

PURDUE UNIVERSITY  
REQUEST FOR ADDITION, EXPIRATION,  
OR REVISION OF A COURSE

DEPARTMENT Agricultural & Biological Engineering

EFFECTIVE SESSION Fall 2004

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

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> 1. New course with supporting documents</li> <li>2. Add existing course offered at another campus</li> <li>3. Expiration of a course</li> <li>4. Change in course number</li> <li>5. Change in course title</li> <li>6. Change in course credit/type</li> </ul> | <ul style="list-style-type: none"> <li>7. Change in course attributes</li> <li>8. Change in instructional hours</li> <li>9. Change in course description</li> <li>10. Change in course requisites</li> <li>11. Change in semesters offered</li> </ul> |
|--|---|

PROPOSED:

Subject Abbreviation ABE  
Course Number 202

EXISTING:

Subject Abbreviation  
Course Number

TERMS OFFERED  
Check All That Apply:  
Summer      Fall      Spring

Long Title Thermodynamics in Biological Systems II

Short Title Thrmodyn in Bio Sys II

Abbreviated title will be entered by the Office of the Registrar if omitted. (22 CHARACTERS ONLY)

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

CREDIT TYPE

1. Fixed Credit: Cr. Hrs. 3
2. Variable Credit Range:  
Minimum Cr. Hrs                      Or                      Maximum Cr. Hrs  
(Check One) To
3. Equivalent Credit: Yes      No
4. Thesis Credit: Yes      No

COURSE ATTRIBUTES: Check All That Apply.

- 1. Pass/Not Pass Only
- 2. Satisfactory/Unsatisfactory Only
- 3. Repeatable
- 4. Credit by Examination
- 5. Designator Required
- 6. Special Fees

- 7. Registration Approval Type  
Department                      Instructor
- 8. Variable Title
- 9. Remedial
- 10. Honors
- 11. Full Time Privilege
- 12. Off Campus Experience

Instructional Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated	Delivery Method (Asyn. Or Syn.)	Delivery Medium (Audio, Internet, Live, Text-Based, Video)
Lecture	50	3	16	100	Syn	Live
Presentation						
Laboratory						
Lab Prep						
Studio						
Distance						
Clinic						
Experiential						
Research						
Ind. Study						
Pract/Observ						

COURSE DESCRIPTION (INCLUDE REQUISITES):

Prerequisites: ABE 201 & MATH 261. Thermodynamic principles and their applications to biochemical and biological systems with emphasis on the second law of thermodynamics and use of molecular interpretations of energies and entropies. Concept of entropy balances and process efficiency. Free energy and chemical equilibrium. Equilibrium between phases, colligative properties, binding of ligands and formation of biological membranes. Molecular motion and transport properties and their application in biochemical analytical methods. Development of physical chemical problem solving skills using MathCad and MatLab software.

Calumet Undergrad Curriculum Committee	Date	Calumet Department Head	Date	Calumet School Dean	Date
Fort Wayne Department Head	Date	Fort Wayne School Dean	Date	Fort Wayne Chancellor	Date
Indianapolis Department Head	Date	Indianapolis School Dean	Date	<i>Robert Montgomery</i> 4/23/04 Undergrad Curriculum Committee	Date
North Central Department Head	Date	North Central Chancellor	Date	Date Approved by Graduate Council	
<i>James Bull</i> 4-8-04 West Lafayette Department Head	Date	<i>Alan Stecher</i> 4-16-04 West Lafayette School Dean	Date	Graduate Council Secretary	Date
Graduate Area Committee Convener	Date	Graduate Dean	Date	<i>Debra Sheeb</i> 5/4/04 West Lafayette Registrar	Date