Session 1	Secure Software Requirements	Define Security Requirements & Lab	2 hours
Day 3			
Session 1	Secure Software Requirements	Data Classification and Data Privacy Requirements	1 hour 30 minutes
Session 2	Secure Software Requirements	Security Requirements Traceability Matrix (SRTM)	30 minutes
Day 4			
Session 1	Secure Software Requirements	Data Classification (Vault Demo & Lab)	1 hour
Session 2		SRTM	1 hour
Day 5			
Session 1	Secure Software Design Considerations and Principles	Secure Software Design Considerations Secure Software Architecture Principles Secure Software Design Principles	2 hours
Day 6			
Session 1	Secure Software Design Considerations and Principles	Threat Analysis and Attack Surface Evaluation	1 hour
Session 2		Threat Modelling Methodologies (Theory & Lab)	1 hour
Day 7			
Session 1	Secure Software Design Considerations and Principles	Software Composition Analysis (Theory & Lab)	2 hours
Day 8			
Session 1		Secure Coding Guidelines Java	1 hour

Session 2	Secure Software Implementation	Secure Coding Guidelines Python	1 hour
Day 9			
Session 1	Secure Software Implementation	Secure Coding Guidelines C++	1 hour
Session 2		Secure Coding Guidelines JavaScript – Part 1	1 hour
Day 10			
Session 1	Secure Software Implementation	Secure Coding Guidelines JavaScript – Part 2	1 hour
Session 2	Secure Software Implementation	Lab (Secure Implementation - JavaScript)	1 hour
Day 11			
Session 1	Secure Software Implementation	Web Security Configuration	1 hour 30 minutes
Session 2		REST API Security	30 minutes
Day 12			
Session 1	Secure Software Implementation	Web Application Firewall (WAF) – Theory & Lab	2 hours
Day 13			
Session 1	Secure Software Implementation	OWASP Top 10 Vulnerabilities	30 mins
Session 2		Docker Architecture Docker Commands	1 hour 30 mins
Day 14			
Session 1	Secure Software Implementation	Docker Swarm Network Building Docker Images Docker Security - Theory & Lab	2 hours
Day 15			
Session 1	Security Testing	Code Review (SAST&DAST) & Security Testing – Theory & Lab	2 hours
Day 16			

Session 1	Operations & Maintenance	Continuous Integration/Continuous Deployment Tools	1 hour
Session 2		Secure Storage	1 hour

3. Training & Certification Requirements

a. Participants should be well-versed in the SDLC lifecycle phases. Participants having a minimum of one year working experience in software development are preferred for nominations, and having knowledge in the following programming languages, HTML, JavaScript, and Python programming are desirable.

b. Participants may use their own laptop with Ubuntu 22.04 Operating System or install a Virtual machine with Ubuntu 22.02 OS as a guest OS for carrying out lab exercises during the training program. Once the participant is enrolled for self-paced learning, an installation manual will be provided for the installation of prerequisites related to the tools/software that are used in the training program.

c. For any doubts or issues with the installation of the above-mentioned tools/software, participants can **post their queries in the WhatsApp group, and the resource persons will provide required support.** Participants will be given **online access only** to the course material for 3 months.

d. Participants attending the training program and those who submit the lab assignments will be considered to have participated in the training program. Such participants will only be given a **Participation Certificate**.

e. Participants who have submitted lab assignments and a case study can opt for the certification examination on any day and at any time of their convenience by registering at https://forms.gle/2wnrJTQ3snB5UXen8 5 days before the proposed examination date. For the certification examination, a separate fee of **Rs 1000/-** (including taxes) has to be paid during examination registration.

f. Certification fee has to be paid as per the particulars below -

Name of the Organization	Centre for Development of Advanced Computing(C-DAC)
Bank Name	Bank of India
Branch	Shamshabad, Hyderabad
Account Number	566310110004393
IFSC Code	BKID0005663

g. A certification examination would be conducted by CDAC Hyderabad and IIT Bhilai upon verifying the registration and payment particulars. The certification examination will be for 100 marks with MCQs, and the duration will be 90 minutes.

h. The participants who have appeared for the certification examination must attain a minimum of 65% (with 30% weightage for assignments and case studies AND 70% weightage for the certification examination). Participants who fulfil the above criteria will be given a **Professional Certificate**.

For more details about the program format, please visit https://ssdlcp.in