

CURRICULUM PROPOSAL FORM 2001-2002

NEW PROGRAMS, MAJOR PROGRAM REVISIONS, AND PROGRAM NAME CHANGES PROCESS C

*DEADLINES: Deadline dates for 2001/2002 submissions: Regular proposals: October 19, 2001 to be implemented in Fall 2002; Short-Term proposals: December 7, 2001 to be implemented in Fall, 2002; Regular proposals February 15, 2002 to be implemented in Spring, 2003; March 22, 2002 for short-term courses to be implemented in Spring 2003.

PROPOSAL TITLE: Proposal for Specializations

SPONSOR(S): Stephen J. Hartley

DEPARTMENT: Computer Science Department

COLLEGE:

IF LAS CHECK ONE: History/Humanities Math/Sciences Social/Behavioral Sciences

Check One: Undergraduate Graduate

The attached NEW PROGRAM/MAJOR PROGRAM REVISION/PROGRAM NAME CHANGE proposal is best described by the item(s) checked.

New degree program

New Certificate of Graduate Study Program

New major

New minor

New concentration, specialization, or track

Major changes to degree requirements, major, minor, or certificate program.

Changes to name of college, school, department or degree

Quasi Curricular

DEPARTMENT
(Signature indicates approval)

Stephen J. Hartley 10/1/2001

Dept. Curriculum Chair / Date

[Signature] X 10/1/2001

Dept. Chairperson / Date

ACADEMIC DEAN (& Graduate Dean, for New Graduate Programs Only)

Approved Not Approved _____ Comments: _____

Academic Dean's Signature/Date Joy Hunter 10/1/01

Graduate Dean's Signature/Date _____

COLLEGE CURRICULUM COMMITTEE

Approved Not Approved _____

Comments: changes made See attached - Requested changes made (hr) old cover sheet

Signature of College Chair/Date: Helen Nguyen 2-1-02

UNIVERSITY CURRICULUM COMMITTEE

Date of Open Hearing (if necessary) 2/26/02 Approved _____ Not Approved _____

Comments: _____

Curriculum Chair Signature/Date Samuel M. Reeves

Date voted upon at Senate (if necessary) 3/26/02 Approved Not Approved _____

EXECUTIVE VICE PRESIDENT/PROVOST

Approved Not Approved _____ If no, reasons are as follows: _____

Student Credit Hours _____ Faculty Load Hours _____ Equalized Credit Hours _____

Official Copy & Approval Sheet Filed (Date): _____ Executive VP/Provost Signature/Date Alan G. Lee 11/20/02

REGISTRAR

Date Approved Course Description Received _____ Hegis Taxonomy & Course Number Assigned _____

Registrar Signature/Date [Signature] 11/20/02

NOTIFICATION FORWARD

Senate Curriculum Committee Chairperson Academic Dean(s) [Signature]

Department Chairpersons Registrar 11-20-02 Sponsor(s) _____

**Rowan University
Computer Science Department**

Proposal for Specializations

**Stephen J. Hartley
Curriculum Committee**

Abstract

In order to give our majors the opportunity to concentrate, we propose adding optional specializations to the computer science major at Rowan University. A specialization will be composed of four or more specified courses in computer science and other related disciplines that provide a solid foundation in some fundamental area of computer science. We have identified the following areas of specialization: software engineering, networking and operating systems, information technology, programming languages and compilers, artificial intelligence, and numerical and scientific computation.

The specializations will be in effect for the fall 2002 semester. No resources are required.

Rowan University Computer Science Department

Proposal for Specializations

2. Details

a. Proposal Title

A proposal to add specializations to the computer science major at Rowan University.

b. Sponsor

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

c. Scope and Size

We currently propose seven specializations. To obtain one of the specializations, a student must take four or more courses from the list associated with that specialization.

d. Relationship to Curriculum

No other departments will be affected; the specializations will apply only to computer science majors. The total number of credit hours required for the computer science major will not change.

e. Eligibility

Any student majoring in computer science will have the option to select one or more specializations. Students are not required to select any specializations.

f. Implementation Time Scale

Effective Fall 2002 for all computer science majors.

g. Resource Requirements

None.

h. Recommended Library Resources

None.

3. Rationale

Rowan's computer science majors will be more competitive in the job market and more attractive to employers when they graduate if they are able to document their skills in particular areas of computer science, such as software engineering, networking and operating systems, information technology, numerical and scientific computation.

4. Essence of the Specializations

a. Major Goals

In order to give our majors the opportunity to concentrate, we propose adding optional specializations to the computer science major at Rowan University.

b. Specific Objectives

Specializations will make our graduating students more competitive in the job market since employers will be able to identify areas of expertise.

c. Structure

A specialization will be composed of four or more specified courses in computer science and other related disciplines that provide a solid foundation in some fundamental area of computer science. We have identified the following areas of specialization: software engineering, networking and operating systems, information technology, programming languages and compilers, artificial intelligence, and numerical and scientific computation.

