

New Course Request

Indiana University

IUPUI

Campus

Check Appropriate Boxes:

Undergraduate credit

Graduate credit

Professional credit

1. School/Division Engineering and Technology 2. Academic Subject Code _____

3. Course Number MET305 (must be cleared with University Enrollment Services) 4. Instructor D. Acheson

5. Course Title Computer-Aided Design with Applications

Recommended Abbreviation (Optional) CAD Use Parametr Model
(Limited to 32 Characters including spaces)

6. First time this course is to be offered (Semester/Year): Fall 2008

7. Credit Hours: Fixed at 3 or Variable from _____ to _____

8. Is this course to be graded S-F (only)? Yes _____ No

9. Is variable title approval being requested? Yes No

10. Course description (not to exceed 50 words) for Bulletin publication: _____
P: TECH104 or CGT110 (Or Instructors Consent). This course provides advanced study
of computer-aided drafting and design utilizing current industrial computer-aided design
systems. The course covers the use of these systems in three dimensional and parametric
modeling applications.

11. Lecture Contact Hours: Fixed at 2 or Variable from _____ to _____

12. Non-Lecture Contact Hours: Fixed at 2 or Variable from _____ to _____

13. Estimated enrollment: 15 of which 0 percent are expected to be graduate students.

14. Frequency of scheduling: Summer/Fall/ Spring Will this course be required for majors? No

15. Justification for new course: To partially fulfill the requirements for a newly-proposed CAD certificate program at IUPUI.

16. Are the necessary reading materials currently available in the appropriate library? Yes

17. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials.

18. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant.

19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by: Richard E. Pfeil Date 11/3/07
Department Chairman/Division Director

Approved by: William Paul Date 12/11/07
Dean

Date _____
Dean of Graduate School (when required)

Date _____
Chancellor/Vice-President

Date _____
University Enrollment Services

After School/Division approval, forward the last copy (without attachments) to University Enrollment Services for initial processing, and the remaining four copies and attachments to the Campus Chancellor or Vice-President.

COURSE DESCRIPTION

Revised: 21 - November 2007

Course: MET 305 – Computer-Aided Design with Applications

Catalog Data: 2 Lecture Hours 2 Lab Hrs. 3 Credit Hours
Prerequisites: TECH104 or CGT110 (Or Instructors Consent)

This course provides advanced study of computer-aided drafting and design utilizing current industrial computer-aided design systems. The course covers the use of these systems in three dimensional and parametric modeling applications.

Offerings: Fall / Spring / Summer**Textbooks:** Engineering Drawing with SolidWorks, 2008, Schroff Development Group**Other Required Material** (1) Flash Drive**Course Coordinator:** Doug Acheson, Associate Professor of Mechanical Engineering Technology

Learning Objectives

1. Understand the basic concepts of constraint-based 3D modeling.
2. Understand the basic concepts of parametric modeling techniques.
3. Define the role of 3D solid modeling in concurrent engineering
4. Define the role of 3D solid modeling for manufacturing.
5. Describe solid modeling database structures.
6. Explain data exchange concerns of 3D solid modeling databases.
7. Explore various applications involving 3D solid modeling databases.
8. Delineate between 3D solid modeling and knowledge-based engineering.
9. Gain an overview of various constraint-based solid modeling systems.

MET 305 - Tentative Course Outline

Week 1	Introduction to Constraint-Based Modeling – Course Overview
Week 2	Exploring SolidWorks
Week 3	2-D Sketches and Layouts
Week 4	Primary Features
Week 5	Treatment Features
Week 6	Creating Drawings of 3-D Models
Week 7	Dimensions and Annotations
Week 8	Midterm Exam Review
Week 9	Midterm Exam
Week 10	Sheet Metal Features
Week 11	Advanced Sheet Metal
Week 12	Assembly Design
Week 13	Presentation and Animation
Week 14	Document Management
Week 15	Final Exam Review
Week 16	Final Exam

Prepared by: Douglas C. Acheson

Date November 21, 2007

PURDUE UNIVERSITY
REQUEST FOR ADDITION, EXPIRATION,
OR REVISION OF AN UNDERGRADUATE COURSE
(100-400 LEVEL)

