



PROGRAM REVIEW – CURRICULUM REVIEW
2015-16

Computer Science

Courses with CID Designation			
Course Name	CID #	CID Name	COR Effective Term
CS G130	ITIS 120	Business Information Systems, Computer Information Systems	Su2010
CS G153	COMP 122	Programming Concepts and Methodology I	S2013
CS G154	COMP 132	Programming Concepts and Methodology II	F2014
CS G175	COMP 122	Programming Concepts and Methodology I	F2014
CS G189	COMP 132	Programming Concepts and Methodology II	S2013
CS G242	COMP 142	Computer Architecture and Organization	F2013
CS G262	COMP 152	Discrete Structures	F2013

Dual Listed Courses

N/A

List of Active Courses offered or not offered in the last 3 years

Course ID	2012-2013			2013-2014			2014-2015		
	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring
CS G101									X
CS G102		X	X		X	X		X	X
CS G121								X	
CS G127									
CS G130		X	X	X	X	X	X	X	X
CS G135									
CS G145									
CS G147		X	X		X	X		X	X
CS G148									
CS G149									
CS G150									X
CS G153		X	X		X	X		X	X
CS G154									X
CS G167		X	X		X	X			
CS G168									
CS G170									
CS G171									
CS G175		X	X		X	X		X	X
CS G176									
CS G177									
CS G178		X	X		X	X		X	
CS G179		X							
CS G185									
CS G189			X		X	X		X	X
CS G193									
CS G194									
CS G195									
CS G196		X			X				

CS G198
CS G242
CS G262

X

X

X

X



PROGRAM REVIEW – SLO ASSESSMENTS 2015-16

Computer Science

*Assessment status reflects assessments between Fall 2013 through Summer 2015

Assessment status for courses with active cSLOs

Course Name	# of cSLOs	# of cSLOs Assessed	Status
CS G101	4	0	↓
CS G102	5	0	↓
CS G121	7	0	↓
CS G127	7	0	↓
CS G130	6	2	↔
CS G135	7	0	↓
CS G145	5	0	↓
CS G147	7	1	↔
CS G148	3	0	↓
CS G149	3	0	↓
CS G150	3	0	↓
CS G153	8	1	↔
CS G154	5	0	↓
CS G167	4	0	↓
CS G168	3	0	↓
CS G170	3	0	↓
CS G171	No SLO on CurricUNET	0	↓
CS G175	8	1	↔
CS G176	No SLO on CurricUNET	0	↓
CS G177	3	0	↓
CS G178	2	1	↔
CS G179	No SLO on CurricUNET	0	↓
CS G185	No SLO on CurricUNET	0	↓
CS G189	5	0	↓
CS G193	3	0	↓
CS G194	3	0	↓
CS G195	No SLO on CurricUNET	0	↓
CS G196	3	0	↓
CS G198	No SLO on CurricUNET	0	↓
CS G242	4	0	↓
CS G262	5	1	↔

- ↑ Fully assessed
- ↔ Partially assessed
- ↓ No assessment

Courses with cSLOs that still need to be assessed

Course Name	cSLO #	cSLO
CS G101	cSLO 1	Assess pros/cons of Communication Software in Business
CS G101	cSLO 2	Evaluate pros and cons of Communication Software
CS G101	cSLO 3	Compare and contrast various types of computer input devices.
CS G101	cSLO 4	Explain the usage of the various components of the system unit.
CS G102	cSLO 1	Describe the basic building blocks of operating systems.
CS G102	cSLO 2	Compare and contrast common software development methodology.
CS G102	cSLO 3	Describe the differences between the common programming languages.
CS G102	cSLO 4	Program simple algorithms and applications.
CS G102	cSLO 5	Describe the fundamentals of computer networking.

