COURSE SLO ASSESSMENT 4-YEAR TIMELINE

Unit Name	Course SLO Assessment Cycle	Course ID	Course Name	Course SLO Title	Course SLO Statement
El Camino: Course SLOs (MATH) - Computer Sciences	2013-14 (Spring 2014)	ECC: CSCI 30	Advanced Programming in C++	SLO #1 Document Programming Solutions	Students will design, code, compile, test and document programming solutions to problems requiring the development of C++ classes (by inheritance, by composition; templates), requiring C++ operator overloading, requiring effective use of the Standard Template Library, requiring effective use of pointers and dynamic memory allocation.
	2013-14 (Spring 2014)	ECC: CSCI 40	Introduction to UNIX/LINUX Operating Systems	SLO #1 Shell Script Solutions	Given a specification for a set of operating system tasks, students will create, edit, move, display, copy and delete files and subdirectories.
	2014-15 (Fall 2014)	ECC: CSCI 1	Problem Solving and Program Design Using C++	SLO #1 Writing Algorithms	Students will write correct and detailed algorithms. (Properly analyze a problem using top down design, and write an algorithm that can be translated into computer code.)
	2014-15 (Fall 2014)	ECC: CSCI 16	Assembly Language	SLO #1 Developing PC Assembly Language Code	Students will design, code, compile, test and document programming solutions to problems by developing PC assembly language code that makes direct use of processor instructions, interrupts, registers, the stack, as well as existing macro and procedure libraries.
	2014-15 (Fall 2014)	ECC: CSCI 2	Introduction to Data Structures	SLO #1 Programming Solutions	Students will design, code, compile, test and document a programming solution to a problem involving the basic data structures: lists, stacks, queues, trees, and related abstract data types.
	2014-15 (Fall 2014)	ECC: CSCI 3	Computer Programming in Java	SLO #1 Designing, Coding, Compiling and Testing	Students, when given a specification for a program or program segment, will be able to design, code, compile, test and document a solution.
	2014-15 (Spring 2015)	ECC: CSCI 30	Advanced Programming in C++	SLO #2 Tracing and Verifying	Students, when given a code segment involving use of a class, will be able to trace the construction of class objects, trace the destruction of class objects, verify whether memory leaks have occurred, trace object assignment operations, verify when copy constructors are invoked and when overloading of copy constructors is required.
	2014-15 (Spring 2015)	ECC: CSCI 40	Introduction to UNIX/LINUX Operating Systems	SLO #2 Using Shell Programming	Students use shell programming to create file processing applications and control user interaction.
	2015-16 (Fall 2015)	ECC: CSCI 1	Problem Solving and Program Design Using C++	SLO #2 Using Correct Syntax	Students will write C++ code that uses correct syntax (when declaring data types, writing algebraic and logical expressions, naming variables, etc.).
	2015-16 (Fall 2015)	ECC: CSCI 12	Programming for Internet Applications using PHP, JavaScript, and XHTML	SLO #2 Side-Scripts	Develop a client-side script to create a drop down menu for a web page.
	2015-16 (Fall 2015)	ECC: CSCI 16	Assembly Language	SLO #2 Tracing Code	Students, when given a code segment will be able to trace the

Unit Name	Course SLO Assessment Cycle	Course ID	Course Name	Course SLO Title	Course SLO Statement
	2015-16 (Fall 2015)	ECC: CSCI 16	Assembly Language	Segments	execution, providing the real-time content of registers during operations, the dynamic content of the stack during procedure calls and returns, and tracing the conditional execution of code generally, and within looping structures specifically.
	2015-16 (Fall 2015)	ECC: CSCI 2	Introduction to Data Structures	SLO #2 Output of Program Segments	Students, when given a C++ code segment, will be able to trace the execution, give the output, and analyze the efficiency of the basic data structures and techniques involved.
	2015-16 (Fall 2015)	ECC: CSCI 3	Computer Programming in Java	SLO #2 Tracing Execution	When given a code segment involving control structures, iteration structures and method calls, students will be able to trace the execution and give the output.
	2015-16 (Spring 2016)	ECC: CSCI 12	Programming for Internet Applications using PHP, JavaScript, and XHTML	SLO #3 Web Pages Date and Time	Design and implement a program or function to process data collected from a web form.
