

Unit Assessment Report - Four Column

Guam Community College Computer Science AS & Certificate

Mission Statement: The mission of the Computer Science Program is to provide the students with foundational knowledge and skills to enter the workforce and to advance as technology changes.

Vision Statement: The program envisions to produce computer science graduates who are knowledgeable and skillful in the workforce in Guam community and the region.

Student Learning Outcomes (SLOs)	Means of Assessment & Criteria (Written in %) / Tasks	Data Collection Status/Summary of Results	Use of Summary Result & Implementation Status
<p>Computer Science AS & Certificate - Computer Science Core - SLO#1 FA10-SP12:</p> <p>Upon completion of this program, students will be able to demonstrate a solid foundation in the core areas of computer science, and knowledge of advanced topics</p> <p>Program Level SLO Domain Types: SLO-Behavioral outcomes</p> <p>Start Date: 10/11/2010</p> <p>End Date: 03/12/2012</p> <p>SLO Status: Currently being assessed</p> <p>Program Level SLO Industry National Certification: N/A</p>	<p>Artifact/Instrument/Rubric/Method/Tool Description: Students will be able to complete course projects.</p> <p>Type of Artifact/Instrument/Rubric/Method/Tool: Course Projects</p> <p>Criterion (Written in %): 90% of students will score at least an 80% on a Skills Checklist.</p> <p>Anticipated Use of Assessment Result: 1. Confirm students obtained skills required for course projects. 2. Obtain updated hardware and software equipment and other resources. 3. Develop new courses in the CS program to align with recommendations from the CS Advisory committee. 4. Participate in professional development activities to stay up-to-date with the latest technology.</p> <p>Budget-Related Proposed Outcomes: 1. To reduce of number of canceled classes per semester. 2. To increase the number of students graduating in the computer science program annually. 3. To accommodate the urgent needs as per the minutes of the advisory committee to infuse in the computer science program.</p> <p>Task Name: Computer Science Core</p>	<p>03/07/2012 - 100% of the students (Spring only course, Spring2011 n = 13) entered and compiled source programs with no terminal errors.</p> <p>Summary of Result Type: Criterion Met</p> <p>Data Collection Status/Summary of Result Status: Program Level Data Collection Status</p> <p>Budget Implications: Over \$5,000</p> <p>Notes: Criterion was met, labs and software need to be upgraded, specifically AS400 system which ties in to all the CS advance classes.</p> <p>Budget Related Performance Indicators: 2.To show how many people graduate with the computer science associates degree annually.</p> <p>Related Documents: CS252 SLO#1 Data Collection</p>	<p>03/14/2012 - Data was collected from a capstone course, which has all the elements of this SLO, the course linked or associated to the criterion needs to be changed as the term "skills checklist" does not relate to one particular document. The collected data however that supports this SLO should be the new or more define data for support and the verbage on the criterion needs to be changed.</p>

