TO: The Faculty of the College of Engineering

FROM: Dr. Michael Harris, Associate Dean for Undergraduate Education M744

**RE:** Change in requisites to accommodate the inclusion of PHYS 17200 is the new curriculum of the Honors Engineering courses, ENGR 16100 and 16200

To facilitate the changes in the courses which require PHYS 17200 as a requisite, this **Fast-Track EFD** is being submitted on behalf of the schools listed below.

#### **AAE 20300**

From: (Undergraduate level PHYS 17200 Minimum Grade of D- or (Undergraduate level PHYS 16200 Minimum Grade of D- and Undergraduate level PHYS 16300 Minimum Grade of D-) and (Undergraduate level MA 26100 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 26300 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 27100 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 27100 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17400 Minimum Grade of D- [may be taken concurrently])

To: (Undergraduate level PHYS 17200 Minimum Grade of D- or (Undergraduate level PHYS 16200 Minimum Grade of D- and Undergraduate level PHYS 16300 Minimum Grade of D-) or Undergraduate level ENGR 16200) and (Undergraduate level MA 26100 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 26300 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 27100 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17400 Minimum Grade of D- [may be taken concurrently])

## **ABE 20500**

From: (Undergraduate level ENGR 12600 Minimum Grade of C- or Undergraduate level ENGR 12100 Minimum Grade of C- or Undergraduate level ENGR 13200 Minimum Grade of C- or Undergraduate level ENGR 13300 Minimum Grade of C- or Undergraduate level ENGR 14200 Minimum Grade of C-) and Undergraduate level PHYS 17200 Minimum Grade of C- [may be taken concurrently]

To: To: (Undergraduate level ENGR 12600 Minimum Grade of C- or Undergraduate level ENGR 12100 Minimum Grade of C- or Undergraduate level ENGR 13200 Minimum Grade of C- or Undergraduate level ENGR 13300 Minimum Grade of C- or Undergraduate level ENGR 14200 Minimum Grade of C- or Undergraduate level ENGR 16200 Minimum Grade of C-) and (Undergraduate level PHYS 17200 Minimum Grade of C- [may be taken concurrently] or Undergraduate level ENGR 16200 Minimum Grade of C-)

Approved for the faculty of the Schools of Engineering by the Engineering Curriculum Committee

ECC Minutes / D Date 2-10-1/1
Chairman ECC / La Caraca

#### **ABE 21000**

From: (Undergraduate level CHM 11500 Minimum Grade of D- and Undergraduate level PHYS 17200 Minimum Grade of D-)

To: Undergraduate level CHM 11500 Minimum Grade of D- and (Undergraduate level PHYS 17200 Minimum Grade of D- or Undergraduate level ENGR 16200 Minimum Grade C-)

#### **CE 29700**

From: (Undergraduate level MA 26100 Minimum Grade of C- [may be taken concurrently] or Undergraduate level MA 27100 Minimum Grade of C- [may be taken concurrently] or Undergraduate level MA 18200 Minimum Grade of C- [may be taken concurrently] or Undergraduate level MA 26300 Minimum Grade of C- [may be taken concurrently] or Undergraduate level MA 17400 Minimum Grade of C- [may be taken concurrently]) and (Undergraduate level PHYS 17200 Minimum Grade of D- or Undergraduate level PHYS 15200 Minimum Grade of D- or (Undergraduate level PHYS 16200 Minimum Grade of D- and Undergraduate level PHYS 16300 Minimum Grade of D-))

To: (Undergraduate level MA 26100 Minimum Grade of C- [may be taken concurrently] or Undergraduate level MA 27100 Minimum Grade of C- [may be taken concurrently] or Undergraduate level MA 18200 Minimum Grade of C- [may be taken concurrently] or Undergraduate level MA 26300 Minimum Grade of C- [may be taken concurrently] or Undergraduate level MA 17400 Minimum Grade of C- [may be taken concurrently]) and (Undergraduate level ENGR 16200 Minimum Grade of C- or Undergraduate level PHYS 17200 Minimum Grade of D- or Undergraduate level PHYS 15200 Minimum Grade of D- and Undergraduate level PHYS 16300 Minimum Grade of D-))