The following table specifies the courses making up each specialization. To obtain one of these specializations, a student must take four or more courses from the specialization's list.

software engineering	Programming Languages, 0704.315 Design and Analysis of Algorithms, 0707.340 Principles of Software Engineering, 0707.321 Software Engineering Practicum, 0707.322 Object Oriented Design, 0704.380
networking and operating systems	Operating Systems, 0704.390 Data Communications and Networking, 0706.410 System Programming and Operating System Internals, 0704.392 Advanced Computer Architecture, 0706.412 Principles of Digital Computers, 0706.310
information technology	Computer Laboratory Techniques, 0701.205 Web Programming, 0704.305 Principles Software Engineering, 0707.321 Operating Systems, 0704.390 Data Communications and Networking, 0706.410
programming languages and compilers	Programming Languages, 0704.315 Object Oriented Design, 0704.380 Foundations of Computer Science, 0707.210 Compiler Design, 0704.410 Principles Software Engineering, 0707.321
artificial intelligence	Introduction to Probability and Statistics I, 1702.360 Foundations of Computer Science, 0707.210 Introduction to Symbolic Logic, 1509.130 Artificial Intelligence, 0707.450 Programming Languages, 0704.315 Robotics: Software and Mobility, 0707.310; or Computer Vision, 0707.xxx
numerical and scientific computation	Design and Analysis of Algorithms, 0707.340 Linear Algebra, 1701.210 Ordinary Differential Equations, 1701.231 Numerical Analysis, 1701.332 Calculus III, 1701.230

d. Administration

Clerical duties only.

5. Results of Consultation

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

6. New Courses

No new courses are being proposed; only existing courses in computer science and related departments will be required in the specializations.



Mathematics Department

MEMO

TO: Jennifer Kay
Computer Science Department

FROM: Ron Czocho, Chair
Mathematics Dept

DATE: December 20, 2000

RE: Consultation on proposed changes to CS major

Thank you for the opportunity to review the changes you have proposed in the Computer Science B.S. degree. I have carefully studied your proposal and I support the suggested changes. These changes will require your students to develop a more focussed set of electives and I think that is a good thing.

The inclusion of Calculus I in your core will have no effect on the Mathematics Department since the students already take the course. The only possible effect would be that it better describes the appropriate order for taking Calculus I with respect to Discrete Mathematics.

I am disappointed that Numerical Analysis will no longer be listed as a possible Restricted Elective. My disappointment stems from the fact that the field of numerical analysis was the place where computer science was born. Nevertheless, I understand the need for this change and recognize that students who are interested in this topic can take the course as an elective.

I have read the proposal for Specializations within the Computer Science major. While the numerical and scientific computation option could cause a marginal increase in enrollments in some Mathematics courses, the courses we are talking about could handle up to 10 students per year without the necessity of offering another section.

This proposal with 6 different specializations should not generate more than 10 students selecting the specialization that would have an impact on the Math Department. So I have no problem with this proposal and I support it.

Ron Czocho, Chairman
Mathematics Department
Rowan University
(856)-256-4845

My homepage: <http://www.rowan.edu/mars/depts/math/czocho/Homepage/homepage.html>

Dept. homepage: <http://www.rowan.edu/mars/depts/math/>

To: Math/Science Curriculum Committee
From: Jennifer Kay, Chair, Computer Science Curriculum Committee
Re: Course Consultations for Computer Science Proposals

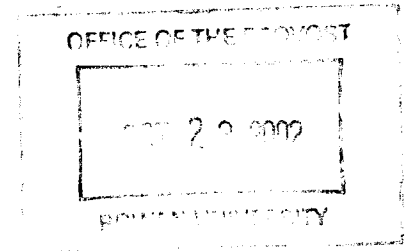


Attached is a record of correspondence with

- John Schmalzel, Chair, Electrical & Computer Engineering, and
- Jooh Lee, Chair, MIS Department

Dr. Schmalzel & Dr. Lee were asked for consultations for computer science proposals on October 18th, 2000, and again on November 29th, 2000. Neither provided a consultation for any of the courses.

Dr. Martin Itzkowitz, chair, University Curriculum Committee, recommended that I provide you with a record of correspondence, which you will find attached.



Department of Electrical and Computer Engineering

MEMORANDUM

To: Steven Hartley

From: Robi Polikar, Electrical and Computer Engineering,
Chair, Curriculum Committee.

Reference: Proposal on Computer Science Specializations

Date: 16 October 2002

Thank you for providing us the opportunity to review your course proposal on providing new specialization areas for your students in the computer science major. We have carefully read and discussed your proposal.

As the body of knowledge in engineering and computer science exponentially grows, it becomes increasingly difficult and inefficient for departments to provide this information to their students. Clearly the strategy for educating the 21st century students should be providing an essential and strong background, along with the tools necessary to efficiently acquire new information. An excellent way of implementing this strategy would be to teach a common curriculum of essential background, with a set of carefully designed electives that would allow the student to specialize in an area of related interest.

