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

**DEPARTMENT:** Chemical Engineering  
**EFFECTIVE SESSION:** 1/05  

**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  
8. Change in instructional hours  
9. Change in course description  
10. Change in course requisites  
11. Change in semesters offered  

**PROPOSED:**  
**Subject Abbreviation:** CHE  
**Course Number:** 377  
**Long Title:** Momentum Transfer  
**Short Title:** Momentum Transfer  

**EXISTING:**  
**Subject Abbreviation:** CHE  
**Course Number:** 377  
**Long Title:** Momentum Transfer  
**Short Title:** Momentum Transfer  

Abbreviated title will be entered by the Office of the Registrar if omitted.  

**TERMS OFFERED:**  
Check All That Apply:  
- Summer  
- Fall  
- Spring  

**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. (Check One) To  
   - Or  
   - Maximum Cr. Hrs.  
3. Equivalent Credit: Yes  
4. Thesis Credit: Yes  

**COURSE ATTRIBUTES:**  
1. Pass/No Pass Only  
2. Satisfactory/Unsatisfactory Only  
3. Repeatable  
4. Maximum repeatable credit:  
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  

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<th>Instructional Type</th>
<th>Minutes Per Wk</th>
<th>Meetings Per Week</th>
<th>Weeks Offered</th>
<th>% of Credit Allocated</th>
<th>Delivery Method (Asyn. Or Syn.)</th>
<th>Delivery Medium</th>
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<th>Text Based</th>
<th>Video</th>
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**COURSE DESCRIPTION (INCLUDE REQUISITES):**  
CHE 377 Momentum Transfer Sem. 1. Class 3, cr. 3 (5 CHE).  
Prerequisite: CHE 205; co-requisites: CHE 211 and MA 303 or equivalent.  
Differential (microscopic) and integral (macroscopic) mass, momentum, and energy balances.  
Newtonian and non-Newtonian fluids.  Fluid statics.  One-dimensional steady and transient laminar flows.  
Turbulence.  Dimensional analysis and similarity.  Friction factors and drag coefficients.  
Applications to engineering analysis of practical problems.  Introduction to numerical analysis and visualization of flows.

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**Calumet Undergrad Curriculum Committee**  
**Date**  
**Calumet Department Head**  
**Date**  
**Calumet School Dean**  
**Date**

**Fort Wayne Department Head**  
**Date**  
**Fort Wayne School Dean**  
**Date**  
**Undergrad Curriculum Committee**  
**Date**  
**North Central Department Head**  
**Date**  
**North Central Chancellor**  
**Date**  
**Undergrad Curriculum Committee**  
**Date**

**W. Lafayette Department Head**  
**Date**  
**West Lafayette School Dean**  
**Date**  
**West Lafayette Registrar**  
**Date**  

**Approved by Graduate Council**  
**Date**  

**Office of the Registrar**