

COMPUTER SCIENCE
Louisiana Tech University

FRESHMAN YEAR								
Fall Quarter		Hr	Winter Quarter		Hr	Spring Quarter		Hr
CSC 130	* The Science of Computing I	3	CSC 131	* The Science of Computing II	3	CSC 132	* The Science of Computing III	3
MATH 240	* Precalculus	3	MATH 241	* Calculus I	3	MATH 242	* Calculus II	3
ENGL 101	Freshman Composition I	3	ENGL 102	Freshman Composition I	3	BISC 130	Biological Principles	3
FYE 100	Freshman Year Experience	1	COMM 101	□ Principles of Comm. Studies	3	BISC 131	Biological Principles Lab	1
		10			12			10
		10			12			10

SOPHOMORE YEAR								
Fall Quarter		Hr	Winter Quarter		Hr	Spring Quarter		Hr
CSC 220	* Data Structures	3	CSC 222	* Systems Programming	3	CSC 345	Operating Systems	3
CSC 265	* Introduction to Digital Design	3	PHYS 201	* Physics for Engr & Science I	3	PHYS 202	Physics for Engr & Science II	3
MATH 311	Discrete Mathematics I	3	PHYS 261	* General Physics Laboratory	1	PHYS 262	General Physics Laboratory	1
Fine Arts Appreciation		3	Social Science**		3	Social Science**		3
		12			10			10
		12			10			10

JUNIOR YEAR								
Fall Quarter		Hr	Winter Quarter		Hr	Spring Quarter		Hr
CSC 325	* Adv. Data Structures & Algorithms	3	CSC 330	Programming Languages	3	CSC 310	Theory of Computing	3
ENGL 210, 211, or 212		3	CSC 430	Database Mgmt. Systems	3	CSC 364	Computer Architecture	3
Math Elective‡		3	CSC Directed Elective◊		3	Minor/Concentration		3
		9	ENGL 303	Technical Writing	3			9
		9			12			9
		9			12			9

SENIOR YEAR								
Fall Quarter		Hr	Winter Quarter		Hr	Spring Quarter		Hr
CSC 403	*	3	CSC 405	* Senior Capstone I	2	CSC 406	Senior Capstone II	1
CSC Directed Elective◊		3	STAT 405	Statistical Methods	3	ENGL 363	Scientific & Tech. Presentations	3
Minor/Concentration		3	Minor/Concentration		3	CSC Directed Elective◊		3
		9			8	Minor/Concentration		3
		9			8			10
		9			8			10

* Requires grade of "C" or higher.

□ Must be taken within first year of enrollment.

Courses in **bold** are typically offered once per year.

**Social Science Electives can be selected from Anthropology, Criminal Justice, Economics, Geography, International Studies, Interdisciplinary, Political Science, Psychology, and Sociology.

◊Direct Electives are chosen in consultation with academic advisor.

‡ Math Elective must be above 242. Math 308 highly recommended.

**COMPUTER SCIENCE
CONCENTRATIONS**
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CLOUD COMPUTING AND BIG DATA CONCENTRATION					
COURSE			SCH	GRADE	PREREQUISITE
CSC	450	Computer Networks	3		CSC 325
	or 475	<i>Artificial Intelligence</i>			CSC 325
	452	Distributed and Cloud Computing	3		CSC 345
	493	Data Mining and Knowledge Discovery	3		CSC 325
	498	Advanced Data Mining, Fusion, and Application	3		CSC 325
TOTAL			12		

COMPUTER ENGINEERING CONCENTRATION					
COURSE			SCH	GRADE	PREREQUISITE
ELEN	242	Introduction to Microprocessors	3		MATH 242
	333	Introduction to Digital Design	3		ELEN 242
	423	Embedded Systems	3		ELEN 242
ENGR	221	Electrical Engineering and Circuits I	3		ENGR 122, MATH 242, PHYS 201
TOTAL			12		

CYBER SECURITY CONCENTRATION					
COURSE			SCH	GRADE	PREREQUISITE
CSC	442	Introduction to Cyber Security	3		CSC 220 & Permission of Instructor
	450	Computer Networks	3		CSC 325
Two of the following:					
CSC	443	Digital Forensics and Cyber Crime	3		CSC 442
	444	Applied Cryptography	3		CSC 442
	446	Access Control Logic and Covert Channels	3		CSC 442, MATH 311
	447	Wireless Mobile Security	3		CSC 442
	448	Reverse Engineering	3		CSC 442
	452	Distributed and Cloud Computing	3		CSC 345
	454	Advanced Computer Networks	3		CSC 450
	475	Artificial Intelligence	3		CSC 325
MATH	308	Introduction to Linear Algebra	3		MATH 243 or 311
TOTAL			12		

GRAPHICS AND GAME DESIGN CONCENTRATION					
COURSE			SCH	GRADE	PREREQUISITE
ART	477	Advanced Communication Media	3		ART 367 & Permission of Instructor
CSC	470	Computer Graphics	3		CSC 325
	475	Artificial Intelligence	3		CSC 325
MATH	308	Introduction to Linear Algebra	3		MATH 243 or 311
TOTAL			12		

* requires grade of "C" or higher.