



غلام ایشاق خان انسٹیٹیوٹ آف انجینئرنگ سائنس و ٹیکنالوجی  
Ghulam ishaq khan institute of engineering sciences and technology

## Semester Project Secure Software Development and Engineering (CY321)

Students will develop a software application or website (**duplicate Ideas** will not be accepted) with **integrated security**, implementing the security steps that we already studied or will study throughout this semester.

### Deliverable Details

- The deadline for every deliverable is **12:00 am Friday (Date mentioned with every deliverable)**. For every deliverable, please upload the corresponding report and the code. Submit week wise deliverable in the separate folder (for example: Week-1) on github.
- Please send the link of the github repo to Jazia

#### 1. Project Proposal (Week 1)

Deadline: 07/03

- Create a github repo
- Team (max = 4 students)
- Title & Project Proposal (1-2 Pages)
- Security Requirements and planning

#### 2. Threat Modeling & Risk Assessment (Week 2)

Deadline: 14/03

- Attack vectors, risk levels, and security mitigation strategies

#### 3. System Architecture & Secure Design (Week 3)

Deadline: 21/03

- System architecture diagrams
- Security controls (authentication, encryption, access control)
- Security Design measures

#### **4. Secure Coding & Initial Implementation (Weeks 4-6)**

Deadline: 11/04

- Implement secure authentication and database security
- Secure Coding (Source submission)

#### **5. Security Testing & Vulnerability Analysis (Week 7)**

Deadline: 18/04

- Secure Testing Techniques and Analysis (Source submission)

#### **6. Final Implementation & Secure Code Review (Week 8).**

Deadline: 25/04

- Secure code review
- Final security fixes and security enhancements (Source submission)

#### **7. Final Report & Presentation (Week 9)**

Deadline: 02/05

- **Final Report** (threat model, security features, test results)
- **Source Code Submission**
- **Live Demo & Presentation**

### **Assessment:**

Project Proposal, Risk Management & Threat Modeling	10%
Secure Design & Implementation	20%
Security Coding & Testing	25%
Final Report & Documentation	15%
Presentation & Demo	30%

For any confusion, please email me or visit my office.