# CE 35000/EEE 35000

From: (Undergraduate level MA 16200 Minimum Grade of D- or Undergraduate level MA 16600 Minimum Grade of D- or Undergraduate level MA 17300 Minimum Grade of D- or Undergraduate level MA 22200 Minimum Grade of D- or Undergraduate level MA 22400 Minimum Grade of D- or Undergraduate level MA 16400 Minimum Grade of D- or Undergraduate level MA 16400 Minimum Grade of D- or Undergraduate level MA 18100 Minimum Grade of D-) and (Undergraduate level CHM 11200 Minimum Grade of D- or Undergraduate level CHM 11600 Minimum Grade of D- or Undergraduate level CHM 13600 Minimum Grade of D- or Undergraduate level CHM 12400 Minimum Grade of D- or Undergraduate level CHM 12400 Minimum Grade of D- or Undergraduate level CHM 12400 Minimum Grade of D- or Undergraduate level CHM C1060 Minimum Grade of D- and Undergraduate level CHM C1260 Minimum Grade of D-) or (Undergraduate level CHEM C1020 Minimum Grade of D- and Undergraduate level CHEM C1220 Minimum Grade of D-) and (Undergraduate level PHYS 17200 Minimum Grade of D- or Undergraduate level PHYS 22000 Minimum Grade of D- or Undergraduate level PHYS 15200 Minimum Grade of D- or Undergraduate level PHYS 23300 Minimum Grade of D-)

To: From: (Undergraduate level MA 16200 Minimum Grade of D- or Undergraduate level MA 16600 Minimum Grade of D- or Undergraduate level MA 17300 Minimum Grade of D- or Undergraduate level MA 22200 Minimum Grade of D- or Undergraduate level MA 22400 Minimum Grade of D- or Undergraduate level MA 16020 Minimum Grade of D- or Undergraduate level MA 16400 Minimum

Grade of D- or Undergraduate level MA 16900 Minimum Grade of D- or Undergraduate level MA 18100 Minimum Grade of D-) and (Undergraduate level CHM 11200 Minimum Grade of D- or Undergraduate level CHM 11600 Minimum Grade of D- or Undergraduate level CHM 13600 Minimum Grade of D- or Undergraduate level CHM 12400 Minimum Grade of D- or Undergraduate level CHM 12400 Minimum Grade of D- or Undergraduate level CHM 12901 Minimum Grade of D- or (Undergraduate level CHM C1060 Minimum Grade of D-) or (Undergraduate level CHEM C1020 Minimum Grade of D- and Undergraduate level CHEM C1220 Minimum Grade of D-) and (Undergraduate level ENGR 16200 Minimum Grade of D- or Undergraduate level PHYS 17200 Minimum Grade of D- or Undergraduate level PHYS 15200 Minimum Grade of D- or Undergraduate level PHYS 23300 Minimum Grade of D-)

## **CHE 20500**

From: ((Undergraduate level ENGR 12600 Minimum Grade of D- or Undergraduate level ENGR 12100 Minimum Grade of D- or Undergraduate level ENGR 13100 Minimum Grade of D- or Undergraduate level ENGR 19500 Minimum Grade of D- or Undergraduate level ENGR 14100 Minimum Grade of D-) and Undergraduate level PHYS 17200 Minimum Grade of D- or (Undergraduate level PHYS 16200 Minimum Grade of D-) and (Undergraduate level MA 16100 Minimum Grade of D- or Undergraduate level MA 16700 Minimum Grade of D- or Undergraduate level MA 16300 Minimum Grade of D- or Undergraduate level MATH 16300 Minimum Grade of D- or Undergraduate level CHM 11600 Minimum Grade of D- [may be taken concurrently] or Undergraduate level CHM 13600 Minimum Grade of D- [may be taken concurrently] or Undergraduate level CHM 12400 Minimum Grade of D- [may be taken concurrently] or Undergraduate level CHM 12600 Minimum Grade of D- [may be taken concurrently] or Undergraduate level CHM 11000 Minimum Grade of D- [may be taken concurrently]) Minimum Grade of D- [may be taken concurrently]) Minimum Grade of D- [may be taken concurrently])

To: (Undergraduate level ENGR 12600 Minimum Grade of D- or Undergraduate level ENGR 12100 Minimum Grade of D- or Undergraduate level ENGR 13100 Minimum Grade of D- or Undergraduate level ENGR 19500 Minimum Grade of D- or Undergraduate level ENGR 14100 Minimum Grade of D- or Undergraduate level ENGR 16100 Minimum Grade of D-) and Undergraduate level PHYS 17200 Minimum Grade of D- or (Undergraduate level PHYS 16200 Minimum Grade of D- and Undergraduate level PHYS 16300 Minimum Grade of D-) or (Undergraduate level ENGR 16200 Minimum Grade of D-) and (Undergraduate level MA 16100 Minimum Grade of D- or Undergraduate level MA 16700 Minimum Grade of D- or Undergraduate level MATH 16300 Minimum Grade of D- or Undergraduate level MA 16500 Minimum Grade of D-) and (Undergraduate level CHM 11600 Minimum Grade of D- [may be taken concurrently] or Undergraduate level CHM 12600 Minimum Grade of D- [may be taken concurrently] or Undergraduate level CHM 12600 Minimum Grade of D- [may be taken concurrently] or Undergraduate level CHM 12600 Minimum Grade of D- [may be taken concurrently]) or Undergraduate level CHM 11000 Minimum Grade of D- [may be taken concurrently])

