**PURDUE UNIVERSITY**

**REQUEST FOR ADDITION, DELETION, OR REVISION OF A COURSE**

**DEPARTMENT** Electrical & Computer Engineering

**GRADUATE COUNCIL DOCUMENT NO.** EFD80-01

**DEPARTMENT** Electrical & Computer Engineering

**DATE SUBMITTED** 11/5/2001  **DATE EFFECTIVE** 7/7/2002

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**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

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**EXISTING:**

- Subject Abbreviation: EE
- Subject Abbreviation: ECE
- Course Number: 362
- Course Number:

**PROPOSED:**

- Proposed Title: Microprocessor Systems and Interfacing
- Abbreviated Title: Micropro Sys & Intrfac

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**SEMESTERS OFFERED**

- Check All That Apply:
  - Summer
  - Fall
  - Winter
  - Spring

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**CROSS LISTED COURSES**

<table>
<thead>
<tr>
<th>CREDIT TYPE</th>
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<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fixed Credit</td>
<td>Cr. Hrs. 4</td>
<td></td>
</tr>
<tr>
<td>2. Variable Credit Range: Minimum Cr. Hrs. (Check One) To</td>
<td>Or</td>
<td></td>
</tr>
<tr>
<td>3. Equivalent Credit:</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>4. Thesis Credit:</td>
<td>Yes No</td>
<td></td>
</tr>
</tbody>
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**COURSE ATTRIBUTES**

- Check All That Apply:
  - Pass/Not Pass Only
  - Repeatable for Credit
  - Available for Credit by Examination
  - Designator Required
  - Special Fees
  - Approval Required for Enrollment

**INSTRUCTORS**

- Department: Instructor

**CAMPUS(ES) INVOLVED**

- Calumet
- Fort Wayne
- Indianapolis
- North Central
- West Lafayette
- Off Campus

**COURSE DESCRIPTION**

Prerequisite: CS 156 or equivalent programming experience and EE 270; prerequisite or corequisite: EE 255

Introduction to basic computer organization, microprocessor instruction sets, assembly language programming techniques, design of digital and analog interfaces, and microprocessor system design considerations. Practical hands-on experience with microprocessor software applications and interfacing techniques. Topics include design and implementation of a simple computer, a detailed study of a particular microcontroller architecture and instruction set, assembly language programming techniques, system control signals and I/O structure, memory system design, I/O port design and handshaking protocols, interrupts and handlers. On-chip peripheral subsystems: Serial communication controllers, timers, pulse-width modulation generators, analog-to-digital converters.

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**APPROVAL SIGNATURES**

- Calumet Undergrad Curriculum Committee
  - Date
- Calumet Department Head
  - Date
- Calumet School Dean
  - Date
- Fort Wayne Department Head
  - Date
- Fort Wayne School Dean
  - Date
- Fort Wayne Chancelor
  - #958
- C.D. Sutton, Chair
  - 2/1/02
- Indianapolis Department Head
  - Date
- Indianapolis School Dean
  - Date
- Undergrad Curriculum Committee
  - Date
- North Central Department Head
  - Date
- North Central Vice Chancellor
  - Date
- Date Approved by Graduate Council
- North Central School Dean
  - Date
- Graduate Council Secretary
  - Date
- West Lafayette Department Head
  - Date
- West Lafayette School Dean
  - Date
- Graduate Dean
  - Date
- West Lafayette Registrar
  - Date

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**OFFICE OF THE REGISTRAR**
PURDUE UNIVERSITY
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DEPARTMENT: Electrical & Computer Engineering
DATE SUBMITTED: 11/5/2001
DATE EFFECTIVE: 1/7/2002

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

PURPOSE

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3. Add existing course offered at another campus
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14. Transfer of course from one dept. to another

EXISTING:

Subject Abbreviation: EE
Course Number: 477
Proposed Title: Digital Systems Senior Project
Proposed Title Abbreviation: Dig Systems Sr Project

PROPOSED:

Subject Abbreviation
Course Number
Proposed Title
Variable Title: Yes [ ] No [x]
Abbreviated Title: Dig Systems Sr Project

SEMESTERS OFFERED

Check All That Apply:
- Summer
- Fall
- Ag Winter
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- Fort Wayne
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- North Central
- West Lafayette
- Off Campus

COURSE DESCRIPTION (PREREQUISITES INCLUDED):

Prerequisite: EE 362
A structured approach to the development and integration of embedded microcontroller hardware and software that provides senior-level students with significant design experience applying microcontrollers to a wide range of embedded systems (e.g., instrumentation, process control, telecommunications, intelligent devices, etc.). The primary objective is to provide practical experience developing integrated hardware and software for embedded microcontroller systems in an environment that models one which students will most likely encounter in industry.

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

Fort Wayne Department Head Date
Fort Wayne School Dean Date
Fort Wayne Chancellor Date
Appr. for Faculty C.D. Sutton, Chair Date

Indianapolis Department Head Date
Indianapolis School Dean Date
Undergrad Curriculum Committee Date

North Central Department Head Date
North Central Vice Chancellor Date
Date Approved by Graduate Council

West Lafayette Department Head Date
West Lafayette School Date
Graduate Council Secretary Date

Graduate Area Committee Convener Date
Graduate Dean Date
West Lafayette Registrar Date

OFFICE OF THE REGISTRAR