



ALAMO COLLEGES DISTRICT

San Antonio College
*Secure Software
Program Development
Associates Degree*

Standard Software Assurance Curriculum

- Originally developed by Carnegie Mellon University (CMU) under grant from the Department of Homeland Security (DHS)



- Leading to Industry Certifications

Local Employers Hiring Local Talent

Earn While You Learn

- Apprenticeship program based on a work-based learning model
- On the job training in companies
- Paid training contract with company

**Local Industry-led
Center of Excellence for
Secure Software**



WWW.ISHPI.NET

(210) 787-2585

CICESSE

San Antonio's

**Center of Excellence
for Secure Software**



*Workforce Capable of Developing Software
Secure from Cyber Attacks*



CMMIDEV / 5SM
Exp. 2020-02-09/Appraisal #28477

Employer Benefits

- **Better match between secure software development jobs and skills**
- **High success rate in finding the qualified candidates with the proven capabilities and competencies required for secure software development**
- **High rates of retention of the skilled worker**
- **Proven successful work-based learning model tailored to augment existing skills formation models to meet requirements defined by industry**

“The next Pearl Harbor we confront could very well be a cyber attack that cripples our power systems, our grid, our security systems, our financial systems, our government”

Leon Panetta, CIA Director

Academic Curriculum

Required Program Courses		
Essentials in Programming UNIX Programming in JAVA Introduction to Relation Database	Advanced Programming in JAVA Event-Driven Programming Structured Query Language C# Programming	Database Administration Structured System Analysis Mobile Application Programming
Secure Software Development Track		General Education Requirements
Introduction to Computer Security Secure Coding Introduction to Assured Software Engineering	English Composition College Algebra Communications	Social Science Laboratory Science Humanities

Apprenticeship Curriculum

Applied Knowledge			Personal Skills	
Software Engineer's Job Time Management Time Tracking Period Planning Product Planning	Managing your Time Managing Commitments Managing Schedules Project Plan Introduction to Statistics	Postmortem Process Improvement Estimating Product Size Process Discipline Earned Value Management	Integrity Initiative Teamwork Respect	Dependability Reliability Adaptability Professionalism Communication
Secure Software Skills			Workplace Skills	
Software Development Process Defects and Software Quality Economics of Defect Removal Defect Management Product Quality Process Quality	Personal Commitment to Quality Software Inspection/Peer Review Software Requirements Secure Life-Cycle Practices and Standards Creation & Use of Personal & Peer Review Checklists		Planning & Organizing Problem Solving Decision Making Customer Focus	Ethics, Fraud & Security training Business Fundamentals Working Tools/Technology Self Managed

Workforce Trained, Apprenticed, Mentored, and Certified