## **EEE 35000/CE 35000**

From: (Undergraduate level MA 16200 Minimum Grade of D- or Undergraduate level MA 16600 Minimum Grade of D- or Undergraduate level MA 17300 Minimum Grade of D- or Undergraduate level MA 22200 Minimum Grade of D- or Undergraduate level MA 22400 Minimum Grade of D- or Undergraduate level MA 16400 Minimum Grade of D- or Undergraduate level MA 16400 Minimum Grade of D- or Undergraduate level MA 18100 Minimum Grade of D-) and (Undergraduate level CHM 11200 Minimum Grade of D- or Undergraduate level CHM 11600 Minimum Grade of D- or Undergraduate level CHM 13600 Minimum Grade of D- or Undergraduate level CHM 12400 Minimum Grade of D- or Undergraduate level CHM 12400 Minimum Grade of D- or Undergraduate level CHM 12400 Minimum Grade of D- or Undergraduate level CHEM C1020 Minimum Grade of D-) or (Undergraduate level CHEM C1020 Minimum Grade of D-) or (Undergraduate level CHEM C1060 Minimum Grade of D- and Undergraduate level CHEM C1260 Minimum Grade of D-) and (Undergraduate level PHYS 17200 Minimum Grade of D- or Undergraduate level PHYS 22000 Minimum Grade of D- or Undergraduate level PHYS 15200 Minimum Grade of D- or Undergraduate level PHYS 23300 Minimum Grade of D-)

To: (Undergraduate level MA 16200 Minimum Grade of D- or Undergraduate level MA 16600 Minimum Grade of D- or Undergraduate level MA 17300 Minimum Grade of D- or Undergraduate level MA 22200 Minimum Grade of D- or Undergraduate level MA 22400 Minimum Grade of D- or Undergraduate level MA 16020 Minimum Grade of D- or Undergraduate level MA 16400 Minimum Grade of D- or Undergraduate level MA 18100 Minimum Grade of D- or Undergraduate level GHM 18100 Minimum Grade of D- or Undergraduate level CHM 11600 Minimum Grade of D- or Undergraduate level CHM 13600 Minimum Grade of D- or Undergraduate level CHM 12400 Minimum Grade of D- or Undergraduate level CHM 12400 Minimum Grade of D- or Undergraduate level CHM 12901 Minimum Grade of D-) or (Undergraduate level CHEM C1220 Minimum Grade of D-) or (Undergraduate level CHEM C1060 Minimum Grade of D-) or (Undergraduate level CHEM C1060 Minimum Grade of D-) or Undergraduate level CHEM C1260 Minimum Grade of D-) and (Undergraduate level ENGR 16200 Minimum Grade of D- or Undergraduate level PHYS 17200 Minimum Grade of D- or Undergraduate level PHYS 23300 Minimum Grade of D- or Undergraduate level PHYS 23300 Minimum Grade of D-)

## **NUCL 20000**

From: (Undergraduate level MA 16200 Minimum Grade of D- or Undergraduate level MA 16900 Minimum Grade of D- or Undergraduate level MA 16600 Minimum Grade of D- or Undergraduate level MA 17100 Minimum Grade of D- or Undergraduate level MA 17100 Minimum Grade of D- or Undergraduate level MATH 16400 Minimum Grade of D- or Undergraduate level MATH M2160 Minimum Grade of D- or Undergraduate level MA 18100 Minimum Grade of D-) and (Undergraduate level PHYS 15200 Minimum Grade of D- or Undergraduate level PHYS 17200 Minimum Grade of D-) or (Undergraduate level PHYS 16200 Minimum Grade of D-) and Undergraduate level PHYS 16300 Minimum Grade of D-)

To:: (Undergraduate level MA 16200 Minimum Grade of D- or Undergraduate level MA 16900 Minimum Grade of D- or Undergraduate level MA 16600 Minimum Grade of D- or Undergraduate level

Engineering Faculty Document 63-17 February 3, 2017 Page **5** of **5** 

MA 16400 Minimum Grade of D- or Undergraduate level MA 17100 Minimum Grade of D- or Undergraduate level MA 17300 Minimum Grade of D- or Undergraduate level MATH 16400 Minimum Grade of D- or Undergraduate level MATH M2160 Minimum Grade of D- or Undergraduate level MA 18100 Minimum Grade of D-) and (Undergraduate level PHYS 15200 Minimum Grade of D- or Undergraduate level PHYS 17200 Minimum Grade of D-) or (Undergraduate level PHYS 16200 Minimum Grade of D- and Undergraduate level PHYS 16300 Minimum Grade of D-) or (Undergraduate level ENGR 16200 minimum grade of D-)

