OFFICE OF THE PROVOST
JUN 10 2003
ROWAN UNIVERSITY

PROCESS A NON-GENERAL EDUCATION ~ **CURRICULUM PROPOSAL** SCC #02-03- 44

Deadlines:
Regular proposals: October 18, 2002 to be implemented Fall 2003; Short-Term proposals: December 6, 2002 to be implemented Fall 2003
Regular proposals: February 14, 2003 to be implemented Spring 2004; March 21, 2003 short-term courses to be implemented Spring 2004

PROPOSAL TITLE: Masonry and Wood Structures

Sponsor(s): Douglas Cleary E-Mail: cleary@rowan.edu Ext: x5325
_____ E-Mail: _____ Ext. _____
_____ E-Mail: _____ Ext. _____
_____ E-Mail: _____ Ext. _____

DEPARTMENT: Civil and Environmental Engineering

COLLEGE: Engineering

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

_____ **UNDERGRADUATE** ___X___ **GRADUATE**

THE ATTACHED ***NON-GEN-ED*** PROPOSAL IS BEST DESCRIBED BY THE ITEM(s) CHECKED.

_X__ New non-gen-ed course
_____ Short-term non-gen-ed course
_____ Minor curricular changes (fewer than three)
____ Existing non-gen-ed course
_____ Non-gen-ed degree requirements
_____ Major
_____ Minor, specialization, concentration, track, certificate program

The following signatures REPRESENT APPROVAL

Department Chair: _____ Date: 2/11/03
Department Curriculum Chair: _____ Date: 2/11/03
Academic Dean: _____ Date: 2/12/03
College Curriculum Chair: _____ Date: 5/5/03
College Curriculum Committee OPEN HEARING Date: 4/11/03 Approved X Not Approved _____

UNIVERSITY CURRICULUM COMMITTEE
Senate Curriculum Chair Signature: _____ Date: 6/4/2003 Senate Announcement/Vote: 4/10/2003
Comments: _____
EXECUTIVE VICE PRESIDENT/PROVOST Signature: _____ Date: 6/27/03

__✓__ Approved ~ Not Approved due to the following: ____ Student Cr Hrs ____ Faculty Load Hrs ____ Equalized Cr Hrs

REGISTRAR
Date: 7/31/03 Course Description Received & Approved ~ Hegis Taxonomy & Course #: 0908587
Registrar Signature: _____ 7/31/03

NOTIFICATION FORWARD

_____ SCC Chair _____ Academic Dean _____ Department Chair _____ Registrar _____ Sponsor(s)

TM 8/13/03

SCC#02-03 400_____

Rowan University

LIBRARY RESOURCES

to

SUPPORT A NEW COURSE* or *NEW PROGRAM PROPOSAL

The purpose of this form is to provide a channel of communication between the library and faculty 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.

- The sponsor(s) complete parts A & D
  If assistance is required to complete parts A & D, please notify the liaison librarian.

- Forward this form to the librarian who will complete parts B, C, & E

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

A. College __ Engineering Department ____Civil and Environmental_____

Proposed by: _____Cleary_____ Date: ____Spring 2003_____

Course Title: _ Masonry and Wood Structures _____

Anticipated Date for Course/Program Offering: __Spring 2004_____

B. 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.

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

D. List specific resources that should be acquired to support this course.

Based on my check of the catalog, we could use some additional technical books on the subject including the masonry design code ACI 530-02/ASCE 5-02/TMS 402-02 and the timber design code 2001 National Design Specification for Wood Construction and NDS Supplement.

E. Librarian comments and recommendations:

Rowan University
LIBRARY RESOURCES
To
SUPPORT A NEW COURSE or NEW PROGRAM PROPOSAL

College: Engineering Dept.: Civil & Environmental

Proposed by: Dr. Cleary Date: April 29, 2003

Course Title: Design of Masonry and Wood Structures

Anticipated Date for Course/Program Offering: Spring 2004

Part B: Resources available in Campbell Library

Campbell Library has acquired key book resources in civil and environmental engineering through an approval plan. At present, we have almost 100 titles, representing the Library of Congress subject headings for civil engineering, environmental engineering, masonry, and wood. A general academic approval plan also provides university press publications in the natural and physical sciences.

Part C: List key periodical resources

Campbell Library is fortunate to have extensive access to online serials databases in a large number of disciplines, including the major Elsevier SciDirect database. Elsevier provides access to over 1,300 full-text journals in the sciences, including major titles in civil and environmental engineering. In addition, the library also subscribes to the Applied Science and Technology database and the General Science Full-Text database.

The Library subscribes to 22 print journals in civil engineering and 18 titles in mechanical engineering. In addition, 40 print titles are available in the biological sciences, which would include major journals in environmental science. For periodicals not available in the library or through our online database services, an interlibrary loan and document service is available for faculty and students.

Part D: List resources that should be acquire

The library reviewed its holdings with the sponsoring professor. At this point, no additional resources need to be purchased to support the proposed course.

The courses proposed in SCC#02-03-400 and SCC#02-03-401 will be dual-listed senior level and graduate electives. The courses will be taught at the same time in the same room. However, there will be clear distinctions between the undergraduate and graduate courses. The graduate students will be required to complete additional work in the graduate course of a more theoretical nature than the requirements for the undergraduate course. As an example, the graduate course will require a design project and additional work in the detailing of masonry and timber connections. These are not requirements for the undergraduate course.