Student Learning Outcomes (SLOs)	Means of Assessment & Criteria (Written in %) / Tasks	Data Collection Status/Summary of Results	Use of Summary Result & Implementation Status
	<p>Task Description: Artifacts will be collected by instructor assigned to teach the course.</p> <p>Task Name: Faculty who teaches the course</p>		
<p>Computer Science AS & Certificate - Needs Evaluation - SLO#2 FA10-SP12: Upon completion of this program, students will be able to apply knowledge and skills to make an evaluation of which possible options best meets the needs of a problem.</p> <p>Program Level SLO Domain Types: SLO-Cognitive outcomes</p> <p>Start Date: 10/11/2010</p> <p>End Date: 03/12/2012</p> <p>SLO Status: Currently being assessed</p> <p>Program Level SLO Industry National Certification: N/A</p>	<p>Artifact/Instrument/Rubric/Method/Tool Description: Students will complete course projects.</p> <p>Type of Artifact/Instrument/Rubric/Method/Tool: Course Projects</p> <p>Criterion (Written in %): 90% of students who completes CS203 System Analysis & Design will be able to analyze a given problem and make an evaluation of a possible software solution. Students should score at least an 80% on a Skills Checklist.</p> <p>Anticipated Use of Assessment Result:</p> <ol style="list-style-type: none"> 1. Confirm students obtained skills required for course projects. 2. Obtain updated hardware and software equipment and other resources. 3. Develop new courses in the CS program to align with recommendations from the CS Advisory committee. 4. Participate in professional development activities to stay up-to-date with the latest technology. <p>Budget-Related Proposed Outcomes:</p> <ol style="list-style-type: none"> 1. To reduce of number of canceled classes per semester. 2. To increase the number of students graduating in the computer science program annually. 3. To accommodate the urgent needs as per the minutes of the advisory committee to infuse in the computer science program. 	<p>03/19/2012 - 100% of the students completed chapter summaries. (Fall only class, Fall2010 n = 8)</p> <p>Summary of Result Type: Criterion Met</p> <p>Data Collection Status/Summary of Result Status: Open</p> <p>Budget Implications: Over \$5,000</p> <p>Notes: This class is part of a overall degree that requires an update of equipment to meet the needs of the industry.</p> <p>Budget Related Performance Indicators:</p> <ol style="list-style-type: none"> 2. To show how many people graduate with the Computer Science Associates Degree annually. <p>Related Documents: CS203 SLO_1 Data Collection - October 10, 2011 DUE DATE[1].pdf</p>	<p>03/19/2012 - This has been identified by the faculty to be a good means to support this SLO. Should be continued for next cycle.</p> <p>Implementation Status: 03/19/2012 - Continue to use this as a means to support SLO.</p>

Student Learning Outcomes (SLOs)	Means of Assessment & Criteria (Written in %) / Tasks	Data Collection Status/Summary of Results	Use of Summary Result & Implementation Status
	<p>Task Name: Faculty who teaches the course</p> <p>Task Name: Needs Evaluation</p> <p>Task Description: Course is being taught every Fall semester. Artifacts will be collected by instructor assigned to teach the course.</p>		
<p>Computer Science AS & Certificate - Computer-Based Solution - SLO#3 FA10-SP12:</p> <p>Upon completion of this program, students will be able to design and implement a computer-based solution of a problem by writing code using an appropriate programming language.</p> <p>Program Level SLO Domain Types: SLO-Behavioral outcomes</p> <p>Start Date: 10/11/2010</p> <p>End Date: 03/12/2012</p> <p>SLO Status: Currently being assessed</p> <p>Program Level SLO Industry National Certification: N/A</p>	<p>Artifact/Instrument/Rubric/Method/Tool Description: Students will be able to complete a comprehensive course project using the RPG programming language and utilities.</p> <p>Type of Artifact/Instrument/Rubric/Method/Tool: Course Projects</p> <p>Criterion (Written in %): 100% of the students who complete the comprehensive course project in CS252 Advanced RPG will be able to analyze a given problem and make an evaluation of a possible software solution. Students should score at least an 100% on a Programming Assignment Rubric.</p> <p>Anticipated Use of Assessment Result: 1. Confirm students obtained skills required for course projects. 2. Obtain updated hardware and software equipment and other resources. 3. Develop new courses in the CS program to align with recommendations from the CS Advisory committee. 4. Participate in professional development activities to stay up-to-date with the latest technology.</p> <p>Budget-Related Proposed Outcomes: 1. To reduce of number of canceled classes per semester. 2. To increase the number of students</p>	<p>03/19/2012 - 100% of the students (Spring only course, Spring2011 n = 13) entered and compiled source programs with no terminal errors.</p> <p>Summary of Result Type: Criterion Met</p> <p>Data Collection Status/Summary of Result Status: Open</p> <p>Budget Implications: Over \$500</p> <p>Notes: Maintain class software and supplies as needed to keep class current.</p> <p>Budget Related Performance Indicators: To show how many people graduate with the Computer Science Associates Degree annually.</p>	<p>03/19/2012 - Criterion was met, good means to support SLO.</p> <p>Implementation Status: 03/19/2012 - Continue to use as a means to assess this SLO as suggested by Faculty members.</p>