## **PURDUE UNIVERSITY**

Office of the Registrar FORM 40 REV. 5/11	REQUEST FOR A OR REVISION OF AN L	ADDITION, EXPIRATION, JNDERGRADUATE COURSE 0-40000 LEVEL)	Print Form
DEPARTMENT Nuclear Engineering		EFFECTIVE SESSION Fall 2017	
INSTRUCTIONS: Please check the items below wi	hich describe the purpose of th	nis request.	
New course with supporting docum			
2. Add existing course offered at another		7. Change in course a 8. Change in Instruction	utributes (department head signature only) onal hours
3. Expiration of a course	1101 Campao	9. Change in course d	
4. Change in course number		10. Change in course re	•
5. Change in course title		<u></u>	rs offered (department head signature only)
6. Change in course credit/type			lepartment to another
PROPOSED:	EXISTING:		TERMS OFFERED
Subject Abbreviation	Subject Abbreviation	n NUCL 20000	Check All That Apply:
Course Number	Course Number		CAMPUS(ES) INVOLVED
Long Title Introduction to Nuclear Engineering			Calumet N. Central
Short Title			Ft. Wayne W. Lafayette
Abbreviated title will be entered by	y the Office of the Registrar if o	mitted. (30 CHARACTERS ONLY)	Indianapolis
CREDIT TYPE		COURSE ATTRIBUTES: Check Al	II That Anniu
1.Fixed Credit: Cr. Hrs.	. Pass/Not Pass Only		n Approval Type
2. Variable Credit Range: Minimum Cr. Hrs 2.	Satisfactory/Unsatisfactory On		tment Instructor
	Repeatable	7. Variable Title	
manufaction of the	Maximum Repeatable Credit:	8. Honors	Ī
IOLUGINATED COLUMN TEST I NO 1 I I	Credit by Examination	9. Full Time Pr	rivilege
	Fees: Coop Lab F clude comment to explain fee	Rate Request 10. Off Campu	is Experience
ScheduleType Minutes Meetings Per	Weeks % of Credit		
Per Mtg Week Lecture	Offered Allocated		Cross-Listed Courses
Recitation			
Presentation			
Laboratory			
Lab Prep Studio			
Distance			
Clinic			
Experiential			
Research			
Ind. Study Pract/Observ			
COURSE DESCRIPTION (INCLUDE REQUISITES/R (Undergraduate level MA 16200 Minimum Grade of D	ESTRICTIONS); }- or Undergraduate level MA 16	6000 Minimum Grado of D. or Hadamer	-turk burdata 40000 Minharm Ounds of D
I ondergraduate level IVIA 16400 Minimum Grade of D-	- or Undergraduate level MA 17	100 Minimum Grade of D- or Undergrad	dusts level MA 17300 Minimum Grade of D. or
Undergraduate level MATH 16400 Minimum Grade of D-) and (Undergraduate level PHYS 15200 Minimum	t D- or Undergraduate level MA	TH M2160 Minimum Grade of D. or Un	dergraduate level MA 19100 Minimum Grade of
Minimum Grade of D- and Hodercraduate level PHYS	3 16300 Minimum Grade of D-V	or (Lindergraduate level FNGR 16200)	O-) or (Undergraduate level PHYS 16200 minimum grade of D-)
*COURSE LEARNING OUTCOMES:			
Calumet Department Head Date	Calumet School Dean	Date	
Fort Wayne Department Head Date F	Fort Wayne School Dean	Date	
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Indianapolis Department Head Date Inc	dianapolis School Dean	Date	
North Central Faculty Senate Chair	ice Chancellor for Addemic Affairs		
de Bietohno	100 Chanceron for meaderning Angelon	Blazza Date	
West Lafayette Department Head Date W	/est Lafayette College/School Dean	Date West Lafe	ayette Registrar Date
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Office of the Registrar FORM 40 REV. 5/11	REQUEST FOR ADD OR REVISION OF AN UND		Print Form
DEPARTMENT Environmental and Ecological Engine	pering EFF	FECTIVE SESSION Fall 2017	
INSTRUCTIONS: Please check the items below wh	ich describe the purpose of this re	equest.	
1. New course with supporting docume 2. Add existing course offered at anoth 3. Expiration of a course 4. Change in course number 5. Change in course title 6. Change in course credit/type	er campus	8. Change in instructi 9. Change in course of 10. Change in course of 11. Change in semeste	lescription equisites ars offered (department head signature only) department to another
PROPOSED:	EXISTING:		TERMS OFFERED Check All That Apply:
Subject Abbreviation	Subject Abbreviation E	EE 35000	Fall Spring Summer
Course Number  Long Title Introduction To Environmental And Ec  Short Title  Abbreviated title will be entered by		ted. (30 CHARACTERS ONLY)	CAMPUS(ES) INVOLVED  Calumet Cont Ed Ft. Wayne Indianapolis
CREDIT TYPE		COURSE ATTRIBUTES: Check	All That Apply
2. Variable Credit Range: Minimum Cr. Hrs (Check One) To Or 3.  Maximum Cr. Hrs. 3. Equivalent Credit: Yes No 5.	Pass/Not Pass Only Satisfactory/Unsatisfactory Only Repeatable Maximum Repeatable Credit: Credit by Examination Fees: Coop Lab Raticlude comment to explain fee	6. Registrati Depa 7. Variable Title 8. Honors 9. Full Time	on Approval Type artment Instructor
ScheduleType Minutes Per Mtg Week  Lecture Recitation Presentation Laboratory Lab Prep Studio Distance Clinic Experiential Research Ind. Study	Weeks % of Credit Allocated		Cross-Listed Courses CE 35000
Pract/Observ			
COURSE DESCRIPTION (INCLUDE REQUISITES/I See attached sheet of paper  *COURSE LEARNING OUTCOMES:	RESTRICTIONS):	·	
		<u> </u>	
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	

