

Rowan University
Computer Science Department

**Proposal: Minor Changes to the
Computer Science Course CS 04.112,
Java for Object-Oriented Programmers**

1. Details

a. Changes Requested

We request approval for the following two minor changes to the Computer Science course CS 04.112, Java for Object-Oriented Programmers.

1. Change the catalog course description to reflect what needs to be taught for a student to succeed in the successor course, CS 04.114, Object-Oriented Programming and Data Abstraction.
2. Change the course from a one-credit course meeting once a week for 50 minutes of lecture to a two-credit course with one 50-minute lecture class a week and one 150-minute lab a week. The faculty teaching load will be three credits.

b. Sponsor

Stephen J. Hartley and members of the Computer Science Department Curriculum Committee.

2. Rationale

a. Need for the Change

CS 04.112, Java for Object-Oriented Programmers, CS 04.113, Introduction to Object-Oriented Programming, and CS 04.114, Object-Oriented Programming and Data Abstraction, have been taught every semester since fall 2003 and spring 2004, respectively.

Incoming freshman computer science majors take the two-course sequence CS 04.113, Introduction to Object-Oriented Programming, and CS 04.114, Object-Oriented Programming and Data Abstraction, both four-credit courses that have a lab meeting once a week. (Faculty teaching these courses receive five credits of load.) This sequence replaced the courses CS 01.102, Introduction to Programming, and CS 04.103, Computer Science and Programming.

Internal and external transfer students with a previous programming course, such as CS 04.103, Computer Science and Programming, at Rowan or a comparable course at a community college, take CS 04.112, Java for Object-Oriented Programmers, followed by CS 04.114, Object-Oriented Programming and Data Abstraction. Currently, CS 04.112, Java for Object-Oriented Programmers, is a one-credit course that meets once a week for 50 minutes of lecture.

Our experience with this scheme is that transfer students are not adequately prepared for Object-Oriented Programming and Data Abstraction by Java for Object-Oriented Programmers, given its current once-a-week 50-minute lecture meeting. There is no way to cover all the material needed by a student going on to Object-Oriented Programming and Data and Data Abstraction, and more critically, there is no supervised

laboratory experience in which students work on programming assignments while guided by the faculty member teaching the course.

To remedy this situation, we propose giving Java for Object-Oriented Programmers a laboratory meeting of the standard length (150 minutes) once a week. Students will earn two credits for the course and faculty teaching the course will receive three credits of load. (Faculty teaching a computer science course with a lab receive two credits of load for teaching the lab and students receive one credit for taking the lab.)

We also propose changing the course description **from**

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.

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This course is designed for students who have substantial programming experience in an object-oriented language, such as C++, but who need to learn the Java language as prerequisite knowledge for other courses in the curriculum. Students will study the syntax and semantics of the Java, specifically, classes and objects, abstraction, encapsulation, data types, calling methods and passing parameters, decisions, loops, arrays and collections, documentation, testing and debugging, exceptions, design issues, inheritance, and polymorphic variables and methods.

b. Curricular Effect

Students will be much better prepared by CS 04.112, Java for Object-Oriented Programmers, for CS 07.114, Object-Oriented Programming and Data Abstraction, and will have a much better opportunity to succeed in that successor course.

c. Staffing

Staffing the course with its increased credit hours will not be a problem. At least half the computer science faculty is qualified to teach this course and our decreasing enrollment since the “dot com” collapse has eliminated any faculty or classroom/laboratory shortage we might have had in the past.

3. Results of Consultation

We solicited letters of consultation from Management Information Systems, Mathematics, and Electrical/Computer Engineering. Received letters are attached.

From hartley Fri Jan 19 12:37:31 2007

To: czochor@rowan.edu, hamilton@rowan.edu, schmalzel@rowan.edu

Subject: letters of consultation for two curriculum proposals

Here are two Computer Science curriculum proposals for the spring 2007 cycle. We are asking for letters of consultation. Thanks for your help.

revised March 2, 2007

<http://elvis.rowan.edu/~hartley/Curriculum/200702/minorChangeIOOP-00PDA.pdf>
<http://elvis.rowan.edu/~hartley/Curriculum/200702/minorChangeJ00P.pdf>

From hamilton@rowan.edu Fri Jan 19 14:35:06 2007
Date: Fri, 19 Jan 2007 13:08:24 -0500
From: "Hamilton, Diane" <hamilton@rowan.edu>
To: Stephen J. Hartley <hartley@elvis.rowan.edu>
Subject: RE: letters of consultation for two curriculum proposals

Hi Stephen,

I have reviewed your two minor curriculum proposals, as requested in your email below, and from the perspective of the MIS faculty, we have no concerns with the changes that you propose, and believe that making the catalog descriptions more accurate is a great thing to do. Thank you for the opportunity to review them.

Sincerely,

Diane Hamilton
Professor of MIS

MEMORANDUM

DATE: 2/5/2007
TO: Steve Hartley, Computer Science Department
FROM: Linda Head, Electrical and Computer Engineering
RE: Consult for: Proposal: Minor Change to the Computer Science Course CS 04.112 Java for Object-Oriented Programmers

The Electrical and Computer Engineering program is pleased to endorse the Computer Science curriculum proposal titled, "Proposal: Minor Change to the Computer Science Course CS 04.112 Java for Object-Oriented Programmers" This change will impact Electrical and Computer Engineering students pursuing the Minor in Computer Science. The additional 1 credit hour will not be an excessive burden and we believe that they will profit from the laboratory experience that is proposed.

From Czochor@rowan.edu Mon Feb 5 17:26:21 2007
Date: Mon, 5 Feb 2007 16:25:21 -0500
From: "Czochor, Ronald" <Czochor@rowan.edu>

revised March 2, 2007

To: Stephen J. Hartley <hartley@elvis.rowan.edu>
Subject: RE: letters of consultation for two curriculum proposals

Steve,

The Math Department has reviewed your two minor curriculum changes with respect to catalog revisions and credit change. We have no concerns with respect to these proposals. The revisions to the catalog should be helpful in fully describing these courses and their value in subsequent courses. We have no comment on the increase in credit hours.

Ronald J. Czochoz, Chairman
Mathematics Department
Rowan University
Phone: 856.256.4845
Fac: 856.256.4816

From hartley Thu Feb 8 15:29:34 2007
To: czochoz@rowan.edu, hamilton@rowan.edu, head@rowan.edu
Subject: Re: minor changes to JOOP/IOOP/OOPDA courses

Ron, Diane, and Linda,

Recent feedback from the computer science faculty has led me to revise the proposals a bit since I sent out the request for consultation letters. The changes are

- (1) split the IOOP/OOPDA proposal into two proposals,
- (2) reduce the length of the IOOP catalog description a bit.

The revised proposals are linked at the top of the following Web page.

<http://elvis.rowan.edu/~hartley/Curriculum/index.html>

Thanks.

Steve

From hamilton@rowan.edu Thu Feb 8 16:25:45 2007
Date: Thu, 8 Feb 2007 15:56:31 -0500
From: "Hamilton, Diane" <hamilton@rowan.edu>
To: Stephen J. Hartley <hartley@elvis.rowan.edu>
Subject: RE: minor changes to JOOP/IOOP/OOPDA courses

Hi Steve,

revised March 2, 2007

The MIS faculty have no problems with the changes to these proposals.
Thanks for sharing them.

diane