CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

COURSE MODIFICATION PROPOSAL

Courses must be submitted by October 15, 2012, and finalized by the end of the fall semester to make the next catalog (2013-14) production

DATE (CHANGE DATE EACH TIME REVISED): 9/14/12; REV 9.26.12

PROGRAM AREA(S) : COMPUTER SCIENC 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 all change areas that apply and follow with justification. Be as brief as possible but, use as much space as necessary.]*

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

Justification: New title better reflects course content.
Prereq change because students need the Math background to be successful in IT151. Currently MATH301 can be taken late in the program. Math 301 has a 300-level number because it is an IT version of Math 300 but it is a much lower level course (has no prereqs unlike Math 300)

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

OLD

Prefix IT Course# 151
Title Data structures for IT Units (3)
2 hours lecture per week
3 hours lab per week

X Prerequisites: 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, stacks, 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 lab 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, stacks, 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

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/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).

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

NEW
BSIT required course

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

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. 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.

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. 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

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 X **No**
If YES, what course(s) and provide a justification of the overlap. COMP 151. Provides similar content for the BSCS. But includes material not needed in the BSIT

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 2013

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, 2012 of preceding year.
Priority deadline for Course Proposals and Modifications: October 15, 2012.
Last day to submit forms to be considered during the current academic year: April 15th.

Peter Smith — 9/14/2012

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

Approval Sheet

Course: IT151

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