Purdue School of Engineering and Technology, IUPUI
Dean's Industrial Advisory Council
February 19, 2009

Update from the dean's action group:
Strategic plan for international activities.
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To hire an engineer...
Does international experience count?

Candidate name:	Degree in relevant engr or tech field?	GPA	Work experience?	International experience?	Foreign language?
AB	May 2009.	3.3	Summer, 10-week internship. Relevant to proposed job duties.	n	n
CD	May 2009.	3.6	Summer, 8-week internship. Relevant to proposed job duties.	n	n
EF	May 2009.	3.1	Summer jobs, non technical.	**6 week summer program, "Mozart's Vienna." 3-credit course in cross-cultural communication.**	**One year, college-level German.**
GH	May 2009.	3.25	Summer jobs, non technical.	**4-week project installing a computer lab in a rural school, Hidalgo, Mexico.**	**4-week intensive program in Mexico, survival-level Spanish.**

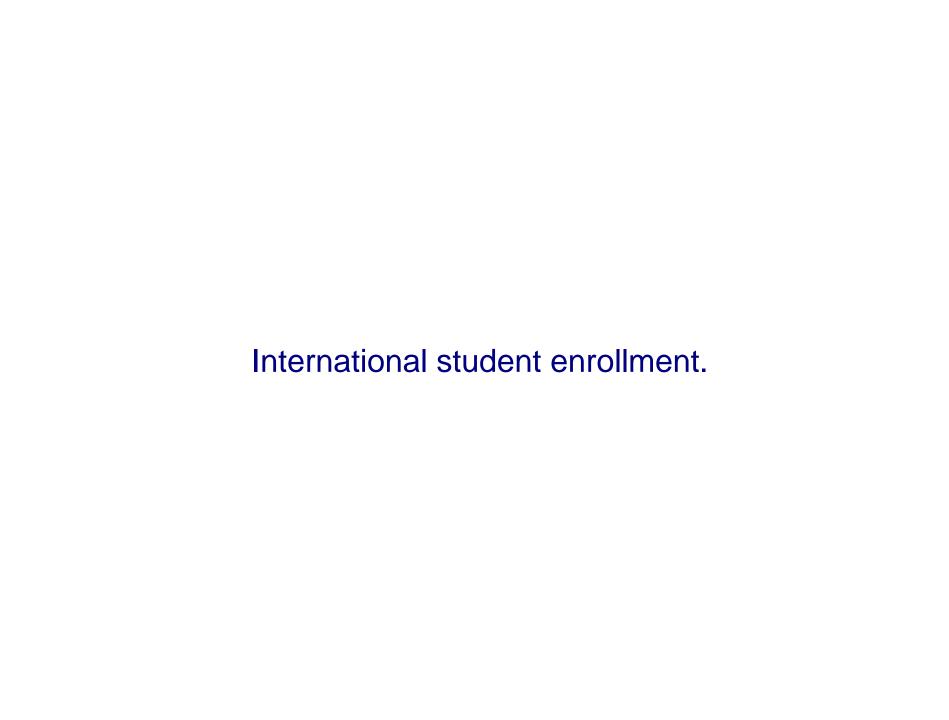# School of E&T plan for international activities.

Framework, related plans:

1. IUPUI Office of International Affairs, "Strategic Plan for a New Era of Internationalization." Spring 2007.

2. "*Global Purdue*: Globalization White Paper," February 2008.

and

3. IU "International Strategic Plan," March 2008.

To "internationalize" the university. Components:

- International student enrollment.
- Affiliations with international partner institutions.
- **Global learning** through curriculum focus and study abroad.
- International research.
- "Serving the international needs of the State of Indiana."

International student enrollment.

IU strategic plan:

GOAL 6 Develop an **international student enrollment management plan** that targets strategic world areas.

