**PURDUE UNIVERSITY**
REQUEST FOR ADDITION, EXPIRATION, OR REVISION OF AN UNDERGRADUATE COURSE
(10000-40000 LEVEL)

**DEPARTMENT** School of Chemical Engineering
**EFFECTIVE SESSION** Fall 2010

**INSTRUCTIONS:** Please check the items below which describe the purpose of this request.

- [ ] New course with supporting documents
- [ ] Add existing course offered at another campus
- [ ] Expiration of a course
- [ ] Change in course number
- [ ] Change in course title
- [ ] Change in course credit/type

**PROPOSED**

<table>
<thead>
<tr>
<th>Subject Abbreviation</th>
<th>Subject Abbreviation</th>
<th>Existing Subject Abbreviation</th>
<th>CHE</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Number</th>
<th>Existing Course Number</th>
<th>20500</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Long Title</th>
<th>Short Title</th>
</tr>
</thead>
</table>

Abbreviated title will be entered by the Office of the Registrar if omitted. (20 CHARACTERS ONLY)

**TERMS OFFERED**

- [ ] Summer
- [ ] Fall
- [ ] Spring

**CAMPUS(ES) INVOLVED**

- [ ] Calumet
- [ ] Cost Ed
- [ ] Tech Statewide
- [ ] Ft. Wayne
- [ ] W. Lafayette
- [ ] Indianapolis

**CREDIT TYPE**

<table>
<thead>
<tr>
<th>1. Fixed Credit Cr. Hrs.</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Variable Credit Range:</td>
<td></td>
</tr>
<tr>
<td>Minimum Cr. Hrs. (Check One)</td>
<td></td>
</tr>
<tr>
<td>To</td>
<td>Or</td>
</tr>
<tr>
<td>Maximum Cr. Hrs.</td>
<td></td>
</tr>
<tr>
<td>Equivalent Credit:</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**COURSE ATTRIBUTES:** Check All That Apply

- [ ] 1. Pass/No Pass Only
- [ ] 2. Satisfactory/Unsatisfactory Only
- [ ] 3. Repeatable
- [ ] 4. Credit by Examination
- [ ] 5. Special Fees
- [ ] 6. Registration Approval Type
- [ ] 7. Variable Title
- [ ] 8. Honors
- [ ] 9. Full Time Privilege
- [ ] 10. Off Campus Experience

**Schedule Type**

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Recitation</th>
<th>Presentation</th>
<th>Laboratory</th>
<th>Lab Prep</th>
<th>Studio</th>
<th>distance</th>
<th>Junc</th>
<th>Experiential</th>
<th>Research</th>
<th>Ind. Study</th>
<th>Project/Observ</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>3</td>
<td>1</td>
<td>15</td>
<td>10</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**Weeks Offered**

- [ ] 15

**% of Credit Allocated**

- [ ] 25

**Cross-Listed Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>No Change</th>
</tr>
</thead>
</table>

**COURSE DESCRIPTION (INCLUDE REQUIREMENTS/RESTRICTIONS):**

No Change

**COURSE LEARNING OUTCOMES**

Course Outcomes (numbers in parentheses refer to ABET program educational objectives)

1. Estimate physical properties of real systems (1).
2. Evaluate introductory single-component and multi-component phase equilibria and incorporate these concepts into solutions of mass and energy balance problems (1, 3).
3. Solve steady state and transient mass and energy balance problems for both reacting and non-reacting systems with or without recycle using

**Calumet Department Head**

Date: [Signature]

**Calumet School Dean**

Date: [Signature]

**Fort Wayne Department Head**

Date: [Signature]

**Fort Wayne School Dean**

Date: [Signature]

**Indianapolis Department Head**

Date: [Signature]

**Indianapolis School Dean**

Date: [Signature]

**North Central Faculty Senate Chair**

Date: [Signature]

**Vice Chancellor for Academic Affairs**

Date: [Signature]

**West Lafayette Department Head**

Date: [Signature]

**West Lafayette College/School Dean**

Date: [Signature]

**West Lafayette Registrar**

Date: [Signature]
PURDUE UNIVERSITY
REQUEST FOR ADDITION, EXPIRATION,
OR REVISION OF AN UNDERGRADUATE COURSE
(10000-40000 LEVEL)