Therefore, the Dept. of Electrical and Computer Engineering fully supports your proposal to provide such specialization to your students. We would like point out that there are some courses within the Electrical and Computer Engineering curriculum (currently in place or pending for approval) that may be also provide essential content for some of your specialization areas. One such example is our currently pending course proposal for Pattern Recognition (0909.455 / 0909.555), which would fit very nicely into your Artificial Intelligence specialization track.

We appreciate the efforts you are making to update and modernize your curriculum and continue to look forward to being kept informed about such progress. Please feel free to let the ECE Department know if we can be of any further assistance in this matter.

OLD
to be discarded
and replaced with new process C cover sheet

PROPOSAL SCC #00-01 705

CURRICULUM PROPOSAL FORM 2000-2001
NON-GENERAL EDUCATION PROCESS A

***DEADLINES:** Deadline dates for 2000/2001 submissions: Regular proposals: October 20, 2000 to be implemented in Fall 2001; Short-Term proposals: December 8, 2000 to be implemented in Fall, 2001; Regular proposals February 16, 2001 to be implemented in Spring, 2002; March 23, 2000 for short-term courses to be implemented in Spring 2002.

PROPOSAL TITLE: Proposal for Specializations

SPONSOR(S): Stephen J. Hartley + Computer Science Department

DEPARTMENT: Computer Science Department

COLLEGE: LAS

IF LAS CHECK ONE: History/Humanities Math/Sciences Social/Behavioral Sciences

Check one: Undergraduate Graduate

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) to:
 - existing non-gen-ed course
 - non-gen-ed degree requirements
 - major
 - minor, specialization, concentration, track, certificate program

OCT 20 2000

DEPARTMENT
(Signature indicates approval)

Dept. Curriculum Chair / Date

Dept. Chairperson / Date

[Signature] 10/20/00
[Signature] 10/20/00

A DEMIC DEAN

Approved Not Approved Comments:

Dean's Signature/Date *[Signature]* 10-27-00

RECEIVED

CURRICULUM PROPOSAL FORM 2001-2002

NEW PROGRAMS, MAJOR PROGRAM REVISIONS, AND PROGRAM NAME CHANGES PROCESS C

*DEADLINES: Deadline dates for 2001/2002 submissions: Regular proposals: October 19, 2001 to be implemented in Fall 2002; Short-Term proposals: December 7, 2001 to be implemented in Fall, 2002; Regular proposals February 15, 2002 to be implemented in Spring, 2003; March 22, 2002 for short-term courses to be implemented in Spring 2003.

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DEPARTMENT: Computer Science Department

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New minor

New concentration, specialization, or track

Major changes to degree requirements, major, minor, or certificate program.

Changes to name of college, school, department or degree

Quasi Curricular

DEPARTMENT

(Signature indicates approval)

Dept. Curriculum Chair / Date Stephen J. Hartley 10/1/2001

Dept. Chairperson / Date J. Xu 10/1/2001

ACADEMIC DEAN (& Graduate Dean, for New Graduate Programs Only)

Approved Not Approved _____ Comments:

Academic Dean's Signature/Date *Joy Harper* 10/1/01

Graduate Dean's Signature/Date _____

COLLEGE CURRICULUM COMMITTEE

Approved Not Approved _____

Comments:

Changes made

See attached - Requested Changes made (NR) 2-1-02 old cover sheet

Signature of College Chair/Date: *H. Ann Nguyen* ~~2-1-02~~

UNIVERSITY CURRICULUM COMMITTEE

Date of Open Hearing (if necessary) 2/26/02 Approved _____ Not Approved _____

Comments:

Curriculum Chair Signature/Date *Janette M. Reeves*

Date voted upon at Senate (if necessary) 3/26/02 Approved Not Approved _____

EXECUTIVE VICE PRESIDENT/PROVOST

Approved _____ Not Approved _____ If no, reasons are as follows:

Student Credit Hours _____ Faculty Load Hours _____ Equalized Credit Hours _____

Official Copy & Approval Sheet Filed (Date): _____ Executive VP/Provost Signature/Date _____

REGISTRAR

Date Approved Course Description Received _____ Hegis Taxonomy & Course Number Assigned _____

Registrar Signature/Date _____

NOTIFICATION FORWARD

_____ Senate Curriculum Committee Chairperson _____ Academic Dean(s)

_____ Department Chairpersons _____ Registrar _____ Sponsor(s)

OLD
to be discarded
and replaced with new process C cover sheet

PROPOSAL SCC #00-01 705

CURRICULUM PROPOSAL FORM 2000-2001

NON-GENERAL EDUCATION PROCESS A

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SPONSOR(S): Stephen J. Hartley + Computer Science Department

DEPARTMENT: Computer Science Department

COLLEGE: LAS

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Check one: 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) to:

existing non-gen-ed course

non-gen-ed degree requirements

major

minor, specialization, concentration, track, certificate program

OCT 20 2000

DEPARTMENT
(Signature indicates approval)

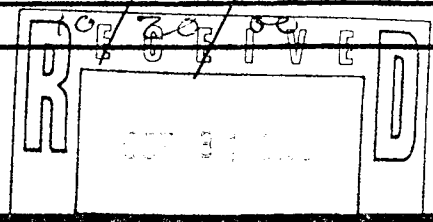
Dept. Curriculum Chair / Date *[Signature]* 10/20/00

