

DEPARTMENT Agricultural + Biological Engineering

DATE SUBMITTED 5/9/01

DATE EFFECTIVE Summer '01

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

PURPOSE

- |   |   |
|---|---|
| <input type="checkbox"/> 1. Deletion of a course                          | <input type="checkbox"/> 8. Change in semesters offered                         |
| <input type="checkbox"/> 2. New course with supporting documents          | <input type="checkbox"/> 9. Change in course credit/type                        |
| <input type="checkbox"/> 3. Add existing course offered at another campus | <input type="checkbox"/> 10. Change in course attributes                        |
| <input type="checkbox"/> 4. Change in course number at same level         | <input type="checkbox"/> 11. Change in instructional hours                      |
| <input type="checkbox"/> 5. Downgrading of course level                   | <input type="checkbox"/> 12. Change in prerequisites                            |
| <input type="checkbox"/> 6. Upgrading of course level                     | <input checked="" type="checkbox"/> 13. Change in description of course content |
| <input type="checkbox"/> 7. Change in course title                        | <input type="checkbox"/> 14. Transfer of course from one dept. to another       |

EXISTING:

PROPOSED:

SEMESTERS OFFERED

Subject Abbreviation ABE Course Number 310

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Check All That Apply.  
 Summer  Fall  Ag Winter  Spring

Proposed Title Thermodynamics of Food and Biological Systems  
 Variable Title Yes  No

Abbreviated Title Therm Food & Biol Syst  
 Abbreviated title will be entered by the Office of the Registrar if omitted. (22 CHARACTERS ONLY)

|                      |  |  |
|----------------------|--|--|
| CROSS LISTED COURSES | CREDIT TYPE  | COURSE ATTRIBUTES: Check All That Apply. |
|                      | 1. Fixed Credit: Cr. Hrs. <u>3</u><br>2. Variable Credit Range:<br>Minimum Cr. Hrs. _____<br>(Check One) To _____ Or _____<br>Maximum Cr. Hrs. _____<br>3. Equivalent Credit: Yes <input type="checkbox"/> No <input type="checkbox"/><br>4. Thesis Credit: Yes <input type="checkbox"/> No <input type="checkbox"/> |  |

| Instructional Type | Class Hours | FTE | Instructional Type | Class Hours | FTE | Instructional Type | Class Hours | FTE | CAMPUS(ES) INVOLVED                                |
|--------------------|-------------|-----|--------------------|-------------|-----|--------------------|-------------|-----|--|
| Primary            | 3           |     | Auto-tutorial      |             |     | Thesis             |             |     | Calumet  |
| Secondary          |             |     | Ind. Study         |             |     | Observation        |             |     | Fort Wayne   |
| Laboratory         |             |     | Clinic             |             |     | Matts Based        |             |     | Indianapolis                                       |
| Lab. Prep.         |             |     | Experiential       |             |     |                    |             |     | North Central                                      |
|                    |             |     |                    |             |     |                    |             |     | West Lafayette <input checked="" type="checkbox"/> |
|                    |             |     |                    |             |     |                    |             |     | Off Campus   |

COURSE DESCRIPTION (PREREQUISITES INCLUDED):  
 Sem. 1, Class 3, cr. 3. Prerequisite: ABE 210 or equivalent.  
 Basic concepts of thermodynamic energy and entropy functions applied to food and biological systems. Equations of state, phase rule, non-ideality, fugacity, activity models, vapor-liquid equilibria, colligative properties, osmotic pressure, ionic solutions, active transport, ATP cycle, characterization of macromolecules, chemical reaction equilibria.

|  |               |                               |                |                                   |                |
|--|---------------|-------------------------------|----------------|-----------------------------------|----------------|
| 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           |
|  |               |                               |                | <i>C.D. Sutton</i>                |                |
|  |               |                               |                | Appr. for Faculty                 | #944           |
|  |               |                               |                | <i>C.D. Sutton, Chair</i>         | 2/14/01        |
| Indianapolis Department Head           | Date          | Indianapolis School Dean      | Date           | Undergrad Curriculum Committee    | Date           |
| North Central Department Head          | Date          | North Central Vice-Chancellor | Date           | Date Approved by Graduate Council |                |
| <i>James Bull</i>                      | <u>5-9-01</u> | <i>Paul G. Brunett</i>        | <u>5/10/01</u> |                                   |                |
| West Lafayette Department Head         | Date          | West Lafayette School Dean    | Date           | Graduate Council Secretary        | Date           |
|  |               |                               |                | <i>Debra Shultz</i>               | <u>5/30/01</u> |
| Graduate Area Committee Convener       | Date          | Graduate Dean                 | Date           | West Lafayette Registrar          | Date           |