Greetings from the Office of Professional Practice at Purdue University! This Annual Report provides a synopsis of our program activities during the academic year 2009-2010. The year ended on a high note in that we saw an increase in student participation over the last two years. Hopefully, this indicates that the economic recession is behind us. Overall, we are serving close to 700 students, which is an 18% increase compared to a year ago.

We are proud to offer Professional Practice Programs that are truly unique. Our co-op employers inform us that we are still the only university in the country that offers a 5-session co-operative education program that starts right after the first year. Within this program, students can participate in up to 20 months of work-integrated learning (WIL) sessions before they graduate in five years. In addition, our award-winning GEARE (Global Alliance for Research and Education) program is the only program in the country that combines three main aspects of global engineering education into one overall student experience: (1) two work-integrated learning sessions, one domestic and one international, each nominal three-month in length; (2) one semester of study abroad with fully transferrable credits and (3) participation in a team-oriented global design team project with students from multi-cultural backgrounds. Student participation in both programs, 5-session co-op and GEARE, has increased over the last year by 5% and 34%, respectively. Student participation in our 3-session co-operative education program, which was launched 4 years ago, has increased by 21% over the last year.

Furthermore, during the last year we launched our new G-PAL (Global Partners in Apprenticeship Learning) program, which was specifically designed to provide professional opportunities to our growing international undergraduate student body, which sometimes has difficulties finding U.S. national opportunities. This is another one-of-a-kind program that partners an international student with a domestic student in both a cultural and a work-integrated learning session. Finally, we just approved a new masters-level cooperative education program. Students who graduate from this program will not only meet all M.Sc. degree requirements, but in addition have significant graduate-level industrial experience within a profession of their choice. The availability of the MS-level co-operative education program will uniquely position Purdue University since no such program currently exists at our peer institutions. The program will significantly enhance the recruitment of new graduate students and the retention of Purdue undergraduates for graduate studies.

Developing unique programs and then increasing student participation in them takes significant resources. Therefore, we are in the middle of a corporate and private fund raising campaign to develop the resources necessary for Purdue students to participate in professional practice opportunities that they could not find anywhere else. The results of participation are astonishing. Students who graduate with a co-operative education certificate or a global engineering minor and decide not to work for their WIL-session employers receive approximately 2.5 times the job offers compared to their peers with similar grade point averages but no professional experiences. They are hired into corporate trainee or leadership development programs. They receive starting salaries that are 10% higher compared to their peers without these experiences. Clearly, these students are in high demand. Their successes provide the reason to enthusiastically continue on our path.

Sincerely,
Eckhard A. Groll
Director of the Office of Professional Practice
Professor of Mechanical Engineering

Professional Practice Programs Mission

The mission of the Office of Professional Practice shall be to facilitate the experiential, practical education of Purdue University students within the traditional learning component of the institution’s strategic triad, further academic research within the field of Professional Practice, and assist the traditional academic units with engagement through enhanced contact with employer host organizations.
Professional Practice is a formal plan of education in which students alternate sessions of full-time work with sessions of full-time study. Purdue’s Professional Practice Programs are designed to combine practical on-the-job experiences with the classroom training of a four-year college curriculum. It helps students integrate theory and practice, confirm career choices, investigate potential job opportunities, and become better graduates. At the same time, it allows students to earn money and help finance their education.

As a Purdue Professional Practice student, they will learn what a professional in their field does -- by doing it. As they progress in the Professional Practice Program, they find themselves performing jobs that they would expect to do after graduation. Their position and responsibilities will change through the course of their Professional Practice experience as they become better able to handle increasing diversity, responsibility, and levels of challenge from each work session.
INDUSTRIAL ROUNDTABLE (IR) - 2009

Focus on the student group for employers recruiting during IR is 3-session Co-Op students. This year:

• 55 Co-Op companies attended who are actively looking for Co-Ops
• 32 companies showed interest in becoming a qualified Co-Op employer (3 of these companies have started the qualification process)