Dept. Chairperson / Date *[Signature]*

DEMIC DEAN

Approved Not Approved Comments:

Dean's Signature/Date *[Signature]* 10-27-00



COLLEGE CURRICULUM COMMITTEE

Date of open hearing (if necessary) _____ Approved Not Approved _____

Comments:

Signature of College Chair/Date:

W. J. Fall _____ May 17 2001

UNIVERSITY CURRICULUM COMMITTEE

Date Received/Processed _____

Comments:

Curriculum Chair Signature _____ Date Announced At Senate _____

EXECUTIVE VICE PRESIDENT/PROVOST

Approved _____ Not Approved _____ If no, reasons are as follows:

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Registrar Signature/Date _____

NOTIFICATION FORWARD

_____ Senate Curriculum Committee Chairperson

_____ Academic Dean(s)

_____ Department Chairpersons

_____ Registrar

_____ Sponsor(s)

To: schmalzel@rowan.edu, lee@rowan.edu
From: Jennifer Kay <kay@elvis.rowan.edu>
Subject: Course consultations
Cc: hartley@rowan.edu, hristesc@elvis.rowan.edu, baliga@rowan.edu
Bcc: kay@elvis.rowan.edu
Attached:

My apologies for sending this so late, we've been running to get everything organized.

We are going to be submitting 7 curriculum proposals this year, and we'd like your consultation on them.

The props are:

2 database programming proposals (one graduate, one undergraduate)
A change to our major to reduce the number of credits to 120 from 123
A proposal to add concentrations to our major (so students can get a degree in CS with a concentration in AI for example)
2 computer vision proposals (one grad, one undergrad)
An undergraduate wireless networking course (the counterpart to the graduate course we already have on the books.

All of these proposals can be found at:
http://elvis.rowan.edu/~kay/course_props/

Again, sorry they're so late, and thanks for your help

-- Jennie Kay
CS Curriculum committee chair

*Remove email -
Key edit # - P. J. (repha)*

X-Sender: kay@elvis.rowan.edu
X-Mailer: QUALCOMM Windows Eudora Version 4.3.1
Date: Wed, 18 Oct 2000 18:44:52 -0400
To: czocho@rowan.edu
From: Jennifer Kay <kay@elvis.rowan.edu>
Subject: Consultation request
Cc: hartley@rowan.edu, hristesc@elvis.rowan.edu, baliga@rowan.edu

Ron,

My apologies for getting this out to you so late. We were wondering if you could give us a consultation on our change of major proposal that you'll find at:

http://elvis.rowan.edu/~kay/course_props/major_change.pdf

Thanks!

-- Jennie

(CS curriculum committee chair)

Jennifer Kay
Rowan University
Computer Science Department

kay@elvis.rowan.edu
<http://www.rowan.edu/~kay>

X-Mailer: Novell GroupWise Internet Agent 5.5.2.1
Date: Mon, 23 Oct 2000 13:45:06 -0400
From: "Jennifer S. Kay" <kay@rowan.edu>
To: <kay@elvis.rowan.edu>
Subject: Fwd: Course consultations-Delegated

>>> Schmalzel 10/23/00 13:44 >>>

ECE Team,

Please take a quick look at the slate (7) of CS course proposals. I would assume that you may have been contacted by the proposing faculty if they were seeking your opinion/input on certain topics...

jls



[TEXT27.htm](#)

Received: from cobain.rowan.edu

by groupwise.rowan.edu; Wed, 18 Oct 2000 18:49:30 -0400

Received: from elvis.rowan.edu (elvis.rowan.edu [150.250.64.69])

by cobain.rowan.edu (8.9.3/8.9.3) with ESMTP id SAA10065;

Wed, 18 Oct 2000 18:49:33 -0400

Received: from jkay.elvis.rowan.edu (dhcp-139-238.rowan.edu [150.250.139.238])

by elvis.rowan.edu (8.9.3/8.9.3) with ESMTP id SAA2854037;

Wed, 18 Oct 2000 18:49:06 -0400 (EDT)

Message-Id: <4.3.1.2.20001018183456.00b64480@elvis.rowan.edu>

X-Sender: kay@elvis.rowan.edu

X-Mailer: QUALCOMM Windows Eudora Version 4.3.1

Date: Wed, 18 Oct 2000 18:49:14 -0400

To: schmalzel@rowan.edu, lee@rowan.edu

From: Jennifer Kay <kay@elvis.rowan.edu>

Subject: Course consultations

Cc: hartley@rowan.edu, hristesc@elvis.rowan.edu, baliga@rowan.edu

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"; format=flowed

My apologies for sending this so late, we've been running to get everything organized.

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A proposal to add concentrations to our major (so students can get a degree in

CS with a concentration in AI for example)
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An undergraduate wireless networking course (the counterpart to the graduate course we already have on the books.

