GRAMBLING STATE UNIVERSITY College of Arts and Sciences Department of Computer Science Computer Science Curriculum (Catalog: 2017-2019)

B. S. in Computer Science

G#:

Name:

Hrs. Grade Substitution Prerequisites Semester Course **Course Name** Notes Number FRESHMAN BIOL 113 Principles of Biology -I 3 Principles of Biology - I Lab BIOL 115 1 FYE 101 First Year Experience I 1 First Year Experience II FYE 102 1 Freshman Composition 3 ENG 101 ENG 102 Freshman Composition 3 **HIST 101** History of Western Civilization I 3 HIST 104 Modern World History 3 MATH 1531 Calculus I 3 MATH148 or ACT (Math) 22 or above **MATH 154** Calculus II 3 **MATH 153** CS 110 Computer Science I 3 CS 120 CS 110 Computer Science II 3 TOTAL 30 SOPHOMORE **GET 300 Rising Junior Exam** 0 ENG 200 World Literature I 3 Intro. to Technical Writing ENG 207 3 **THEA 212** Fund. of Public Speaking 3 **MATH 201** Calculus III 3 **MATH 154 MATH 273** Probability and Statistics I 3 **PHYS 153** General Physics I 3 PHYS 153L General Physics Laboratory 1 CS 201 Social, legal, and Ethical issues in 3 CS 120 or with the Information Age. permission of Instructor CS 210 **Discrete Structures** 3 CS 110 Data Structures and Algorithm CS 236 3 CS 120, CS 210 Analysis CS 325 Comp. Org. & Architecture 3 CS 236 TOTAL 31 JUNIOR SOC 101 Introduction to Social Science 3 PHYS 154 General Physics II 3 PHYS 154L General Physics Laboratory 1 Probability and Statistics II **MATH 274** 3 **MATH 273 MATH 309** Intro. to Linear Algebra 3 **MATH 154 MATH 421** Numerical Methods I 3 **MATH 201** CS 310 Software Engineering 3 CS 236 Information Assurance and Security CS 236 CS 311 3 Database Management Systems CS 236 CS 320 3 CS 336 Programming Language Concepts 3 CS 236 CS 345 Operating Systems CS 236 3 TOTAL 31

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Semester	Grade	Substitution	Course	Course Name	Hrs.	Prerequisites	Notes
			Number			-	
SENIOR						· ·	
			ART 105	Intro. To Fine & Performing Arts	3		
			ECON 201	Principles of Economics	3		
			CS 400	Computer Science Seminar	1	CS 236	
			CS 406	Software Development	3	CS 310	
			CS 419	Computer Networks	3	CS 236	
			CS 450	Parallel processing	3	CS 325	
			CS 4xx	Major Elective	3	See list	
			CS 4xx	Major Elective	3	See list	
		FR 101	SPAN 101	Foreign Language	3		
		FR 102	SPAN 102	Foreign Language	3		
				TOTAL	28		
				TOTAL	120		

1. Students deficient in Math are required to take MATH147/148 before taking MATH153.

COMPUTER SCIENCE ELECTIVES

Course	Course Name	Hrs.	Prerequisites
Number			
CS 411	Applied Cryptography	3	CS 311
CS 415	Computer Games Programming	3	CS 236
CS 424	Advanced Programming Technique	3	CS 236
CS 426	Artificial Intelligence	3	CS 236
CS 428	Computer Graphics	3	CS 236
CS 435	Big Data and Cloud Security	3	CS 311
CS 451	Robotics	3	CS 236
CS 456	Special Topics in Computer science	3	CS 236
CS 462	Special Topics in Software Engineering	3	CS 310
CS 371	CO-OP-1	3	
CS 372	CO-OP-2	3	
CS 471	CO-OP-3	3	
CS 472	CO-OP-4	3	