CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

COURSE MODIFICATION PROPOSAL

Courses must be submitted by October 15, 2013, and finalized by the end of the fall semester to make the next catalog (2014-15) production

DATE (CHANGE DATE EACH TIME REVISED): 8/29/13

PROGRAM AREA(S) : COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

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 an X by all change areas that apply and follow-up your justification. Be as brief as possible but, use as much space as necessary.]*

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

Justification: Course description, outline and course learning outcomes were not changed appropriately when IT 151 was separated from COMP 151. The new description, outline and outcomes reflect the actual course content

2. Course Information.

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

OLD

Prefix IT Course# 151
Title IT Programming Units (3)
2 hours lecture per week
3 hours laboratory per week

[X] Prerequisites: Math 301 and Comp 105 or equivalent
[ ] Consent of Instructor Required for Enrollment
[ ] Corequisites:

Catalog Description (Do not use any symbols):
Introduction to data structures and the algorithms that use them. Review of composite data types such as arrays, records, strings and sets. Topics include: abstract data types, st acks, queues, linked lists, trees and graphs, recursion, and time complexity. No credit given toward Computer Science Degree

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 IT Course# 151
Title IT Programming Units (3)
2 hours lecture per week
3 hours laboratory per week

[X] Prerequisites: Math 301 and Comp 105 or equivalent
[ ] Consent of Instructor Required for Enrollment
[ ] Corequisites:

Catalog Description (Do not use any symbols)**:**
Introduction to programming in C in the Unix environment including input/output, recursion and pointers. Introduction to composite data types such as arrays, records, strings and sets. Topics include: abstract data types, stacks, queues and linked lists. Brief introduction to trees and graphs. No credit given toward the Computer Science Degree.

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	2	1	20	y
Seminar		1		
Lab	1	3	20	y
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	20	y	
Seminar		1			
Lab	1	3	20	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/ge
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 (Graduation Writing Assessment Requirement)
Meets University Language Requirement

American Institutions, Title V Section 40404: Government US Constitution US History
Regarding 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).

Online Course (Answer YES if the course is ALWAYS delivered online).

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

OLD
BSIT required course

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

NEW
BSIT required course

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

Submit Program Modification if this course changes your program.

6. Student Learning Outcomes. (List in numerical order. Please refer to the Curriculum Committee's "Learning Outcomes" guideline for measurable outcomes that reflect elements of Bloom's Taxonomy: *http://senate.csuci.edu/comm/curriculum/resources.htm*. The committee recommends 4 to 8 student learning outcomes, unless governed by an external agency (e.g., Nursing).

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

OLD
1. Identify abstract data types.
2. Analyze simple computer program design.
3. Use link lists.
4. Use tree structures in an algorithm.
5. Use arrays in a computer program.
6. Use stacks and queues.
7. Analyze recursion in a computer program.
8. Represent graphs in a computer program.
9. Analyze the time complexity of an algorithm.

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

NEW
1. solve problems using algorithmic and structured approaches
2. develop algorithms using pseudocode, flowcharts and other design methods
3. design, implement, test and debug C programs
4. compile and manage C programs and related files in a UNIX environment
5. use C and Unix skills to solve a variety of technical problems

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

OLD
1. Arrays.
2. Linked Lists.
3. Binary Trees.
4. Sorting and searching
5. Graphs.
6. Algorithm design.
7. Debugging and Testing Code
8. Abstract Data Types

NEW
1. Algorithm design
2. The C programming language and the Unix environment
3. Debugging and testing code
4. Arrays and Sorting
5. Strings and Pointers
6. Stacks and Queues
7. Introduction to trees and graphs

Does this course content overlap with a course offered in your academic program? Yes X **No**
If YES, what course(s) and provide a justification of the overlap. Comp 121 Introduction C Programming. Comp 121 is the corresponding course for Computer Science majors,

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:
C. Program responsible for staffing:

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

OLD 1 Problem solving and program design in C (6th edition), Hanly and Koffman, Addison-Wesley, 2010, ISBN 0321535421
2. Programming in C (3rd edition), Kochan, SAM's publishing, 2004, ISBN 0672326663

NEW 1 Problem solving and program design in C (6th edition), Hanly and Koffman, Addison-Wesley, 2010, ISBN 0321535421
2. Programming in C (3rd edition), Kochan, SAM's publishing, 2004, ISBN 0672326663

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

11. Requested Effective Date or First Semester offered: Fall 2014

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 ☐ **No** X
If, YES attach a program update or program modification form for all programs affected.
Priority deadline for New Minors and Programs: October 1, 2013 of preceding year.
Priority deadline for Course Proposals and Modifications: October 15, 2013.
Last day to submit forms to be considered during the current academic year: April 15th.

Peter Smith — 8/29/13

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

Approval Sheet

Course: IT 151

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.

The CI program review process includes a report from the respective department/program on its progress toward accessibility requirement compliance. By signing below, I acknowledge the importance of incorporating accessibility in course design.

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		
	Signature	Date