**PURDUE UNIVERSITY**

REQUEST FOR ADDITION, EXPIRATION, OR REVISION OF A GRADUATE COURSE
(50000-60000 LEVEL)

**DEPARTMENT** Engineering  
**EFFECTIVE SESSION** Fall 2014

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

- [ ] New course with supporting documents (complete proposal form)
- [ ] Add existing course offered at another campus
- [ ] Expiration of a course
- [x] Change in course number
- [ ] Change in course title
- [ ] Change in credit or type

**PROPOSED:**

**Subject Abbreviation:** Subject Abbreviation  
**Course Number:** Course Number 59600

**Long Title:** Introduction to Robotic Systems

**Short Title:**

Abbreviated title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY)

**CREDIT TYPE**

1. Fixed Credit: Cr. Hrs. 3
2. Variable Credit Range: Minimum Cr. Hrs. (Check One) To Maximum Cr. Hrs.
   - [ ] No
   - [ ] Yes

3. Equivalent Credit:  
4. Thesis Credit: Yes

5. Pass/Not Pass Only

**COURSE ATTRIBUTES:** Check All That Apply

- [ ] Registration Approval Type
- [ ] Department
- [ ] Instructor

- [ ] Variable Title
- [ ] Honors
- [ ] Full Time Privilege
- [ ] Off Campus Experience

**Schedule Type**

- Lecture
- Recitation
- Presentation
- Laboratory
- Lab Prep
- Studio
- Distance
- Clinic
- Experiential
- Research
- Ind. Study

- Pract/Observe

- Minutes Per Mtg
- Meetings Per Week
- Weeks Offered
- % of Credit Allocated

**TERMS OFFERED**

- [x] Fall
- [x] Spring
- [ ] Summer

**CAMPUS(ES) INVOLVED**

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

**COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):**

ECE/ME 333, MA 351, MA 363

The topics to be covered include: basic components of robotic systems; selection of coordinate frames; homogeneous transformations; solutions to kinematic equations; velocity; and homogeneous matrix manipulations in Lagrange formulation; direct simulation of manipulator motion under motion planning objectives, etc.

**COURSE LEARNING OUTCOMES**

**Cross-Listed Courses**

**Signature**

Calumet Department Head

Fort Wayne Department Head

Indianapolis Department Head

North Central Department Head

West Lafayette Department Head

Graduate Area Committee Convener

Calumet Director of Graduate Studies

Fort Wayne Director of Graduate Studies

IUPUI Associate Dean for Graduate Education

North Central Director of Graduate Studies

Date Approved by Graduate Council

Graduate Council Secretary

West Lafayette Registrar

**OFFICE OF THE REGISTRAR**