**PURDUE UNIVERSITY**

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

**DEPARTMENT** Biomedical Engineering  
**EFFECTIVE SESSION** Fall 2011

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

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

**PROPOSED:**

<table>
<thead>
<tr>
<th>Subject Abbreviation</th>
<th>BME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Number</td>
<td>205</td>
</tr>
<tr>
<td>Long Title</td>
<td>Biomolecular and Cellular Systems Laboratory</td>
</tr>
<tr>
<td>Short Title</td>
<td>Biotech &amp; Cellular Syst Lab</td>
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**EXISTING:**

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<thead>
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<tbody>
<tr>
<td>Course Number</td>
<td>205</td>
</tr>
</tbody>
</table>

**TERMS OFFERED**

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

**CAMPUS(ES) INVOLVED:**

- [ ] Catlet
- [ ] Cont Ed
- [ ] Fl. Wayne
- [x] Indianapolis
- [ ] N. Central
- [ ] Tech Statewide
- [ ] W. Lafayette

**CREDIT TYPE**

<table>
<thead>
<tr>
<th>Schedule Type</th>
<th>Minutes Per Mgr</th>
<th>Meetings Per Week</th>
<th>Weeks Offered</th>
<th>% of Credit Allocated</th>
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<tbody>
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<tr>
<td>Ind. Study</td>
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</tbody>
</table>

**COURSE ATTRIBUTES:**

- [ ] Pass/Not Pass Only
- [ ] Satisfactory/Unsatisfactory Only
- [x] Repeatable
- [ ] Credit by Examination
- [ ] Special Fees
- [ ] Department Approval Type
- [ ] Instructor
- [ ] Variable Title
- [ ] Honors
- [ ] Full Time Privilege
- [ ] Off Campus Experience

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

Description: Introductory laboratory experience focused on engineering concepts and practices in the analysis of biomolecules and cells. Topics include fundamental qualitative techniques of analysis, methods of isolation, identification, and quantification of biomolecules and cells, and analysis of integrated biosystems. Concludes with student-driven design project.

**COURSE LEARNING OUTCOMES:**

1. Independently describe the theoretical basis of, and put into practice, fundamental analytical tools and techniques used in the isolation, characterization, and quantification of biomolecules and cells. 2. Collect, record, process, statistically analyze, and report experimental data related to the analysis of biomolecules and cells in an accurate and understandable manner. 3. Conceptually design a simple analytical method and/or tool for solving a medically-relevant problem based upon detection/analysis of a specific biomolecular or cellular related abnormality.

**Cross-Listed Courses:**

- [ ]
- [ ]
- [ ]
- [ ]
- [ ]

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

DEPARTMENT: Biomedical 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
- [X] 7. Change in course attributes (department head signature only)
- [ ] 8. Change in instructional hours
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<tr>
<td>Course Number</td>
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<tr>
<td>Long Title</td>
<td>Biomolecular and Cellular Systems Laboratory</td>
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<tr>
<td>Short Title</td>
<td>Biomolec &amp; Cellular Syst Lab</td>
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TERMS OFFERED

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

CAMPUS(ES) INVOLVED

- Calumet
- Cont Ed
- Ft Wayne
- Indianapolis
- Tech Statewide
- W. Lafayette

Abbr. title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY)

CREDIT TYPE

- [ ] 1. Fixed Credit: Cr. Hrs.
- [ ] 2. Variable Credit: Range: Minimum Cr. Hrs. (Check One) To
- [ ] 3. Equivalent Credit: Yes

COURSE ATTRIBUTES: Check All That Apply

- [ ] 1. Pass/Not 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. Of Campus Experience

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COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):

Fall, Lab 3 Cr. 1. Major Restriction: BM E Only. Co-requisite: BIOL 23000 and BM E 20100
Description: Introductory laboratory experience focused on engineering concepts and practices in the analysis of biomolecules and cells. Topics include fundamental quantitative techniques of analysis, methods of isolation, identification, and quantification of biomolecules and cells, and analysis of integrated biosystems. Concludes with student-driven design project.

*COURSE LEARNING OUTCOMES:

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Calumet Department Head Date
Calumet School Dean Date

Fort Wayne Department Head Date
Fort Wayne School Dean Date

Indianapolis Department Head Date
Indianapolis School Dean Date

North Central Department Head Date
North Central Campus Dean Date

WEST Lafayette Department Head Date
WEST Lafayette College/School Dean Date

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

FROM: The Faculty of the School of Biomedical Engineering

RE: Changes in Undergraduate-Level Course, BME 20500 Biomedical Engineering Laboratory I, title and requisites

The Faculty of the School of Biomedical Engineering has approved the following changes to an existing course. This action is now submitted to the Engineering Faculty with a recommendation for approval.

From: BME 20500 Biomedical Engineering Laboratory I
Term offered: Fall, Lab 3, Cr. 1
Prerequisite: CHM 11600, CS 15600, ENG 10600, and MA 16600, or equivalent
Corequisite: BIOL 29500E, BME 20100

This course is an introductory laboratory experience that focuses on engineering concepts and practices used in the analysis of biomolecules and cells. Topics include fundamental quantitative techniques of analysis, methods of isolation, identification, and quantification of biomolecules and cells, and analysis of integrated biosystems. The course concludes with a student-driven design project.

To: BME 20500 Biomolecular and Cellular Systems Laboratory
Term offered: Fall, Lab 3, Cr. 1
Restriction: Must be enrolled in the School of Biomedical Engineering (BME)
Co-requisite: BME 20100
Concurrent prerequisite: BIOL 23000

Description: Introductory laboratory experience focused on engineering concepts and practices in the analysis of biomolecules and cells. Topics include fundamental quantitative techniques of analysis, methods of isolation, identification, and quantification of biomolecules and cells, and analysis of integrated biosystems. Concludes with student-driven design project.

Reason: To provide a more descriptive course title for the students. The change in co-requisite reflects the new permanent number for the Biology course. A restriction is employed since this is a limited space laboratory course. This restriction, along with the co-requisite BME 20100, negates the need to list prerequisites on this course as well.

George R. Wodicka, Professor and Head
Weldon School of Biomedical Engineering