All of these proposals can be found at:
http://elvis.rowan.edu/~kay/course_props/

Again, sorry they're so late, and thanks for your help

-- Jennie Kay
CS Curriculum committee chair

Jennifer Kay
Rowan University
Computer Science Department

kay@elvis.rowan.edu
<http://www.rowan.edu/~kay>

To: schmalzel@rowan.edu, czochor@rowan.edu
From: Jennifer Kay <kay@elvis.rowan.edu>
Subject: Course consultations
Cc: hartley@rowan.edu, hristesc@elvis.rowan.edu, baliga@rowan.edu
Bcc:
Attached:

Hi,

I never heard back from you about our course consultation request. I assume this is because they're not terribly controversial. If you have comments, could you please get them to me asap.

Thanks,

-- Jennie

To: lee@rowan.edu
From: Jennifer Kay <kay@elvis.rowan.edu>
Subject: Course consultation request
Cc: hartley@rowan.edu, hristesc@elvis.rowan.edu, baliga@rowan.edu
Bcc:
Attached:

Hi,

I never heard back from you about our course consultation request. I assume this is because they're not terribly controversial. If you have comments, could you please get them to me asap.

Thanks,

-- Jennie

X-Mailer: Novell GroupWise Internet Agent 5.5.2.1
Date: Wed, 29 Nov 2000 17:40:26 -0500
From: "John L. Schmalzel" <Schmalzel@rowan.edu>
To: <kay@elvis.rowan.edu>
Cc: "Linda M. Head" <head@groupwise.rowan.edu>,
"Robert R. Krchnavek" <krchnavek@groupwise.rowan.edu>,
"Raul E. Ordonez" <ordonez@groupwise.rowan.edu>,
"Ravi Prakash Ramachandran" <ravi@groupwise.rowan.edu>,
"John L. Schmalzel" <Schmalzel@groupwise.rowan.edu>,
"Shreekanth A. Mandayam" <Shreek@groupwise.rowan.edu>,
"Xiao-Hua Yu" <xhyu@groupwise.rowan.edu>
Subject: Re: Course consultations



[TEXT75.htm](#)

Jennifer,

I fwd'd the list around to the faculty, but have yet to hear any/much feedback. I'll cc this to the ECE faculty for last-minute remarks.

Thanks!

jls

>>> Jennifer Kay <kay@elvis.rowan.edu> 11/29/00 12:56PM >>>

Hi,

I never heard back from you about our course consultation request. I assume this is because they're not terribly controversial. If you have comments, could you please get them to me asap.

Thanks,

-- Jennie

Jennifer Kay
Rowan University
Computer Science Department

kay@elvis.rowan.edu
<http://www.rowan.edu/~kay>

To: "John L. Schmalzel" <Schmalzel@rowan.edu>
From: Jennifer Kay <kay@elvis.rowan.edu>
Subject: Re: Course consultations
Cc:
Bcc:
Attached:

Thanks, John. Assuming they don't have any feedback, can you send me a quick "all ok" note.

-- Jennie

At 05:40 PM 11/29/00 -0500, you wrote:
Jennifer,

I fwd'd the list around to the faculty, but have yet to hear any/much feedback. I'll cc this to the ECE faculty for last-minute remarks.

Thanks!
jls



*College of Business
Department Of Management &
Management Information Systems*

DATE: October 11, 2002
TO: Stephen J. Hartley, Computer Science Curriculum Committee
FROM: Diane Hamilton, for faculty in Management Information Systems *diane hamilton*
RE: Proposal for specializations

I have provided all MIS faculty with a copy of your proposal to add specializations to the Computer Science major, and we applaud your proposal. We find that there is no duplication or overlap with our current or planned coursework. (While there may be similar topics taught in both programs, clearly the treatment of these topics varies considerably.) Further, since these specializations are only available to computer science majors, so there will be no impact upon our current MIS students.

One faculty member suggested that it might be useful to your own students to prepare a matrix showing all the computer science courses on one axis and the specialization names on the other. A check mark could be placed at the appropriate intersections. This would help indicate the distinction among the specializations and also make clear the ease or difficulty of a "double" specialization (in case you are willing to allow students to do such a thing.)

Faison, Christy

From: Marty Cucinotta
Sent: Wednesday, November 20, 2002 2:26 PM
To: Stephen J. Hartley
Cc: Christy Faison; Helen Giles-Gee; Jay A. Harper; Jianning Xu
Subject: Computer Science Specialization

Dr. Hartley: Regarding your request for Computer Science Specialization. Mr. Eigenbrot has notified us that specializations are not noted on diplomas. However, Dr. Giles-Gee has authorized Mr. Eigenbrot, Registrar, to record specializations on Fall 2002 graduate records. Any further questions should be addressed to Mr. Eigenbrot.
Thanks, Marty

From: Marty Cucinotta
To: Hartley, Stephen J.
Date: 11/20/02 2:26PM
Subject: Computer Science Specialization

Dr. Hartley: Regarding your request for Computer Science Specializations that specializations are not noted on diplomas. However, Dr. C Registrar, to record specializations on Fall 2002 graduate records addressed to Mr. Eigenbrot. Thanks, Marty

