Computer Information Systems, AS
Computer Science, AS

PROGRAM LEARNING OUTCOMES

The assessment of student learning outcomes is not only a key indicator of program effectiveness it is also one of the standards of excellence identified by the Middle States Commission (Standard 5) and is required through the SUNY assessment initiative.

Current Program Learning Outcomes as stated in Catalog

Upon completion, students will:

CIS -- Computer Information Systems, AS

- Design, implement, test and debug programs that employ fundamental programming constructs

- Utilize the three basic principles of object-oriented design: encapsulation, inheritance and polymorphism

- Work as a team member in a problem-solving situation

- Apply technical knowledge and skills to provide practical solutions to real world problems

CPS -- Computer Science, AS

- Design, implement, test and debug programs that employ fundamental programming constructs

- Utilize the three basic principles of object-oriented design: encapsulation, inheritance and polymorphism

- Work as a team member in a problem-solving situation

- Design, analyze and understand the relationship between digital components forming the building blocks of modern digital devices

- Design and implement efficient solutions utilizing appropriate algorithms and data structures

CURRICULUM MAP

COURSES IN THE MAJOR	CIS/CPS SLO 1	CIS/CPS SLO 2	CIS/CPS SLO 3	CIS SLO 4	CPS SLO 4	CPS SLO 5
CIS/CPS Required Courses						
CIS 119			I	I	I	
CPS 120	I/P					
CPS 130	P/R	I/P/R	P	P		I
CPS Required Courses						
CPS 247					P	
CPS 250	R	R				P/R
Electives						
CIS 201				P/R		
CIS 202	P/R	P/R		P/R		
CIS 205				P/R		
CIS 218				P/R		
CIS 220	P/R	P/R		P/R		
CPS 225				P/R		
CPS 235	P/R	P/R		P/R		

Assessment Key:

P=Paper   E=Exam   PO=Portfolio   O=Oral Presentation   L=Lab Assignment   PR=Project   I=Internship
(I)=Introduced   (P)=Practiced   (R)=Reinforced

STUDENT LEARING OUTCOME RUBRIC

Student Learning Outcomes	Assessment Measure	Criterion			
		Does Not Meet Standard	Approaches Standard	Meets Standard	Exceeds Standard
CIS and CPS SLO #1 Design, implement, test and debug programs that employ fundamental programming constructs	Programming Rubric Constructs: • Decision • Repetition • Value Returning Functions • Void Functions	See Programming Rubric following this Table			
CIS and CPS SLO #2 Utilize the three basic principles of object oriented design: encapsulation, inheritance and polymorphism	Programming Rubric Constructs: • Classes • Inheritance	See Programming Rubric following this Table			
CIS and CPS SLO #3 Work as a team member in a problem solving situation	Group Project Rubric	See Group Project Rubric following this Table			
CIS SLO #4 Apply technical knowledge and skills to provide practical solutions to real world problems					

Student Learning Outcomes	Assessment Measure	Does Not Meet Standard	Approaches Standard	Meets Standard	Exceeds Standard
CPS SLO #4 Design, analyze and understand the relationship between digital components forming the building blocks of modern digital devices	Exam Questions				
CPS SLO #5 Design and implement efficient solutions utilizing appropriate algorithms and data structures	Programming Rubric	See Programming Rubric following this Table			

Programming Rubric

Assessment Measure	Criterion			
	Does Not Meet Standard	Approaches Standard	Meets Standard	Exceeds Standard
Programming Project or Test Question	Code contains numerous syntax errors and / or does not meet specifications	Code contains minor syntax and / or logic errors but attempts to meet specifications	All code works according to problem specifications	Highly efficient, well structured, well documented and meets or exceeds all problem specifications

Group Project Rubric

Category	Criterion				Score
	Does Not Meet Standard *1 point*	**Approaches Standard** *2 points*	**Meets Standard** *3 points*	**Exceeds Standard** *4 points*	
Group Cooperation	We did most of the work by ourselves	We worked together most of the time, sharing information regularly	We worked together so that everyone contributed to the final project	Everyone worked together using his or her abilities and knowledge to make the project come together	
Communication	We only talked when we thought we needed to, but received little feedback	We talked about what we were doing	We usually asked each other for help and showed our work to each other	We talked all the time and shared our work for group feedback	
Individual Participation	A few people tried very hard, but most didn't do much	Each person did some work and tried to do a fair share	We all seemed to find our place and do what was needed	Everyone did a great job, I would work with these people again	
Listening to other points of view	We usually listened to what others were saying but some either did not share ideas or argued	We usually listened to each other and tried to use what they said in the project	We listened while others talked, we learned about different viewpoints, and used some of that information in the project	Everyone listened to each other a lot, and used what we heard to improve our work and the whole project	
Technical	Code contains numerous syntax errors and / or does not meet Specifications	Code contains minor syntax and / or logic errors but attempts to meet specifications	All code works according to problem specifications	Highly efficient, well structured, well documented and meets or exceeds all problem specifications	
Group Total Score	*5 – 9 points*	*10 - 14 points*	*15 – 17 points*	*18 – 20 points*	

Additionally:

Rate your experience of this group project	I would rather work alone	I learned that group work can sometimes be helpful	I liked learning this way and would probably try it again	It was a valuable and realistic way to learn. My group was great.