	2015-16 (Spring 2016)	ECC: CSCI 30	Advanced Programming in C++	SLO #3 Identifying and Eliminating Errors	Students, when given C++ code with errors, will be able to identify what those errors are and will be able to modify the C++ code to eliminate those errors.
	2015-16 (Spring 2016)	ECC: CSCI 40	Introduction to UNIX/LINUX Operating Systems	SLO #3 Input/Output of Programs and Processes	Students create, schedule, filter, monitor, format, sort and redirect and delete input / output of programs and processes.
	2016-17 (Fall 2016)	ECC: CSCI 1	Problem Solving and Program Design Using C++	SLO #3 Input and Output Information	Students will write C++ code that correctly uses control structures (and nested control structures) including conditionals (like "if"), loops (like "while" and "for") and user defined functions (both void and value returning).
	2016-17 (Fall 2016)	ECC: CSCI 12	Programming for Internet Applications using PHP, JavaScript, and XHTML	SLO #1 Interactive Web Pages	Design and implement an interactive web page.
	2016-17 (Fall 2016)	ECC: CSCI 16	Assembly Language	SLO #3 Identifying and Eliminating Errors	Students, when given PC assembly language code with errors, will be able to identify what those errors are and will be able to modify the PC assembly language code to eliminate those errors.
	2016-17 (Fall 2016)	ECC: CSCI 2	Introduction to Data Structures	SLO #3 Correcting Errors	Students, when given a C++ code segment with errors, will be able to identify and correct the problems.
	2016-17 (Fall 2016)	ECC: CSCI 3	Computer Programming in Java	SLO #3 Describing What Users See	When given a code segment involving data objects, graphical interface objects, and processing objects, students will be able to describe what the users sees and the events that take place as the user interacts with the interface.
	2016-17 (Spring 2017)	ECC: CSCI 30	Advanced Programming in C++	SLO #4 Explaining the Concept of C++	Students will be able to explain the concept of C++ class templates and how they relate to the concept of generics, the concept of virtual functions and polymorphism, the concept of multiple inheritance and virtual base classes, the concept of container types and the circumstances where specific containers should or should not be used.
	2016-17 (Spring 2017)	ECC: CSCI 40	Introduction to	SLO #4 Basic	Students perform basic administration functions in system

Unit Name	Course SLO Assessment Cycle	Course ID	Course Name	Course SLO Title	Course SLO Statement
	2016-17 (Spring 2017)	ECC: CSCI 40	UNIX/LINUX Operating Systems	Administration Functions	installation and maintenance, network services, user services.
	2017-18 (Fall 2017)	ECC: CSCI 1	Problem Solving and Program Design Using C++	SLO #4 Basic Data Structures	Students will write C++ code that correctly uses basic data structures (including strings, arrays, and structs).
	2017-18 (Fall 2017)	ECC: CSCI 14	Computer Programming in Python for Computer Science	SLO #4 Basic Data Structures	Students will write Python code that correctly uses basic data structures (including strings, arrays, and classes).
	2017-18 (Fall 2017)	ECC: CSCI 16	Assembly Language	SLO #4 Explaining the Concepts of PC Assembly Language	Students will be able to explain the concepts of PC assembly language registers, interrupts, data segment organization, addressing modes, internal data representation, decision structures, macros and procedures.
	2017-18 (Fall 2017)	ECC: CSCI 2	Introduction to Data Structures	SLO #4 Explaining C++ Concepts	Students will be able to explain the C++ concepts related to pointers, classes, recursion, searching, sorting, templates and dynamic memory allocation.
	2017-18 (Fall 2017)	ECC: CSCI 3	Computer Programming in Java	SLO #4 Understanding and Developing Desktop and Web Applications	Students understand and be able to develop both desktop and web applications involving graphical user interfaces, animations, sound manipulations, File I/O, database, applets, and threads.
	2017-18 (Spring 2018)	ECC: CSCI 12	Programming for Internet Applications using PHP, JavaScript, and XHTML	SLO #1 Interactive Web Pages	Design and implement an interactive web page.
	2017-18 (Spring 2018)	ECC: CSCI 12	Programming for Internet Applications using PHP, JavaScript, and XHTML	SLO #4 Processing Web Data	Design and implement a server-side program or function to a database and interact (insert, delete, update records) with it.
