

# B.S. Computer Science Computer Graphics Programming Option

## Four-Year Degree Plan

within the CSU Chico Department of Computer Science

2005 - 2007 University Catalog

Total Units  
**128**

CIS Major	Units	GE & Electives	Units
Major Lower Division (LD)	25	General Education	54
Major Upper Division (UD)	31	Electives	11
Computer Graphics Prog. Option (CGP)	25	Double Counted	-18
Major Total Units	81	Other Total Units	47

First Semester				Units	Notes <sup>1</sup>	Second Semester				Units	Notes <sup>1</sup>
CSCI 111	CSCI 015A	Programming and Algorithms I	3	LD	CSCI 112	CSCI 015B	Programming and Algorithms II	3	LD		
MATH 120	MATH 007A	Analytic Geometry and Calculus	4	LD & GE A4	MATH 121	MATH 007B	Analytic Geometry and Calculus	4	LD		
ENGL 130	ENGL 001	Academic Writing	3	GE A2	GE D		Behavioral and Social Sciences	3	GE D1/D2/D3		
GE A		Oral Communications or Critical Thinking	3	GE A1 or A3	GE A		Oral Communications or Critical Thinking	3	GE A1 or A3		
APCG 110	CSCI 040	Computer-Assisted Art I	3	CGP & GE C1	CGP Art		APCG 112/117/ARTS 122/240 / CDES 13	3	CGP		
Semester Total			16		Semester Total			16			
Third Semester				Units	Notes <sup>1</sup>	Fourth Semester				Units	Notes <sup>1</sup>
CSCI 221	CSCI 051A	Assembly Language Programming	3	LD	CSCI 305	CSCI 180	Proj Requiremts/Design/Test	3	UD		
PHYS 204A	PHYS 004A	Mechanics	4	LD & GE B1	PHYS 204B	PHYS 004B	Electricity and Magnetism	4	LD		
GE C		Arts and Humanities	3	GE C1/C2/C3	APCG 330	CSCI 140	3-D Computer Modeling	3	CGP		
POLS 155	POLS 055	American Government	3	GE <sup>2</sup> D1/D2/D3	HIST 130	HIST 050	United States History	3	GE <sup>2</sup> C1/C2/C3		
GE E		Lifelong Learning	3	GE E	GE B2		Life Forms	3	GE B2		
Semester Total			16		Semester Total			16			
Fifth Semester				Units	Notes <sup>1</sup>	Sixth Semester				Units	Notes <sup>1</sup>
CSCI 311	CSCI 151	Algorithms and Data Structures	3	UD	CSCI 330	CSCI 112	Software Engineering	3	UD		
CSCI 320	CSCI 171	Computer Architecture	3	UD	CSCI 340	CSCI 152	Operating Systems Programming	3	UD		
MATH 317	MATH 120	Discrete Math Structures	3	UD	MATH 314	MATH 104	Prob & Stat for Science & Tech	4	CGP		
APCG 340	CSCI 240	Computer Animation	3	CGP	Elective		Elective	3			
Theme 1		Upper Division Theme (Natural Science)	3	GE <sup>3</sup> UD Theme	Theme 2		Upper Division Theme	3	GE UD Theme		
Semester Total			15		(Apply for graduation 1 year in advance) Semester Total			16			
Seventh Semester				Units	Notes <sup>1</sup>	Eighth Semester				Units	Notes <sup>1</sup>
CSCI 301	CSCI 110	Computer's Impact on Society	3	UD	CSCI 315	CSCI 150	Programming Languages	3	UD		
CSCI 566	CSCI 231	Computer Graphics Programming	3	UD	CSCI 490	CSCI 190	Directed Programming Exp	1	UD		
CGP Selection		APCG 360 / CSCI 465/467/545/567	3	CGP	CSCI 550	CSCI 256	Theory of Computing	3	UD		
Theme 3		Upper Division Theme	3	GE UD Theme	CGP Selection		APCG 360 / CSCI 465/467/545/567	3	CGP		
Elective		Elective	3		GE D		Behavioral and Social Sciences	3	GE D1/D2/D3		
Elective		Elective	2		Elective		Elective	3			
Semester Total			17		Semester Total			16			

<sup>1</sup>For General Education (GE) refer to GE planning sheet; consider taking a Course Link in your first semester; consider meeting Ethnic and Non-Western requirements with GE.

