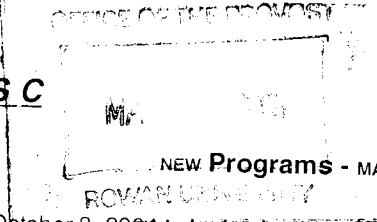


PROCESS C

CURRICULUM PROPOSAL SCC #04-05- 112



NEW Programs - MAJOR Program Revisions - PROGRAM Name Changes

0708

Effective Dates: October 8, 2004 to be implemented Fall 2005 ~ February 11, 2005 to be implemented Spring 2006

PROPOSAL TITLE: New CS Specialization: Graphics and Visualization

Sponsor(s): Adrian Rose E-Mail: rose@rowan.edu Ext: 3884

DEPARTMENT: CS
COLLEGE: LAS

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

UNDERGRADUATE GRADUATE
THE ATTACHED NEW PROGRAM - MAJOR PROGRAM REVISION - PROGRAM NAME CHANGE IS BEST DESCRIBED BY THE ITEM(S) CHECKED.

- New degree program
- Major changes-degree requirements/major/minor or certificate program
- New Major
- Changes to College name, School, Department or Degree
- New Minor
- Quasi curricular change
- New concentration, specialization, or track
- New Certificate of Graduate Study Program (COGS & COGA)

THE FOLLOWING SIGNATURES REPRESENT APPROVAL

Department Chair: [Signature] Date: 2-8-05
 Department Curriculum Chair: [Signature] Date: Feb 8 2005
 Academic Dean: [Signature] Date: 2-7-05

COLLEGE CURRICULUM COMMITTEE

CLOSED HEARING Date: 3/28/2005 Approved Not Approved

COLLEGE CURRICULUM CHAIR: [Signature]

UNIVERSITY CURRICULUM COMMITTEE

OPEN HEARING Date: 4/18/05 Approved Not Approved

Senate Curriculum Chair Signature: [Signature] Date: Senate Announcement/Note: 5/10/05

Comments: _____

EXECUTIVE VICE PRESIDENT/PROVOST Signature: [Signature] Date: 8/24/05
 Approved Not Approved

REGISTRAR

Date: 8/30/05 Official Copy & Approval Sheet Filed

Date: _____ Course Description Received & Approved ~ Hegis Taxonomy & Course # _____

Course Description Received & Approved ~ Hegis Taxonomy & Course #: _____

Registrar Signature: [Signature]

NOTIFICATION FORWARD
 SCC Chair Academic Dean Department Chair Registrar IR CAP VP Student Affairs
 VP Student Affairs Others Trans. 9/17/05

B 9/05

Rowan University
Computer Science Department

Proposal: New Specialization added to the Computer Science Specializations

1. Details

a. Change Requested

We request approval for the following change to the Computer Science Specializations requirements: adding a new specialization in Graphics and Visualization.

The courses to be part of this specialization are the following.

1701.210 Linear Algebra
0704.222 Data Structures and Algorithms
0707.360 Computer Graphics
0707.370 Introduction to Information Visualization
0707.380 Introduction to Computer Animation

The latter two are new courses being proposed in separate proposals.

Four or more courses will need to be taken by a student to meet the Graphics and Visualization specialization requirements, consistent with the other specialization requirements.

b. Sponsor

Adrian Rusu and the Computer Science Department Curriculum Committee.

2. Rationale

a. Need for the Change

The two courses being proposed in separate proposals, Introduction to Information Visualization and Introduction to Computer Animation, together with the existing Computer Graphics course, do not fit naturally into any existing specialization. Therefore, we are proposing a new specialization. This new specialization will allow students interested in pursuing careers or advanced degrees in Computer Graphics or Visualization to develop the necessary expertise.

b. Curricular Effect

This change will enhance the attractiveness of the specializations to computer science majors. Students will not need to take extra courses in order to fulfill the specialization requirements. In the new specialization, Introduction to Computer Animation, Computer Graphics, and Introduction to Information Visualization are Computer Science restrictive elective courses. As part of their degree, Computer Science students are required to take four Computer Science restrictive elective courses.

A student wishing to satisfy the new Graphics and Visualization specialization will take Linear Algebra (required course) in the freshman year, take Data Structures and Algorithms (required course) in the sophomore year, and in fall of junior year and fall of senior year take two courses from Computer Graphics, Introduction to Computer Animation, and Introduction to Information Visualization. These courses are offered alternatively every fall semester. A transfer student also can satisfy the requirements of the specialization since, by the time of transfer, the student already has taken Linear Algebra and Data Structures and Algorithms.

c. Adequacy of Resources

The current computers and software available in the open labs and computer science advanced lab are adequate to carry out this specialization at the present time. However it is fully expected that the equipment will need to be regularly upgraded to support this specialization, as well as all of the courses in our major. Thus it is, of course, necessary that a reasonable replacement cycle be maintained.

d. Recommended Library Resources

The new specialization being proposed includes two new courses, 0707.370 Introduction to Information Visualization and 0707.380 Introduction to Computer Animation. Recommended library resources are discussed in those new course proposals.

Copies of the completed Library Resource forms for Introduction to Information Visualization and Introduction to Computer Animation are attached for reference and in lieu of a Library Resource form for this new specialization proposal.

