

Rowan University
Computer Science Department

Proposal: Minor Change to the Computer Science Prerequisites

1. Details

a. Change Requested

We request approval for the following minor change to the Computer Science course prerequisites.

The Computer Science major requirements include earning a grade of C– or better in Discrete Structures (MATH 03.160), Introduction to Object-Oriented Programming (CS 04.113), Object-Oriented Programming and Data Abstraction (CS 04.114), Computer Organization (CS 06.205), and Data Structures and Algorithms (CS 04.222). For clarity, we wish to include this grade requirement explicitly in the prerequisites of any course having in its prerequisites one or more of the courses listed above that require a C– or better for graduation.

Change the following prerequisites wherever they appear in the catalog **from**

- Discrete Structures (MATH 03.160),
- Introduction to Object-Oriented Programming (CS 04.113),
- Object-Oriented Programming and Data Abstraction (CS 04.114),
- Computer Organization (CS 06.205),
- Data Structures and Algorithms (CS 04.222)

to

- C– or better in Discrete Structures (MATH 03.160),
- C– or better in Introduction to Object-Oriented Programming (CS 04.113),
- C– or better in Object-Oriented Programming and Data Abstraction (CS 04.114),
- C– or better in Computer Organization (CS 06.205),
- C– or better in Data Structures and Algorithms (CS 04.222).

Courses whose prerequisites will be changed by this proposal are the following.

- Object-Oriented Programming and Data Abstraction (CS 04.114),
- C++ for Java Programmers (CS 04.115),
- Web Programming (CS 04.305),
- Programming Languages (CS 04.315),
- Programming in Ada (CS 04.325),

- Power Java (CS 04.327),
- Operating Systems (CS 04.390),
- Computer Organization (CS 06.205),
- Principles of Digital Computers (CS 06.310),
- Digital Computer Laboratory (CS 06.311),
- Software Engineering I (CS 07.321),
- Design and Analysis of Algorithms (CS 07.340),
- Theory of Computing (CS 07.422),
- Artificial Intelligence (CS 07.450),
- Computer Vision (CS 07.460).

For example, change the prerequisites of CS 04.390 Operating Systems **from**

CS 04.222 Data Structures and Algorithms and CS 06.205 Computer Organization

to

C– or better in CS 04.222 Data Structures and Algorithms and C– or better in CS 06.205 Computer Organization

b. Sponsor

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

2. Rationale

a. Need for the Changes

Currently, a Computer Science major can take a course in which a grade of C– or better is required for graduation, earn less than a C–, and continue taking more Computer Science courses. Finally, in the senior year, the student retakes the course requiring a C– or better in order to satisfy the graduation requirement. We feel this “short-circuits” or “games” the system. The student will learn more and be better served by not taking subsequent courses until the prerequisite courses are sufficiently mastered.

b. Curricular Effect

Computer Science majors will not be able to take follow-on courses until earning a C– or better in the prerequisite courses which require such a grade for graduation.

3. Results of Consultation

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

From hartley Wed Jan 30 13:06:04 2008
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 2008 cycle. We are asking for letters of consultation.

<http://elvis.rowan.edu/~hartley/Curriculum/200802/updatePrereqsFoundDSA.pdf>

<http://elvis.rowan.edu/~hartley/Curriculum/200802/updatePrereqsCminus.pdf>

If you are not the correct person to ask, please forward this request to the proper person.

Thanks for your help.

Steve Hartley

From hamilton@rowan.edu Thu Jan 31 09:41:53 2008
Date: Thu, 31 Jan 2008 09:37:02 -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 Steve,

The MIS faculty is in unanimous support for your two curriculum proposals. Thank you for sharing this information with us.

Diane Hamilton
Professor of MIS

MEMORANDUM

TO: Stephen Hartley
Department of Computer Science

FROM: Hieu Nguyen, Chair
Department of Mathematics

DATE: January 31, 2008

SUBJECT: Re: Consultation for proposed changes to prerequisites

for CS courses

The Department of Mathematics supports the two proposals put forth by Computer Science to change its course prerequisites, in particular those that require Discrete Structures (Math 03.160). Requiring CS students to earn at least a grade of C- in Discrete Structures will certainly strengthen their preparation for both upper-level CS and math courses. The Math Department already requires its own students to earn at least a C- in all math courses and so it welcomes this minimum grade requirement. For those students taking Discrete Math (Math 03.150) as a substitute for Discrete Structures, it is hoped the same minimum grade of C- will also be required.

MEMORANDUM

DATE: 2/25/2007

TO: Steve Hartley, Computer Science (CS) Department

FROM: Linda Head, Electrical and Computer Engineering (ECE)

RE: Consult for:

Proposal: Two Minor Changes to the Computer Science Prerequisites
and

Proposal: Minor Change to the Computer Science Prerequisites

The Electrical and Computer Engineering program is pleased to endorse the Computer Science curriculum proposals mentioned above. These changes will impact Electrical and Computer Engineering students pursuing the Minor in Computer Science. The pre-requisite changes requiring minimum grades of C- are very much in line with our own requirements for major courses in ECE. It is reasonable to expect ECE students taking advanced CS courses toward the CS minor to have mastered the pre-requisites at the C- or better level.