COMPUTER SCIENCE
LOUISIANA TECH UNIVERSITY
Revised 05/2016

Name _____ **Catalog Year** _____

Student ID _____ **Email** _____

Advisor _____ **Last Updated** _____

COURSE		PREREQUISITES	SCH	TERM	YEAR	*	GRADE
CSC[4]	**130**	MATH 101 or equivalent	3			*	
	131	CSC 130	3			*	
	132	CSC 131	3			*	
	220	CSC 132, MATH 240**	3			*	
	222	CSC 132, MATH 240**	3			*	
	265	CSC 132, MATH 240**	3			*	
	310	CSC 220, MATH 311	3				
	325	CSC 220, MATH 311**	3			*	
	330	CSC 325	3				
	345	CSC 222	3				
	364	CSC 265	3				
	403	CSC 325, senior standing	3			*	
	404	CSC 403	3				
	430	CSC 220	3				
ENGL	**101**	ACT >= 18 or VERBAL SAT >= 450	3				
	102	ENGL 101	3				
	21X	ENGL 102	3				
	303	ENGL 102	3				
	363	ENGL 303	3				
MATH	**240**	MATH 101 or MATH ACT >= 26	3			*	
	241	MATH 240	3			*	
	242	MATH 241	3			*	
	311	MATH 242	3			*	
STAT	**405**	MATH 242	3				
PHYS	**201**	MATH 241	3			*	
	202	PHYS 201, MATH 242	3				
	261	MATH 112 or MATH 241	1			*	
	262	PHYS 261	1				
MINOR / CONCENTRATION							
Course 1			3				
Course 2			3				
Course 3			3				
Course 4			3				
OTHER / ELECTIVES							
COMM 101			3				
Fine Arts (ART 290, KINE 280, MUGN 290, SPTH 290)			3				
BISC 130			3				
BISC 131			1				
Social Science[1,5]			3				
Social Science[1,5]			3				
CSC Directed Elective[2]			3				
CSC Directed Elective[2]			3				
CSC Directed Elective[2]			3				
Math/Science Elective[6]			3				
TOTAL SCH			**120**				

ADDITIONAL COURSE	SCH	TERM	YEAR	GRADE

COURSE SUBSTITUTIONS[3]		
EXISTING COURSE	**SUBSTITUTED COURSE**	**INITIAL**

NOTES

* Requires a grade of C or higher.

** Requires credit of or registration in.

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

2 CSC Directed Electives must be selected in consultation with student's advisor.

3 Substitutions must be initialed by the Program Chair.

4 A student must have a 2.0 GPA on all CSC courses.

5 All students must complete an International Education Requirement. GEOG 205, GEOG 210, GEOG 331, and numerous POLS courses are acceptable for this.

6 Must be in Mathematics or Science above required.

The Computer Science Program requires a C or better in any course in the COES prior to taking courses for which it is a prerequisite.

COMMENTS

Name _____ **Date** _____

Student ID _____ **Email** _____

FRESHMAN YEAR								
	Fall Quarter	**Cr**		**Winter Quarter**	**Cr**		**Spring Quarter**	**Cr**
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
COMM 101	Principles of Communication Studies	3	ENGL 101*	Freshman Composition I	3	BISC 130	Biological Principles	3
FYE 100	First Year Experience	1				BISC 131	Biological Principles Lab	1
		10			**9**			**10**
							TOTAL	**28**

Computer Science
Math
English/Humanities
Science
Social Science
Minor/Concentration

SOPHOMORE YEAR								
	Fall Quarter	**Cr**		**Winter Quarter**	**Cr**		**Spring Quarter**	**Cr**
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 Engineering & Science I	3	PHYS 202	Physics for Engineering & Science II	3
MATH 311	Discrete Mathematics I	3	PHYS 261	Physics Lab	1	PHYS 262	Physics Lab	1
ENGL 102	Freshman Composition II	3	Social Science***		3	Social Science***		3
		12			**10**			**10**
							TOTAL	**32**