Student Learning Outcomes (SLOs)	Means of Assessment & Criteria (Written in %) / Tasks	Data Collection Status/Summary of Results	Use of Summary Result & Implementation Status
	<p>graduating in the computer science program annually. 3. To accommodate the urgent needs as per the minutes of the advisory committee to infuse in the computer science program.</p> <hr/> <p>Task Name: Computer-Based Solution Task Description: Course is being taught every Spring semester. Artifacts will be collected by instructor assigned to teach the course.</p> <hr/> <p>Task Name: Faculty who teaches the course</p>		
<p>Computer Science AS & Certificate - AY06-07 SLO#1 COMPUTER-BASED SOLUTION - Students will be able to design and implement a computer-based solution of a problem by using SDA, creating files using IDDU and writing code using the RPG programming language.</p> <p>Program Level SLO Domain Types: SLO-Behavioral outcomes</p> <p>Start Date: 10/09/2006</p> <p>End Date: 03/31/2008</p> <p>SLO Status: Not currently being assessed</p> <p>Program Level SLO Industry National Certification: N/A</p>	<p>Artifact/Instrument/Rubric/Method/Tool Description: 100% of students in CS252 Advanced RPG II will be able to analyze a given problem and design a software solution using SDA, IDDU and the RPG programming language. Criteria verified by an instructor-defined checklist with a rubric for scoring students performance (see the rubric in Add Document Link below).</p> <p>Type of Artifact/Instrument/Rubric/Method/Tool: Course Projects</p> <p>Criterion (Written in %): 70% of CS252 students will be successful in creating file using RPG program</p> <p>Anticipated Use of Assessment Result: Results will be used to improve teaching methods or update RPG program.</p> <hr/> <p>Task Name: COMPUTER-BASED SOLUTION Task Description: Course is being offered. Materials are being covered. Artifacts will be collected at the</p>	<p>10/05/2007 - By following the sequential steps in creating a Computer-based program, 28 students enrolled in CS252 in Spring 2006 and Spring 2007 were able to complete a Computer-based solution to a problem. A rubric on a scale of 1-4 was created to evaluate the project. Only two students were unable to complete the project.</p> <p>Summary of Result Type: Distinction/strength</p> <p>Data Collection Status/Summary of Result Status: Open</p> <p>Budget Implications: No budget impact</p> <p>Notes: None</p>	<p>10/09/2007 - Criteria has been met. No action is needed.</p> <hr/> <p>10/05/2007 - 95% scored 4.0 on a rubric of 4.0. Criteria has been met. No action is needed at this time.</p> <hr/>

