

CIS CA Computer Programming with C++

PLO	PLO Reflection (What were the strong points and weak points students demonstrated in the courses? What areas need more attention? What do your results show about student learning?)	PLO Action Plan (include timeline for implementation, key/responsible personnel, priority high/medium/low, status report/reflection on results of action plan)
<p>Computer Software Development: Demonstrate the ability to apply data requirements, algorithmic principles, and software development practice in the modeling and design of computer-based systems in a way that proves comprehension of the tradeoffs involved in design choices.</p>	<p>Students demonstrated weakness in program development because of starting with the coding phase instead of designing a proper solution first; to decrease a significant amount of errors.</p>	<p>Continue to assign more assignments, activities and projects for them to design a solution to the problem first, desk check the solution, and then code the program in a chosen programming language. Assigned instructor will implement additional resources in Fall 2017 to continue new methods of implement the program development process to make a better effective outcome of the program development process.</p>
<p>Programming Skills: Demonstrate the ability to analyze a problem, using algorithms to create computer systems and appropriate problem solving using a programming language.</p>	<p>Student demonstrated weakness in being clear of the define problem phase before outlining the solution in their assignments.</p>	<p>Continue to assign more assignments, activities and projects to prepare them on what questions should be asked to be clear of the problem to solve. Assigned instructor will implement additional resources and update SLO to improve on the define the problem phase Fall 2017.</p>
<p>Solve Business Problems with Computers: Interpret and analyze a business information problem and design, code, compile, test and debug a program solution in C++ using proper program syntax balancing efficiency and maintainability, and manage project tasks required for completion of a computer system development project.</p>	<p>Students demonstrated weakness to express their solution in a programming language. The students weakness in the translation of the logic from the flowchart and or pseudocode to the coding (programming language); indicates more mini projects to have more hands on in working through the phases of developing an algorithm and coding process.</p>	<p>Continue to assign more assignments, activities and projects for them to improve on the translation of the logic form the flowchart to the programming language C++. Assigned instructor will implement additional resources in Fall 2017.</p>

SLOs		
Design Algorithms and Programs: Proficiently and effectively plan the design of a program and write appropriate programming algorithms.		Computer Software Development: Demonstrate the ability to apply data requirements, algorithmic principles, and software development practice in the modeling and design of computer-based systems in a way that proves comprehension of the tradeoffs involved in design choices.
Program Structure: Proficiently and effectively write programming code using a variety of programming structures, including variable definitions, alternation and iteration, functions and objects.		Programming Skills: Analyze a problem, using algorithms to create computer systems and appropriate problem solving using a programming language.
Implement Programs: Proficiently and effectively write and debug programming code using a programming language in a development environment and tools including user interface.		Solve Business Problems with Computers: Interpret and analyze a business information problem and design, code, compile, test and debug a program solution in C++ using proper program syntax balancing efficiency and maintainability, and manage project tasks required for completion of a computer system development project.
Solve Problems with Computers: Design, code, compile, test and debug a program solution in C++		
Program Structure: Select & construct data types to define variables and arrays		
Development Tools: Create programs using software development tools including editors, libraries and compilers		
Solve Business Problems: Write C++ applications and applets to create solutions to business problems and manage project tasks required for completion of a computer system development project		
Advanced Techniques: Develop programs using advanced techniques and features such as exceptions, multi-threading and concurrency		
GUI: Develop event-handling code for GUI (graphical user interface) programs for environments such as .NET or other API (application programming interface) standards		
Data & I/O: Access persistent data utilizing file Input/Output and/or database access		