Courses with cSLOs that still need to be assessed

Course Name	cSLO #	cSLO
CS G121	cSLO 1	Develop 3D polygon objects.
CS G121	cSLO 2	Demonstrate understanding of 3D game engines.
CS G121	cSLO 3	Create and apply object textures.
CS G121	cSLO 4	Demonstrate knowledge of texture and alpha mapping.
CS G121	cSLO 5	Apply transparencies and shading.
CS G121	cSLO 6	Apply material to objects and create specialized material effects.
CS G121	cSLO 7	Integrate 3D artwork with game engines.
CS G127	cSLO 1	Given a set of requirements for a small business or scientific problem, prepare the software development specification.
CS G127	cSLO 2	Design the software components and database structures for code sections.
CS G127	cSLO 3	Create a project with the correct file and database structure.
CS G127	cSLO 4	Partition the programs into appropriate functions and Web pages.
CS G127	cSLO 5	Design a simple Web based user interface to satisfy the user interactions.
CS G127	cSLO 6	Code all the necessary expressions, branches, loops, functions, classes.
CS G127	cSLO 7	Add the appropriate error handling routines.
CS G130	cSLO 2	Demonstrate the fundamentals of computer-based operating systems and utility programs.
CS G130	cSLO 4	Compare and contrast communication and networking concepts including local area networks (LAN), metropolitan area networks (MAN), wide area networks (WAN), topologies, wired and wireless media approaches, network connectivity issues and methods, general and firewall security.
CS G130	cSLO 5	Describe the information systems development approach, including system development life cycle, analysis, design, implementation and support.
CS G130	cSLO 6	Identify and discuss computer ethics, crime, privacy and other social implications.
CS G135	cSLO 1	Understand the concepts and terminologies of the UNIX/Linux operating System.
CS G135	cSLO 2	Install and configure the UNIX/Linux operating system.
CS G135	cSLO 3	Utilize administrative commands to maintain a local working system.
CS G135	cSLO 4	Manage files and directories.
CS G135	cSLO 5	Manage permissions and security.
CS G135	cSLO 6	Write simple shell scripts to enable automation.
CS G135	cSLO 7	Manage tasks and services.
CS G145	cSLO 1	Master program flow-charting and documentation.
CS G145	cSLO 2	Demonstrate a working knowledge of C language constructs.
CS G145	cSLO 3	Design, document, and code a complete software project in the C language.
CS G145	cSLO 4	Design and implement moderately complex algorithms.
CS G145	cSLO 5	Demonstrate the ability to design an application from a business requirement document
CS G147	cSLO 1	Understand and describe the world of 3D interactive game programming.
CS G147	cSLO 3	Demonstrate knowledge of current and popular gaming engines for the Windows platform.
CS G147	cSLO 4	Distinguish and apply the theory and principle of the mathematical algorithms utilized in 3D games.
CS G147	cSLO 5	Apply theoretical knowledge with hands-on lab assignments for drawing primitive objects and applying lighting, textures blending, stenciling, shadowing, and transparency techniques.
CS G147	cSLO 6	Integrate sound and video into the fabric of a computer game design games that interact with user I/O devices such as joysticks.
CS G147	cSLO 7	Use the internet and library resources to research topics and communicate via e-mail.
CS G148	cSLO 1	Compare and contrast existing game engines.
CS G148	cSLO 2	Describe the internal components of a game engine and their interactions.
CS G148	cSLO 3	Explain the fundamentals of game physics and artificial intelligence (AI)
CS G149	cSLO 1	Understand the basic principles of computer networking.
CS G149	cSLO 2	Describe the components of a Multiplayer Online Game and the distribution and interaction of these components on the network.
CS G149	cSLO 3	Explain the tools used by teams of developers to create Massively Multiplayer online Games (MMOGs).
CS G150	cSLO 1	Describe the current state of the mobile game environment.
CS G150	cSLO 2	Explain the component internals of mobile games and the interactions of these components.
CS G150	cSLO 3	Compare and contrast the current design tools, development environments, debugging facilities and deployment packages.