	2017-18 (Spring 2018)	ECC: CSCI 30	Advanced Programming in C++	SLO #1 Document Programming Solutions	Students will design, code, compile, test and document programming solutions to problems requiring the development of C++ classes (by inheritance, by composition; templates), requiring C++ operator overloading, requiring effective use of the Standard Template Library, requiring effective use of pointers and dynamic memory allocation.
	2017-18 (Spring 2018)	ECC: CSCI 40	Introduction to UNIX/LINUX Operating Systems	SLO #1 Shell Script Solutions	Given a specification for a set of operating system tasks, students will create, edit, move, display, copy and delete files and subdirectories.
	2018-19 (Fall 2018)	ECC: CSCI 1	Problem Solving and Program Design Using C++	SLO #1 Writing Algorithms	Students will write correct and detailed algorithms. (Properly analyze a problem using top down design, and write an algorithm that can be translated into computer code.)
	2018-19 (Fall 2018)	ECC: CSCI 14	Computer Programming in Python for Computer Science	SLO #1 Writing Algorithms	Student will write and correct detailed algorithms, some of them would include text processing. (Properly analyze a software problem using top down design, and write related algorithm that can be translated into computer program in Python).
	2018-19 (Fall 2018)	ECC: CSCI 16	Assembly Language	SLO #1 Developing PC Assembly Language Code	Students will design, code, compile, test and document programming solutions to problems by developing PC assembly language code that makes direct use of processor instructions,

Unit Name	Course SLO Assessment Cycle	Course ID	Course Name	Course SLO Title	Course SLO Statement
	2018-19 (Fall 2018)	ECC: CSCI 16	Assembly Language	SLO #1 Developing PC Assembly Language Code	interrupts, registers, the stack, as well as existing macro and procedure libraries.
	2018-19 (Fall 2018)	ECC: CSCI 2	Introduction to Data Structures	SLO #1 Programming Solutions	Students will design, code, compile, test and document a programming solution to a problem involving the basic data structures: lists, stacks, queues, trees, and related abstract data types.
	2018-19 (Fall 2018)	ECC: CSCI 3	Computer Programming in Java	SLO #1 Designing, Coding, Compiling and Testing	Students, when given a specification for a program or program segment, will be able to design, code, compile, test and document a solution.
	2018-19 (Spring 2019)	ECC: CSCI 12	Programming for Internet Applications using PHP, JavaScript, and XHTML	SLO #2 Side-Scripts	Develop a client-side script to create a drop down menu for a web page.
	2018-19 (Spring 2019)	ECC: CSCI 30	Advanced Programming in C++	SLO #2 Tracing and Verifying	Students, when given a code segment involving use of a class, will be able to trace the construction of class objects, trace the destruction of class objects, verify whether memory leaks have occurred, trace object assignment operations, verify when copy constructors are invoked and when overloading of copy constructors is required.
	2018-19 (Spring 2019)	ECC: CSCI 40	Introduction to UNIX/LINUX Operating Systems	SLO #2 Using Shell Programming	Students use shell programming to create file processing applications and control user interaction.
	2019-20 (Fall 2019)	ECC: CSCI 1	Problem Solving and Program Design Using C++	SLO #2 Using Correct Syntax	Students will write C++ code that uses correct syntax (when declaring data types, writing algebraic and logical expressions, naming variables, etc.).
	2019-20 (Fall 2019)	ECC: CSCI 14	Computer Programming in Python for Computer Science	SLO #2 Correct Syntax	Students will write Python code that uses correct syntax (when declaring data types, writing algebraic and logical expressions, naming variables, etc.).
	2019-20 (Fall 2019)	ECC: CSCI 16	Assembly Language	SLO #2 Tracing Code Segments	Students, when given a code segment will be able to trace the execution, providing the real-time content of registers during operations, the dynamic content of the stack during procedure calls and returns, and tracing the conditional execution of code generally, and within looping structures specifically.
	2019-20 (Fall 2019)	ECC: CSCI 2	Introduction to Data Structures	SLO #2 Output of Program Segments	Students, when given a C++ code segment, will be able to trace the execution, give the output, and analyze the efficiency of the basic data structures and techniques involved.
	2019-20 (Fall 2019)	ECC: CSCI 3	Computer Programming in Java	SLO #2 Tracing Execution	When given a code segment involving control structures, iteration structures and method calls, students will be able to trace the execution and give the output.