West Lafayette Registrar

Date

North Central Faculty Senate Chair

Office of the Registrar FORM 40 REV. 5/11

# **PURDUE UNIVERSITY**

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

DEPARTMENT	School of Chemi	cal Engineeri	ng (1283)	EFFECTIV	E SESSIC	N Fa	II 2017				]
INSTRUCTIONS: Please check the items below which describe the purpose of this request.											
1.   2.   3.   4.   5.   6.	New course with Add existing cour Expiration of a co Change in course Change in course Change in course	rse offered at a ourse e number e title			<u>□</u> 1	8. Cha 9. Cha 0. Cha 1. Cha	ange in i ange in d ange in d ange in s	instructional hou course descripti course requisite	on s ed (department he	d signature only) ead signature only)	
PROPOSED:			_EXISTING:						TERMS OFFERED	)	
Subject Abbreviation			Subject Abbreviation		CHE		]		Check All That Apply	I	
Course Number	·····		Course Number		20500			Summer CA	Fall AMPUS(ES) INVOL	VED  N. Central	
Long Title Chemical Engineering Calculations Cont Ed Tech Statewide  Tech Statewide  W. Lafayette											
Short Title							<b>⅃</b> ᅵ	Indianapolis	3		
		the Office of the Reg	gistrar if omitted. (30 CHARACTER	RS ONLY)			I			· <del>-</del>	
Fixed Credit: Cr. Hr     Variable Credit Rar     Minimum Cr. H     (Check One)     Maximum Cr. F.      3. Equivalent Credit:	rs To Or Or or Yes No		1. Pass/Not Pass Only 2. Satisfactory/Unsatisfactory 3. Repeatable Maximum Repeatable 4. Credit by Examination 5. Fees	Credit:		6 Regis 7 Varia 8 Hono 9 Full T	stration Ap Depai ible Title	ege	Instructor		
Schedule Type	Minutes Per Mtg	Meetings Per Week	Weeks % of Credit Offered Allocated						Cross-List	ted Courses	
(Undergraduate leve 19500 Minimum Grade (Undergraduate level 16100 Minimum G Undergraduate level	e of D- or Undergraduate PHYS 16200 Minimum ( crade of D- or Undergrad MA 16500 Minimum Gra r Undergraduate level Cl	n Grade of D- or Ur e level ENGR 14100 Grade of D- and Ur duate level MA 1670 de of D-) and (Und HM 12400 Minimum	NS): ndergraduate level ENGR 121: 0 Minimum Grade of D- or Undergraduate level PHYS 1630 00 Minimum Grade of D- or Ungraduate level CHM 11600 in Grade of D- [may be taken or Minimum Grade of D- [may be	dergraduate leve 00 Minimum Grad ndergraduate lev Minimum Grade oncurrently] or U	I ENGR 161 de of D-) or ( el MA 16300 of D- [may b ndergradual	00 Minim Undergra Minimun e taken c e level C	um Grade aduate lev m Grade o concurrent HM 12600	of D-) and Undergr el ENGR 16200 Min if D- or Undergradua iy] or Undergraduate D Minimum Grade of	aduate level PHYS 172 imum Grade of D- ) an- ite level MATH 16300 M e level CHM 13600 Min D- [may be taken cond	200 Minimum Grade of D d (Undergraduate level M Minimum Grade of D- or imum Grade of D- [may I	)- or MA be
*COURSE LEARNING	OUTCOMES										ᅱ
Calumet Department I	lead	Date	Calumet School Dean		Dat	e					
Fort Wayne Departme	nt Head	Date	Fort Wayne School Dean		Dat	<del>-</del>					
Indianapolis Departme	nt Head	Date	Indianapolis School Dean	***	Dat	e					
North Central Faculty	Senate Chair	Date	Vice Chancellor for Academic	Affairs	Dat	<del>-</del>					
David	S. Corti	1/26/2017 Date	West Lately et le College/Scho	Min	_ 2/f		Most	afavotte Pozista			ate
vvest Latayette Depart	แกรกเการสน	Date	vvesi Lalayette College/SCD6	OI DRAU	r Dat	· /	vvest l	Lafayette Registrar		Di	ate