Part E: Librarian remarks

Based on the strength of our online database services and the adequacy of our print holdings, the library supports this proposal. (Remarks prepared by Gregory Potter, Associate Dean of the Library.)

SCC#02-03-400

MASONRY AND WOOD STRUCTURES

Details

a. Course Title: Masonry and Wood Structures (suggested HEGIS number 0908.587)
b. Sponsor: Dr. Douglas Cleary, Civil and Environmental Engineering
c. Credit Hours: 3
d. Course Level: Graduate (500 level)
e. Prerequisites: Solid Mechanics (0901.272), Structural Analysis and Design (0908.382)
f. Suggested time and scale of implementation: Spring term every two years starting in Spring 2004.

We don't put undergrad pre-reqs on grad courses. SKP 9/3/03

Curricular Effect

Include a description of how the course implementation will affect other departments, college, and university.

No effect on other departments, colleges or the university.

-Offerings - which class will be dropped or offered less frequently as a result of this course?

The current course "0908.584 Prestressed Concrete Design" will be offered less frequently with our current staffing and enrollment levels. If increased enrollment justified additional faculty then "0908.584 Prestressed Concrete Design" and the new proposed course may run simultaneously.

- Adequacy of the present staff, resources, space needs, and any other additional requirements for implementation. This section should include a description of any costs that will be incurred by implementation of the proposal.

Current staff, resources, and space are adequate for this course. There are no additional costs to be incurred.

- Recommended Library Resources: Provide a list of resources required to implement the course and any predicted resources for future needs. If resources are not adequate please specify how this issue will be addressed. The department's library liaison should be consulted.

A selection of additional books related to masonry or timber design would be a nice addition to the library to supplement the course text. The library catalog currently lists two books related to masonry design and no references on the design of timber structures. A selection of 3 or 4 other references related to each topic (total 6 to 8 books) would be beneficial.

- Short-term Evaluations: Not applicable.

Rationale

The department is currently offering a sequence of three structural engineering courses every year and a fourth course that rotates on an annual basis (0908.485 Advanced Reinforced

Concrete for Seniors or 0908.484 Prestressed Concrete for Seniors). This sequence provides the students with a solid background in structural analysis, design of steel and concrete structures. The fourth course provides additional advanced topics in concrete that are dependent on which course is offered as the fourth in the sequence. However, feedback from our graduates has indicated that masonry and timber are two very common construction materials that they are using on the job. We currently do not provide our graduates any training in the design of structures using these materials. Our graduates have cited masonry in particular as being the material they are using the most. This course offers a strong alternate as the fourth course in the sequence. This graduate level course will be offered in conjunction with an undergraduate course (0908.487 Design of Masonry Structures). This is the model we are using for several of our graduate courses until staffing and enrollment levels allow our graduate courses to be offered stand-alone.

Essence of the Course

a. Objectives of the course in relation to student outcomes. These are statements of what a student is to learn as a result of completing the course.

- Develop an understanding of the basic material characteristics of wood and masonry
- Design basic structural components in wood and masonry
- Become familiar with the common design specifications for structural design in wood and masonry.

b. Topical Outline/Content (This may be replaced by attaching a syllabus or by indicating that the objectives are specific and reflect the exact content).

- Properties of wood and lumber grades
- Glue-laminated and plywood properties
- Flexure in wood
- Axial forces in wood
- Combined flexure/axial loading
- Diaphragms and shear walls (wood)
- Masonry materials
- Reinforced and non-reinforced masonry
- Masonry in flexure
- Load bearing walls
- Shear walls
- Additional advanced topics required of graduate students include design of connections and a design project.

c. Evaluation of students and grading procedure. These should be generic and should not include specific classroom requirements.

- Students will be evaluated based on homework and exam results.

d. Course Evaluation: Procedures that will be used to assess the success of the course in meeting the goals and objectives of the college as well as the objectives of the course (e.g., student evaluations, departmental curriculum review, program review).

- Course and instructor evaluations are performed each semester following the departmental guidelines.

Results of Consultations

a. Letters of consultation MUST be included from all departments or programs (NOT INDIVIDUALS) that have similar course content or might otherwise be affected by this proposal. If the proposal is inter-disciplinary, evidence concerning consultation with all departments potentially involved must be included.

There are no departments or programs that have any similar course content nor are there any that would be affected by this proposal. The course content is very specific to civil engineering.

b. Additional consultation should be solicited from any individual on campus who might have expertise relative to the course. List the names of all persons from departments and/or disciplines consulted. Attach a statement about the results (pro and con) of the consultation.

There are no known individuals outside the CEE department with an expertise relative to the course. It is likely that there are individuals on campus who have some personal experience in construction using masonry or timber. We do not have a way to identify them.

c. Attach copies of any written consultation. Include consultations both supportive and non-supportive.

d. Consulted parties may appear in person at the Open Hearing.

Additional Information, comments, etc.

Catalog Description

MUST be included as a separate sheet. HEGIS numbers of any prerequisites MUST be included.

Design of Masonry and Wood Structures (suggested HEGIS number 0908.587)

Prerequisites: Solid Mechanics (0901.272), Structural Analysis and Design (0908.382)

This course provides the fundamentals of structural design using masonry and wood. Topics include material properties, flexure, axial loading, lateral load resisting systems, and connections. This course builds upon previously acquired fundamental concepts of structural analysis and design. A design project is required.