DEPARTMENT Engineering Technology EFFECTIVE SESSION Fall 2008

- INSTRUCTIONS: Please check the items below which describe the purpose of this request.
- | | |
|--|---|
| <input type="checkbox"/> 1. New course with supporting documents | <input type="checkbox"/> 7. Change in course attributes (department head signature only) |
| <input checked="" type="checkbox"/> 2. Add existing course offered at another campus | <input type="checkbox"/> 8. Change in instructional hours |
| <input type="checkbox"/> 3. Expiration of a course | <input type="checkbox"/> 9. Change in course description |
| <input type="checkbox"/> 4. Change in course number | <input checked="" type="checkbox"/> 10. Change in course requisites |
| <input type="checkbox"/> 5. Change in course title | <input type="checkbox"/> 11. Change in semesters offered (department head signature only) |
| <input type="checkbox"/> 6. Change in course credit/type | <input type="checkbox"/> 12. Transfer from one department to another |

PROPOSED:	EXISTING:
Subject Abbreviation <u>MET</u>	Subject Abbreviation <u></u>
Course Number <u>305</u>	Course Number <u></u>
Long Title <u>Computer-Aided Design with Applications</u>	
Short Title <u>CAD Use Parametr Model</u>	

Abbreviated title will be entered by the Office of the Registrar if omitted. (22 CHARACTERS ONLY)

TERMS OFFERED
Check All That Apply:

Summer Fall Spring

CAMPUS(ES) INVOLVED

Calumet N. Central
 Cont Ed Tech Statewide
 Ft. Wayne W. Lafayette
 Indianapolis

CREDIT TYPE	COURSE ATTRIBUTES: Check All That Apply
1. Fixed Credit: Cr. Hrs. <u>3</u>	1. Pass/Not Pass Only <input type="checkbox"/>
2. Variable Credit Range: Minimum Cr. Hrs. <u></u> (Check One) To <input type="checkbox"/> Or <input type="checkbox"/> Maximum Cr. Hrs. <u></u>	2. Satisfactory/Unsatisfactory Only <input type="checkbox"/>
3. Equivalent Credit: Yes <input type="checkbox"/> No <input type="checkbox"/>	3. Repeatable <input type="checkbox"/>
4. Thesis Credit: Yes <input type="checkbox"/> No <input type="checkbox"/>	4. Credit by Examination <input type="checkbox"/>
	5. Designator Required <input type="checkbox"/>
	6. Special Fees <input type="checkbox"/>
	7. Registration Approval Type Department <input type="checkbox"/> Instructor <input type="checkbox"/>
	8. Variable Title <input type="checkbox"/>
	9. Remedial <input type="checkbox"/>
	10. Honors <input type="checkbox"/>
	11. Full Time Privilege <input type="checkbox"/>
	12. Off Campus Experience <input type="checkbox"/>

Instructional Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated	Delivery Method (Asyn. Or Syn.)	Delivery Medium (Audio, Internet, Live, Text-Based, Video)	Cross-Listed Courses
Lecture	50	2	16		Syn.	Live	
Recitation							
Presentation							
Laboratory	100	1	16		Syn.	Live	
Lab Prep							
Studio							
Distance							
Clinic							
Experiential							
Research							
Ind. Study							
Pract/Observe							

COURSE DESCRIPTION (INCLUDE REQUISITES):
P: TECH104 or CGT110 (Or Instructors Consent). This course provides advanced study of computer-aided drafting and design utilizing current industrial computer-aided design systems. The course covers the use of these systems in three dimensional and parametric modeling applications.

Calumet Department Head _____ Date _____	Calumet School Dean _____ Date _____
Fort Wayne Department Head _____ Date _____	Fort Wayne School Dean _____ Date _____
Indianapolis Department Head <u>Shepard E. Byle</u> Date <u>11/3/07</u>	Indianapolis School Dean <u>Willetts</u> Date <u>12/1/07</u>
North Central Department Head _____ Date _____	North Central Chancellor _____ Date _____
West Lafayette Department Head _____ Date _____	West Lafayette College/School Dean _____ Date _____
	West Lafayette Registrar _____ Date _____