#### **PURDUE UNIVERSITY** REQUEST FOR ADDITION, EXPIRATION, Office of the Registrar **Print Form** OR REVISION OF AN UNDERGRADUATE COURSE FORM 40 REV. 5/11 (10000-40000 LEVEL) **DEPARTMENT Civil Engineering EFFECTIVE SESSION Fall 2017** INSTRUCTIONS: Please check the items below which describe the purpose of this request. New course with supporting documents 7. Change in course attributes (department head signature only) Add existing course offered at another campus 2. Change in instructional hours Expiration of a course 9. Change in course description 4. Change in course number 10. Change in course requisites 5. Change in course title Change in semesters offered (department head signature only) Change in course credit/type 12. Transfer from one department to another PROPOSED: EXISTING: TERMS OFFERED Check All That Apply: Subject Abbreviation Subject Abbreviation CE 35000 Fall Spring Summer Course Number Course Number CAMPUS(ES) INVOLVED Long Title Introduction To Environmental And Ecological Engineering Calumet N. Central Cont Ed Tech Statewide Short Title Ft. Wayne W. Lafayette Indianapolis Abbreviated title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY) CREDIT TYPE COURSE ATTRIBUTES: Check All That Apply 1.Fixed Credit: Cr. Hrs. 1. Pass/Not Pass Only 6. Registration Approval Type 2. Variable Credit Range: 2. Satisfactory/Unsatisfactory Only Minimum Cr. Hrs Department Instructor 3. Repeatable (Check One) 7. Variable Title Maximum Repeatable Credit: Maximum Cr. Hrs. 8. Honors 4. Credit by Examination 3.Equivalent Credit: Yes No 9. Full Time Privilege 5. Fees: Coop Lab Rate Request 10. Off Campus Experience Include comment to explain fee ScheduleType Meetings Per Week Minutes % of Credit Weeks **Cross-Listed Courses** Per Mtg Offered Allocated Lecture EEE 35000 Recitation Presentation Laboratory Lab Prep Studio Distance Clinic Experiential Research Ind. Study Pract/Observ COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS): See attached sheet of paper \*COURSE LEARNING OUTCOMES: Calumet Department Head Date Calumet School Dean Date Fort Wayne Department Head Date Fort Wayne School Dean Date Indianapolls Department Head Date Indianapolis School Dean Date North Central Faculty Senate Chair

West Lafayette Registrar

Date

e Department Head

#### **PURDUE UNIVERSITY** REQUEST FOR ADDITION, EXPIRATION, Office of the Registrar Print Form OR REVISION OF AN UNDERGRADUATE COURSE FORM 40 REV. 5/11 (10000-40000 LEVEL) **DEPARTMENT Civil Engineering EFFECTIVE SESSION Fall 2017** INSTRUCTIONS: Please check the items below which describe the purpose of this request. New course with supporting documents Change in course attributes (department head signature only) Add existing course offered at another campus 2. Change in instructional hours 3. Expiration of a course Change in course description 9. 4. Change in course number 10. Change in course requisites 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: EXISTING: TERMS OFFERED Check All That Apply: Subject Abbreviation Subject Abbreviation CE 29700 Fall Spring Course Number Course Number CAMPUS(ES) INVOLVED Calumet Long Title Basic Mechanics I (Statics) N. Central Cont Ed Tech Statewide **Short Title** Ft. Wayne W. Lafayette Indianapolis Abbreviated title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY) **CREDIT TYPE** COURSE ATTRIBUTES: Check All That Apply 1.Fixed Credit: Cr. Hrs. 1. Pass/Not Pass Only 2. Variable Credit Range: 6. Registration Approval Type 2. Satisfactory/Unsatisfactory Only Department Instructor Minimum Cr. Hrs 3. Repeatable (Check One) Or 7. Variable Title Maximum Repeatable Credit: Maximum Cr. Hrs. 8. Honors 4. Credit by Examination 9. Full Time Privilege 3.Equivalent Credit: Yes No 5. Fees: Coop Lab Rate Request 10. Off Campus Experience Include comment to explain fee ScheduleType % of Credit Minutes Meetings Per Week Weeks **Cross-Listed Courses** Per Mtg Offered Allocated Lecture Recitation Presentation Laboratory Lab Prep Studio Distance Clinic Experiential Research Ind. Study Pract/Observ COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS): See attached sheet of paper COURSE LEARNING OUTCOMES:

