CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

PROGRAM MODIFICATION

DATE: FEBRUARY 14, 2006
PROGRAM AREA: COMPUTER SCIENCE

Please use the following format to modify any existing program. Any deletions from an existing program need to be underlined (left hand column), and any additions/changes to the program need to be in CAPS (right hand column).

EXISTING PROGRAM	PROPOSED PROGRAM
Name of Degree Program **COMPUTER SCIENCE**	**Name of Degree Program** **COMPUTER SCIENCE**
Catalog Description of the Program **PROGRAMS OFFERED** • Bachelor of Science in Computer Science • Minor in Computer Science • Master of Science in Computer Science • Bachelor of Science in Information Technology The Computer Science degree offers the latest cutting edge education for various industrial and applied fields. Students will be given a strong background in computer hardware and software, as well as a substantial amount of "hands-on" experience. The program will stress interdisciplinary applications in other sciences and business and prepare students for graduate studies. **CAREERS:** The program will prepare students for careers in high-tech, computer and Internet-driven industries, where interdisciplinary, dynamic and innovative professionals trained in the latest technologies are increasingly sought.	**Catalog Description of the Program** **PROGRAMS OFFERED** • Bachelor of Science in Computer Science • Minor in Computer Science • Master of Science in Computer Science • Bachelor of Science in Information Technology The Computer Science degree offers the latest cutting edge education for various industrial and applied fields. Students will be given a strong background in computer hardware and software, as well as a substantial amount of "hands-on" experience. The program will stress interdisciplinary applications in other sciences and business and prepare students for graduate studies. **CAREERS:** The program will prepare students for careers in high-tech, computer and Internet-driven industries, where interdisciplinary, dynamic and innovative professionals trained in the latest technologies are increasingly sought.
PROGRAM LEARNING OUTCOMES AND CONTACT INFORMATION http://compsci.csuci.edu/	**PROGRAM LEARNING OUTCOMES AND CONTACT INFORMATION** http://compsci.csuci.edu/
Requirements for the Degree Program	**Requirements for the Degree Program**
REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN COMPUTER SCIENCE (122 UNITS)	**REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN COMPUTER SCIENCE (122 UNITS)**
Lower Division Requirements (42 units): COMP 150 Object Oriented Programming (4) COMP 151 Data Structures and Program Design (4)	**Lower Division Requirements (42 units):** COMP 150 Object Oriented Programming (4) COMP 151 Data Structures and Program Design (4)