CC: eigenbrot@rowan.edu; Faison, Christy; Gile
Jianning

*Look for in Notebook
Bonnie has*

From: Marty Cucinotta
To: eigenbrot@rowan.edu
Date: 11/20/02 2:09PM
Subject: Computer Science Specialization

Ed: Spoke to Helen this morning. She said for you to go ahead with whatever you have to do to have this placed on this Fall 2002 graduates record. Any questions, please let me know. thanks, Marty

Specializations are never noted on a diploma. The question should be raised as to when the CS proposal was submitted and whether Dr. Giles-Gee would like this Fall 2002 graduates to have this placed upon their record. The registrar's office can do the programming, but is it appropriate would be better answered by the Provost.

>>> "Marty Cucinotta" <cucinotta@rowan.edu> 11/19/02 04:23PM >>>

Ed: I may be jumping the gun here but the Computer Science specialization was approved by the Academic Affairs Committee of the BOT

at the meeting on 11/13/02. Helen is in the process of signing it now.

The CS department asked: "Now that it has been approved, can our December 2002 graduates apply to have their specializations put on their diploma or is it too late for that and we have to wait for the spring 2003 graduation."

Your comments, please. Thanks, Marty

From: Helen Giles-Gee
To: "hartley@elvis.rowan.edu".GWIA.ROWANDOM
Date: 11/18/02 1:48PM
Subject: Re: CS specializations

I'll need to check on this and get back to you.

>>> "Stephen J. Hartley" <hartley@elvis.rowan.edu> 11/14/02 04:28PM >>>

Now that the Board has approved the Computer Science specializations, we are wondering if our December 2002 graduates can apply to have their specializations put on their diplomas. Or, is it too late for that and we have to wait for the spring 2003 graduation.

Thanks.

CC: Faison, Christy

From: Marty Cucinotta
To: eigenbrot@rowan.edu
Date: 11/19/02 4:23PM
Subject: Computer Science Specialization

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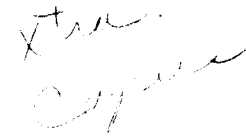
Your comments, please. Thanks, Marty

CC: Giles-Gee, Helen

Rowan University
Computer Science Department

Proposal for Specializations

Stephen J. Hartley
Curriculum Committee



Abstract

In order to give our majors the opportunity to concentrate, we propose adding specializations to the computer science major at Rowan University. A specialization will be composed of four or more specified courses in computer science and other related disciplines that provide a solid foundation in some fundamental area of computer science. We have identified the following areas of specialization: software engineering, networking and operating systems, information technology, programming languages and compilers, artificial intelligence, and numerical and scientific computation.

The specializations will be in effect for the fall 2002 semester. No resources are required.

**Rowan University
Computer Science Department**

Proposal for Specializations

2. Details

a. Proposal Title

A proposal to add specializations to the computer science major at Rowan University.

b. Sponsor

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

c. Scope and Size

We currently propose seven specializations. To obtain one of the specializations, a student must take four or more courses from the list associated with that specialization.

d. Relationship to Curriculum

No other departments will be affected; the specializations will apply only to computer science majors. The total number of credit hours required for the computer science major will not change.

e. Eligibility

Any student majoring in computer science will have the option to select one or more specializations. Students are not required to select any specializations.

f. Implementation Time Scale

→ Effective Fall 2002 for all computer science majors.

g. Resource Requirements

None.

h. Recommended Library Resources

None.

3. Rationale

Rowan's computer science majors will be more competitive in the job market and more attractive to employers when they graduate if they are able to document their skills in particular areas of computer science, such as software engineering, networking and operating systems, information technology, numerical and scientific computation.

4. Essence of the Specializations

a. Major Goals

In order to give our majors the opportunity to concentrate, we propose adding optional specializations to the computer science major at Rowan University.

b. Specific Objectives

Specializations will make our graduating students more competitive in the job market since employers will be able to identify areas of expertise.

c. Structure

A specialization will be composed of four or more specified courses in computer science and other related disciplines that provide a solid foundation in some fundamental area of computer science. We have identified the following areas of specialization: software engineering, networking and operating systems, information technology, programming languages and compilers, artificial intelligence, and numerical and scientific computation.

The following table specifies the courses making up each specialization. To obtain one of these specializations, a student must take four or more courses from the specialization's list.

