CPTR2255 - Software Security and Testing

Credits:	3 (2/1/0)
Description:	This course is an introduction to software security and testing. Students will learn the importance of this aspect of software development by exploring historical and current needs in the area of stable and secure software development. The use of development operations in these areas will be included.
Prerequisites:	
Corequisites:	
Pre/Corequisites*:	• CPTR2001 • CPTR2230
Competencies:	1. Explain the reasoning, purpose and impact of software security. 2. Describe and differentiate use of white, grey and black hat penetration testing. 3. Identify the current and future threat landscape and surface. 4. Use cryptography to secure data. 5. Perform input and output validation and secure error handling. 6. Explain the purpose and importance of software testing. 7. Generate manual and automated software testing processes. 8. Utilize black and white box testing methodologies. 9. Perform unit, integration, system and acceptance testing. 10. Design and develop regression tests, including the communication of their results.
MnTC goal areas:	None

**Can be taking as a Prerequisite or Corequisite.*

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