<sup>2</sup>POLS 155 and HIST 130 - special GE modifications for this degree.

<sup>3</sup>One upper-division GE Natural Science course approved by CSCI Advisor.

## B.S. Computer Science Computer Graphics Programming Option

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### Computer Science Core

Course	Description	Units
Lower Division Core (7 courses)		
CSCI 111	CSCI 015A Programming and Algorithms I	3
CSCI 112	CSCI 015B Programming and Algorithms II	3
CSCI 221	CSCI 051A Assembly Language Programming	3
MATH 120	MATH 007A Analytic Geometry and Calculus	4
MATH 121	MATH 007B Analytic Geometry and Calculus	4
PHYS 204A	PHYS 004A Mechanics	4
PHYS 204B	PHYS 004B Electricity and Magnetism	4
Total Lower Division Core		25
Upper Division Core (10 courses)		
CSCI 301	CSCI 110 Computer's Impact on Society	3
CSCI 305	CSCI 180 Proj Requiremnts/Design/Test	3
CSCI 311	CSCI 151 Algorithms and Data Structures	3
CSCI 315	CSCI 150 Programming Languages	3
CSCI 320	CSCI 171 Computer Architecture	3
CSCI 330	CSCI 112 Software Engineering	3
CSCI 340	CSCI 152 Operating Systems Programming	3
CSCI 490	CSCI 190 Directed Programming Exp	1
CSCI 550	CSCI 256 Theory of Computing	3
MATH 317	MATH 120 Discrete Math Structures	3
1 course selected from: (only CSCI 566 permitted for CGP Option)		
CSCI 470	CSCI 273 Database Management	3
CSCI 547	CSCI 278 Computer Networks	3
<b>CSCI 566</b>	<b>CSCI 231 Computer Graphics Programming</b>	<b>3</b>
CSCI 567	CSCI 233 Graphical User Interface Impl	3
CSCI 580	CSCI 223 Artificial Intelligence	3
CSCI 583	CSCI 222 Expert Systems & Applications	3
Total Upper Division Core		31
Total Computer Science Core		56

### Double Counted Units

MATH 120	A4	3
PHYS 204A	B1	3
POLS 155	D1/D2/D3	3
HIST 130	C2/C3	3
APCG 110	C1	3
Natural Sci	Theme	3
Total Double Counted		18

### Computer Graphics Programming Option

Course	Description	Units
Natural Science (1 Course)		
One upper-division General Education Natural Sciences Thematic course approved in advance by your CSCI adviser. See General Education requirements.		3
Required Courses (4 Courses)		
APCG 110	CSCI 040 Computer-Assisted Art I	3
APCG 330	CSCI 140 3-D Computer Modeling	3
APCG 340	CSCI 240 Computer Animation	3
MATH 314	MATH 104 Prob & Stat for Science & Tech	4
CGP UD Selections (2 Courses)		6
APCG 360	CSCI 145 Web Page Design	
CSCI 465	CSCI 245 Web Programming Fundamentals	
CSCI 467	CSCI 232 Graphical User Interface Des	
CSCI 545	CSCI 241 Advanced Animation Production	
CSCI 567	CSCI 233 Graphical User Interface Impl	
CGP Art Selections (1 Courses)		3
APCG 112	APCG 044 Digital Photography	
APCG 117	APCG 046 Concept Design and Storyboarding	
ARTS 122	ART 015A Color Theory	
ARTS 240	ART 091 Intro to Fine Art Photography	
CDES 131	CDES 023 Visual Communication Concepts	
CDES 206	CDES 092 Intro Photo Com & Dig Imaging	
Total Computer Graphics Programming Option Units		25

### Unit Summary

Computer Science Core Requirements	56
Computer Graphics Programming Option	25
Lower Division General Education	39
Upper Division General Education	9
American Institutions	6
Double Counted	-18
Electives	11
Total Degree	128