software engineering	Programming Languages, 0704.315 Design and Analysis of Algorithms, 0707.340 Principles of Software Engineering, 0707.321 Software Engineering Practicum, 0707.322 Object Oriented Design, 0704.380
networking and operating systems	Operating Systems, 0704.390 Data Communications and Networking, 0706.410 System Programming and Operating System Internals, 0704.392 Advanced Computer Architecture, 0706.412 Principles of Digital Computers, 0706.310
information technology	Computer Laboratory Techniques, 0701.205 Web Programming, 0704.305 Principles Software Engineering, 0707.321 Operating Systems, 0704.390 Data Communications and Networking, 0706.410
programming languages and compilers	Programming Languages, 0704.315 Object Oriented Design, 0704.380 Foundations of Computer Science, 0707.210 Compiler Design, 0704.410 Principles Software Engineering, 0707.321
artificial intelligence	Introduction to Probability and Statistics I, 1702.360 Foundations of Computer Science, 0707.210 Introduction to Symbolic Logic, 1509.130 Artificial Intelligence, 0707.450 Programming Languages, 0704.315 Robotics: Software and Mobility, 0707.310; or Computer Vision, 0707.xxx
numerical and scientific computation	Design and Analysis of Algorithms, 0707.340 Linear Algebra, 1701.210 Ordinary Differential Equations, 1701.231 Numerical Analysis, 1701.332 Calculus III, 1701.230

d. Administration

Clerical duties only.

5. Results of Consultation

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

6. New Courses

No new courses are being proposed; only existing courses in computer science and related departments will be required in the specializations.



Mathematics Department

MEMO

TO: Jennifer Kay
Computer Science Department

FROM: Ron Czocho, Chair
Mathematics Dept

DATE: December 20, 2000

RE: Consultation on proposed changes to CS major

Thank you for the opportunity to review the changes you have proposed in the Computer Science B.S. degree. I have carefully studied your proposal and I support the suggested changes. These changes will require your students to develop a more focussed set of electives and I think that is a good thing.

The inclusion of Calculus I in your core will have no effect on the Mathematics Department since the students already take the course. The only possible effect would be that it better describes the appropriate order for taking Calculus I with respect to Discrete Mathematics.

I am disappointed that Numerical Analysis will no longer be listed as a possible Restricted Elective. My disappointment stems from the fact that the field of numerical analysis was the place where computer science was born. Nevertheless, I understand the need for this change and recognize that students who are interested in this topic can take the course as an elective.

I have read the proposal for Specializations within the Computer Science major. While the numerical and scientific computation option could cause a marginal increase in enrollments in some Mathematics courses, the courses we are talking about could handle up to 10 students per year without the necessity of offering another section.

This proposal with 6 different specializations should not generate more than 10 students selecting the specialization that would have an impact on the Math Department. So I have no problem with this proposal and I support it.

Ron Czocho, Chairman
Mathematics Department
Rowan University
(856)-256-4845

My homepage: <http://www.rowan.edu/mars/depts/math/czocho/Homepage/homepage.html>

Dept. homepage: <http://www.rowan.edu/mars/depts/math/>

To: Math/Science Curriculum Committee
From: Jennifer Kay, Chair, Computer Science Curriculum Committee
Re: Course Consultations for Computer Science Proposals



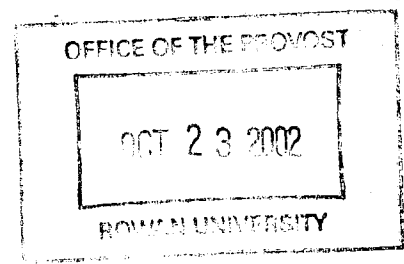
MASSACHUSETTS
UNIVERSITY
CURRICULUM
COMMITTEE

Attached is a record of correspondence with

- John Schmalzel, Chair, Electrical & Computer Engineering, and
- Jooh Lee, Chair, MIS Department

Dr. Schmalzel & Dr. Lee were asked for consultations for computer science proposals on October 18th, 2000, and again on November 29th, 2000. Neither provided a consultation for any of the courses.

Dr. Martin Itzkowitz, chair, University Curriculum Committee, recommended that I provide you with a record of correspondence, which you will find attached.



Department of Electrical and Computer Engineering

MEMORANDUM

To: Steven Hartley
From: Robi Polikar, Electrical and Computer Engineering,
Chair, Curriculum Committee.
Reference: Proposal on Computer Science Specializations

Date: 16 October 2002

Thank you for providing us the opportunity to review your course proposal on providing new specialization areas for your students in the computer science major. We have carefully read and discussed your proposal.

As the body of knowledge in engineering and computer science exponentially grows, it becomes increasingly difficult and inefficient for departments to provide this information to their students. Clearly the strategy for educating the 21st century students should be providing an essential and strong background, along with the tools necessary to efficiently acquire new information. An excellent way of implementing this strategy would be to teach a common curriculum of essential background, with a set of carefully designed electives that would allow the student to specialize in an area of related interest.

Therefore, the Dept. of Electrical and Computer Engineering fully supports your proposal to provide such specialization to your students. We would like point out that there are some courses within the Electrical and Computer Engineering curriculum (currently in place or pending for approval) that may be also provide essential content for some of your specialization areas. One such example is our currently pending course proposal for Pattern Recognition (0909.455 / 0909.555), which would fit very nicely into your Artificial Intelligence specialization track.

We appreciate the efforts you are making to update and modernize your curriculum and continue to look forward to being kept informed about such progress. Please feel free to let the ECE Department know if we can be of any further assistance in this matter.

