Office of the Registrar
FORM 40G REV. 7/08

PURDUE UNIVERSITY

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

Print Form

EFD 1-08

DEPARTMENT School of Industrial Engineering EFFECTIVE SESSION

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

- [X] 1. New course with supporting documents (complete proposal form)
- [ ] 2. Add existing course offered at another campus
- [ ] 3. Expiration of a course
- [ ] 4. Change in course number
- [ ] 5. Change in course title
- [ ] 6. Change in course credit/type
- [ ] 7. Change in course attributes
- [ ] 8. Change in instructional hours
- [ ] 9. Change in course description
- [ ] 10. Change in course requisites
- [ ] 11. Change in semesters offered
- [ ] 12. Transfer from one department to another

PROPOSED:

Subject Abbreviation IE
Course Number 58600
Long Title
Short Title e-Work and e-Service
Abbreviated title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY)

EXISTING:

Subject Abbreviation
Course Number

TERMS OFFERED
Check All That Apply:
[ ] Summer [ ] Fall [X] Spring

CAMPUS(ES) INVOLVED
[ ] Calumet [ ] N. Central
[ ] Cont Ed [ ] Tech Statewide
[ ] Ft. Wayne [X] W. Lafayette
[ ] Indianapolis

CREDIT TYPE
1. Fixed Credit: Cr. Hrs. 3
2. Variable Credit Range:
Minimum Cr. Hrs
(Check One) To [ ] Or [ ]
Maximum Cr. Hrs.
3. Equivalent Credit: Yes [ ] No [ ]
4. Thesis Credit: Yes [ ] No [ ]

COURSE ATTRIBUTES: Check All That Apply
1. Pass/Not Pass Only [ ]
2. Satisfactory/Unsatisfactory Only [ ]
3. Repeatable [ ]
Maximum Repeatable Credit:
4. Credit by Examination [ ]
5. Special Fees [ ]
6. Registration Approval Type
Department [ ] Instructor [ ]
7. Variable Title [ ]
8. Honors [ ]
9. Full Time Privilege [ ]
10. Off Campus Experience [ ]

Schedule Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated
	50	3	15	100
Lecture				
Recitation				
Presentation				
Laboratory				
Lab Prep				
Studio				
Distance				
Clinic				
Experiential				
Research				
Ind. Study				
Pract/Observ				

Cross-Listed Courses

COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):

Calumet Department Head	Date	Calumet School Dean	Date	Calumet Undergrad Curriculum Committee	Date
Fort Wayne Department Head	Date	Fort Wayne School Dean	Date	Fort Wayne Chancellor	Date
Indianapolis Department Head	Date	Indianapolis School Dean	Date	Undergrad Curriculum Committee (R Cipra)	2/10/2009
North Central Department Head	Date	North Central Chancellor	Date	Date Approved by Graduate Council	
West Lafayette Department Head (Joe Pekny by Cmjin)	2/5/09	West Lafayette College/School Dean	2/9/2009	Graduate Council Secretary	Date
Graduate Area Committee Convener	Date	Graduate Dean	Date	West Lafayette Registrar	Date

OFFICE OF THE REGISTRAR

Engineering Faculty Document No.: 1-08

To: The Engineering Faculty

From: The faculty of the School of Industrial Engineering

Date: June 26, 2008

Subject: New dual level course

The faculty of the School of Industrial Engineering has approved the following new course. This action is now submitted to the Engineering Faculty with a recommendation for approval.

IE 586 **e-Work and e-Service**
Sem. 2, Class 3, Cr. 3
Prerequisite: IE332 or equivalent

Course description: Industrial Engineering researchers have identified e-Work as the foundation for e-Service, e-Commerce, e-Business, and other electronic production/service activities. e-Work is defined as the collaborative, computer-and-communication-supported work in highly distributed organizations of humans /robots /autonomous systems. This course is devoted to learning the basic principles, theories and applications for the design of effective e-Work and e-Service systems. Relevant discoveries at Purdue and elsewhere are also presented.

Reasons: Engineering responsibilities are increasingly concerned with distributed information activities, especially through the World Wide Web. Work systems of concern to industrial engineers increasingly involve e-Work functions and e-Service design objectives. The students will learn the necessary fundamentals and methods to know the design of such systems. The students will be able to apply their learning in their semester project. This course has been taught experimentally three times at dual level, including twice with ProEd (Engineering Professional Education) students from industry. The enrollment ranges from 30 to 72, with the following breakdown: Sp '01, 34 students on-campus; SS' 02, 72 industry students (ProEd) and Sp '06, 40 students (12 on-campus; 28 ProEd).