JUNIOR YEAR								
	Fall Quarter	**Cr**		**Winter Quarter**	**Cr**		**Spring Quarter**	**Cr**
CSC 325*	Advanced Data Structures & Algorithms	3	**CSC 330**	Programming Languages	3	CSC 310	Theory of Computing	3
Math/Science Elective****		3	**CSC 430**	Database Management Systems	3	CSC 364	Computer Architecture	3
ART†	Fine Arts Appreciation	3	CSC Elective**		3	Minor/Concentration		3
ENGL 21X	Literature	3	ENGL 303	Technical Writing	3			
		12			**12**			**9**
							TOTAL	**33**

SENIOR YEAR								
	Fall Quarter	**Cr**		**Winter Quarter**	**Cr**		**Spring Quarter**	**Cr**
CSC Elective**		3	**CSC 403***	Software Design and Engineering	3	**CSC 404**	Senior Capstone	3
ENGL 363	Scientific and Technical Presentations	3	STAT 405	Statistical Methods	3	CSC Elective**		3
Minor/Concentration		3	Minor/Concentration		3	Minor/Concentration		3
		9			**9**			**9**
							TOTAL	**27**
								120

* Requires a grade of C or higher.
** CSC Directed Electives must be selected in consultation with student's advisor.
*** GEOG 205, GEOG 210, or GEOG 331 count as the International Education Requirement (IER).
**** Must be in Mathematics or Science above required.
† ART 290, SPTH 290, MUGN 290, or KINE 280 counts as the Fine Arts Requirement.
Courses in **bold** are typically offered only once per year.

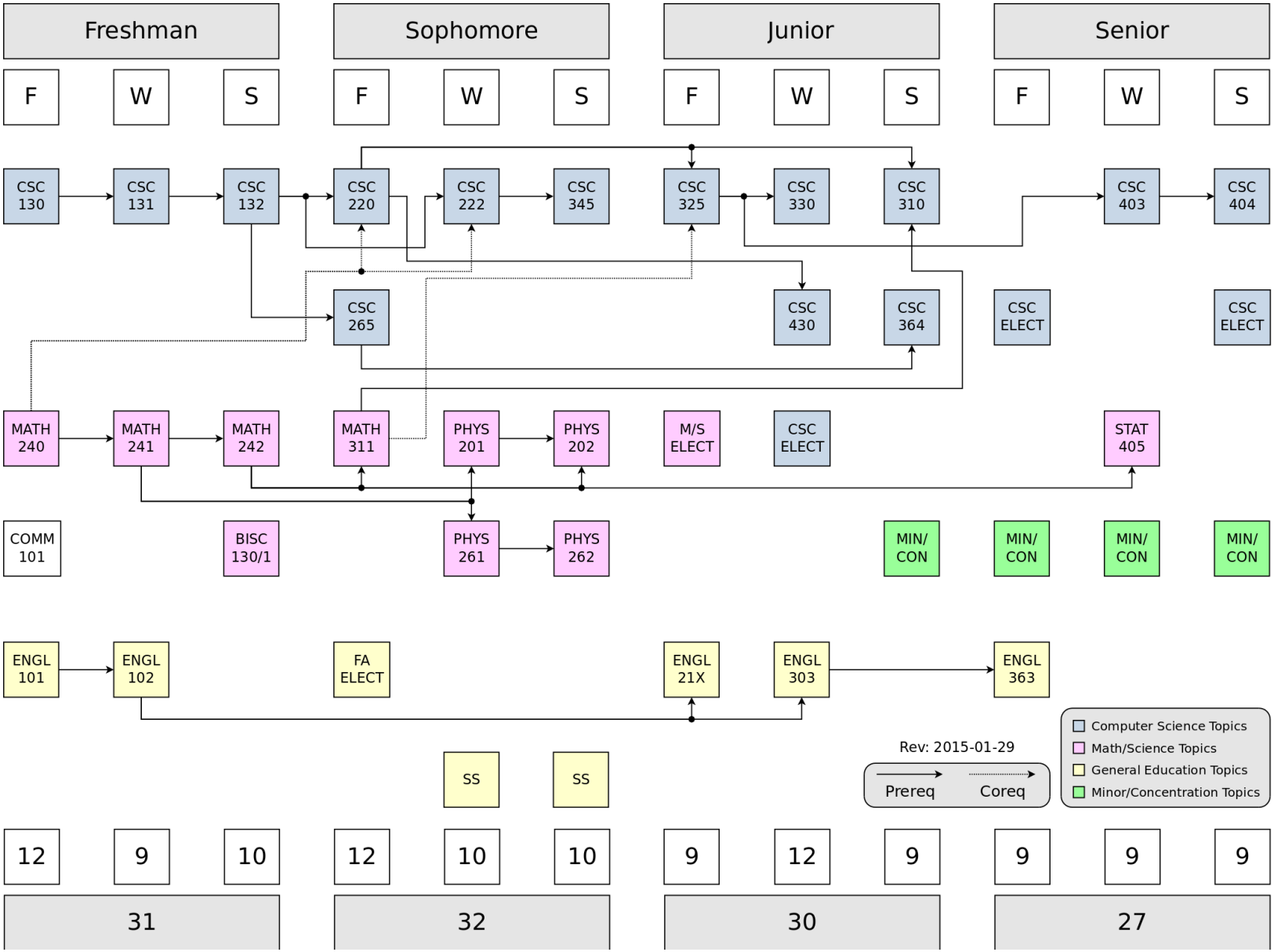
The Computer Science Program requires a "C" or better in any course in the COES prior to taking courses for which these are prerequisites.