From: Rosemarie Wiest
To: Dorland, Dianne; Harper, Jay A.; Hartley@Rowan.Edu; Kay, Jennifer S.; Schmalzel@Rowan.Edu; Schoen@Rowan.Edu; Xu, Jianning
Date: 9/18/02 3:03PM
Subject: Curriculum Proposal for Specializations

Dr. Giles-Gee would like to meet to discuss the proposal for Specializations sponsored by the Computer Science Dept. Please mark your calendar for Monday September 30@1pm in the Provost Conference Room, Bole Hall.

Please get back to me w/confirmation. Thank you.

roe

Rosemarie Wiest
Provost Office
Bole Hall
3053

CC: Martyc@rowan.Edu

From: Helen Giles-Gee
To: "giles-gee@rowan.edu".GWIA.ROWANDOM;
"hartley@elvis.rowan.edu".GWIA.ROWANDOM
Date: 11/4/02 2:01PM
Subject: Re: letter of consultation

Thank you for resending this letter. I can now move forward with the proposal.

>>> "Stephen J. Hartley" <hartley@elvis.rowan.edu> 10/31/02 02:22PM >>>
Jennie Kay told me you never got the letter of consultation from ECE on
our specializations proposal. I will send it again through campus
mail. In the meantime, here it is electronically.

Memorandum

To: Stephen Hartley
From: Robi Polikar, Electrical and Computer Engineering,
Chair, Curriculum Committee.
Reference: Proposal on Computer Science Specializations

Date: 16 October 2002

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proposal on providing new specialization areas for your students in the
computer science major. We have carefully read and discussed your
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As the body of knowledge in engineering and computer science
exponentially grows, it becomes increasingly difficult and inefficient
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the strategy for educating the 21st century students should be
providing an essential and strong background, along with the tools
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which would fit very nicely into your Artificial Intelligence
specialization track.

We appreciate the efforts you are making to update and modernize your
curriculum and continue to look forward to being kept informed about
such progress. Please feel free to let the ECE Department know if we
can be of any further assistance in this matter.

CC: "kay@elvis.rowan.edu".GWIA.ROWANDOM; Faison, Christy; Wiest, Rosemarie

From: John L. Schmalzel
To: Giles-Gee, Helen
Date: 10/31/02 4:24PM
Subject: CS Letter of Consult from ECE

Dr. Giles-Gee,

Thank you for chatting w/ me this morning about some of your planning ideas. At the end of the conversation you asked me for a quick status report on our consultations w/ CS. Attached is a copy of the consultation letter that we sent earlier in the month. We'll also be developing a response to the latest CS critique of our plans to offer courses in Pattern Recognition. Per your request, we'll coordinate w/ Dr. Dorland to make sure she understands our department's concerns about their objections.

Thanks!
John

From: Dorland, Dianne
To: Giles-Gee, Helen
Date: 1/21/03 5:50PM
Subject: Computer Science course in the Freshmen Curriculum

During the Fall semester, the faculty in the College of Engineering met and discussed the issues associated with the lingering curriculum proposal sponsored by Chemical Engineering. This proposal changes the Computer Science course required for chemical engineering, effective Fall 2003. This change impacts the "common" freshman experience for engineering students.

The current CS course required in the common first year curriculum, Computer Science and Programming, requires prior programming experience. When the common curriculum was established, there was agreement between the College of Engineering and the Computer Science Department that no prerequisites would be required for this course for engineering students.

There is very strong support in the College for that prominent hallmark, the Freshman Clinic, as our best common feature. There is also general support for improving the computer science course within a common curriculum. I suggest that the use of the Computer Science and Programming course for our common curriculum be revisited.

Computer Science education and the teaching choices for optimum CS languages are constantly evolving. I recommend that Computer Science work with Engineering (and other Colleges) to develop CS courses that meet the broad needs of the college and address course material update as well. Two of the constructs that define this task are the desire for a common, high-quality CS program in the Freshman year and the limits of a heavy curriculum load (128-133 hours) required for graduation with engineering degrees.

The faculty in both colleges are innovative and have the sincere desire to meet the needs of students. Some of the suggestions that have been brought forward include:

- * Dev [unclear] that would allow students to bypass earlier review modules or [unclear] engineering
- truncate late [unclear]
- programs. [unclear]
- * Allo [unclear] nt.
- * Dev [unclear] d still meet
- the prerequi [unclear] take.
- * Dev [unclear] echnology
- students, to [unclear]

- Considering [unclear] available
- before Fall [unclear] se options:
- * Th [unclear] requesting
- that CS wo [unclear] a committee
- approved. [unclear]
- * Th [unclear] parties to work
- toward a d [unclear]
- * Th [unclear] would have
- to have a c [unclear]

In my mind, probationary approval with the admonition to work to create a new common course for Fall 04 acknowledges the campus curriculum committee's decision while emphasizing that a common first year experience should not be abandoned. Please let me know if there is any other information that I can provide. I have put this on my agenda for our next one-on-one discussion as well if there are points that we should review or discuss.

Thanks,
Dianne

Dianne Dorland, Ph.D., P.E.
Dean, College of Engineering
Rowan University
Glassboro, NJ 08028
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856-256-5303