



TRANSFER GUIDE - ASSOCIATE DEGREE PROGRAMS

Northwood Tech Program: Information Technology - Web and Software Developer 2023-24

Lakeland University Program: Computer Science with any emphasis 2023-2024

Minimum GPA for admission: 2.0

Review Date: 12/23

General Education Courses					
Technical College			Lakeland		
Course No.	Course Title	Credits	Course No.	Course Title/Field	Credits
10-809-198	Introduction to Psychology	3	PSY 200	General Psychology	3
10-801-136	English Composition 1	3	GEN 110	Composition I: Academic Writing	3
10-804-123	Math with Business Applications --OR--	3		An elective course	3
10-804-113	College Technical Mathematics 1A --OR--		MAT 130	Intermediate Algebra	
10-804-133	Mathematics and Logic			An elective course	
10-801-196	Oral/Interpersonal Communication --OR--	3	COM 111	Fundamentals of Public Speaking	3
10-801-198	Speech				
10-809-166	Introduction to Ethics: Theory and Application --OR--	3	PHI 232	Ethics	3
10-809-172	Introduction to Diversity Studies --OR---		SOC 210	Majority-Minority Relations	
10-809-195	Economics		ECN 235	Principles of Macroeconomics	
	Total general education credits earned:	15		Total general education credits accepted:	15
Occupational Courses					
Course No.	Course Title	Credits	Course No.	Course Title	Credits
10-152-100	Database Concepts and SQL	3	DAT 210	Database Basics	3
10-152-101	Web Design and Development	3	CPS 280	Special Topics in Computer Science	3
10-152-115	Beginning .NET Programming	3	CPS 200	Programming I	3
10-152-135	Program Logic	3		An elective course	3
10-152-102	Advanced Website Development	3	CPS 280	Special Topics in Computer Science	3
10-152-106	Java Programming - Beginning	3	CPS 315	Object-Oriented Programming I	3
10-152-110	Programming in SQL	3		An elective course	3
10-152-117	Advanced .NET Programming	3		An elective course	3
10-152-107	Java Programming - Advanced	3	CPS 316	Object-Oriented Programming II	3
10-152-111	Systems Analysis and Design	3	DAT 445	Systems Analysis & Design (Writing Intensive)	3
10-152-112	Server-Side Web Development	3		An elective course	3
10-152-119	Development in Emerging Technologies	3	CPS 435	Mobile Application Development	3
10-152-108	Enterprise Java Programming	3		An elective course	3
10-152-113	Applications Development	3		An elective course	3
10-152-116	Web Tools of the Trade	2		An elective course	2
10-152-118	Enterprise Programming in .NET	3		An elective course	3
	Total of Occupational/Elective	47		An elective course	
	Total transferable credits:	62		Total transferable credits:	62

NOTE: Transfer credits noted assume completed Associate's Degree.

Courses needed to complete degree at Lakeland University:

Course No.	Course Title	Credits
GEN 112	Composition II: Argumentation & Research	3
GEN 3XX	CORE II: Exploring the Human Condition	3
GEN 4XX	CORE III: Shaping the Future	3
CPS 212	Programming II	3
CPS 362	Introduction to Data Structures	3
DAT 442	Data Management & Warehousing	3
MAT 250	Discrete Mathematics	3
Complete one area of emphasis		
Computer Science Emphasis: Choose 3 courses		9
CPS 221	COBOL Programming	
CPS 313	Advanced Programming	
CPS 314	Programming Languages	
CPS 323	Computer Architecture	
CPS 325	Networking & Telecommunications	
CPS 400	Internship in Computer Science	
CPS 420	Operating Systems	
CPS 421	Project Design Lab F^	

^ Courses offered at Lakeland University main campus only

CPS 422	Project Design Lab S^	
CPS 425	Artificial Intelligence	
CPS 426	Game Design & Development	
CPS 480	Special Topics in Computer Science	
CPS 490	Independent Study in Computer Science	
CYS 250	Foundations of Cybersecurity	
CYS 450	Ethical Hacking & Penetration Testing	
CYS 451	Digital Forensics	
DAT 301	Introduction Data Visualization Techniques	
DAT 318	Computational Modeling and Visualization	
DAT 401	Operations Research	
DAT 402	Adv. Modeling Techniques & Visualization (WI)	
DAT 452	Information Technology Project Management	
DAT 455	Predictive Analysis	
Up to four semester hours from non-CPS designated courses:		
MAT 370	Numerical Analysis	
	A foreign language course	
Electives needed to reach the 120 credit minimum:		28
Cybersecurity Emphasis:		24
CPS 313 OR	Advanced Programming OR	
CPS 314	Programming Languages	
CPS 323	Computer Architecture	
CPS 325	Networking & Telecommunications	
CPS 420	Operating Systems	
CRJ 232	Introduction to Criminology	
CYS 250	Foundations of Cybersecurity	
CYS 450	Ethical Hacking & Penetration Testing	
CYS 451	Digital Forensics	
Elective credits needed to reach 120 minimum:		13
Computer Science & Data Analytics Emphases		12
DAT 301	Introduction Data Visualization Techniques	
DAT 452	Information Technology Project Management	
DAT 455	Predictive Analytics	
CPS 221 OR	COBOL Programming OR	
CPS 314	Programming Languages	
Elective credits needed to reach 120 minimum:		25
Computer Science & Software Design Emphases:		9
CPS 313 OR	Advanced Programming OR	
CPS 221	COBOL Programming	
CPS 314	Programming Languages	
An additional course from the Computer Science emphasis		
Elective credits needed to reach 120 minimum:		28
Total credits needed to complete Lakeland University degree:		58