

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: Wireless Networks and Applications

SPONSOR(S): Andrea Lobo

DEPARTMENT: Computer Science

COLLEGE: LAS

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

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

DEPARTMENT

(Signature indicates approval)

Dept. Curriculum Chair / Date

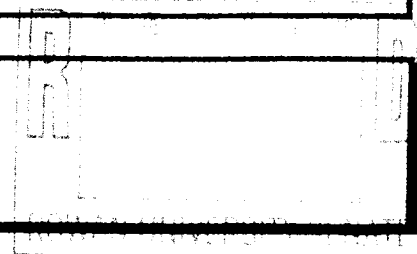
Dept. Chairperson / Date

Handwritten signatures and dates: Andrea Lobo 10/20/00, S. Bergman 10/20/00

ACADEMIC DEAN

Approved Not Approved ___ Comments:

Dean's Signature/Date: J. H. ... 10-27-00



COLLEGE CURRICULUM COMMITTEE

Date of open hearing (if necessary) 12/22/00 Approved X Not Approved _____

Comments:

Signature of College Chair/Date: [Signature] 2/18/01

UNIVERSITY CURRICULUM COMMITTEE

Date Received/Processed 1/22/01

Comments:

Curriculum Chair Signature [Signature] Date Announced At Senate 5-8-01

EXECUTIVE VICE PRESIDENT/PROVOST

Approved X 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 [Signature] 5/16/01

REGISTRAR

Date Approved Course Description Received 5/1/01 Hegis Taxonomy & Course Number Assigned _____

Registrar Signature/Date [Signature]

NOTIFICATION FORWARD

_____ Senate Curriculum Committee Chairperson _____ Academic Dean(s)
_____ Department Chairpersons _____ Registrar _____ Sponsor(s)

Rowan University
Department of Computer Science

Course Proposal

Wireless Networks and Applications

1. Details

- | | |
|-----------------------------------|--|
| a. Course Title: | Wireless Networks and Applications |
| b. Sponsor: | Andrea Lobo, Computer Science Department |
| c. Credit Hours: | 3 |
| d. Course Level: | Undergraduate |
| e. Curricular effect: | Restricted elective for Computer Science majors |
| f. Prerequisites: | Data Communications and Networking (0706.410), or permission from the instructor |
| g. Suggested time, Implementation | One section every two years, or more often as demand dictates |
| h. Resources: | Faculty, equipment, and library resources are adequate |

2. Rationale

Wireless technologies have seen enormous improvements in miniaturization and battery consumption in the last decade. As the technology has facilitated more sophisticated consumer products and the Internet has matured, wireless networks and systems are becoming increasingly important and widespread. This course prepares students to understand deployed and proposed wireless networks and applications, and the underlying communications technologies that make them possible.

This course proposal is consistent with the Computer Science Department's goal to offer restricted electives for our majors. It course is the undergraduate counterpart of the graduate 0706505.

3. Essence of the course

a. Objectives in relation to student outcomes

Students will be able to:

- Describe wireless communications;
- Understand the details of important deployed and proposed wireless networks and applications;
- Understand the issues that are critical to wireless system performance;
- Understand the Quality of Service capabilities of wireless systems;
- Prepare and deliver a technical presentation on a topic in wireless networks and applications.

b. Topic outline

Radio, infrared, analog, digital, very short distance, and satellite communications
Wireless local area networks
Wireless bridges
Wireless access to the Internet
Ad hoc networks
Cordless telephones
Wireless access and control
Landline systems
Satellite voice and paging systems
Global communications systems
Deployed cellular systems
Third Generation Personal Communication Systems
Performance of wireless systems and technologies
Quality of Service capabilities of wireless systems

c. Evaluation and grading procedure of students

Students will be evaluated based on one or more in-term examinations, one or more projects, and a final examination. Each student will present the results of one project to the class.

d. Course evaluation

This course will be evaluated by the Department's curriculum committee.

e. Texts

- i. Goodman, David, *Wireless Personal Communications Systems*, Addison-Wesley, 1997.
- ii. Solomon, James, *Mobile IP: The Internet Unplugged*, Prentice Hall, 1998.

4. Results of consultation

We have consulted with the Computer Science Department and Prof. John Schmalzel, Chair of Electrical Engineering.

5. Catalog Description

0706.4##

3 s.h.

Wireless Networks and Applications

(Prerequisites: 0706.410 (Data Communications and Networking), or permission from the instructor)

This course prepares students to understand wireless networks and applications, and the underlying communications technologies that make them possible. The course covers descriptive material on wireless Internet applications, wireless communications technologies, and important deployed and proposed wireless networks and systems. Wireless system performance and Quality of Service capabilities are introduced. Students will prepare and deliver technical presentations on state-of-the-art topics in wireless networks and systems.



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.

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

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

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CS with a concentration in AI for example)
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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