A student must have a 2.0 cumulative GPA on all CSC courses.

CSC Course Offerings					
Course	**Title**	**F**	**W**	**Sp**	**Su**
130[3]	The Science of Computing I (Living *with* Cyber I)	✓	✓	✓	✓
131[3]	The Science of Computing II (Living *with* Cyber II)	✓	✓	✓	✓
132[3]	The Science of Computing III (Living *with* Cyber III)	✓	✓	✓	✓
220[3]	Data Structures	✓	✓		✓
222	Systems Programming	✓	✓		
265	Introduction to Digital Design	✓	✓		
310	Theory of Computing	✓		✓	
325	Advanced Data Structures and Algorithms	✓	✓		✓
330	Programming Languages		✓		
345	Operating Systems		✓	✓	
364	Computer Architecture		✓	✓	
403	Software Design and Engineering		✓		
404	Senior Capstone			✓	
430	Database Management Systems		✓		
442	Introduction to Cyber Security			✓	
443/543	Digital Forensics and Cyber Crime	✓			
444[2]	Applied Cryptography			✓	
446[1]	Access Control Logic and Covert Channels		✓		
447[2]	Wireless and Mobile Security			✓	
448[1]	Reverse Engineering		✓		
450	Computer Networks	✓	✓		
452/552	Distributed and Cloud Computing	✓			
454/554	Advanced Computer Networks			✓	
470	Computer Graphics		✓		
475	Artificial Intelligence	✓			
493/579	Data Mining and Knowledge Discovery	✓			
498/580	Advanced Data Mining, Fusion, and Applications			✓	
520	Advanced Analysis of Algorithms and Complexity		✓		
521	Advanced Computer Architectures			✓	
532	Advanced Topics in Software Engineering	✓			

Legend	
	Core courses
	Electives
	Graduate courses
✓	New offerings
✓	Possible offerings

1. CSC 446 and 448 rotate every other year.
2. CSC 444 and 447 rotate every other year.
3. Anticipated honors section(s).