OPP CAREER FAIR - 2010

31 companies participated

Interview slots filled through Career Fair
• 5-Session: 20
• 3-Session: 23
• Internships: 5
• Full Time: 1
• Ph.D. Student: 1

CO-OP DAYS - 2010

56 companies participated

Interviews
• 628 5-Session: 628
• 152 3-Session: 152
• Internships: 5
• Full Time: 1
• Ph.D. Student: 1

Student interviews for Co-Op Days were 787 compared to 671 the previous year, showing a 20% increase. 310 students interviewed.
Projected Income for 2009-2010

- Research Funds: 41%
- University Funds: 57%
- Corporate Gifts: 1%
- Career/Co-Op Days: 1%

Projected Expenses for 2009-2010

- IREE/NSF Grant: 50%
- Program Administration: 45%
- Recruiting: 2%
- Pre-College Outreach: 2%
- Communications: 1%
**New Masters Co-Op Program**

Students can get a Master’s Degree and Professional Experience at the same time from our NEW Masters Co-Op Program!!

The Office of Professional Practice (OPP) provides work integrated learning programs. The newest addition to OPP’s portfolio of programs is the Masters Co-Op Program. Students who graduate from this program will not only meet all MS degree requirements in their specific discipline, but also have significant graduate-level industrial experience within a profession of their choice.

Students who complete the MS-level Cooperative Education Program will be well prepared to work in:

- Advanced technical centers of industry as research and development specialists
- Private and government research institutions
- Design and develop advanced products requiring knowledge and experience in advanced engineering
- Pursue a Ph.D degree
OPP is “moving out” and “moving global”! In light of the global economy, OPP has increased our offerings to include international destinations and educating students the importance of Global professional practices. We are working with interested employers to allow their co-op students to conduct one or two work sessions overseas. This program is designed to allow students to gain insight about the company’s domestic and global operation. Many students would also gain leadership experience and inter-cultural experiences. These experiences are important for tomorrow’s leaders.

- **GEARE**: the Global Engineering Alliance for Research and Education, a unique program originating in the School of Mechanical Engineering at Purdue. Since 2009, OPP has assumed all GEARE operations and opened up the program to all College of Engineering students.

- **Global Internships**: these are important for students who otherwise cannot engage in long-term work abroad sessions. OPP has developed several summer international opportunities at several foreign countries. Example includes China, Taiwan, India, and Germany. Students participates in either industrial or research internship to earn either summer salary or credit hours toward their curriculum.

- **G-PAL**: the Global Partners in Apprenticeship Learning Program. This program helps you gain a “pal” from a different culture. Together as a pair, friendships and network can be built based on common internships experience between the international student and the American student. Students will conduct internship with financial incentives at the international-pal’s home country. Employers and agencies participating in the G-PAL program will offer a pair of concurrent international internship positions, one for a student from the target international partner country and one for a student from the U.S.

**Spring 2010 GEARE Students:**
- New Applicants: 30
- Active Students: 82
**Grants and Research Activities**

**IREE Grant**

In January 2010, Purdue University received an $800K International Research and Education in Engineering (IREE) grant to send 50 U.S. students to China. Under the IREE program, OPP receives approximately $600K of the grant to be the administration central of this grant. The IREE program will strive to better prepare recipients through a new orientation, language and cultural training and background about China. We have received 360 applications from all over the United States, and the 50 best and brightest will head to China this summer.

**SAIL Grant**

The SAIL GRANT (Study Abroad and International Learning) is offered by the Office of International Programs to increase study abroad participation. The Office of Professional Practice was awarded this grant in the amount of $6000. These funds will be used to further develop the G-PAL (Global Partners in Apprenticeship Learning) program.

**Tsinghua 2-Way Internship**

Additionally, the Office of International Programs granted the use of $3800 to support the Tsinghua 2-way Internship. Students participating in this internship spend 5 weeks in China and 5 weeks back at Purdue in faculty member’s research labs. Students will be working with chosen Chinese student partner in multi-national teams.

