# PURDUE UNIVERSITY
## REQUEST FOR ADDITION, DELETION, OR REVISION OF A COURSE

### DEPARTMENT
Biomedical Engineering

### DATE SUBMITTED
4/19/04

### DATE EFFECTIVE
1/05/05

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

### PURPOSE

- [ ] Deletion of a course
- [ ] New course with supporting documents
- [ ] Add existing course offered at another campus
- [ ] Change in course number at same level
- [ ] Downgrading of course level
- [ ] Upgrading of course level
- [ ] Change in course title
- [ ] Change in semesters offered
- [ ] Change in course credit/type
- [ ] Change in course attributes
- [ ] Change in instructional hours
- [ ] Change in prerequisites
- [ ] Change in description of course content
- [ ] Transfer of course from one dept. to another

### EXISTING:

**Subject Abbreviation:** BME  
**Course Number:** 595  
**Proposed Title:** Biomedical Fluid Dynamics  
**Variable Title:** Yes  
**Abbreviated Title:** BME Fluid Dynamics  
**Abbreviated title will be entered by the Office of the Registrar if omitted.**

### PROPOSED:

**Subject Abbreviation:** BME  
**Course Number:** 541  
**Proposed Title:** Biomedical Fluid Dynamics  
**Variable Title:** Yes  
**Abbreviated Title:** BME Fluid Dynamics

### SEMESTERS OFFERED

- [ ] Summer
- [x] Fall
- [ ] Ag Winter
- [x] Spring

### CREDIT TYPE

1. Fixed Credit:  Cr. Hrs. 3.0
2. Variable Credit Range: Minimum Cr. Hrs. (Check One) To Maximum Cr. Hrs.
3. Equivalent Credit: Yes [x] No [ ]
4. Thesis Credit: Yes [ ] No [x]

### COURSE ATTRIBUTES:
Check All That Apply:

- [ ] Pass/No Pass Only
- [ ] Repeatable for Credit
- [ ] Available for Credit by Examination
- [ ] Designator Required
- [ ] Special Fees
- [x] Approval Required for Enrollment
- [ ] Department
- [ ] Instructor

### CROSS LISTED COURSES

<table>
<thead>
<tr>
<th>Instructional Type</th>
<th>Class Hours</th>
<th>FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>3.0</td>
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<tr>
<td>Secondary</td>
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<tr>
<td>Laboratory</td>
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<tr>
<td>Lab. Prep.</td>
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### INSTRUCTIONAL TYPE

<table>
<thead>
<tr>
<th>Instructional Type</th>
<th>Class Hours</th>
<th>FTE</th>
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<tbody>
<tr>
<td>Auto-Tutorial</td>
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<tr>
<td>Ind. Study</td>
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<tr>
<td>Clinic</td>
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<tr>
<td>Experiential</td>
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</tbody>
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### CAMPUS(ES) INVOLVED

- [x] Calumet
- [ ] Fort Wayne
- [ ] Indianapolis
- [x] North Central
- [x] West Lafayette
- [ ] Off Campus

### COURSE DESCRIPTION (PREREQUISITES INCLUDED):
Prerequisites: Senior or Graduate standing; ME308 or equivalent. (Offered in alternate years.)
Advanced principles of convective diffusion of fluids pertaining to the body, particularly vascular circulation. Topics include blood flow in arteries, convective and diffusion boundary layers in internal flows with reactive and/or permeable walls, Brownian motion, blood rheology, transport in blood, mass transport to the arterial wall, and fluid dynamics of vasculature in physiological and pathological conditions.

### COURSE PREREQUISITES

Calumet Undergrad Curriculum Committee  
Calumet Department Head  
Calumet School Dean  

Fort Wayne Department Head  
Fort Wayne School Dean  

Indianapolis Department Head  
Indianapolis School Dean  

North Central Department Head  
North Central Vice Chancellor  

West Lafayette Department Head  
West Lafayette School Dean  

Graduate Area Committee Convener  
Graduate Dean  
West Lafayette Registrar

**OFFICE OF THE REGISTRAR**

**MAR 04 2005**