Freshman
Sophomore
Junior
Senior
F
W
S
CSC 130
CSC 131
CSC 132
CSC 220
CSC 222
CSC 345
CSC 325
CSC 330
CSC 310
CSC 403
CSC 404
CSC 265
CSC 430
CSC 364
CSC ELECT
CSC ELECT
MATH 240
MATH 241
MATH 242
MATH 311
PHYS 201
PHYS 202
M/S ELECT
CSC ELECT
STAT 405
COMM 101
BISC 130/1
PHYS 261
PHYS 262
MIN/ CON
MIN/ CON
MIN/ CON
MIN/ CON
ENGL 101
ENGL 102
FA ELECT
ENGL 21X
ENGL 303
ENGL 363
SS
SS
Rev: 2015-01-29
Prereq
Coreq
Computer Science Topics
Math/Science Topics
General Education Topics
Minor/Concentration Topics
12
9
10
12
10
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12
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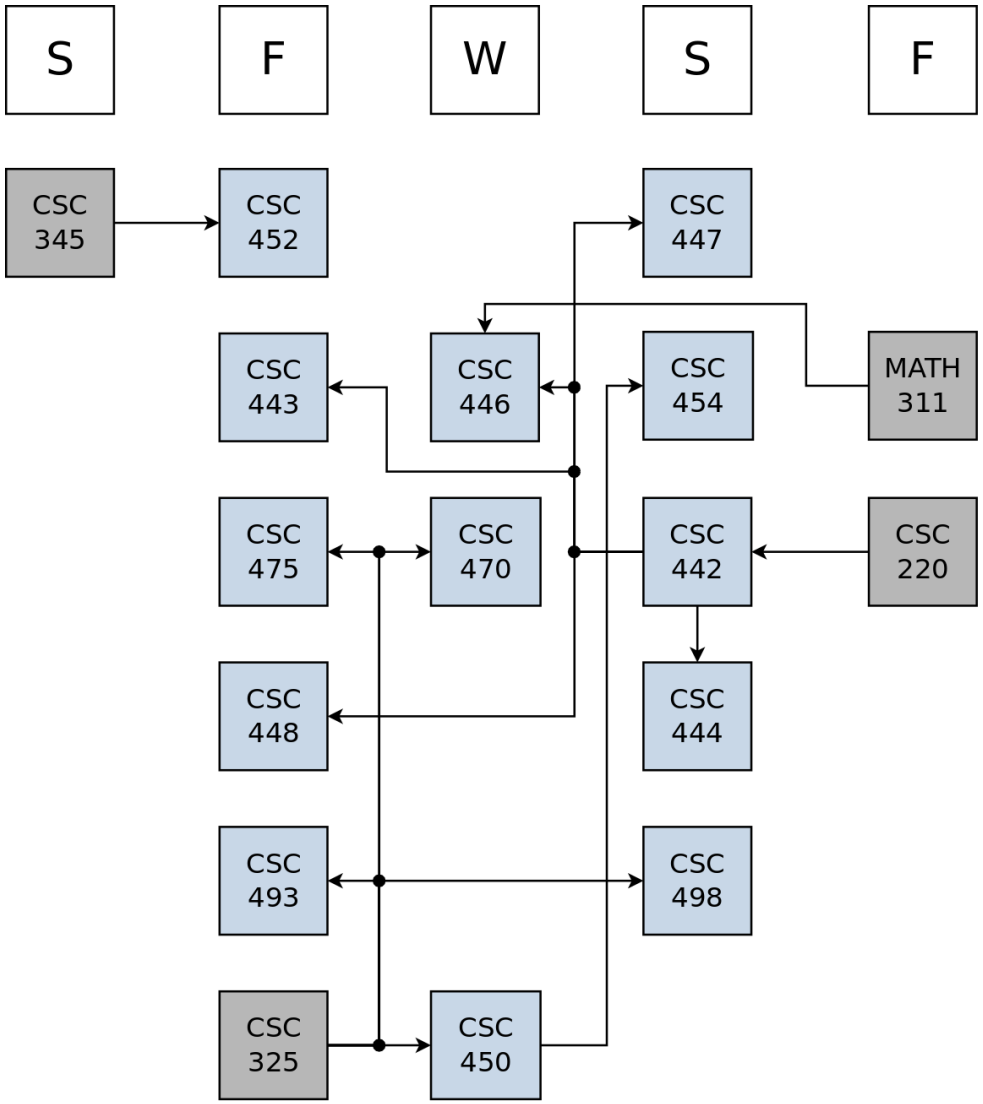
9
9
9
31
32
30
27



