## CPTR2001 - Scripting for Automation

Credits:	3 (2/1/0)
Description:	Students will build on the skills learned in Introduction to Programming and Scripting. Students will learn scripting styles, procedures and methods for system, database, web and network environments.
Prerequisites:	• CPTR1001
Corequisites:	
Pre/Corequisites <sup>*</sup> :	
Competencies:	<ol> <li>Use tools and services to develop computing systems that consider platform constraints, support version control, track requirements and bugs, and automate building.</li> <li>Implement secure coding techniques such as input validation, wrapper code, securing method access and buffer overflow prevention.</li> <li>Produce a program that implements an appropriate style, intended input behavior and correct program components, and includes descriptions of program functionality.</li> <li>Develop algorithms to solve a computational problem.</li> <li>Implement appropriate data structures while using multiple levels of abstraction to create a new program that requires teamwork and is socially relevant.</li> <li>Implement a mobile or web app with appropriate user experience design, functionality and security analysis while using standard libraries, unit testing tools and version control in a team environment.</li> <li>Develop an interactive application that optimizes usability while applying a user-centered design cycle with related tools and techniques.</li> <li>Analyze how a responsive web application utilizes a web framework and presentation technologies in support of a diverse online community.</li> <li>Implement storage, transfer and retrieval of digital media with appropriate file, database or streaming formats.</li> </ol>
MnTC goal areas:	None

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