CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

COURSE MODIFICATION PROPOSAL

Courses must be submitted by October 15, 2011, and finalized by the end of the fall semester to make the next catalog (2012-13) production

DATE (CHANGE DATE EACH TIME REVISED): 9/19/11; REV 9.23.11; REV 10.11.11

PROGRAM AREA(S) : COMPUTER SCIENCE

Directions: All of sections of this form must be completed for course modifications. Use YELLOWED areas to enter data. All documents are stand alone sources of course information.

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1. Indicate Changes and Justification for Each. *[Mark all change areas that apply and follow with justification. Be as brief as possible but, use as much space as necessary.]*

- X Course title
- X Prefix/suffix
- Course number
- Units
- Staffing formula and enrollment limits
- X Prerequisites/Corequisites
- Catalog description
- X Mode of Instruction
- Course Content
- Course Learning Outcomes
- References
- GE
- Other
- Reactivate Course

Justification: The title change better reflects the course content. The cross-listing and pre-requisite change reflects the use of the course in both the BSCS and BSIT In order for students to succeed in the course there needs to be significant instructor assistance in orienting students to the utilities of the Unix operating system in a hands-on manner. A scheduled laboratory provides the time for this.

2. Course Information.

[Follow accepted catalog format.] ***(Add additional prefixes i f cross-listed)***

OLD

Prefix COMP Course# 421
Title Introduction to Unix for programmers Units (3)
3 hours lecture per week
hours blank per week

X Prerequisites: COMP350 and COMP362
Consent of Instructor Required for Enrollment
Corequisites:

Catalog Description (Do not use any symbols):
The use of the Unix operating environment including command line Unix utilities, vi and emacs editors, regular expressions, text processors and Unix shells, fundamental Perl and its application in programming CGI. Writing in C utilities that control the operating environment through the use of system calls. Developing programs using Unix facilities

General Education Categories:
Grading Scheme (Select one below):
X A – F
Credit/No Credit
Optional (Student's Choice)
Repeatable for up to units
Total Completions
Multiple Enrollment in Same Semester Y/N
Course Level:
X Undergraduate
Post-Baccalaureate
Graduate

NEW

Prefix COMP/IT Course# 421
Title Unix System Programming II Units (3)
2 hours lecture per week
3 hours laboratory per week

X Prerequisites: COMP/IT221
Consent of Instructor Required for Enrollment
Corequisites:

Catalog Description (Do not use any symbols)**:**
The use of the Unix operating environment including command line Unix utilities, vi and emacs editors, regular expressions, text processors and Unix shells, fundamental Perl and its application in programming CGI. Writing in C utilities that control the operating environment through the use of system calls. Developing programs using Unix facilities
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General Education Categories:
Grading Scheme (Select one below):
X A – F
Credit/No Credit
Optional (Student's Choice)
Repeatable for up to units
Total Completions
Multiple Enrollment in Same Semester Y/N
Course Level:
X Undergraduate
Post-Baccalaureate
Graduate

3. Mode of Instruction (Hours per Unit are defaulted) **Hegis Code(s)**_____
(Provided by the Dean)

Existing

	Units	Hours Per Unit	Benchmark Enrollment	Graded
Lecture	3	1	24	y
Seminar		1		
Lab		3		
Activity		2		
Field Studies				
Indep Study				
Other blank				
Online				

Proposed

	Units	Hours Per Unit	Benchmark Enrollment	Graded	CS No. (filled out by Dean)
Lecture	2	1	24	y	
Seminar		1			
Lab	1	3	24	y	
Activity		2			
Field Studies					
Indep Study					
Other blank					
Online					

4. Course Attributes:

General Education Categories: All courses with GE category notations (including deletions) must be submitted to the GE website: http://summit.csuci.edu/geapproval. Upon completion, the GE Committee will forward your documents to the Curriculum Committee for further processing.

A (English Language, Communication, Critical Thinking)
- A-1 Oral Communication
- A-2 English Writing
- A-3 Critical Thinking

B (Mathematics, Sciences & Technology)
- B-1 Physical Sciences
- B-2 Life Sciences – Biology
- B-3 Mathematics – Mathematics and Applications
- B-4 Computers and Information Technology

C (Fine Arts, Literature, Languages & Cultures)
- C-1 Art
- C-2 Literature Courses
- C-3a Language
- C-3b Multicultural

D (Social Perspectives)

E (Human Psychological and Physiological Perspectives)

UDIGE/INTD Interdisciplinary

Meets University Writing Requirement

Meets University Language Requirement

American Institutions, Title V Section 40404: Government US Constitution US History
Refer to website, Exec Order 405, for more information: http://senate.csuci.edu/comm/curriculum/resources.htm

Service Learning Course (Approval from the Center for Community Engagement must be received before you can request this course attribute).

