

PROPOSAL SCC #99/00- 428

CURRICULUM PROPOSAL FORM 1999-2000

**NON-GENERAL EDUCATION PROCESS A**

\*DEADLINES: Deadline dates for 1999/2000 submissions: Regular proposals: October 22, 1999 to be implemented in Fall 2000; Short-Term proposals: December 10, 1999 to be implemented in Fall, 2000; Regular proposals February 18, 2000 to be implemented in Spring 2001; March 24, 2000 for short-term courses to be implemented in Spring 2001

PROPOSAL TITLE: Advanced Process Analysis (0906.581)

SPONSOR(S): James A. Newell

DEPARTMENT: Chemical Engineering

COLLEGE: Engineering

IF LAS CHECK ONE:  History/Humanities  Math/Science  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 *Paul Hill* 02/24/00

Dept. Chairperson/Date *Paul Hill* Feb 24 2000

ACADEMIC DEAN

Approved  Not Approved  Comments:

Dean's Signature/Date *J. Gray* 2/24/00

COLLEGE CURRICULUM COMMITTEE

Date of open hearing (if necessary) 2/28/01 Approved  Not Approved

Comments:

Signature of College Chair/Date: [Signature] 02/28/01

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:

Student Credit Hours: \_\_\_\_\_ Faculty Load Hours: \_\_\_\_\_ Equalized Credit Hours: \_\_\_\_\_

Official Copy & Approval Sheet Filed (Date): \_\_\_\_\_ Executive VP/Provost Signature/Date: [Signature] 1/7/02

REGISTRAR

Date Approved Course Description Required 1-9-02

Hegis Taxonomy & Course Number Assigned 0906.581 JAN

Registrar Signature/Date: [Signature]

NOTIFICATION FORWARD

Tm - 1/11/02

Senate Curriculum Committee Chairperson [Signature]

Academic Dean(s)

Department Chairpersons

Registrar

Student affw.  
Admissions  
CAP  
Inst Research -  
Sponsor(s)

rw

Course

1. Details:

- a) Course Title: Advance
- b) Sponsor: James A Curricul
- c) Credit Hours: 3 credit
- d) Course Level: Graduate
- e) Curricular Effect: Technical
- f) Prerequisites: Graduate
- g) Suggested Time/Scale of Implementation: 1 section Spring 20
- h) Resources: Faculty v Engineer beyond

Laboratory equipment will be obtained consistent with the College of Engineering capital budget. Library acquisitions will be required consistent with current acquisition plan.

2. Rationale:

The propos with the establish February 1995.

The course process optimizatic

e of Engineering and is consistent ed by the Board of Trustees in ss consistency, process selection,

3. Essence of the C

a) Objectiv

Upon compl

1. Validate t

2. Identify information

3. Perform comprehensi

4. Prepare & analyze those

5. Optimally

*Substitute for this page*

omic analysis and utilize this

nt Analysis and formulate a els.

g budgets and flow sheets and

projects

6. Serve as team leaders to solve open-ended design problems.

**b) Topical Outline:**

The course will be divided into topical modules, each of which will address a specific aspect of process analysis. The topical outline is presented below

Process Consistency  
    Mass Balances  
    Closure Issues

Process Optimization  
    Economic Analysis  
        Rates of Return  
        Depreciation and Taxes  
    Equipment Replacement Analysis  
    Sensitivity Analysis

Process Selection  
    Identification of Processing Alternatives  
    Rationing of Resources

Process Documentation  
    Budgets and Financial Statements  
    Process Flowsheets

**c) Evaluation and Grading Procedure of Students:**

Student grades will be based on examinations, homework, and in-class group assignments. Graduate students will be required to do an independent research paper as part of this course and to serve as team leaders in all homeworks and in-class group projects. A course syllabus with a stated method of arriving to the final grade, e.g., number of exams, projects, homework, percentage of grade, will be distributed to students the first week of classes.

**d) Course Evaluation:**

The proposed course will be evaluated on the basis of student evaluations and curriculum review by appropriate faculty.

