CIST 1305 - Program Design and Development (version 201003L)

Course Title	Course Development	Learning Support
Program Design and Development	Standard	No

Course Description

An introductory course that provides problem solving and programming concepts for those that develop user applications. An emphasis is placed on developing logic, troubleshooting, and using tools to develop solutions. Topics include: problem solving and programming concepts, structured programming, the three logic structures, file processing concepts, and arrays.

Pre-requisites

Pre-requisites: None

Co-requisites

Co-requisites: None

Course Length

	Minutes	Contact Hour	Semester Credit	WLU
Lecture:	**1500**	**30**		
Lab 2:	**1500**	**30**		
Lab 3:	**0**	**0**		
Total:	**3000**	**60**	**3**	
Semester Credit Hours:			**3**	**105**
Breakout Detail of Lab 3				
Practicum/Internship	**0**	**0**		
Clinical	**0**	**0**		

Competencies & Outcomes

Order	Description	Lecture	Lab 2	Lab 3	Total Min	Credit Hrs	Pract Intern	Clinical
1	**Define Problem Solving and Programming Concepts**	350	350	0	700	1	0	0

Order	Description	Learning Domain	Level of Learning
1	Describe general problem solving concepts	Cognitive	Comprehension
2	Describe constants, variables, and data types	Cognitive	Comprehension
3	Understand demonstration of mathematical operations and functions	Cognitive	Application
4	Describe procedural programming and object-oriented programming	Cognitive	Comprehension

Order	Description	Lecture	Lab 2	Lab 3	Total Min	Credit Hrs	Pract Intern	Clinical
2	**Develop Structured Solutions Using the Three Logic Structures**	600	600	0	1200	1	0	0

Order	Description	Learning Domain	Level of Learning
1	Construct structured solutions utilizing modules	Cognitive	Application

	2	Construct a solution utilizing the sequential logic structure						Cognitive	Application
	3	Construct a solution utilizing the decision logic structure						Cognitive	Application
	4	Construct a solution utilizing the looping logic structure						Cognitive	Application

3	**Develop Structured Solutions Utilizing File Processing Concepts**	150	150	0	300	1	0	0	

Order	Description	Learning Domain	Level of Learning
1	Demonstrate an understanding of sequential and random file terminology and concepts	Cognitive	Application
2	Demonstrate an understanding of record keys (primary, secondary, foreign, and concatenated)	Cognitive	Application
3	Construct a solution utilizing sequential and random file processing	Cognitive	Application

4	**Develop Structured Solutions Using Arrays**	400	400	0	800	1	0	0	

Order	Description	Learning Domain	Level of Learning
1	Demonstrate an understanding of an array of terminology and concepts	Cognitive	Application
2	Construct a solution utilizing single-dimensional and multidimensional arrays	Cognitive	Application

	Lecture	Lab 2	Lab 3	Total Min	Cred Hrs	Pract Intern	Clinical
Competency Totals:	**1500**	**1500**	**0**	**3000**	**3**	**0**	**0**