3. Results of Consultation

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

```
From hamilton@rowan.edu Sun Feb  6 15:26:05 2005
Date: Sun, 06 Feb 2005 15:25:57 -0500
From: "Diane Hamilton" <hamilton@rowan.edu>
To: <hartley@elvis.rowan.edu>
Subject: Re: Request for consultation: new specialization proposal
Status: RO
Content-Length: 379
```

Hi Steve,

The MIS faculty are happy to support your new specialization in graphics and animation as well as the two new courses - Information Visualization and Computer Animation.

- - - - -

Diane Hamilton, Ph.D.
Professor of MIS

revised May 13, 2005

Rowan University
College of Business
201 Mullica Hill Rd
Glassboro, NJ 08028

856-256-4760 (phone)
856-256-4439 (fax)

From: Czochor@rowan.edu Fri Feb 4 12:16:09 2005
Date: Fri, 04 Feb 2005 12:16:01 -0500
From: "Ronald Czochor" <Czochor@rowan.edu>
To: <hartley@elvis.rowan.edu>
Subject: Re: minor change curriculum proposal

Steve,

The Math Department has no comment on the proposed additions to your department's specialization.

Ron Czochor, Chairman
Mathematics Department
Rowan University
Phone: 856.256.4845
Fax: 856.256.4816
Webpage:
<http://www.rowan.edu/mars/depts/math/czochor/Homepage/homepage.htm>
Dept. webpage: <http://www.rowan.edu/mars/depts/math/>



Electrical and Computer Engineering

February 7, 2005

Professor Stephen J. Hartley
Computer Science Department
Rowan University
Glassboro, NJ 08028

Re: New CS Specialization: Graphics and Visualization

Dear Professor Hartley:

The Electrical & Computer Engineering department has received your course proposal entitled "New CS Specialization: Graphics and Visualization." We have reviewed the rationale, curricular effect and proposed course content and are pleased to support this change.

Best wishes,

Shreekanth Mandayam, Ph.D.
Associate Professor
ECE Curriculum Committee Chair

Cc: Dr. Jennifer Kay, Chair, CS

Rowan University
**CURRICULUM PROPOSAL
 LIBRARY RESOURCE FORM**

The purpose of this form is to provide a channel of communication between the library and faculty, changing and designing new courses/programs. The information will be used to assess the resources available in the library, and to identify resources the library should acquire to support the course program. The information will also provide rationale for institutional support for library acquisitions.

This form should be completed in a coordinated effort between the course sponsor(s) and the academic department liaison librarian. **THIS FORM MUST BE COMPLETED FOR ALL CURRICULUM PROPOSALS.**

- The sponsor(s) complete parts A & B. Librarian assistance is required to complete parts A & B. Please notify the liaison librarian.
- Forward this form to the librarian who will complete parts C, D & E.

This form must be completed and attached to the original curriculum proposal before being approved by the Senate Curriculum Committee

A. College LIBERAL ARTS AND SCIENCES Department COMPUTER SCIENCE
 Proposed by ANDREW ROSS, SP2007 Date 1/9/11/07
 Course Title ^{NEW} SPECIALIZATION IN GRAPHICS & VISUALIZATION
 Anticipated Date for Course/Program Offering: _____

- B. List specific resources that should be acquired to support this course.
 The new specialization has four courses: Linear Algebra (existing course), Data Structures and Algorithms (existing course), Computer Graphics (existing course), Information Visualization (new course proposed Feb 2011) and Computer Animation (new course proposed Feb 2011). In addition to the existing resources, the courses for the new courses (have an approved library form) are needed.
- C. Describe the resources available in the library to support this course/program, including reference, monographic, electronic databases, audio-visual materials, etc. A summary statement is sufficient.

D. List key periodicals available in the library to support this course/program

E. Librarian comments and recommendations

Needed resources are in the library due to other like courses.

Name: LIBRARIAN LIAISON John Matthews Librarian Signature [Signature]

Wiest, Rosemarie

From: Faison, Christy
Sent: Tuesday, June 21, 2005 1:43 PM
Rusu, Adrian S.
Cc: Wiest, Rosemarie; Mosto, Patricia; Milou, Eric
Subject: Scc 04-05-832

I am in receipt of curriculum proposal **04-05-832** requesting approval of a new specialization in graphics and visualization for the Computer Science department. All new specializations must be approved by the Academic Affairs subcommittee of the Board of Trustees, in addition to the normal curriculum process. The BOT subcommittee has concluded its meetings for this academic year. You will be notified when this item appears on a future AA/BOT agenda and requested to make a presentation before the subcommittee. Please feel free to contact me if you have any questions.

Christy L. Faison, Ed.D.
Interim Provost
Rowan University
856-256-4108

Rowan University
Board of Trustees
Academic Affairs Subcommittee

SCC Proposal # 04-05-832
Department/College: Computer Science Department
College of LAS

Action Item:

New Computer Science Specialization: Graphics & Visualization

Submitted by: Christy L. Sherrill
(Provost)

Justification: To allow students to pursue careers or advanced degrees in
Computer Graphics or Visualization to develop the necessary expertise.

Approved: 3/22/05
Date
Signed: [Signature]
Committee Chair

Notice of this action item will be **announced** at the full Board of Trustees meeting to be held on 9-14-05 and will be forwarded to the Academic Issues Committee of the New Jersey Presidents' Council for **notification**.

| | YES | DATE |
|------------|-------------------------------------|----------------|
| AA/BOT | <input checked="" type="checkbox"/> | <u>8/23/05</u> |
| FULL BOARD | <input type="checkbox"/> | _____ |
| STATE | <input type="checkbox"/> | _____ |