



PROCESS A NON-GENERAL EDUCATION CURRICULUM PROPOSAL

SCC #02-03-

Deadlines:

Regular proposals: October 18, 2002 to be implemented Fall 2003; Short-Term proposals: December 6, 2002 to be implemented Fall 2003
Regular proposals: February 14, 2003 to be implemented Spring 2004; March 27, 2003 short-term courses to be implemented Spring 2004

PROPOSAL TITLE: Course Proposal: Java for Object Oriented Programmers

Sponsor(s): Seth Bergmann E-Mail: bergmann@uconn.edu Ext: 3197
and Steve E-Mail: _____ Ext: _____
Computer Science E-Mail: _____ Ext: _____
Department E-Mail: _____ Ext: _____

DEPARTMENT: Computer Science

COLLEGE: Liberal Arts and Sciences

If Liberal Arts & Sciences CHECK : History/Humanities Math/Sciences Social/Behavioral Sciences
 UNDERGRADUATE GRADUATE

THE ATTACHED **NON-GEN-ED** PROPOSAL IS BEST DESCRIBED BY THE ITEM(S) CHECKED.

- New non-gen-ed course
- Short-term non-gen-ed course
- Minor curricular changes (fewer than three)
- Existing non-gen-ed course
- Non-gen-ed degree requirements
- Major
- Minor, specialization, concentration, track, certificate program

The following signatures REPRESENT APPROVAL

Department Chair: [Signature] Date: 7/2/02
 Department Curriculum Chair: [Signature] Date: 2 July 2002
 Academic Dean: [Signature] Date: 7-2-02
 College Curriculum Chair: [Signature] Date: 12-13-02
 College Curriculum Committee OPEN HEARING Date: 12-13-02 Approved Not Approved

UNIVERSITY CURRICULUM COMMITTEE

Senate Curriculum Chair Signature: [Signature] Date: Senate Announcement/Vote:
Comments:

EXECUTIVE VICE PRESIDENT/PROVOST Signature: [Signature] Date: 5/3/03

**Approved with required review at that space to determine continued need for course*
 Approved ~ Not Approved due to the following: Student Cr Hrs Faculty Load Hrs Equalized Cr Hrs

REGISTRAR

Date: 6/3/03 Course Description Received & Approved ~ Hegis Taxonomy & Course #: 0704112 to 9/17/03
Registrar Signature: [Signature]

NOTIFICATION FORWARD

SCC Chair Academic Dean Department Chair Registrar Sponsor(s)
P.A.P. Adm. Serv. J.R. Small - Schmitz Small, Mummert, VanDunst TM 6/10/03

Course Proposal Java for Object Oriented Programmers

1. Details:

- a. Course Title: Java for Object Oriented Programmers
- b. Sponsor(s): Seth Bergmann, Stephen Hartley, Computer Science Department
- c. Credit Hours: 1 cr.
- d. Course Level: Undergraduate, [Frosh/Soph Level]
- e. Prerequisite: Computer Science & Programming (0704.103) or equivalent background in object-oriented programming
- f. Time scale: This course is to be offered every semester, and possibly in the summer, immediately upon approval. ~~It will be offered short-term, if necessary, Spring '03.~~ *Ref 2/25/2003*
- g. Curricular Effect: This course will not be required for students in the CS major; it may be taken as a free elective.
- h. No additional resources will be needed.
- i. Recommended Library Resources: Additional books on Java have been ordered for the library.
- j. Short-term Evaluations: This course may be offered Spring '03, at which time a short-term evaluation will be provided.

2. Rationale:

Our curriculum is changing from a C++ based curriculum to a Java based curriculum. This does not mean that students will be writing all of their programs in Java; it does mean that courses such as Data Structures, Analysis of Algorithms, Operating Systems, Compiler Design, etc. which need to use a language to express concepts will be using Java rather than C++ to express those concepts. This transition has been motivated by (1) Java is usually better suited than C++ for the concepts of computer science, (2) most other B.S. programs in the U.S. have switched, or are switching, to Java, (3) The ETS has changed the AP course to a Java based course. During this transition period (and perhaps after this period) there will be a number of current students, as well as transfer students, who began their study of computer science with C++ and will need to learn the rudiments of Java in order to continue in our program. Since the syntax of Java is similar to the syntax of C++, a 1 credit course should be sufficient for those students who have an adequate background.

3. Essence of the Course:

- a. Students taking this course will already have the ability to write programs in an object-oriented language such as C++. It will be

assumed that they can not only use, but also design, classes appropriately. Students will write several programs in Java to demonstrate knowledge of the syntax and semantics of Java. They will demonstrate knowledge of inheritance, encapsulation, and polymorphism, as expressed in Java. The programs they write will reflect knowledge of the topics shown below.

- b. Topical Outline/Content
 - Primitive Data Types
 - Control Structures
 - Methods (functions)
 - Input and Output
 - Classes
 - Instance variables and instance methods
 - Class variables and class methods
 - Encapsulation
 - Inner classes
 - Inheritance
 - Polymorphism
 - Javadoc (documentation)
 - API (Application Program Interface)
- c. Students will be evaluated on the basis of functional, correctly working programs, quizzes, and exams.
- d. Course Evaluation: This course will be evaluated through student surveys, as well as by the Computer Science Accreditation Commission when our major is to be re-evaluated in 2003.

4. Consultations

- a. Dan Davis, Management & M.I.S.
- b. John Schmalzel, Electrical & Computer Engineering
- c. Ron Czochoz, Mathematics

6. Catalog Description:

0704.112 (Suggested hegis number)

1 s.h.

Java for Object-Oriented Programmers

(Prerequisite: 0704.103, or equivalent experience)

This course is designed for students who have substantial programming experience in an object-oriented language, but who need to learn Java as prerequisite knowledge for other courses in the curriculum. Students will study the syntax and semantics of Java, classes (inheritance, encapsulation, polymorphism, methods, etc.) control structures, input/output, and documentation schemes.