COMP 162 Computer Architecture and Assembly Language (3) COMP 232 Programming Languages (3) COMP 262 Computer Organization and Architecture (3) MATH 150 Calculus I (4) MATH 151 Calculus II (4) MATH 240 Linear Algebra (3) PHIL 230 Logic (3) Science: A 2 semester science sequence and an additional science course (one lab section required) in Physics, Biology, or Chemistry (11-12, G.E. B1 and B2) **Upper Division Requirements (40 units):** COMP 350 Software Engineering (3) COMP 362 Operating Systems (3) COMP 447 Societal Issues in Computing (3, G.E. D) COMP 454 Automata, Languages and Computation (3) COMP 499 Senior Colloquium (1) MATH 300 Discrete Mathematics (3) MATH 352 Probability and Statistics (3) MATH 448 Scientific Computing (3) MATH 454 Analysis of Algorithms (3) ***Choose 3 units from the following:*** COMP 420 Database Theory and Design (3) COMP 464 Computer Graphics I (3) **Electives** COMP/MATH/PHYS 345 Digital Image Processing (3, G.E. B1, B4, Interdisciplinary) COMP 422 Design of Compilers (3) COMP 424 Computer System Security (3) COMP 429 Computer Networks (3) COMP/MATH/PHYS 445 Image Analysis and Pattern Recognition (3, G.E. B1, B4, Interdisciplinary) COMP/PSY 449 Human-Computer Interaction (3, G.E. B4, E, Interdisciplinary) COMP/MATH 452 Computational Bioinformatics (4) COMP 462 Advanced Object-Oriented Programming (3) COMP 464 Computer Graphics I (3) COMP 466 Computer Graphics II (3) COMP 469 Artificial Intelligence/Neural Nets (3) COMP 490 Topics in Computer Science (3) COMP 492 Internship (1-3)	COMP 162 Computer Architecture and Assembly Language (3) COMP 232 Programming Languages (3) COMP 262 Computer Organization and Architecture (3) MATH 150 Calculus I (4) MATH 151 Calculus II (4) MATH 240 Linear Algebra (3) PHIL 230 Logic (3) Science: A 2 semester science sequence and an additional science course (one lab section required) in Physics, Biology, or Chemistry (11-12, G.E. B1 and B2) **Upper Division Requirements (40 units):** COMP 350 Software Engineering (3) COMP 362 Operating Systems (3) COMP 447 Societal Issues in Computing (3, G.E. D) COMP 454 Automata, Languages and Computation (3) COMP 499 Senior Colloquium (1) MATH 300 Discrete Mathematics (3) MATH 352 Probability and Statistics (3) MATH 448 Scientific Computing (3) MATH 454 Analysis of Algorithms (3) ***Choose 3 units from the following:*** COMP 420 Database Theory and Design (3) COMP 464 Computer Graphics I (3) **Electives** COMP 337 SURVEY OF COMPUTER GAMING (3 GE B UD) COMP/MATH/PHYS 345 Digital Image Processing (3, G.E. B1, B4, Interdisciplinary) COMP 421 UNIX FOR PROGRAMMERS (3) COMP 422 Design of Compilers (3) COMP 424 Computer System Security (3) COMP 425 COMPUTER GAME PROGRAMMING (3) COMP 429 Computer Networks (3) COMP 437 FOUNDATIONS OF COMPTUER GAME DEVELOPMENT (3 GE B, INTERDISCIPLINARY) COMP/MATH/PHYS 445 Image Analysis and Pattern Recognition (3, G.E. B1, B4, Interdisciplinary) COMP/PSY 449 Human-Computer Interaction (3, G.E. B4, E, Interdisciplinary) COMP/MATH 452 Computational Bioinformatics (4)

COMP 494	Independent Research(1-3)
COMP 497	Directed Study (3)
COMP 499	Senior Colloquium (1)
ENGL 482	Technical Writing (3)
MATH 429	Operations Research (3)

Required Supporting and other GE Courses

Emphasis or Option Requirements

Additional Courses

COMP 462	Advanced Object-Oriented Programming (3)
COMP 464	Computer Graphics I (3)
COMP 466	Computer Graphics II (3)
COMP 469	Artificial Intelligence/Neural Nets (3)
COMP 490	TOPICS IN COMPUTER SCIENCE (3)
COMP 492	Internship (1-3)
COMP 494	Independent Research(1-3)
COMP 497	Directed Study (3)
COMP 499	Senior Colloquium (1)
ENGL 482	Technical Writing (3)
MATH 429	Operations Research (3)

Required Supporting and other GE Courses

Emphasis or Option Requirements

Additional Courses

SUMMARY OF CHANGES
The following courses were added to the list of electives:

Comp 337
Comp 421
Comp 425
Comp 437
Comp 490

The first 4 of these are the new courses added to the program to support Computer Game Design and Development minor, but we wish to have them as options for the CS major as electives in any case.

JUSTIFICATION

Adding upper division courses to the list of electives. Gives students more options. Includes the new courses that were approved for the Computer Game Design and Development Minor.

_____William J. Wolfe_____2/2/2006_____
Proposer of Program Modification Date

Approvals

Program Chair	Date
Curriculum Committee Chair	Date
Dean	Date

California State University Channel Islands
Program Modification Consultation Sheet

1. Course Title: _____

_____

2. Program Area: _____

Recommend Approval

Program Area/Unit	**Program/Unit Chair**	**YES**	**NO** (attach objections)	**Date**
Art				
Biology				
Business & Economics				
Education				
English				
History				
Liberal Studies				
Mathematics & CS				
Multiple Programs				
Psychology				
Library				
Information Technology				