5. Justification and Requirements for the Course. *[Make a brief statement to justify the need for the course]*

OLD
In the age of Graphical User Interfaces one may ask a question why should we bother with studying Unix with its enigmatic command line interface and hacker culture. Shouldn't we do everything using windows, menus, mice and clicking? In spite of prevalence of these high level paradigms, a lot of computer

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science work is done at a low, grass root level. Very often computer scientists - especially those working in the Information Technology industry - end up with nothing else but a terminal to work with. No menus, no mouse control, no graphics. In this course, the students will learn how to deal with such and many other problems. Many backend systems use Unix or Linux as the operating system for their servers. Many embedded systems are also built around derivatives of Linux. While there are more or less sophisticated and comprehensive tools to develop and operate these systems, the most secure jobs are reserved for those who understand how the heart of the system beats. That does not come through a Windows GUI or Web browser application. When it comes to solving many problems, the only way is top pull up the sleeves and get hands dirty using a command line, text-based interface and a multitude of available tools. :

_ Requirement for the Major/Minor
X Elective for the Major/Minor
_ Free Elective

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X Elective for the Major/Minor
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Submit Program Modification if this course changes your program.

6. Student Learning Outcomes. (List in numerical order. You may wish to visit resource information at the following website: http://senate.csuci.edu/comm/curriculum/resources.htm)

Upon completion of the course, the student will be able to:

OLD

1.Describe the philosophy of Unix Operating System
2. Control Unix using command line interface
3. Use regular expressions
4. Edit streams with sed and awk
5. Edit files with vi and emacs
6. Program scripts in Bourne Shell
7. Program in Perl
8. Develop applications using Unix development tools
9. Develop applications in C that control Unix-based systems through the use of system calls.

Upon completion of the course, the student will be able to:

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7. Course Content in Outline Form. (Be as brief as possible, but use as much space as necessary)

OLD

What is Unix?
Unix utilities for non-programmers
Editing files with emacs and vi
Unix utilities for power users
regex: regular expressions
awk
sed
perl
Introduction to Unix Shells
bash: the Bourne Again Shell
C programming Tools
make: Unix file dependency system
ANT: Java file dependency system
Command line clients for CVS, Subversion
ar: nix archiver
gdb: Gnu debugger
jdb: Java command line debugger
System Programming

NEW

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System Programming

Does this course content overlap with a course offered in your academic program? Yes _ **No** X
If YES, what course(s) and provide a justification of the overlap. _

Does this course content overlap a course offered in another academic area? Yes **No** X
If YES, what course(s) and provide a justification of the overlap.

Overlapping courses require Chairs' signatures.

8. Cross-listed Courses (Please note each prefix in item No. 1)

A. List cross-listed courses (Signature of Academic Chair(s) of the other academic area(s) is required).
B. List each cross-listed prefix for the course: COMP. IT
C. Program responsible for staffing: Computer Science

9. References. *[Provide 3-5 references]*

OLD Unix for Programmers and Users 3/e Graham Glass, King Ables, Pearson Prentice-Hall, 2003
Unix in a nutshell, Arnold Robbins, 3/E O'Reilly, 1999
Programming Perl, Larry Wall, Tom Christiansen, Randal L. Schwartz, 3/E O'Reilly, 2000
sed &awk, Dale Dougherty, Arnold Robbins, 2/E, O'Reilly, 1997
Learning the bash Shell, Cameron Newham, 3/E, O'Reilly, 2005
Mastering Regular Expressions, Jeffrey E. F. Friedl, 2/E, O'Reilly, 2002

NEW Unix for Programmers and Users 3/e Graham Glass, King Ables, Pearson Prentice-Hall, 2003
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Learning the bash Shell, Cameron Newham, 3/E, O'Reilly, 2005
Mastering Regular Expressions, Jeffrey E. F. Friedl, 2/E, O'Reilly, 200**2**

10. Tenure Track Faculty qualified to teach this course.
All Computer Science faculty

11. Requested Effective Date or First Semester offered: Fall 2012

12. New Resource Requested: Yes **No** X
If YES, list the resources needed.

A. Computer Needs (data processing, audio visual, broadcasting, other equipment, etc.)
B. Library Needs (streaming media, video hosting, databases, exhibit space, etc.)
C. Facility/Space/Transportation Needs:
D. Lab Fee Requested: Yes **No** **(Refer to the Dean's Office for additional processing)**
E. Other.

13. Will this course modification alter any degree, credential, certificate, or minor in your program? Yes X **No**
If, YES attach a program update or program modification form for all programs affected.
Priority deadline for New Minors and Programs: October 1, 2011 of preceding year.
Priority deadline for Course Proposals and Modifications: October 15, 2011.
Last day to submit forms to be considered during the current academic year: April 15th.

Peter Smith 9/19/11

Proposer(s) of Course Modification — Date
Type in name. Signatures will be collected after Curriculum approval.

Approval Sheet

Course: COMP 421

If your course has a General Education Component or involves Center affiliation, the Center will also sign off during the approval process.

Multiple Chair fields are available for cross-listed courses.

Program Chair		
	Signature	Date
Program Chair		
	Signature	Date
Program Chair		
	Signature	Date
General Education Chair		
	Signature	Date
Center for Intl Affairs Director		
	Signature	Date
Center for Integrative Studies Director		
	Signature	Date
Center for Multicultural Engagement Director		
	Signature	Date
Center for Civic Engagement and Service Learning Director		
	Signature	Date
Curriculum Chair		
	Signature	Date

AVP Comments: Program will have to cover costs	Karen Carey	10.3.11
	Signature	Date