Summer

Date

Daid West Lafayette College/School Dear

Calumet Department Head

Fort Wayne Department Head

Indianapolis Department Head

entral Faculty Senate Chair

yette Department Head

Date

Date

Date

Date

Date

Calumet School Dean

Fort Wayne School Dean

Indianapolis School Dean

Vice Chancellor for Academic Affairs

Date

Date

Date

West Lafayette Registrar

**PURDUE UNIVERSITY** REQUEST FOR ADDITION, EXPIRATION, Office of the Registrar OR REVISION OF AN UNDERGRADUATE COURSE FORM 40 REV. 5/11 (10000-40000 LEVEL) DEPARTMENT Agricultural and Biological Engineering EFFECTIVE SESSION Fall 2017 INSTRUCTIONS: Please check the items below which describe the purpose of this request. New course with supporting documents 7. Change in course attributes (department head signature only) Add existing course offered at another campus 2. 8. Change in instructional hours 3. Expiration of a course 9. Change in course description Change in course requisites 10. 4. Change in course number Change in course title 11. 5. Change in semesters offered (department head signature only) 6. Change in course credit/type Transfer from one department to another PROPOSED: EXISTING: **TERMS OFFERED** Check All That Apply: Subject Abbreviation Subject Abbreviation ABE ✓ Spring Fail Summer Course Number Course Number 21000 CAMPUS(ES) INVOLVED Calumet N. Central Long Title Thermodynamics Principles Of Engineering And Biological Systems Cont Ed Tech Statewide Ft. Wayne Short Title Thermo Prin Of Engr & Bio Sys ✓ W. Lafayette Indianapolis Abbreviated title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY) CREDIT TYPE COURSE ATTRIBUTES: Check All That Apply 1.Fixed Credit: Cr. Hrs. 1. Pass/Not Pass Only 6. Registration Approval Type 2.Variable Credit Range: 2. Satisfactory/Unsatisfactory Only Department Instructor Minimum Cr. Hrs 3. Repeatable (Check One) 7. Variable Title Maximum Repeatable Credit: 8. Honors Maximum Cr. Hrs. 4. Credit by Examination 9. Full Time Privilege 3.Equivalent Credit: Yes No 5. Fees: Coop Lab Rate Request 10. Off Campus Experience Include comment to explain fee ScheduleType Minutes Meetings Per % of Credit Weeks **Cross-Listed Courses** Per Mtg Allocated Offered Lecture Recitation Presentation Laboratory Lab Prep Studio Distance Clinic Experiential Research Ind. Study Pract/Observ COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS): Application of thermodynamic principles to the design and operation of biological and engineering systems. The focus is on mass and energy balances for non-reacting processes and on the second law of thermodynamics. These principles are applied to biological and agricultural engineering systems. Specific topics include refrigeration systems, power cycles, energy conversion systems, and environmental impacts of energy production. Undergraduate level CHM 11500 Minimum Grade of D. and /Undergraduate level PHVS 17900 Minimum Grade of D. or Undergraduate level ENGR 16900 Minimum Grade C.) COURSE LEARNING OUTCOMES: Calumet Department Head Date Calumet School Dean Date Fort Wayne Department Head Fort Wayne School Dean Date Indianapolis School Dean Indianapolis Department Head Date North Central Faculty Senate Chair Date Vice Chancellor for Academic Affairs Date 1/30/17 West Lafayette Department Head Date ollege/School Dear