DEPARTMENT: School of Chemical Engineering
EFFECTIVE SESSION: Fall 2011

INSTRUCTIONS: Please check the items below which describe the purpose of this request:

1. New course with supporting documents
2. Add existing course offered at another campus
3. Expiration of a course
4. Change in course number
5. Change in course title
6. Change in course credit/type
7. Change in course attributes (department head signature only)
8. Change in instructional hours
9. Change in course description
10. Change in course requisites
11. Change in semesters offered (department head signature only)
12. Transfer from one department to another

PROPOSED:
Subject Abbreviation: CHE
Course Number: 20500
Long Title: 
Short Title: 

EXISTING:
Subject Abbreviation: CHE
Course Number: 20500
Long Title: 
Short Title: 

TERMS OFFERED:
Check All That Apply:

- Summer
- Fall
- Spring

CAMPUS(ES) INVOLVED:
- Calumet
- N. Central
- Cont Ed
- Tech Statewide
- Ft. Wayne
- W. Lafayette
- Indianapolis

CREDIT TYPE

1. Fixed Credit: Cr. Hrs.
   - 4

2. Variable Credit Range:
   - Minimum Cr. Hrs
     - (Check One)
     - To
     - Or
   - Maximum Cr. Hrs

3. Equivalent Credit: Yes

4. Pass/No Pass Only

5. Satisfactory/Unsatisfactory Only

6. Registration Approval Type
   - Department
   - Instructor

7. Repeatable

8. Maximum Repeatable Credit:

9. Credit by Examination

10. Special Fees

Course Outcomes (numbers in parentheses refer to ABET program educational objectives)
1. Estimate physical properties of real systems (1).
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<td>75</td>
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COURSE DESCRIPTION (INCLUDE PREREQUISITES/RESTRICTIONS):

No Change

COURSE LEARNING OUTCOMES

Date: 5-12-10

OFFICE OF THE REGISTRAR
To: The Faculty of the College of Engineering

From: The Faculty of the School of Chemical Engineering

Re: Change of existing CHE 20500, Chemical Engineering Calculations, from 3 credit hours to 4 credit hours.

The faculty of the School of Chemical Engineering has approved the following change. This action is now submitted to the Engineering Faculty with a recommendation for approval.

From:
CHE 20500 - Chemical Engineering Calculations
Sem 1 and 2, Lec 3, Cr. 3
Restrictions: Must be enrolled in the School of Chemical Engineering
Prerequisites:
ENGR 12600, MA 16500, PHYS 17200.
Concurrent Prerequisites: CHM 11600

Quantitative application of steady-state mass and energy balances to solve problems involving multi-component systems and multi-unit chemical processes. Single-component and multi-component phase equilibria, single reaction and multiple reaction stoichiometry, coupled mass and energy balances, chemical processes involving bypass and recycle streams.

To:
CHE 20500 - Chemical Engineering Calculations
Sem 1 and 2, Lec 3, Recitation 1, Cr. 4
Restrictions: Must be enrolled in the School of Chemical Engineering
Prerequisites:
ENGR 12600, MA 16500, PHYS 17200,
Concurrent Prerequisites: CHM 11600

Quantitative application of steady-state mass and energy balances to solve problems involving multi-component systems and multi-unit chemical processes. Single-component and multi-component phase equilibria, single reaction and multiple reaction stoichiometry, coupled mass and energy balances, chemical processes involving bypass and recycle streams.

APPROVED FOR THE FACULTY OF THE SCHOOLS OF ENGINEERING BY THE ENGINEERING CURRICULUM COMMITTEE

ECC Minutes #25
Date 4/27/10
Chairman ECC R. Cipia
**Reason:** CHE 20500 is the first CHE course that is taken by students accepted into the School of Chemical Engineering, and as such provides the foundation needed for all subsequent chemical engineering courses. Furthermore, School of Chemical Engineering policy requires a “C” or higher for chemical engineering majors to enroll in any subsequent chemical engineering course. The additional credit hour will be used to convert the currently optional PSO (Practice, Study, Observation) into a required recitation session. Hence, all students will benefit from the additional review of lecture material and further problem solving exercises that are included in the recitation session.

[Signature]

A. Varma, Head
School of Chemical Engineering
2/11/10