Student Learning Outcomes (SLOs)	Means of Assessment & Criteria (Written in %) / Tasks	Data Collection Status/Summary of Results	Use of Summary Result & Implementation Status
	end of Spring 2008.		
<p>Computer Science AS & Certificate - AY06-07 SLO#2 EVALUATE THE ADVANTAGES AND DISADVANTAGES OF THE SOLUTIONS - Students from the CS203 and CS205 courses will apply the knowledge and skills from the course to make an evaluation of which of possible options best meets the needs of a problem.</p> <p>Program Level SLO Domain Types: SLO-Cognitive outcomes</p> <p>Start Date: 10/03/2006</p> <p>End Date: 03/31/2008</p> <p>SLO Status: Not currently being assessed</p> <p>Program Level SLO Industry National Certification: N/A</p>	<p>Artifact/Instrument/Rubric/Method/Tool Description: Students in CS252 Advanced RPG II will be able to create files using the Interactive Data Definition Utility (IDDU). Criteria verified by an instructor-defined checklist with a rubric for scoring student performance (see the rubric in Add Document Link below)</p> <p>Type of Artifact/Instrument/Rubric/Method/Tool: Course Projects</p> <p>Criterion (Written in %): 70% of CS252 students will be successful in creating file using RPG program</p> <p>Anticipated Use of Assessment Result: Results will be used to improve teaching methods or update RPG program.</p> <hr/> <p>Task Name: EVALUATE THE ADVANTAGES AND DISADVANTAGES OF THE SOLUTIONS</p> <p>Task Description: Course is being offered. Materials are being covered. Artifacts will be collected at the end of Spring 2008.</p>	<p>10/05/2007 - Students submitted reports on various solutions from providing system backup solutions covering various options. Some included commercial solutions, open source projects (including G4L and G4U). The students were given a wide range of latitude on the material to be included with the report. In this cycle, it provided us with information on how the students perceived the assignment. Most of the reports were very superficial, but did include the general information that would be required at the Preliminary Investigation Level. This was due in part to the assignment being presented at the end of the course. This was more of a pre-test situation in which the SLO can be further improved.</p> <p>Summary of Result Type: Distinction/strength</p> <p>Data Collection Status/Summary of Result Status: Open</p> <p>Budget Implications: No budget impact</p> <p>Notes: None</p>	<p>10/09/2007 - In next cycle, the students will be provided the report assignment at the beginning of the semester.</p> <hr/>
<p>Computer Science AS & Certificate - AY06-07 SLO#3 SCREEN DESIGN UTILITY (SDA)/INTERACTIVE DATA DIFINITION UTILITY (IDDU) - Students will be able to</p>	<p>Artifact/Instrument/Rubric/Method/Tool Description: Students in CS252 Advanced RPG II will be able to use the Screen Design Utility (SDA)</p>	<p>10/05/2007 - Student artifacts were collected for two semesters, in Spring 2006 and Spring 2007 when CS252 was offered. The project required students to create program files following</p>	<p>10/09/2007 - Criteria has been met. No action is needed.</p> <hr/>

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<p>Screen Design Utility (SDA) to create user interfaces and create files using the Interactive Data Definition Utility (IDDU).</p> <p>Program Level SLO Domain Types: SLO-Behavioral outcomes</p> <p>Start Date: 10/09/2006</p> <p>End Date: 03/31/2008</p> <p>SLO Status: Not currently being assessed</p> <p>Program Level SLO Industry National Certification: N/A</p>	<p>to design a user interface. Criteria verified by an instructor-defined checklist with a rubric for scoring student performance (see the rubric in Add Document Link below. The document can also be viewed in the Query & Report menu under the following reports: Assessment Impact, Assessment Plan or Observation by Assessment Method).</p> <p>Type of Artifact/Instrument/Rubric/Method/Tool: Course Projects</p> <p>Criterion (Written in %): 70% of CS252 students will be successful in creating file using RPG program</p> <p>Anticipated Use of Assessment Result: Results will be used to improve teaching methods or update RPG program.</p> <hr/> <p>Task Name: SCREEN DESIGN UTILITY (SDA)/INTERACTIVE DATA DEFINITION</p> <p>Task Description: Course is being offered. Materials are being covered. Artifacts will be collected at the end of Spring 2008.</p>	<p>sequential steps in running a program. In Spring 2006, 13 students completed the project; although 15 students registered. For Spring 2007, 13 were enrolled, all of the students completed the project. All the artifacts collected from the students were rated against the teacher designed rubric. The reports were generated successfully resulting from an error-free program written by the students.</p> <p>Summary of Result Type: Distinction/strength</p> <p>Data Collection Status/Summary of Result Status: Open</p> <p>Budget Implications: No budget impact</p> <p>Notes: None.</p>	
<p>Computer Science AS & Certificate - AY 04-05 Interactive Data Definition Utility (IDDU) - Students will be able to create files using the Interactive Data Definition Utility (IDDU).</p> <p>Program Level SLO Domain Types: SLO-Behavioral outcomes</p> <p>Start Date: 01/18/2004</p> <p>End Date: 03/13/2006</p> <p>SLO Status: Complete</p>	<p>Artifact/Instrument/Rubric/Method/Tool Description: Students in CS252 Advanced RPG II will be able to create files using the Interactive Data Definition Utility (IDDU). Criteria verified by an instructor-defined checklist with a rubric for scoring student performance (see the rubric in Add Document Link below)</p> <p>Criterion (Written in %): 70% of CS252 students will be successful in creating file using RPG program</p> <p>Anticipated Use of Assessment Result:</p>	<p>10/01/2005 - In Spring 2004, 22 students registered for CS252; 2 students withdrew from the class. Of the 20 remaining students, all of them completed the programming projects for IDDU. Hence, 100% of the students in the class completed the project which were rated using the teacher designed rubric. (See Rubric in Add Document Link under Assessment Plan, Means of Assessment).</p> <p>In Spring 2005, 24 students were enrolled in CS252. At the end of the course, only 22 students completed the IDDU project. Hence, 92% of the students in the class completed the</p>	<p>10/01/2005 - Criteria has been met. No action is needed at this time.</p> <hr/> <p>11/20/2003 - Faculty in Computer Science Dept. are adding the following advanced programming and courses, C Builder, Delphi J Builder and Linux operating System. Additional faculty training, computer hardware, software, materials, and computer</p>