Date

West Lafayette Registrar

Office of the Registrar FORM 40 REV. 5/11	REQUEST FOR AD OR REVISION OF AN UN	E UNIVERSITY DDITION, EXPIRATION, IDERGRADUATE COURSE 40000 LEVEL)	
DEPARTMENT Agricultural and Biological Engineer	ng Ei	FFECTIVE SESSION Fall 2017	
INSTRUCTIONS: Please check the items below to	which describe the purpose of this	request.	
1. New course with supporting documents of the course of	EXISTING: Subject Abbreviation Course Number	8. Change in instruction 9. Change in course of 10. Change in course of 11. Change in semeste 12. Transfer from one of  ABE  20500	escription
Abbreviated title will be entered  CREDIT TYPE	by the Office of the Registrar if or	nitted. (30 CHARACTERS ONLY)	
1.Fixed Credit: Cr. Hrs.  2.Variable Credit Range: Minimum Cr. Hrs (Check One) To Or Maximum Cr. Hrs.  3.Equivalent Credit: Yes No	Include comment to explain fee	FI	on Approval Type rtment Instructor  rivilege
ScheduleType Minutes Meetings Per Week  Lecture Recitation Presentation Laboratory Lab Prep Studio Distance Clinic Experiential Research Ind. Study Pract/Observ  Minutes Meetings Per Week  Meetings Per Week  Leture  Clings Study  Meetings Per Week  Leture  Leture  Week  Leture  Leture  Leture  Week  Leture  Leture  Week  Leture  Week  Leture  Week  Leture  Week  Leture  Week  Leture  Leture  Week  Leture  Week  Leture  Leture  Week  Leture  Leture  Leture  Week  Leture  Leture  Week  Leture  Leture  Week  Leture  Week  Leture  Leture  Week  Leture  Week  Leture  Leture  Week  Week  Leture  Week  Leture  Week  Week  Leture  Week  Week  Leture  Week  Wee	Weeks % of Credit Offered Allocated		Cross-Listed Courses
COURSE DESCRIPTION (INCLUDE REQUISITES Development of engineering problem solving and det Introduction to elementary statics, dynamics, materia (Undergraduate level ENGR 12600 Minimum Grade or Undergraduate level ENGR 13300 Minimum Grade C-\ and (I Indergraduate level PHVS 17200 Minimum *COURSE LEARNING OUTCOMES:	sign skills. Use of Excel, Matlab, and ls, thermodynamics, fluid mechanics of C- or Undergraduate level ENGR e of C- or Undergraduate level ENGF	s, and energy topics. 12100 Minimum Grade of C- or Undergr R 14200 Minimum Grade of C- or Under	raduate level ENGR 13200 Minimum Grade of C- graduate level ENGR 16200 Minimum Grade of
Calumet Department Head Date	Calumet School Dean	Date	

Fort Wayne Department Head Date Fort Wayne School Dean Date Indianapolis School Dean Date Indianapolis Department Head Date North Central Faculty Senate Chair Date Date 1/30/17 West Lafayette College/School Dean West Lafayette Department Head Date Date

#### **PURDUE UNIVERSITY** Print Form REQUEST FOR ADDITION, EXPIRATION, Office of the Registrar OR REVISION OF AN UNDERGRADUATE COURSE FORM 40 REV. 5/11 (10000-40000 LEVEL) EFFECTIVE SESSION Fall 2017 **DEPARTMENT Aero & Astro Engineering** INSTRUCTIONS: Please check the items below which describe the purpose of this request. New course with supporting documents Change in course attributes (department head signature only) Change in instructional hours 8. Add existing course offered at another campus Change in course description Expiration of a course 9. Change in course requisites 10. Change in course number Change in course title Change in semesters offered (department head signature only) Change in course credit/type Transfer from one department to another TERMS OFFERED PROPOSED: **EXISTING:** Check All That Apply: Subject Abbreviation Subject Abbreviation AAE X Fall X Spring Summer Course Number Course Number 20300 CAMPUS(ES) INVOLVED Calumet N. Central Long Title Aeromechanics I Cont Ed Tech Statewide Ft. Wayne XW. Lafayette **Short Title** Indianapolis Abbreviated title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY) COURSE ATTRIBUTES: Check All That Apply 1.Fixed Credit: Cr. Hrs. 1. Pass/Not Pass Only 6. Registration Approval Type 2. Variable Credit Range: Instructor Department 2. Satisfactory/Unsatisfactory Only Minimum Cr. Hrs 3. Repeatable 7. Variable Title (Check One) Or Maximum Repeatable Credit: 8. Honors Maximum Cr. Hrs. 4. Credit by Examination 9. Full Time Privilege 3.Equivalent Credit: Yes No 5. Fees: Coop Lab Rate Request 10. Off Campus Experience Include comment to explain fee % of Credit ScheduleType Minutes Meetings Per Cross-Listed Courses Per Mtg Week Offered Allocated 100 Lecture Recitation Presentation Laboratory Lab Prep Studio Distance Clinic Experiential Research Ind. Study Pract/Observ COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS): (Undergraduate level PHYS 17200 Minimum Grade of D- or (Undergraduate level PHYS 16200 Minimum Grade of D- and Undergraduate level PHYS 16300 Minimum Grade of D-) or Undergraduate level ENGR 16200) and (Undergraduate level MA 26100 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 26300 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17200 Minimum Grade of D- [may be taken concurrent 18200 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 27101 Minimum Grade of D- [may be taken concurrently] or Undergraduate level MA 17400 Minimum Grade of D- Imay he taken concurrently \*COURSE LEARNING OUTCOMES: Compute velocities and accelerations for any type of motion. Compute angular velocities and accelerations of rigid bodies. Model forces and apply Newtons Laws in particle dynamic problems. 4. Model forces and solve general statics of bodies problems Calumet Department Head Date Calumet School Dean Date

Date

Date

West Lafayette Registrar

Date

Fort Wayne Department Head

Indianapolis Department Head

North Central Faculty/Senate Chair

West Lafayette Department Head

Date

Date

Date 26/17

Fort Wayne School Dean

Indianapolis School Dean