**Masters Co-op Program Research**

Graduate degrees are becoming highly desirable and may even be an essential requirement as many companies expect graduates to be able to contribute to engineering and development in the globally competitive environment. In addition, Purdue University has a strong commitment to teaching and industrial-sponsored research. Consistent with this, the proposed program will provide students an opportunity to develop a more advanced knowledge base in their areas of interest as well as an opportunity for industrial-sponsored and work-integrated research. Both thesis-option and non-thesis option programs at the master’s level are available for students participating in this program.

Currently, no integrated graduate-level cooperative education programs exist within the engineering programs of Purdue University’s peer institutions. By introducing such a program, the College of Engineering at Purdue University will be able to position itself as a unique and forward thinking entity in the recruitment of graduate students.
Sponsorship Opportunities

Alumni and individuals can invest in our students future by sponsoring one of the following opportunities:

- Endowed Directorship for the Office of Professional Practice ($1,000,000)
- Global Co-Op Opportunities Fund ($1,000,000 - $500,000)
- The A.A. Potter Engineering Center Lobby ($100,000)
- Office of Professional Practice Suite ($100,000)
- Cooperative Education Hall of Fame ($50,000)
- Office of Professional Practice Scholarship Support ($25,000)

Companies have an opportunity to invest in our students future by sponsoring one of the following levels:

- **BLACK**: Internship Level Professional Practice Sponsor with an annual gift of $2,500.
- **GOLD**: Co-Op Level Professional Practice Sponsor with an annual gift of $5,000
- **PLATINUM**: GEARE (Global) Level Professional Practice Sponsor with an annual gift of $10,000

Companies Investing in Purdue’s Students for the 2009-10:

