



**California State Polytechnic University, Pomona
Degree Curriculum Sheet**

Plan (Major) **COMPUTER SCIENCE**
Subplan/Option _____

Catalog Year **2014 - 2015**
Minimum Units Required **180**

Name _____
Student ID _____

Required Core Courses		
Course		Units
Discrete Structures	CS 130	4
Intro to Computer Science	CS 140	4
Intro to Programming and Problem-Solving	CS 141	4
Computer Logic	CS 210	4
Data Structures and Algorithms I	CS 240	4
Data Structures and Algorithms II	CS 241	4
C++ Programming	CS 256	4
Computer Organization and Assembly Programming	CS 264	4
Language Translation and Automata	CS 311	4
Design and Analysis of Algorithms	CS 331	4
Computer Architecture	CS 365	4
Programming Languages	CS 408	4
Operating Systems	CS 431	4
Undergraduate Seminar	CS 463	2
Software Engineering	CS 480	4
Total Units		58

Elective Core Courses		
Course		Units
<i>At least 20 units from:</i>		
Programming Graphical User Interfaces	CS 245	(4)
Unix and Scripting	CS 260	(4)
Numerical Methods	CS 301	(4)
Symbolic Programming	CS 352	(4)
Object-Oriented Design and Programming	CS 356	(4)
Parallel Processing	CS 370	(4)
Computer Networks	CS 380	(4)
Compilers and Interpreters	CS 411	(4)
Artificial Intelligence	CS 420	(4)
Database Systems	CS 435	(4)
Computer Graphics	CS 445	(4)
Computability	CS 450	(4)
Secure Communication	CS 460	(4)
Game Development	CS 470	(4)
Software Engineering Practice	CS 481	(4)
Honors	CS 490	(4)
Special Topics for UD Students	CS 499/499A/499L	(1-4/1-4/1-4)
Continue to next column		

Elective Core Courses		
Course		Units
<i>No more than 8 units from:</i>		
Special Study for LD Students	CS 200	(1-2)
Special Topics for LD Students	CS 299/299A/299L	(1-4/1-4/1-4)
Special Study for UD Students	CS 400	(1-2)
Senior Project	CS 461	(2)
Senior Project	CS 462	(2)
Engineering Interdisciplinary Clinic I	EGR 461	(3)
Engineering Interdisciplinary Clinic II	EGR 462	(3)
Engineering Interdisciplinary Clinic III	EGR 463	(3)
Differential Equations	MAT 216	(4)
Graph Theory	MAT 370	(4)
Mathematics of Operations Research	MAT 380	(4)
Mathematics of Operations Research	MAT 381	(4)
Numerical Methods in Differential Equations	MAT 402	(4)
Combinatorics	MAT 470	(4)
Mathematical Programming	MAT 480	(4)
Mathematical Modeling and Simulation	MAT 485	(4)
Mathematical Modeling and Simulation	MAT 486	(1-4)
Cooperative Education	SCI 470	(1-4)
Cooperative Education	SCI 471	(1-4)
Cooperative Education	SCI 472	(1-4)
Cooperative Education	SCI 473	(1-4)
Total Units		27

Required Support Courses		
Course		Units
The following required support courses should be taken to satisfy the indicated GE Requirements to achieve the minimum units to degree listed at the top of this sheet.		
Life Science & Lab (B2, B3)	BIO 110/111L	3/1
Computers and Society (B5 or D4)	CS 375	4
Analytic Geometry and Calculus I (B4)	MAT 114	4
Analytic Geometry and Calculus II	MAT 115	4
Analytic Geometry and Calculus III	MAT 116	4
Intro to Linear Algebra	MAT 208	4
Calculus of Several Variables	MAT 214	3
General Physics & Lab (B1, B3)	PHY 131/131L	3/1
General Physics & Lab	PHY 132/132L	3/1
General Physics & Lab	PHY 133/133L	3/1
Statistical Methods for Computer Scientists	STA 326	4
Total Units		43

General Education Requirements	
Area	Units
Area A Communication & Critical Thinking	12
1. Oral Communication	
2. Written Communication	
3. Critical Thinking	
Area B Mathematics & Natural Sciences	16
<i>Select at least one lab course from subarea 1 or 2.</i>	
1. Physical Science	
2. Biological Science	
3. Laboratory Activity	
4. Math/Quantitative Reasoning	
5. Science & Technology Synthesis	
Area C Humanities	16
1. Visual and Performing Arts	
2. Philosophy and Civilization	
3. Literature and Foreign Language	
4. Humanities Synthesis	
Area D Social Sciences	20
1. U.S. History, Constitution, American Ideals	
a. United States History	
b. Introduction to American Government	
2. History, Economics and Political Science	
3. Sociology, Anthropology, Ethnic & Gender Studies	
4. Social Science Synthesis	
Area E Lifelong Understanding & Self Development	4
Total Units	68

American Institutions	
Courses that satisfy this requirement may also satisfy GE Area D1	8

American Cultural Perspectives Requirement	
Refer to catalog for list of courses that satisfy this requirement. Course may also satisfy major, minor, GE, or unrestricted elective requirements.	4

All persons who receive undergraduate degrees from Cal Poly Pomona must pass the Graduation Writing Test (GWT). The test must be taken by the quarter following completion of 120 units for undergraduates.