

- ☒ REQUIRED COURSE
- ☒ ELECTIVE COURSE

Lake Land College

COURSE NUMBER:		CIS-162		TITLE: (30 Characters Max)			Object-Oriented Programming I									
SEM CR HRS:		3	Lecture:		3		Lab:	0			ECH:	3				
Course Level:		<input type="checkbox"/> Gen Ed / IAI <input type="checkbox"/> Baccalaureate / Non-IAI		<input checked="" type="checkbox"/> Career/Technical <input type="checkbox"/> Dev Ed/ Not in Degree Audit		Clinical Practicum:		0	Work-based Learning		0	WBL ECH:	0			
COURSE PCS #		12- 11. 0201		IAI Code							Contact Hours Per Week					
Repeatable (Y/N):		Y	Pass/Fail (Y/N):		N	Variable Credit (Y/N):		N	Min:		Max:		16 Wks	150	8 Wks	300
Prerequisites:		CIS-156														
Catalog Description: (40 Word Limit)		Focuses on the fundamentals of object-oriented programming. Building on CIS-156 Computer Logic concepts, new topics include C# classes, objects, encapsulation, and modular code.														

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
Introduction to Object-Oriented (OO) Language	3			
Data Types and Expressions	6			
Methods and Behaviors	6			
Objects and Classes	6			
Selection Structures	6			
Repetition Structure	6			
One-dimensional Arrays	6			
Two-dimensional Arrays	6			
TOTAL	45	0	0	0

EVALUATION					
QUIZZES	<input checked="" type="checkbox"/>	EXAMS	<input checked="" type="checkbox"/>	ORAL PRES	<input type="checkbox"/>
LAB WORK	<input type="checkbox"/>	PROJECTS	<input checked="" type="checkbox"/>	COMP FINAL	<input checked="" type="checkbox"/>
				PAPERS	<input type="checkbox"/>
				OTHER	<input type="checkbox"/>

COURSE MATERIALS		
<b>TITLE:</b>	Microsoft Visual C# 2017 (ISBN: 978-1-337-10210-0)	
<b>AUTHOR:</b>	Joyce Farrell	
<b>PUBLISHER:</b>	Course Technology	
<b>VOLUME/EDITION/URL:</b>	7th	
<b>COPYRIGHT DATE:</b>	2018	

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		<i>The student will be able to:</i>
Introduction to OO Language	3	1. Describe the steps of software development. 2. Understand the components of an OO program including comments, whitespace, main function and #include statements. 3. Create an OO program. 4. Open an OO program. 5. Save, build, and execute an OO program. 6. Locate an error in an OO program.
Data Types and Expressions	6	1. Use predefined data types. 2. Declare and manipulate strings. 3. Explain how data is stored in memory. 4. Declare and initialize a memory location. 5. Type cast data. 6. Use an assignment statement to assign data to a variable. 7. Describe the order of precedence for arithmetic operators in an expression.

Methods and Behaviors	6	<ol style="list-style-type: none"> <li>1. Understand the components of a method.</li> <li>2. Call methods with and without parameters.</li> <li>3. Write value and non-value returning methods.</li> <li>4. Use parameter types.</li> </ol>
Objects and Classes	6	<ol style="list-style-type: none"> <li>1. Understand the components of a class.</li> <li>2. Describe instance variables and methods.</li> <li>3. Create a class.</li> <li>4. Create a default constructor.</li> <li>5. Create an object from a class.</li> <li>6. Overload a function.</li> </ol>
Selection Structures	6	<ol style="list-style-type: none"> <li>1. Code the if and if/else forms of the selection structure.</li> <li>2. Write code that uses comparison operators and logical operators.</li> <li>3. Code a nested selection structure in an OO program.</li> <li>4. Code the switch form of the selection structure in an OO program.</li> </ol>
Repetition Structure	6	<ol style="list-style-type: none"> <li>1. Code a pretest loop using a while statement.</li> <li>2. Initialize and update counters and accumulators.</li> <li>3. Code a pretest loop using a for statement.</li> <li>4. Code a posttest loop using a do while statement.</li> <li>5. Nest repetition structures.</li> </ol>
One-dimensional Arrays	6	<ol style="list-style-type: none"> <li>1. Declare and initialize a one-dimensional array.</li> <li>2. Manipulate a one-dimensional array.</li> <li>3. Pass a one-dimensional array to a function.</li> <li>4. Use parallel one-dimensional arrays.</li> </ol>
Two-dimensional Arrays	6	<ol style="list-style-type: none"> <li>1. Declare and initialize a two-dimensional array.</li> <li>2. Use multidimensional arrays.</li> <li>3. Create dynamic lists.</li> <li>4. Use the predefined methods of the string class.</li> </ol>
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	45	

COURSE OUTCOMES*	At the successful completion of this course, students will be able to:
	<ul style="list-style-type: none"> <li>• Understand the three basic logic structures.</li> </ul>
	<ul style="list-style-type: none"> <li>• Create and use a method in an object-oriented programming language.</li> </ul>
	<ul style="list-style-type: none"> <li>• Create and use an array in an object-oriented programming language.</li> </ul>

\* Course Outcomes will be used in the Assessment Software for Outcomes Assessment. Limit to 3 - 5.