Courses with cSLOs that still need to be assessed

Course Name	cSLO #	cSLO
CS G153	cSLO 1	Given a set of requirements for a small business or scientific problem, prepare the software development specification.
CS G153	cSLO 2	Design the software components and draw flow-charts for the complex code sections.
CS G153	cSLO 3	Design, implement, test, and debug a program that uses each of the following fundamental programming constructs: basic computation, simple I/O, standard conditional and iterative structures, and the definition of functions.
CS G153	cSLO 4	Apply the techniques of structured (functional) decomposition to break a program into smaller pieces.
CS G153	cSLO 6	Design a simple user interface to satisfy the user interactions.
CS G153	cSLO 7	Code all the necessary expressions, branches, loops, functions, classes.
CS G153	cSLO 8	Add the appropriate error handling routines.
CS G154	cSLO 1	Implement complex data storage mechanisms and manipulation algorithms.
CS G154	cSLO 2	Describe object-oriented class hierarchy and inheritance.
CS G154	cSLO 3	Implement, test, and debug simple recursive functions and procedures.
CS G154	cSLO 4	Explain software development methodologies and debugging techniques.
CS G154	cSLO 5	Write programs that use abstract data structures.
CS G167	cSLO 1	Utilize Objective-C language to create basic object oriented applications.
CS G167	cSLO 2	Demonstrate the theory and application of the Model-View-Controller (MVC) methodology for designing applications.
CS G167	cSLO 3	Utilize the Apple iPhone development environment including Cocoa Touch, Xcode, and Interface Builder.
CS G167	cSLO 4	Develop applications incorporating iPhone technologies using (but not limited to) Core Audio, Animation, Data, Location, GPS (Global Position Syst.), Audio/Video, Multitasking, and Web Services.
CS G168	cSLO 1	Build, debug and deploy iPhone and iPad web apps.
CS G168	cSLO 2	Utilize email and graphics technologies in iPhone web apps.
CS G168	cSLO 3	Understand the theory and design of effective and efficient iPhone web apps.
CS G170	cSLO 1	Define and analyze current industry terminology, solutions, and trends in supply chain management, customer relationship management, and other areas relevant in enterprise management.
CS G170	cSLO 2	Review and analyze best practices for evaluating, planning, and implementing enterprise software solutions.
CS G170	cSLO 3	Review and analyze approaches for organizational planning and business process enablement.
CS G175	cSLO 1	Given a set of requirements for a small business or scientific problem, prepare the software development specification.
CS G175	cSLO 2	Design the software components and draw flow-charts for the complex code sections.
CS G175	cSLO 3	Design, implement, test, and debug a program that uses each of the following fundamental programming constructs: basic computation, simple I/O, standard conditional and iterative structures, and the definition of functions.
CS G175	cSLO 4	Apply the techniques of structured (functional) decomposition to break a program into smaller pieces.
CS G175	cSLO 6	Design a simple user interface to satisfy the user interactions.
CS G175	cSLO 7	Code all the necessary expressions, branches, loops, functions, classes.
CS G175	cSLO 8	Add the appropriate error handling routines.
CS G177	cSLO 1	Understand the basic principles of the event-driven and graphical user interface (GUI) model.
CS G177	cSLO 2	Explain the mechanisms for proper class hierarchy and component design in .NET.
CS G177	cSLO 3	Describe the software development methodologies for creating application cores that could have Windows, Web, or web Services interfaces.
CS G178	cSLO 2	Explain the mechanisms for proper class hierarchy and component design in .Net.
CS G189	cSLO 1	Implement complex data storage mechanisms and manipulation algorithms.
CS G189	cSLO 2	Describe object-oriented class hierarchy and inheritance.
CS G189	cSLO 3	Implement, test, and debug simple recursive functions and procedures.
CS G189	cSLO 4	Explain software development methodologies and debugging techniques.
CS G189	cSLO 5	Write programs that use abstract data structures.
CS G193	cSLO 1	Understand the basic principles of the event-driven and graphical programming model.
CS G193	cSLO 2	Explain the mechanisms for proper class hierarchy and component design in .NET.
CS G193	cSLO 3	Describe the software development methodologies for creating application cores that could have Windows, Web, or web Services interfaces.
CS G194	cSLO 1	Understand the basic principles of the event-driven and graphical programming model.

Courses with cSLOs that still need to be assessed

Course Name	cSLO #	cSLO
CS G194	cSLO 2	Explain the mechanisms for proper class hierarchy and component design in .NET. Describe the software development methodologies for creating application cores that could have Windows, Web, or web Services interfaces.
CS G194	cSLO 3	Web, or web Services interfaces.
CS G196	cSLO 1	Understand the basic principles of a multi-tiered application running on the World Wide Web.
CS G196	cSLO 2	Explain the mechanisms for proper class hierarchy and component design in ASP.net. Describe the software development tools and methodologies for creating distributed multi-tiered application.
CS G196	cSLO 3	Diagram the relationship between machine-level architecture & organization and high-level abstractions such as programming languages.
CS G242	cSLO 1	Identify the fundamental components, both hardware and software, in the architectural and organizational design of a computer system.
CS G242	cSLO 2	Solve problems involving operations of computer arithmetic and identify errors arising from binary representation.
CS G242	cSLO 3	repetition.
CS G242	cSLO 4	Create assembly language segments with the correct data structure. Describe how formal tools of symbolic logic are used to model real-life situations, including those arising in computing contexts such as program correctness, database queries, and algorithms.
CS G262	cSLO 1	computing contexts such as program correctness, database queries, and algorithms.
CS G262	cSLO 2	Relate the ideas of mathematical induction to recursion and recursively defined structures.
CS G262	cSLO 3	Analyze a problem to create relevant recurrence equations.
CS G262	cSLO 5	Apply the binomial theorem to independent events and Bayes' theorem to dependent events.

