

Library Resource Form Required for New Non-Gen-Ed

Submission Deadlines: Fall - October 10, 2006 Spring - February 13, 2007

TITLE Course Title Change for Unit Operations I (0906.404)

0906.403 - Skessel

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DEPARTMENT Chemical Engineering  
College Engineering

If LAS-check:          History/Humanities          Social/Behavioral Sciences  
         Math/Science

X UNDERGRADUATE          GRADUATE

         New non gen-ed          Major

         Short-Term non gen-ed

X Minor curricular changes (fewer than three) to:

         Existing non gen-ed course

         Non gen-ed degree requirements

         Major

         Minor, specialization, concentration, track, certificate program

**Signatures Required: representing approval before submission to Office of the Senate**

Department Chair: Robert P Hesketh Date: 10/17/06  
Department CURRICULUM Chair: [Signature] Date: 10/17/06  
Academic DEAN: [Signature] Date: 10/17/06

COLLEGE CURRICULUM COMMITTEE: Open Hearing Date: 11/22/06  
Approved 11/30/06  
Not Approved

Signature: College Curriculum Chair [Signature]

Signature: SENATE CURRICULUM CHAIR [Signature]  
Date: 11/16/06

Comments: \_\_\_\_\_

Signature: Executive Vice President/Provost: 1/2/07 [Signature]  
Date: \_\_\_\_\_

Signature: REGISTRAR [Signature]  
Date: 1/4/07

Course Description Received & Approved  
Hegis Taxonomy & Course # CHE 06.403

Notification Forward:  
         SCC CHAIR          Academic Dean  
         IR          Department Chair  
         CAP          VP/Student Affairs  
         Registrar          Other-

## Minor Curricular Change

403 = VOL I  
404 = VOL II  
-SK

### Details

CHE 06.403

- a. Change Requested: Change in title of senior level required chemical engineering course- From: Unit Operations Laboratory I (0906.404) ~~0906.403~~ -SK  
To: Unit Operations Experimental Design and Analysis (~~0906.404~~)
- b. Sponsors: Z. Otero Gephardt and the Chemical Engineering Department

### Rationale

- a. Statement of need: The change in title is needed to better describe the course content. Engineering experimental design and data analysis are essential components of the course and have always been an important part of the course content. The new name highlights these areas which have become more crucial to the chemical process industry in the last five to ten years. The Industrial Advisory Committee of the Chemical Engineering Department suggested this change. They noted that the change will make it clear to potential employers that the Rowan chemical engineering curriculum familiarizes students with the experimental design and analysis specifically suited to unit operations. The proposed name change will more accurately describe the course. It will help future employers to understand the degree of preparation of Rowan chemical engineering students in industrially relevant analysis techniques and technologies.
- b. Statement of Curricular Effect: The proposed change in course title will have no impact on the curriculum. The course content will remain the same. It will continue to be taught with the same laboratory pedagogy.

### Results of Consultation

- a. The change in title proposed here only affects a required chemical engineering senior level course. Chemical Engineering majors are the only students who take this course. The proposed change has no effect on any other department. In addition, the proposed change does not impact the course content or the chemical engineering curriculum. The matter was discussed at Chemical Engineering Department meetings and at meetings of the Industrial Advisory Board.

**906.403 Unit Operations Experimental Design and Analysis**

*Prerequisites: 0906.310, 0906.314, 0906.316*

This course addresses the fundamental operation and applications of chemical engineering unit processes, generally referred to as unit operations. Students will learn and develop experimental designs and engage in the data analysis required to characterize the operations and relate theory to industrial practice. Students will engage in pilot-scale process experimentation based on appropriate experimental designs and analysis. Typical processes covered include process filtration, tubular flow reactors, liquid-liquid extraction, fluidized beds, continuous crystallization, leaching, reverse osmosis, gas permeation, absorption and stripping, and bioprocesses.