



## UP System Information Technology Foundation, Inc.

Rm. 303 Vidal A. Tan Hall, Quirino Ave. cor. Velasquez St.

University of the Philippines Diliman, Quezon City

**Tel:** 436-2217/788-5898 | **Fax:** 920-2036

**upsitf.org** | **info@upsitf.org**

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**Course Title:** Secure Programming

**Duration:** Three (3) Days

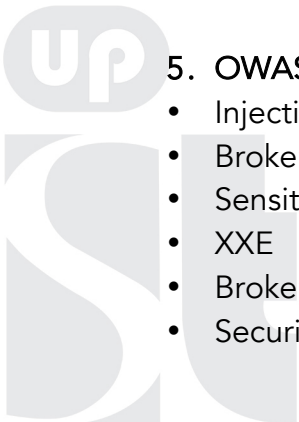
**Class Schedule:** 9:00am to 5:00pm

### Course Overview:

This course allows students to learn basic and advanced concepts in developing software that adhere to industry approved secure programming practices. Emphasis will be given to: understanding information security concepts, secure programming practices supported by OWASP (OWASP Top 10 Web Application Vulnerabilities), auditing techniques and tools, and common threats to applications and their mitigation strategies.

### Topics:

1. Introduction to information Security
2. Secure Coding Principles
3. Introduction to Threat Modeling
4. Web Fundamentals
5. OWASP Top 10
  - Injection
  - Broken Authentication
  - Sensitive Data Exposure
  - XXE
  - Broken Access Control
  - Security Misconfiguration





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- XSS
- Insecure Deserialization
- Using Vulnerable Components
- Insufficient Logging and Monitoring

### **6. Secure Coding Best Practices**

- Handling credit card payments
- Authentication
- Password security
- 2FA
- Authorization
- Data Validation
- Session Management
- Cryptography / Encryption
- Auditing and Logging
- Error and Exception Handling
- Denial-of-Service
- Maintenance and Version Control
- Vulnerability Management