	2019-20 (Spring 2020)	ECC: CSCI 12	Programming for Internet Applications using PHP, JavaScript, and XHTML	SLO #1 Interactive Web Pages	Design and implement an interactive web page.
	2019-20 (Spring 2020)	ECC: CSCI 30	Advanced Programming in	SLO #3 Identifying and	Students, when given C++ code with errors, will be able to identify

Unit Name	Course SLO Assessment Cycle	Course ID	Course Name	Course SLO Title	Course SLO Statement
	2019-20 (Spring 2020)	ECC: CSCI 30	C++	Eliminating Errors	what those errors are and will be able to modify the C++ code to eliminate those errors.
	2019-20 (Spring 2020)	ECC: CSCI 40	Introduction to UNIX/LINUX Operating Systems	SLO #3 Input/Output of Programs and Processes	Students create, schedule, filter, monitor, format, sort and redirect and delete input / output of programs and processes.
	2020-21 (Fall 2020)	ECC: CSCI 1	Problem Solving and Program Design Using C++	SLO #3 Input and Output Information	Students will write C++ code that correctly uses control structures (and nested control structures) including conditionals (like "if"), loops (like "while" and "for") and user defined functions (both void and value returning).
	2020-21 (Fall 2020)	ECC: CSCI 14	Computer Programming in Python for Computer Science	SLO #3 Control Structures	Students will write Python code that correctly uses control structures (and nested control structures) including conditionals (like "if"), loops (like "while" and "for") and user defined functions (both void and value returning).
	2020-21 (Fall 2020)	ECC: CSCI 16	Assembly Language	SLO #3 Identifying and Eliminating Errors	Students, when given PC assembly language code with errors, will be able to identify what those errors are and will be able to modify the PC assembly language code to eliminate those errors.
	2020-21 (Fall 2020)	ECC: CSCI 2	Introduction to Data Structures	SLO #3 Correcting Errors	Students, when given a C++ code segment with errors, will be able to identify and correct the problems.
	2020-21 (Fall 2020)	ECC: CSCI 3	Computer Programming in Java	SLO #3 Describing What Users See	When given a code segment involving data objects, graphical interface objects, and processing objects, students will be able to describe what the users sees and the events that take place as the user interacts with the interface.
	2020-21 (Spring 2021)	ECC: CSCI 30	Advanced Programming in C++	SLO #4 Explaining the Concept of C++	Students will be able to explain the concept of C++ class templates and how they relate to the concept of generics, the concept of virtual functions and polymorphism, the concept of multiple inheritance and virtual base classes, the concept of container types and the circumstances where specific containers should or should not be used.
	2020-21 (Spring 2021)	ECC: CSCI 40	Introduction to UNIX/LINUX Operating Systems	SLO #4 Basic Administration Functions	Students perform basic administration functions in system installation and maintenance, network services, user services.
	2021-22 (Fall 2021)	ECC: CSCI 1	Problem Solving and Program Design Using C++	SLO #4 Basic Data Structures	Students will write C++ code that correctly uses basic data structures (including strings, arrays, and structs).
	2021-22 (Fall 2021)	ECC: CSCI 14	Computer Programming in Python for Computer Science	SLO #4 Basic Data Structures	Students will write Python code that correctly uses basic data structures (including strings, arrays, and classes).
	2021-22 (Fall 2021)	ECC: CSCI 16	Assembly Language	SLO #4 Explaining the Concepts of PC Assembly Language	Students will be able to explain the concepts of PC assembly language registers, interrupts, data segment organization, addressing modes, internal data representation, decision structures, macros and procedures.
	2021-22 (Fall 2021)	ECC: CSCI 2	Introduction to Data Structures	SLO #4 Explaining C++ Concepts	Students will be able to explain the C++ concepts related to pointers, classes, recursion, searching, sorting, templates and

Unit Name	Course SLO Assessment Cycle	Course ID	Course Name	Course SLO Title	Course SLO Statement
	2021-22 (Fall 2021)	ECC: CSCI 2	Introduction to Data Structures	SLO #4 Explaining C++ Concepts	dynamic memory allocation.
	2021-22 (Fall 2021)	ECC: CSCI 3	Computer Programming in Java	SLO #4 Understanding and Developing Desktop and Web Applications	Students understand and be able to develop both desktop and web applications involving graphical user interfaces, animations, sound manipulations, File I/O, database, applets, and threads.