**GOLD LEVEL**
- Air Products

**PLATINUM LEVEL**
- Chrysler
- Cummins
- Dow
- John Deere
- United Technology

- Cummins
- Dow
- United Technologies
Professional Practice Companies

Advanced Micro Devices, Inc.
AEP
Air Liquide - Research & Development
Air Products and Chemicals, Inc.
Al-Ghanim International - Kuwait
Alberto Culver Co.
Allison Transmission, Inc.
Alt and Witzig
American Consulting Engineers of FL, LLC
American Structurepoint, Inc.
Applied Engineering Services, Inc.
ArcelorMittal USA
Argon ST
Arsee Engineers
Arvin Meritor - Vehicle Systems - Light and Commercial
Astronautics Corporation of America
ATA Engineering, Inc.
Ball Aerospace and Technologies Corp.
Banjo Corp.
Bendix Commercial Vehicle Systems - Huntington Plant
Biomet
Bonar Group
Borg Warner Automotive - Transmission Systems
Bose Corp. - Research and Development
BP
Braun Corp.
Bucyrus International, Inc.
Bunge - Oils/Oilseed Processing
Burns and McDonnell
Butler, Fairman and Seufert, Inc.
Caltherm
Camp Dresser and McKee Inc.
Cardinal Health - Supply Chain Services-Medical
Cargill Inc. - Engineering - Corn Milling
Carson Design Associates
Celanese - Ticona
Charles Pankow Builders, Ltd.
Chevron Phillips Chemical Company LP
Citgo Petroleum Corp. - Lemont Refinery
Civiltech Engineering, Inc.
Cognis
Commonwealth Engineers
Cooper Tire and Rubber Co. - Tire Division
Cornerstone Consolidated Svcs. Grp.
Cornerstone Controls, Inc.
Crowder Construction Co. - Civil and Environmental Div.
CTS Corp. - Automotive Products
Cummins Inc.
Danis Building Construction Co.
Dassault Falcon Jet
David Evans and Associates, Inc.
Delphi Corp.
Delta Faucet Co. - Greensburg Plant
Depuy Orthopaedics, Inc.
Design Systems, Inc.
Detroit Diesel Remanufacturing - Detroit Diesel Corp.
Diebold Incorporated
DLZ Indiana, LLC
Dometic Corp.
Dominion
Domtar - Hawesville Operations
Dow Chemical U.S.A.
Duke Energy
DuPage County - Dept. of Development and Stormwater
Dupont - Engineering
Dupont - White Pigment and Minerals Products
Dupont - Tyvek Nomex Kevlar
E.ON US
Earth Exploration, Inc.
Eastman Chemical Co.
Eastman Kodak
Eaton Corp. - Clutch Division
Elkhart County Highway - Engineering
EMCON Technologies
Emerson Appliance Controls
Emerson Climate Technologies, Inc. - Copeland Brand Products
Emerson Power Transmission - Bearings Division
Engineering Methods, Inc. - Computer Aided Engineering
Enterprise Rent-A-Car
Ethicon Endo-Surgery, Inc.
Exxon Mobil Corp.
F. H. Paschen, SN Nielsen - Building, Civil, Estimating, Job Order Contracts (JOC)
Facet Technologies - Research and Development
Federal-Mogul Corp. - Frankfort Plant
Federal-Mogul Corp. - Fuel Systems
First Energy Corp. - Davis Besse Nuclear Power Station
Fisher and Partners - Structural Engineers, Inc.
Flowserve Corp. - Pump Division
Franklin Innovation, LLC
Freudenberg-Nok - Morristown Plant
Freudenberg-Nok - Shelbyville Plant
Fuller, Mossbarger, Scott and May
General Electric - Appliance Div. - Supply Chain
General Electric - Consumer and Industrial/Motors
General Electric - Consumer and Industrial - Environmental
General Electric - GE Healthcare
General Electric - GE Aviation - Materials
General Electric - GE Aviation
General Electric - GE Transportation
General Electric - GE Aviation/Aircraft Engines
General Electric - Appliance Div.
General Electric - Consumer and Industrial - Lombard
General Electric - Consumer and Industrial - Carmel
General Electric - GE Infrastructure - Energy
General Electric - Consumer and Industrial/OMLP
General Electric - Aviation Systems
General Motors Corp.
Goodwin and Marshall, Inc.
Goodyear Tire and Rubber Co.
Grain Processing Corporation
GRW Engineers, Inc.
Gulfstream Aerospace - Staffing / Engineering Co-op Program
Hella Electronics Corp.
Heritage-Crystal Clean, LLC
Hill-Rom
HNTB Corp. - Dallas
HNTB Corp. - Chicago, IL
HNTB Corp. - Indianapolis
Honda of America Mfg., Inc.
Honeywell, Inc. - Consumer Products Group
Honeywell, Inc. - Resins and Chemicals - Chesterfield