Nagabhushana Prabhu
Professor and Head

APPROVED FOR THE FACULTY
OF THE SCHOOLS OF ENGINEERING
BY THE ENGINEERING
CURRICULUM COMMITTEE

ECC Minutes #11

Date 11-13-08

Chairman ECC R. Capra

Course title: IE 586, e-Work and e-Service

1. Level: Graduate and Undergraduate
2. Course Instructor: Shimon Y. Nof
3. Course outline by lecture hour:

No.	Lecture Topic	Assignment
1.	Fundamentals of e-Work, e-Service and course objectives	Terminology - Basics
2.	e-Work and e-Services	Terminology – e-Work
3.	Communication and Internet fundamentals	HW1 assigned
4.	HTML and Internet; Semester Project	
5.	Client Side; basic protocols	Project assigned Project examples
6.	../articles/Odlyzko, MIT Technology Review, April 2001.pdf e-Work and e-Business models	
7.	e-Business and e-Service models	HW1 due; HW2 assigned
8.	Building an e-Service	
9.	Java; VBScript; PHP	Project proposal due
10.	Server Side; basic protocols	
11.	e-Work and e-Service case studies	
12.	Design criteria	
13.	XML (I)	HW2 due; HW3 assigned
14.	Exam 1	
15.	XML(II)	
16.	Evaluation measures and guidelines	
17.	Workflow models and service quality	
18.	Workflow applications, quality assurance	
19.	CIM workflow, sensor networks and e-Service	HW3 Due; HW4 assigned
20.	TIE, Teamwork Integration Evaluation	

21.	TIE/Agent ; TIE/Protocol	
22.	e-Work design and optimization	
23.	Web accessibility issuesLect26/Lecture 26 Accessibility.ppt	
24.	e-Work and collaborative design	HW4 due; HW 5 assigned
	Semester break	
25.	Networked enterprises	Project progress review
26.	Internet Based ERP	
27.	P2P, B2B, C2C Exchange Models	
28.	Exam 2	
29.	ERP, Enterprise Resource Planning	
30.	Credibility and trust issues	HW5 due; HW6 assigned
31.	Alliances and affiliates	
32.	CRM, Customer Relations management	
33.	e-Learning and o-Learning	
34.	Legal and ethical issues	
35.	Financial transactions (1)	Project due
36.	Financial transactions (2)Lect35/Lecture 35 Financial B2B.ppt	
37.	Tele-work and tele-robotics	HW6 due
38.	Internet securityLect37/Lecture 37 Security.ppt	
39.	Information assurance; emerging trends	
40.	Students' project presentations	
41.	Students' project presentations	
42.	Emerging trends and research challenges	
43.	Course review	
44.	Exam 3	

Note for literature review: For each homework, the students will include research summaries based on two to three recent research articles. These summaries include:

(1) Problem addressed and its significance; (2) Background and known practice; (3) New methods and results; (4) Strength and limitations of this paper; (5) Impact on my understanding and research.

Textbook: *Design of e-Work, e-Business, and e-Service* S.Y. Nof and J.A. Ceroni (Draft, to be published by Springer Publishers, 2008)

Grading:		
	Three exams	45%
	Six homework assignments	35%
	Final project	20%

Supporting Document for a New Graduate Course

For Reviewer's comments only:

To: Purdue University Graduate Council

From: School of Industrial Engineering, College of Engineering

Campus: W. Lafayette

Subject: Proposal for New Graduate Course-Documentation Required by the Graduate Council to Accompany Registrar's Form 40G

Contact for information if questions arise: C. Richard Liu, 494 5413; liuch@purdue.edu; Grissom 234, WL

Course Subject Abbreviation and Number: IE 58600

Course Title: e-Work and e-Service

A. Justification for the Course:

Engineering responsibilities are increasingly concerned with distributed information activities, especially through the World Wide Web. Work systems of concern to industrial engineers increasingly involve e-Work functions and e-Service design objectives. The students will learn the necessary fundamentals and methods to know the design of such systems. The students will be able to apply their learning in their semester project. This course has been taught experimentally three times at dual level, including twice with ProEd (Engineering Professional Education) students from industry. The enrollment ranges from 30 to 72, with the following breakdown: Sp '01, 34 students on-campus; SS' 02, 72 industry students (ProEd) and Sp '06, 40 students (12 on-campus; 28 ProEd).

B. Learning Outcomes and Method of Evaluation or Assessment:

Learning outcomes are mainly related to knowledge, critical thinking and the structure of the knowledge in the topic areas. These are to be evaluated by examinations. (see Engineering Faculty Document No.1-08)

Grading criteria : Grading is based on three examinations (45%), six homework assessment (35%) and a final project (20%).

Method(s) of instruction : mainly by lectures supported by literature reviews required of students. .

C. Prerequisite(s): IE33200 or equivalent.
D. Course Instructor: Dr. Shimon Nof, Professor of Industrial Engineering, a member of IE graduate faculty.
E. Course Outline: Industrial Engineering researchers have identified e-Work as the foundation for e-Service, e-Commerce, e-Business, and other electronic production/service activities. e-Work is defined as the collaborative, computer-and-communication-supported work in highly distributed organizations of humans /robots /autonomous systems. This course is devoted to learning the basic principles, theories and applications for the design of effective e-Work and e-Service systems. Relevant discoveries at Purdue and elsewhere are also presented

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F. **Textbook:** *Design of e-Work, e-Business, and e-Service* S.Y. Nof and J.A. Ceroni (Draft, to be published by Springer Publishers, 2008)

(Revised and Approved by theGraduate Council 2/08)