*Catalog Description*

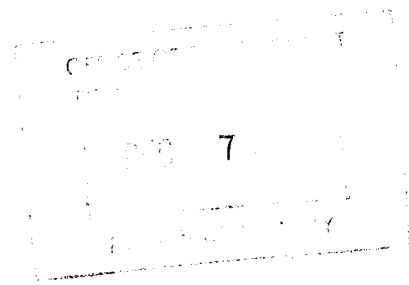
**Process Analysis (0906.581)**

*Prerequisite: Graduate standing and approval of Graduate Advisor*

This course will examine advanced topics in process analysis including: process consistency, identification of optimal process based on economic analysis, process documentation including flowsheets and budgets, replacement analysis for processing equipment, and rationing limited resources between competing projects



Rowan University Senate



December 6, 2001

TO: Dr. Helen Giles-Gee  
Provost

FROM: Laretta Reeves, Chair  
University Senate Curriculum Committee

RE: Fall 2001 Curriculum Proposal

Attached please find the original copy of a curriculum proposal prepared for your review and approval:

SCC#99-00-428 College of Engineering: Advanced Process Analysis  
Hegis: 0906.581

Thank you.

*1/2/02*

*There are no current plans to increase faculty on the current budget, and no budget increases promised. In addition, the "good" elective indicates good program support that hasn't been documented (or planned). I do not support in its current form. DD*

**From:** Dianne Dorland  
**To:** Slater, C. Stewart  
**Date:** 1/2/02 12:58PM  
**Subject:** Advanced Process Analysis

I recently reviewed a curriculum proposal for Advanced Process Analysis that begin under Jim Tracey. It is now at the Provost's level and my input was requested.

There are two issues where I seek further information.

1) The course is presented as a graduate course, a technical elective for graduate students. Will this course be tied to its undergraduate link (906-481 Advanced Process Analysis) in conjunction with the 5-year MS program? Currently those linked courses have a shared lecture with additional graduate work required for grad students.

2) The course requires an additional faculty hire. At the present time we have no indications of an increase in budget for the College of Engineering, so new hires are unlikely unless strongly supported by enrollment or program growth. While program enrollment in chemical engineering appears solid, I am not aware of major changes that we should anticipate. Please let me know if there are other factors that need to be taken into consideration.

I will forward my recommendation to the Provost after I have reviewed this course proposal with you. Thanks in advance for your assistance.

Dianne

Dianne Dorland, Ph.D., P.E.  
Dean, College of Engineering  
Rowan University  
Glassboro, NJ 08028-1701  
Phone: 856-256-5303  
Fax: 856-256-5350  
email: dorland@rowan.edu

**CC:** Chin, Steven; Helen Giles-Gee

Course Proposal

1. Details:

- a) Course Title:
- b) Sponsor:
- c) Credit Hours:
- d) Course Level:
- e) Curricular Effect:
- f) Prerequisites:
- g) Suggested Time/  
Scale of Implementation:
- h) Resources:

Helen -  
If this is acceptable -  
please substitute Slater's  
updated proposal page for the  
original. I consider this  
resource neutral. *SD*  
1-2-02

~~Laboratory equipment will be obtained consistent with the  
College of Engineering capital budget. Library acquisitions  
will be required consistent with current acquisition plan.~~

2. Rationale:

The proposed course is a graduate elective in the College of Engineering and is consistent with the establishment of the College of Engineering approved by the Board of Trustees in February 1995.

The course will address process analysis including process consistency, process selection, process optimization, and process documentation.

3. Essence of the Course:

a) Objectives:

Upon completion of the course, students will be able to:


1. Validate the consistency of engineering processes.
2. Identify optimal processing options based on economic analysis and utilize this information to make overall process assessments
3. Perform Detailed Process Equipment Replacement Analysis and formulate a comprehensive understanding of defender/challenger models.
4. Prepare and analyze process documentation including budgets and flow sheets and analyze those of existing engineering companies.
5. Optimally Ration limited resources among engineering projects



*Office of the Executive Vice President / Provost*

January 11, 2002

To: Deans' Council  
Department Chairs  
Drew Calandrella, Student Affairs  
Edwin Eigenbrot, Registrar  
Marvin Sills, Admissions  
Betsy McCalla-Wriggins, Director, Career & Academic Planning Center  
Lauretta Reeves, Chair, University Senate Curriculum Committee  
Cindy Vitto, President, University Senate  
Joyce Rigdon, Director, Institutional Research and Planning

From:  Helen Giles-Gee, Provost

I have approved the following curriculum proposal, which has been approved by the University Senate Curriculum Committee.

Please ensure that the faculty who advise students in your areas are aware of this new course.

**College of Engineering**

Chemical Engineering Department:

New course: (0906.581); Advanced Process Analysis; Graduate course;  
SCC#99-00-428.

rw