Rev: 2015-01-29

Prereq Coreq

Required Prerequisites

Computer Science Electives

CSC442 Intro to Cyber Security
CSC443 Digital Forensics and Cyber Crime
CSC444 Applied Cryptography
CSC446 Access Control Logic and Covert Channels
CSC447 Wireless and Mobile Security
CSC448 Reverse Engineering
CSC450 Computer Networks
CSC452 Distributed and Cloud Computing
CSC454 Advanced Computer Networks
CSC470 Computer Graphics
CSC475 Artificial Intelligence
CSC493 Data Mining and Knowledge Discovery
CSC498 Advanced Data Mining, Fusion, & Applications

CYBER SECURITY CONCENTRATION					
Course	**Name**		**Cr**	**Grade**	**Prerequisites**
CSC 442	Introduction to Cyber Security	Sp	3		CSC 220 and consent of instructor
CSC 450	Computer Networks	W	3		CSC 325 or consent of instructor
Two of the following:			6		
CSC 443	Digital Forensics and Cyber Crime	F			CSC 442 or consent of instructor
CSC 444	Applied Cryptography	Sp			CSC 442 or consent of instructor
CSC 446	Access Control Logic and Covert Channels	W			CSC 442 and MATH 311 or consent of instructor
CSC 447	Wireless and Mobile Security	Sp			CSC 442 or consent of instructor
CSC 448	Reverse Engineering	F			CSC 442 or consent of instructor
CSC 452	Distributed and Cloud Computing	F			CSC 345 or consent of instructor
CSC 454	Advanced Computer Networks	Sp			CSC 450 or consent of instructor
CSC 475	Artificial Intelligence	F			CSC 325 or consent of instructor
MATH 308	Introduction to Linear Algebra	W,Sp			MATH 243 or MATH 311
	Total		**12**		

GRAPHICS AND GAME DESIGN CONCENTRATION					
Course	**Name**		**Cr**	**Grade**	**Prerequisites**
CSC 470	Computer Graphics	W	3		CSC 325 or consent of instructor
CSC 475	Artificial Intelligence	F	3		CSC 325 or consent of instructor
ART 464	Advanced Communication Media	F,Sp	3		Consent of instructor
MATH 308	Introduction to Linear Algebra	W,Sp	3		MATH 243 or MATH 311
	Total		**12**		

CLOUD COMPUTING AND BIG DATA CONCENTRATION					
Course	**Name**		**Cr**	**Grade**	**Prerequisites**
CSC 452	Distributed and Cloud Computing	F	3		CSC 345 or consent of instructor
CSC 493	Data Mining and Knowledge Discovery	F	3		CSC 325 or consent of instructor
CSC 498	Advanced Data Mining, Fusion, and Applications	Sp	3		CSC 325 or consent of instructor
One of the following:			3		
CSC 450	Computer Networks	W			CSC 325 or consent of instructor
CSC 475	Artificial Intelligence	F			CSC 325 or consent of instructor
	Total		**12**		

COMPUTER ENGINEERING CONCENTRATION (NOT YET OFFICIAL)					
Course	**Name**		**Cr**	**Grade**	**Prerequisites**
ENGR 221	Electrical Engineering and Circuits I		3		ENGR 122 (we substitute CSC 132), MATH 242, PHYS 201
ELEN 242	Introduction to Microprocessors	F,W	3		MATH 242
ELEN 333	Introduction to Digital Design	W,Sp	3		ELEN 242
ELEN 423	Embedded Systems	F	3		ELEN 333
	Total		**12**		