CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

NEW COURSE PROPOSAL

PROGRAM AREAS ______BIOLOGICAL AND PHYSICAL SCIENCES, MATH AND COMPUTER SCIENCE_____

1. Catalog Description of the Course. [Include the course prefix, number, full title, and units. Provide a course narrative including prerequisites and corequisites. If any of the following apply, include in the description: Repeatability (May be repeated to a maximum of ___ units); time distribution (Lecture ___ hours, laboratory ___ hours); non-traditional grading system (Graded CR/NC, ABC/NC). Follow accepted catalog format.]

COMP 232. PROGRAMMING LANGUAGES (3)
Three hours of lecture in the lab per week.
Prerequisite: COMP 151 and COMP 162.
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.

2. Mode of Instruction.

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<tr>
<th>Lecture</th>
<th>Units</th>
<th>Hours per Unit</th>
<th>Benchmark Enrollment</th>
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<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>24</td>
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3. Justification and Learning Objectives for the Course. (Indicate whether required or elective, and whether it meets University Writing, and/or Language requirements) [Use as much space as necessary]

The course is a required course for Computer Science majors according to accreditation guidelines.

Through this course, students will be able to

- Explain how languages are designed and implemented
- Select the most appropriate language for solving a specific problem
- Assess the quality of a 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.

This course is not designed to satisfy the University Writing or Language requirements.

4. Is this a General Education Course

   NO

   If Yes, indicate GE category:

   A (English Language, Communication, Critical Thinking)
   B (Mathematics & Sciences)
   C (Fine Arts, Literature, Languages & Cultures)
   D (Social Perspectives)
   E (Human Psychological and Physiological Perspectives)

5. Course Content in Outline Form. [Be as brief as possible, but use as much space as necessary]

NEWCRSFR 9/30/02
Introduction to Languages
Standardization and Internationalization
Language Translation and Grammar
Regular Grammar
Recursive Descent Parsing
Introduction to LISP
Perl
Parameter Transmission
Heap Storage
Garbage Collection
Overview of C and C++
Introduction to Java

6. References. [Provide 3 - 5 references on which this course is based and/or support it.]

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

7. List Faculty Qualified to Teach This Course.

All Computer Science faculty.

8. Frequency.

a. Projected semesters to be offered: Fall ___X__  Spring _X____  Summer ___X__

9. New Resources Required.

a. Computer (data processing), audio visual, broadcasting needs, other equipment

   Use of existing computer lab.

b. Library needs

   none

c. Facility/space needs

   none

10. Consultation.

   Attach consultation sheet from all program areas, Library, and others (if necessary)

11. If this new course will alter any degree, credential, certificate, or minor in your program, attach a program modification.

Proposer of Course    Date

NEWCRSFR 9/30/02