



TRANSFER GUIDE - ASSOCIATE DEGREE PROGRAMS

NTC Program: IT - Software Developer

Lakeland University Program: Computer Science

Minimum GPA for admission: 2.0

Initial effective date: 2018-2019

General Education Courses

NTC			Lakeland College		
Course No.	Course Title	Credits	Course No.	Course Title/Field	Credits
10-801-196	Oral/Interpersonal Communications	3	COM 111	Fundamentals of Public Speaking	3
10-801-195	Written Communication OR	3	GEN 110	Composition I: Academic Writing	3
10-801-136	English Composition 1				
10-804-189	Introductory Statistics	3	MAT 220	Probability & Statistics	3
10-809-199	Psychology of Human Relations <u>OR</u>	3	PSY ELEC	Psychology Elective	3
10-809-198	Intro to Psychology		PSY 200	General Psychology	
10-804-133	Math & Logic	3		An elective course	3
10-809-166	Intro to Ethics: Theory & App	3	PHI 232	Ethics	3
Total general education credits earned:		18	Total transferable credits:		18

Occupational Courses

Course No.	Course Title	Credits	Course No.	Course Title	Credits
10-152-211	Web Design I	3	CPS 280	Special Topics in Computer Science	3
10-152-310	Client-Side Web Development 1	3	CPS 200	Programming I	3
10-152-331	Data Concepts	3	CPS 210	Database Basics	3
10-152-332	Database Design and SQL	3		An elective course	
10-152-351	Client-Side Web Development 2 <u>OR</u>	3		An elective course	
10-152-391	Collaborative Application Development	3	CPS 280	Special Topics in Computer Science	3
10-152-362	Open-Source Web Development <u>OR</u>	3		An elective course	
10-152-337	Data Analytics			An elective course	
10-152-223	User Experience Design	3		An elective course	
10-152-333	Advanced Data Management	3		An elective course	
10-152-392	Software Architecture	3		An elective course	
10-152-393	Application Development Capstone Project	3		An elective course	
10-152-500	IT Development and Design Fundamentals	1		An elective course	
10-152-501	Programming Concepts A	1		An elective course	
10-152-502	Programming Concepts B	1		An elective course	
10-152-503	Programming Concepts C	1		An elective course	
10-152-504	Object - Oriented Programming A	1		An elective course	
10-152-505	Object - Oriented Programming B	1		An elective course	
10-152-506	Object - Oriented Programming C	1		An elective course	
10-152-507	Object - Oriented Design A	1		An elective course	
10-152-508	Object - Oriented Design B	1		An elective course	
10-152-509	Object - Oriented Design C	1		An elective course	
10-152-510	Advanced .Net Programming A	1		An elective course	
10-152-511	Advanced .Net Programming B	1		An elective course	
10-152-512	Advanced .Net Programming C	1		An elective course	
Total occupational course credits earned:		46	Total credits accepted at Lakeland University:		64

Courses needed to complete degree at Lakeland University:		
GEN 112	Composition II: Argumentation and Research	3
GEN 3XX	Core II: Exploring the Human Condition	3
GEN 4XX	Core III: Shaping the Future (Writing Intensive)	3
Computer Science		
CPS 212	Programming II	3
CPS 362	Introduction to Data Structures	3
CPS 442	Data Management, Warehousing & Mining	3
CPS 445	Systems Analysis & Design (Writing Intensive)	3
MAT 250	Discrete Mathematics	3
Complete one area of emphasis		
Computer Science Emphasis: 18 semester hours from the following:		18
CPS 221	COBOL Programming	
CPS 250	Cybersecurity I	
CPS 313	Advanced Programming	
CPS 314	Programming Languages	
CPS 315	Object-Oriented Programming I	
CPS 316	Object-Oriented Programming II	
CPS 323	Computer Architecture	
CPS 325	Networking & Telecommunications	
CPS 400	Internship in Computer Science	
CPS 420	Operating Systems	
CPS 425	Artificial Intelligence	
CPS 435	Mobile Application Development	
CPS 450	Cybersecurity II	
CPS 452	Information Technology Project Management	
CPS 455	Predictive Analysis	
CPS 480	Special Topics in Computer Science	
CPS 490	Independent Study in Computer Science	
Up to four semester hours from the following non-CPS designated courses		
BUS 301	Management Information Systems	
MAT 370	Numerical Analysis	
	A foreign language course	
	Additional general electives needed for degree completion	14
Information Systems Emphasis: 18 total		18
BUS 301	Management Information Systems	
CPS 314	Programming Languages	
OR CPS 221	OR COBOL Programming	
CPS 315	Object-Oriented Programming I	
CPS 452	Information Technology Project Management	
CPS 455	Predictive Analysis	
	Three (3) additional semester hours from the Computer Science emphasis not already earned as transfer or used in above emphasis	
	Additional general electives needed for degree completion	14
Software Design Emphasis: 18 total		18
CPS 313	Advanced Programming	
OR CPS 221	OR COBOL Programming	
CPS 314	Programming Languages	
CPS 315	Object-Oriented Programming I	
CPS 316	Object-Oriented Programming II	
CPS 435	Mobile Application Development	
	Three (3) additional semester hours from the Computer Science emphasis not already earned as transfer or used in above emphasis	
	Additional general electives needed for degree completion	14
Total credits needed to complete degree any emphasis:		56