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	Results will be used to improve teaching methods or update RPG program.	<p>requirement.</p> <p>In both semesters, the 42 students in the two classes scored 4(highest score in the rubric) out of a 4-point scale.</p> <p>Summary of Result Type: Distinction/strength</p> <p>Data Collection Status/Summary of Result Status: Closed</p>	<p>class rooms will be needed in order to make this happen.</p>
<p>Computer Science AS & Certificate - AY 04-05 Screen Design Utility (SDA) - Students will be able to use the Screen Design Utility (SDA) to create user interfaces.</p> <p>Program Level SLO Domain Types: SLO-Behavioral outcomes</p> <p>Start Date: 01/18/2004</p> <p>End Date: 03/13/2006</p> <p>SLO Status: Complete</p>	<p>Artifact/Instrument/Rubric/Method/Tool Description: Students in CS252 Advanced RPG II will be able to use the Screen Design Utility (SDA) to design a user interface. Criteria verified by an instructor-defined checklist with a rubric for scoring student performance (see the rubric in Add Document Link below. The document can also be viewed in the Query & Report menu under the following reports: Assessment Impact, Assessment Plan or Observation by Assessment Method).</p> <p>Criterion (Written in %): 70% of CS252 students will be successful in creating file using RPG program</p> <p>Anticipated Use of Assessment Result: Results will be used to improve teaching methods or update RPG program.</p>	<p>10/01/2005 - Student artifacts were collected for two semesters, in Spring 2004 and Spring 2005 when CS252 was offered. The project required students to create program files following sequential steps in running a program. In Spring 2004, 20 students completed the project; although 22 students registered, 2 withdrew. Hence, 100% of the students in the class completed the SDA project. For Spring 2005, although 24 were enrolled, only 22 students completed the project, 2 failed to complete the assignment. Therefore, 95% of the students in the class completed the project. All the artifacts collected from the students were rated against the the teacher designed rubric. The reports were generated successfully resulting from an error-free program written by the students.</p> <p>Summary of Result Type: Distinction/strength</p> <p>Data Collection Status/Summary of Result Status: Closed</p>	<p>10/01/2005 - 95% scored 4.0 on a rubric of 4.0. Criteria has been met. No action is needed at this time.</p> <p>11/18/2003 - To raise the standard of performance, students in CS252 used HP Laser printers in addition to Dot Band Printer to print the projects. Students were able to access to AS/400 Server from off-campus via Internet and port mapper.</p> <p>Implementation Status: 02/20/2004 - IF the result is not used.</p>
<p>Computer Science AS & Certificate - AY 04-05 Computer-based solution - Students will be able to design and implement a computer-based solution of a problem by using SDA, creating files using IDDU and writing code using the RPG programming</p>	<p>Artifact/Instrument/Rubric/Method/Tool Description: 70% of students in CS252 Advanced RPG II will be able to analyze a given problem and design a software solution using SDA, IDDU</p>	<p>10/01/2005 - By following the sequential steps in creating a Computer-based program, 42 students enrolled in CS252 in Spring 2004 and Spring 2005 were able to complete a Computer-based solution to a problem.</p>	<p>10/01/2005 - 95% scored 4.0 on a rubric of 4.0. Criteria has been met. No action is needed at this time.</p>

