COURSE MODIFICATION PROPOSAL
Courses must be submitted by October 15, 2010,
to make the next catalog (2011-12) production

DATE (CHANGE DATE EACH TIME REVISED): 6/7/10; REV 9.20.10
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.

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

OLD	**NEW**
Prefix COMP Course# 232 Title Programming Languages	Prefix COMP Course# 232 Title Programming Languages
Units (3)	Units (3)
3 hours lecture per week	2 hours lecture per week
[ ] hours blank per week	3 hour laboratory per week
X Prerequisites: COMP 151 and COMP 162	X Prerequisites: COMP 151 and COMP 162
[ ] Consent of Instructor Required for Enrollment	[ ] Consent of Instructor Required for Enrollment
[ ] Corequisites: [ ]	[ ] Corequisites: [ ]

OLD

Catalog Description (Do not use any symbols): Discussion of issues in the design, implementation, and use of high-level programming languages. Topics include: historical background; how languages reflect different design philosophies and user requirements; technical issues in the design of major imperative (procedural) programming languages; other approaches to programming: functional programming, logic programming, and object-oriented programming.

General Education Categories [   ]
[ ] Lab Fee Requested
Course Level:
X Undergraduate
[ ] Post-bac/Credential
[ ] Graduate

Graded
[ ]
CR/NC
X A - F
Optional (Student's choice)

[ ] Repeatable for up to [ ] units
Total Completions [ ]
[ ] Multiple Enrollment in same semester

NEW

Catalog Description (Do not use any symbols)**:** Discussion of issues in the design, implementation, and use of high-level programming languages. Topics include: historical background; how languages reflect different design philosophies and user requirements; technical issues in the design of major imperative (procedural) programming languages; other approaches to programming: functional programming, logic programming, and object-oriented programming.

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Optional (Student's choice)

[ ] Repeatable for up to [ ] units
Total Completions [ ]
[ ] Multiple Enrollment in same semester

2. **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	[ ]		[ ]	[ ]

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	[ ]		[ ]	[ ]	[ ]

3. 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).

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

OLD	NEW
The course is a required course for Computer Science majors according to accreditation guidelines.	The course is a required course for Computer Science majors according to accreditation guidelines.
X Requirement for the Major/Minor	X Requirement for the Major/Minor
Elective for the Major/Minor	Elective for the Major/Minor
Free Elective	Free Elective

Submit Program Modification if this course changes your program.

5. Student Learning Outocmes. (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	NEW
Explain how languages are designed and implemented	Explain how languages are designed and implemented
• Select the most appropriate language for solving a specific problem	• Select the most appropriate language for solving a specific problem
• Assess the quality of a language	• Evaluate the quality of a language
• Write a program in each of a imperative, applicative, rule-based, object-oriented language	• Write a program in each of a imperative, applicative, rule-based, object-oriented language
• Organize and express ideas clearly and convincingly in oral and written forms.	• Synthesize and articulate ideas clearly and convincingly in oral and written forms.

6. Course Content in Outline Form. (Be as brief as possible, but use as much space as necessary)
OLD   **NEW**

Introduction to Languages	Introduction to Languages
Standardization and Internationalization	Standardization and Internationalization
Language Translation and Grammar	Language Translation and Grammar
Regular Grammar	Regular Grammar
Recursive Descent Parsing	Recursive Descent Parsing
Introduction to LISP	Introduction to LISP
Perl	Perl
Parameter Transmission	Parameter Transmission
Heap Storage	Heap Storage
Garbage Collection	Garbage Collection
Overview of C and C++	Overview of C and C++
Introduction to Java	Introduction to Java

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.

7. 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:

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

    OLD Sebesta, *Concepts of Programming Languages*, Addison-Wesley 5th edition ISBN: 02017529536

Pratt and Zelkowitz, *Programming Languages - Design and Implementation*, Prentice-Hall 4th edition,
ISBN: 0130276782

    NEW Sebesta, *Concepts of Programming Languages*, Addison-Wesley 5th edition ISBN: 02017529536, 2003;

Pratt and Zelkowitz, *Programming Languages - Design and Implementation*, Prentice-Hall 4th edition,
ISBN: 0130276782,2000

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

10. Requested Effective Date or First Semester offered: Fall 2011

11. 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.

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

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

Justification: One outcome reworded to make it assessable.

Programming assignments in a variety of languages, most of which are new to the students, is an important focus of the course. In order for students to succeed in the course there needs to be significant instructor assistance in orienting students to the new languages in a hands-on manner. A scheduled laboratory provides the time for this.

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 4, 2010 of preceding year.
   Priority deadline for Course Proposals and Modifications: October 15, 2010.
   Last day to submit forms to be considered during the current academic year: April 15th.

Peter Smith   6/7/10
_____   _____
Proposer(s) of Course Modification   Date
Type in name. Signatures will be collected after Curriculum approval.

Approval Sheet

Course: COMP 232

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

Dean of Faculty		
	Signature	Date