Courses Assessed and their Action Plans

Course Name	cSLO #	Semester Assessed	Action Plans
CS G130	cSLO 1	2014 - 2015 (Fall 2014)	I will use these results to develop a more lecture sensitive component to encourage the student to attend the lectures. Greater student measuring emphasis will be implemented to make obvious to the student that attendance and then all other subject components will be the most beneficial path for the student in knowledge and grade. Software tutorials will be made available to further strengthen the understanding of the applications although not needed.
CS G130	cSLO 1	2013 - 2014 (Spring 2014)	The students achieved at an acceptable SLO rate in this course. I will continue to observe and study the SLO results. No changes are required at this time
CS G130	cSLO 1	2013 - 2014 (Spring 2014)	In view of the results, I will keep the same structure for the class. I normally send weekly reminders about class weekly tasks and encourage all to focus on learning. Will try harder to encourage/ motivate students for time management.
CS G130	cSLO 1	2013 - 2014 (Spring 2014)	At this time I believe that I can move on to the next SLO. It is clear from the assessment that the students understood the concept.
CS G130	cSLO 1	2013 - 2014 (Spring 2014)	I will use these results to develop a more lecture sensitive component to encourage the student to attend the lectures. Greater student measuring emphasis will be implemented to make obvious to the student that attendance and then all other subject components will be the most beneficial path for the student in knowledge and grade.
CS G130	cSLO 3	2013 - 2014 (Fall 2013)	The assessment of this SLO is based upon the fact that each and every person using a computer must be functional using the machine and the software such as MS Office 2013. Failure to accomplish this task will likely result in not being employed in many professions. In this light, the publisher of the textbook is developing a three pronged online tutorial approach that should increase student knowledge. For on-campus courses (54559 and 56007) the online tutorials should also be helpful since the on campus student will also have access to the tutorials. The new tutorials target the visual learner, printed learner and audio learner.
CS G130	cSLO 3	2013 - 2014 (Fall 2013)	I believe the objectives of the class are working as they should and no changes are required. I will continue to observe and analyze the data for further improvements as needed.
CS G130	cSLO 3	2013 - 2014	In view of the results, I will keep the same structure for the class. I normally send weekly

Courses Assessed and their Action Plans

Course Name	cSLO #	Semester Assessed	Action Plans
		(Fall 2013)	reminders about class weekly tasks and encourage all to focus on learning. Will try harder to encourage/ motivate students for time management.
CS G147	cSLO 2	2013 - 2014 (Spring 2014)	What will you do differently next semester? I'm going to try to ensure students work on required assignments during lab time and try to intervene early and often.
CS G147	cSLO 2	2013 - 2014 (Fall 2013)	What will you do differently next semester? I will teach less game engines and introduce more examples in each game engine.
CS G153	cSLO 5	2013 - 2014 (Spring 2014)	The results could be further improved by following up with the students during the lab sessions. As it was assessed, this SLO is well covered during the lecture and students showed a high level of understanding and implementation for the concept.
CS G175	cSLO 5	2013 - 2014 (Spring 2014)	The level of understanding and implementation for this SLO is excellent. Student who were identified as deficient, were contacted and advise on future assignments. Most of the difficulties were related to students poor planning for study and work on assignments. Students were advised weekly with regards to time to set aside for course work.
CS G178	cSLO 1	2013 - 2014 (Fall 2013)	What will you do differently next semester? I will emphasize on the importance of the homework practice
CS G262	cSLO 4	2013 - 2014 (Spring 2014)	The level of understanding for this SLO is excellent. The topic of traversal was well covered in class and students showed an outstanding level of achievement on this SLO.