Student Learning Outcomes (SLOs)	Means of Assessment & Criteria (Written in %) / Tasks	Data Collection Status/Summary of Results	Use of Summary Result & Implementation Status
<p>language.</p> <p>Program Level SLO Domain Types: SLO-Cognitive outcomes</p> <p>Start Date: 01/18/2004</p> <p>End Date: 03/13/2006</p> <p>SLO Status: Complete</p>	<p>and the RPG programming language. Criteria verified by an instructor-defined checklist with a rubric for scoring students performance (see the rubric in Add Document Link below).</p> <p>Criterion (Written in %): 70% of CS252 students will be successful in creating file using RPG program</p> <p>Anticipated Use of Assessment Result: Results will be used to improve teaching methods or update RPG program.</p>	<p>A rubric on a scale of 1-4 was created to evaluate the project. Only two students were unable to complete the project. Of the two classes combined, 95% completion rate was achieved.</p> <p>Summary of Result Type: Distinction/strength</p> <p>Data Collection Status/Summary of Result Status: Closed</p>	<p>11/20/2003 - The four core courses of MCSE were added to the catalogue. One of the courses will be offered in Spring 2004. MCSE Certification test will be offered in the New Technology Building.</p>
<p>Computer Science AS & Certificate - AY08-09 SLO#1 Computer Science Core - Upon completion of this program, students will be able to demonstrate a solid foundation in the core areas of computer science, and knowledge of advanced topics studied in appropriate elective courses.</p>			
<p>Computer Science AS & Certificate - AY08-09 SLO#2 Needs Evaluation - Upon completion of this program, students will be able to apply knowledge and skills to make an evaluation of which possible options best meets the needs of a problem.</p>			
<p>Computer Science AS & Certificate - AY08-09 SLO#3 Computer-Based Solution - Upon completion of this program, students will be able to design and implement a computer-based solution of a problem by writing code using an appropriate programming language.</p>			
<p>Computer Science AS & Certificate - 2011-2012 Catalog SLO#1 - SLO#1 FA-SP: Upon successful completion of the Certificate and AS in Computer Science</p>			

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<p>program, students will be able to demonstrate a solid foundation in the core areas of computer science, as well as knowledge of advanced topics in the field.</p> <p>Program Level SLO Industry National Certification: N/A</p>			
<p>Computer Science AS & Certificate - 2011-2012 Catalog SLO#2 - SLO#2 FA-SP: Upon successful completion of the Certificate and AS in Computer Science program, students will be able to apply skillful evaluation to computer-based glitches and draw possible options that best meets the needs of a problem.</p> <p>Program Level SLO Industry National Certification: N/A</p>			
<p>Computer Science AS & Certificate - 2011-2012 Catalog SLO#3 - SLO#3 FA-SP: Upon successful completion of the Certificate and AS in Computer Science program, students will be able to design and implement a computer-based solution of a problem by writing codes using an appropriate programming language.</p> <p>Program Level SLO Industry National Certification: N/A</p>			