

New Course Request

Indiana University

Indianapolis Campus

Check Appropriate Boxes: Undergraduate credit Graduate credit Professional credit

1. School/Division School of Engineering & Technology 2. Academic Subject Code MSTE

3. Course Number 497 (must be cleared with University Enrollment Services) 4. Instructor Pete Hylton

5. Course Title Motorsports Design Project (Independent Study)
Recommended Abbreviation (Optional) _____
(Limited to 32 Characters including spaces)

6. First time this course is to be offered (Semester/Year): Fall 2009

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

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

9. Is variable title approval being requested? Yes _____ No X

10. Course description (not to exceed 50 words) for Bulletin publication: _____
P: MSTE 311 and MSTE 331 and MSTE 350 and MSTE 320 This is an independent study version of the MSTE 414 culminating course in the Motorsports Engineering Plan of Study, tying together concepts from all the other courses in the curriculum, and requires a capstone design project representative of a real world project within the Motorsports Industry.

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

12. Non-Lecture Contact Hours: Fixed at 4 or Variable from _____ to _____

13. Estimated enrollment: 25 of which 0 percent are expected to be graduate students.

14. Frequency of scheduling: yearly Will this course be required for majors? yes

15. Justification for new course: Part of the already approved BS in Motorsports Engineering

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: Michael P. Gelo Date 11/21/08
Date Department Chairman or Division Director

Approved by: Will Akay Date 11-25-08
Date

Dean of Graduate School (when required) _____ Date _____

Chancellor/Vice-President _____ Date _____

University Enrollment Services _____ Date _____

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.

PURDUE SCHOOL OF ENGINEERING & TECHNOLOGY OUTCOMES AND ASSESSMENT DATA SHEET

This is an internal document to identify and record expected outcomes and anticipated assessment strategies for all courses taught within the School of Engineering and Technology. Submission of this form, as noted below, is required and must accompany all new course and course change requests. Copies of this form should also be retained within the department and kept on file with the outline or syllabus for each course.

Course Number: MSTE 497 Course Title: Motorsports Design Project

Procedure:

First, identify all instructional outcomes expected for this course, and then select all ABET

ENGINEERING - EAC Criteria #3

An ability to apply knowledge of mathematics, science, and engineering

An ability to design and construct experiments as well as to analyze and interpret data

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MSTE 497 – Motorsports Design Project

- Description:** This is the independent study version of the Motorsports Engineering Capstone Design course (MSTE 414). The project executed under this course must tie together all that has been studied in past classes into an industry caliber design project.
- Concept:** The design project requires a student or group of to thoroughly develop the design for a selected project. The project team will perform the tasks normally associated with a design effort in industry, including concept development, scheduling, cost estimates, design, engineering analysis, drawing production, specification preparation, risk management, and preparation for a Preliminary Design Review (PDR) presentation and a Final Report and Final Design Review (FDR) presentation.
- Prerequisites:** MSTE 311 and MSTE 331 and MSTE 350 and MSTE 320
- Scheduled Class Meetings:** as scheduled with instructor
- Instructor:** Pete Hylton
Phone: 317-274-7192, Email: phylton@iupui.edu, Office: ET209G
- Text:** Design Concepts for Engineers, 3rd edition, by Horenstein

Topics which must be demonstrated during the course of the project include the following: Design Process, Project Scheduling, Cost Analysis, Technical Risk Management, Effective PowerPoint Presentations, Design for Manufacturability, Analysis of Designs, Probabilistic Design, Ethics, Concurrent Engineering Design, Motorsports Modeling, Motorsports Analysis, Final Report, Final Presentation.

Exact scope of the project will be agreed upon in advance by the professor and student(s).

Outcomes:

1. Apply knowledge of mathematics, science, and engineering to the solution of complex and comprehensive design problems relative to the motorsports industry.
2. Design a system, component, or process to meet desired needs pertinent to the motorsports industry.
3. Identify, formulate, and solve engineering problems.
4. Recognize professional and ethical responsibility.
5. Communicate effectively in written reports and oral presentations.
6. Use the techniques, skill; and modern engineering tools necessary for engineering practice in the motorsports industry.

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

DEPARTMENT Motorsports Engineering EFFECTIVE SESSION Fall 2009

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

- | | |
|---|---|
| <input checked="" type="checkbox"/> 1. New course with supporting documents | <input type="checkbox"/> 7. Change in course attributes (department head signature only) |
| <input 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 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>MSTE</u>	Subject Abbreviation _____
Course Number <u>497</u>	Course Number _____
Long Title <u>Motorsports Design Project (Independent Study)</u>	
Short Title <u>Motorsports Project</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: _____	2. Satisfactory/Unsatisfactory Only <input type="checkbox"/>
Minimum Cr. Hrs _____	3. Repeatable <input type="checkbox"/>
(Check One) To <input type="checkbox"/> Or <input type="checkbox"/>	Maximum Repeatable Credit: <u> </u>
Maximum Cr. Hrs _____	4. Credit by Examination <input type="checkbox"/>
3. Equivalent Credit: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Designator Required <input type="checkbox"/>
4. Thesis Credit: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	6. Special Fees <input type="checkbox"/>
	7. Registration Approval Type <input type="checkbox"/>
	Department <input checked="" 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 Mfg	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							
Recitation							
Presentation							
Laboratory							
Lab Prep							
Studio							
Distance							
Clinic							
Experiential							
Research							
Ind. Study	120	1		15			
Pract/Observ							

COURSE DESCRIPTION (INCLUDE REQUISITES):
P: MSTE 311 and MSTE 331 and MSTE 350 and MSTE 320. This is an independent study version of the MSTE 414 culminating course in the Motorsports Engineering Plan of Study, tying together concepts from all the other courses in the curriculum, and requires a capstone design project representative of a real world project within the Motorsports Industry.

Calumet Department Head _____	Date _____	Calumet School Dean _____	Date _____
Fort Wayne Department Head _____	Date _____	Fort Wayne School Dean _____	Date _____
<i>Richard E. Biele</i>	<i>11/21/08</i>	<i>H.U. Akay</i>	<i>11-25-08</i>
Indianapolis Department Head _____	Date _____	Indianapolis School Dean _____	Date _____
North Central Department Head _____	Date _____	North Central Chancellor _____	Date _____
West Lafayette Department Head _____	Date _____	West Lafayette College/School Dean _____	Date _____
		West Lafayette Registrar _____	Date _____