



# California State University Channel Islands

## Bachelor of Science

# COMPUTER SCIENCE

### Advisement Form 2007-2008

Name \_\_\_\_\_ ID \_\_\_\_\_

Required Major Courses (82 units) 122 minimum units are required for graduation.

Computer Science Curriculum	Units	Instit.	Course	Units	Grade	Term	Prerequisites, GE & comments
<b>Lower Division Requirements (42-43 units)</b>							
<b>Computer Science and Mathematics Courses (31 units)</b>							
COMP 150 Object-Oriented Programming	4						Prereq: Programming experience or COMP 105 recommended; GE: B4
COMP 151 Data Structures and Program Design	4						Prereq: COMP 150
COMP 162 Computer Architecture and Assembly Language	3						Prereq: COMP 150
COMP 232 Programming Languages	3						Prereq: COMP 151 and 162
COMP 262 Computer Organization and Architecture	3						Prereq: COMP 151 and 162
MATH 150 Calculus I	4						Prereq: Passing scores on Calculus Placement Exam or MATH 105; GE: B3
MATH 151 Calculus II	4						Prereq: MATH 150
MATH 230 Logic and Mathematical Reasoning	3						GE: A3, B3
MATH 240 Linear Algebra	3						Prereq: MATH 151
<b>Science ( 11-12 units) <i>Select <u>one 2 semester science sequence</u> and an additional science course with lab in Physics, Biology or Chemistry</i></b>							
PHYS, BIOL or CHEM (choose one discipline)							GE: B1 or B2 depending on science chosen
PHYS, BIOL or CHEM (choose 2 <sup>nd</sup> semester of above discipline)							Same discipline as science chosen above
PHYS, BIOL or CHEM							If B1 chosen above select B2; If B2 chosen above select B1
<b>Upper Division Requirements (40-41 units)</b>							
<b>Computer Science and Mathematics Requirements (31 units)</b>							
COMP 350 Introduction to Software Engineering	3						Prereq: COMP 232 and 262
COMP 362 Operating Systems	3						Prereq: COMP 262
COMP 447 Societal Issues in Computing	3						Prereq: Senior standing; GE: B4, D & INTD
COMP 454 Automata, Languages and Computation	3						Prereq: MATH 300
COMP 491 Capstone Preparation	1						Prerequisite: COMP 350 and 362; Senior standing
COMP 499 Capstone Project	3						Prereq: COMP 491
MATH 300 Discrete Mathematics	3						Prereq: MATH 151 and 230
MATH 352 Probability and Statistics	3						Prereq: MATH 151
MATH 354 Analysis of Algorithms	3						Prereq: MATH 300, some computer programming experience
MATH 448 Scientific Computing	3						Prereq: MATH 151 and (MATH 350 or COMP 151); GE: B3, B4, & INTD
COMP 420 Database Theory and Design <b>OR</b> COMP 464 Computer Graphic Systems and Design I	3						Prereq for <u>COMP 420</u> : COMP 350  Prereq for <u>COMP 464</u> : COMP 350 and MATH 240

Computer Science Curriculum	Units	Instit.	Course	Units	Grade	Term	Prerequisites, GE & comments
<b>Major Electives (9-10 units)</b> <i>Select a minimum of 9 units from courses listed below: (May choose any upper division Computer Science course with approval from Faculty Advisor.)</i>							
COMP/PHYS/MATH 345 Digital Image Processing	3						Prereq: Consent of instructor; GE: B1, B4 & INTD
COMP 351 Distributed Computing	3						Prereq: COMP 151
COMP 421 Unix for Programmers	3						Prereq: COMP 151 and 362
COMP 422 Design of Compilers	3						Prereq: COMP 232
COMP 424 Computer System Security	3						Prereq: COMP 350
COMP 425 Computer Game Programming	3						Prereq: COMP 151
COMP 429 Computer Networks	3						Prereq: COMP 232 and 362
COMP/PHYS/MATH 445 Image Analysis & Pattern Recognition	3						Prereq: COMP/PHYS/MATH 345 or consent of instructor; GE: B1, B4 & INTD
COMP 451 Advanced Object-Oriented Programming	3						Prereq: COMP 350
COMP/MATH 452 Computational Bioinformatics	4						Prereq: Programming experience and statistics, or consent of instructor
COMP 462 Embedded Systems	3						Prereq: COMP 362
COMP 464 Computer Graphic Systems and Design I	3						Prereq: COMP 350 and MATH 240. May not be taken if completed above.
COMP 466 Computer Graphic Systems and Design II	3						Prereq: COMP 464
COMP 469 Artificial Intelligence/Neural Nets	3						Prereq: COMP 350 and 362
COMP 490 Topics in Computer Science	3						Upper-division standing
COMP 492 Internship	1-3						Prereq: Upper-division standing and program approval of written proposal
COMP 494 Independent Research	1-3						Prereq: Upper-division standing and program approval of written proposal
COMP 497 Directed Study	3						Prereq: Program approval of written proposal
ENGL 482 Technical Writing	3						Prereq: ENGL 330
MATH 429 Operations Research	3						Prereq: MATH 329 or 352 or equivalent

### Additional University Graduation Requirements

**9 Units Upper Division Interdisciplinary GE at CSUCI (courses numbered 330-349 or 430-449)**

Course 1 (in major) COMP 447 Course 2 (in major) MATH 448 Course 3 (outside of major) \_\_\_\_\_  
(Choose from GE A-E)

**American Institutions Requirements:** US History \_\_\_\_\_ State and Local Gov't POLS 150  
(Choose from HIST 270, 271, 272, 275 or 350)

Students must receive a grade of "C" or better in the language and Multicultural Requirements

**Language Requirement:** GE C3a \_\_\_\_\_  
(one semester of college level language)

**Multicultural Requirement:** GE C3b \_\_\_\_\_

Minimum total units to graduate: 120 of which 40 must be upper division. Please see catalog for a complete list of graduation requirements.

Advisor \_\_\_\_\_ Date Completed: \_\_\_\_\_

Advisor Comments: \_\_\_\_\_  
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