Honeywell, Inc. - Consumer Products Group - Greenville
Honeywell, Inc. - Aerospace Div.
Howmet Castings - a division of ALCOA
Husco International
Indiana, State of - Dept. of Transportation
Industrial Dielectrics, Inc. - Molding Compounds/Fabricated Parts Div.
Ingersoll Rand
Integrator.Com, Inc.
International Truck and Engine Corp. - TDTC
ITW Produx
Jacobs Engineering
John Deere
Kimberly-Clark Corp.
Klingner and Associates, P.C. - Hannibal Branch Office
Kokosing Construction Co. - Heavy Industrial
Kraft Foods, Inc. - R and D
Landis and Gyr
Lennox International - Lennox Industries
Lexmark Int’l., Inc.
Louisville Water Co.
Lubrizol Corp. - Process Development Dept.
Lutron Electronics Co., Inc.
LyondellBasell - Research
LyondellBasell - Manufacturing
M.D. Wessler and Associates, Inc.
Marathon Petroleum Company LLC - Refining Dept.
Maregatti Interiors
Mass Electric
McCrone, Inc.
McShane Construction Corp.
MED Institute, Inc.
Mercury - MotoTron
Messer Construction
Metal Technologies, Inc. - West Allis Corporate Center
MJ Harris - General Construction
Motoman, Inc.
Nestle R and D
Nibco Inc.
Northwest Airlines, Inc.
Nufarm Americas Inc.
O’Brien and Gere - Total Water Solutions
Panduit Corp.
Patheon Pharmaceuticals, Inc.
PB World
Perry and Associates, LLC
Pilkington North America
Plymouth Tube
Praxair Electronics - Polishing Products
PREMIER SYSTEM INTEGRATORS - Corporate
Procter and Gamble Co. - Sharon Woods Tech. Center
Purdue University - Engineering, Utilities and Construction
R.A. Jones and Co., Inc.
Radian Research
Raytheon
Regal-Beloit Corporation
Robert Bosch Corp. - Braking Systems - Indiana Plant
Robert Bosch Corp. - Automotive Manufacturing
Robert Bosch Corporation - Automotive Aftermarket Division
Rockwell Collins
Rohm and Haas Kentucky Inc.
Rolls-Royce
RQAWS Corp.
S and C Electric Co.
SABIC Innovative Plastics
Sager Metal Strip Co.
Sargent and Lundy
Schneider Corp. - Surveying and Mapping Div.
Soil and Material Consultants, Inc.
SolaC Co., The
Speedway Superamerica LLC
Square D/Schneider Electric
St. Jude Medical - Cardiac Rhythm Management Division
Stanley Security Solutions, Inc. - Best Access Systems
STEEL DYNAMICS
Sterling Fluid Systems - Labour Pump and Peerless Pump
Structural Analysis Engr. Corp.
Stryker Corporation - Instruments Division
Summit Design and Build, LLC
Sun Chemical Corp.
Swagelok Co.
Tate and Lyle North America, Inc. - A.E. Staley
TechSolve, Inc.
Tenneco Automotive - Original Equipment
The Hershey Company - Continuous Improvement
Thomson, Inc.
Town of Fishers - Engineering & Public Works Department

Toyota Engr. and Mfg. of North America - North America - Indiana
Toyota Engr. and Mfg. of North America - North America - Michigan
Toyota Industrial Equipment Inc.
Toyota Motor Manufacturing - Kentucky
Trane - A Div. of American Standard Companies
Transystems Corp.
Traylor Bros., Inc.
TRW - Commercial Steering Div.
TRW - Electronics
U.S. Government - Air Force Research Lab
U.S. Government - Army Eng. Support - Redstone Arsenal
U.S. Government - NASA/Dryden Flight Research Center
U.S. Government - NASA/ Glenn Research Center
U.S. Government - NASA/Kennedy Space Center
U.S. Government - NASA/ Marshall Space Flight Center
U.S. Government - National Security Agency
U.S. Government - Naval Surface Warfare Center
U.S. Government - Wright Patterson AFB
U.S. Government - Printing Office
U.S. Nuclear Regulatory Commission - NMSS/FCSS
U.S. Steel - Gary Works
United Airlines - WHQKB
United Parcel Service - Air Group
United Parcel Service - Hodgkins
United Parcel Service - Indiana District
United Technologies - Carrier Corp. - Indianapolis
United Technologies - Electronic Controls
United Technologies - Hamilton Sundstrand
United Technologies - Pratt and Whitney
United Technologies - Carrier Corp. - TN
V3 Companies - SDI Consultants
Valspar Corp. - Packaging Coatings Group
Vantage Oleochemicals
Walt Disney World
Westell - Westinghouse Electric Co. LLC - Nuclear Fuels
Weyerhaeuser Co.
Whirlpool Corp. - Indiana Plant
Whirlpool Corp. - Corporate Technology
Wilson Sporting Goods - Racquet Sports
Woolpert
Zimmer - Orthopedic Implants and Instruments
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