GOAL 7 Develop special **incentives to attract top quality international students**.
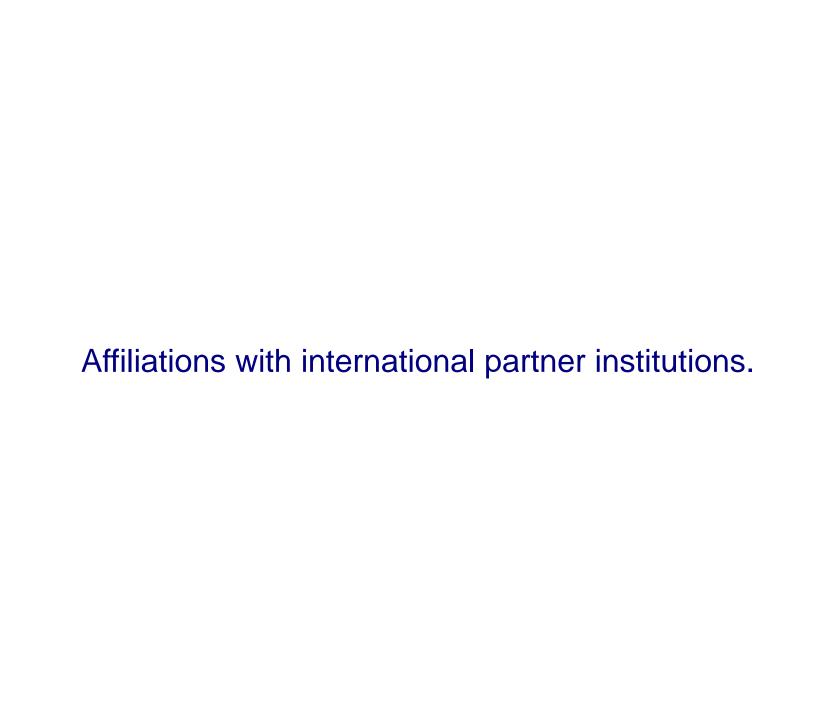
GOAL 8 Facilitate the recruitment of more **sponsored international student**s.

E&T enrollment of international students increased from about 4% in 1995 to about 12% in 2008.

- International partnerships.
- Systematic recruiting of international students.
- Purdue name.
- Incentives for well qualified students.
- Leadership.

Why recruit international students?

- Credit hour rates, 2008-2009:
    International = $664.
    Indiana resident = $217.
- Contact hypothesis: local students benefit from interaction with international students.

Affiliations with international partner institutions.

Affiliations with international partner institutions.

IUPUI plan:
Make **"... global partnerships** the centerpiece of our internationalization efforts..."

Global Purdue:
"The necessary changes will include... collaborative project opportunities with faculty and students from **global partner universities...**"

Affiliations with international partner institutions.

IU plan:

"Meeting these goals will mean... Developing new strategic partnerships with **highly regarded institutions** of higher education abroad. Relationships with partner universities must be selected on the basis of how they **contribute to faculty research** and student **study abroad**, as well as how they add to **institutional prestige**."

Affiliations with international partner institutions. Selection of E&T links.

- Universiti Tenaga Nasional, Malaysia; export of curriculum and academic infrastructure; 2+2 degree program.
- Heilbronn University: German/Engineering Dual Degree Program; exchange program.
- Yeditepe University, Turkey; exchange program.
- Université de la Méditerranée, France; exchange program.
- University of Tehran, Iran; 2+2 degree program.

Global learning through curriculum focus
and study abroad.

Global learning: Connection to accreditation standards:

ABET outcomes:
- "The broad education necessary to understand the impact of engineering solutions in a global context."
- "A respect for diversity and a knowledge of contemporary professional, societal and global issues."

Global learning: Connection to accreditation standards:

IUPUI "Principles of Undergraduate Learning":
- Understanding of society and culture: Students' ability "...to recognize their own cultural traditions and to understand and appreciate the **diversity of the human experience**... to analyze and understand the interconnectedness of **global and local communities**."

Global Purdue white paper:

- "**All students will be expected to graduate with some exposure to the world** from overseas experience and/or substantive global learning opportunities on campus."
- "The necessary changes will include... integration of global issues and problems across the curriculum ... a **rich portfolio of global learning experiences** accessible to all students, faculty and staff."

Global Purdue white paper:

"The success of our Global Strategy will be measured through progress on quantitative metrics and against relevant benchmarks:

- Number of faculty, staff, and students, **participating in global activities** on and off campus.
- Number and percentages students with **international experiences** (study abroad, research abroad), and the **quality** of the experiences.
- Number of courses, academic majors, and departments that formally **include global focus in course work**."

Global learning:
A goal of the IU International Strategic Plan of 2007 is to,
"Eliminate or reduce **disincentives** associated with **structural impediments to expanded study-abroad participation**."

"**Structural impediments** to expanded study-abroad participation."

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*"Only 4 percent of (U.S.) engineering graduates have some kind of international experience... Historically, **engineering students have not studied abroad in large numbers** due to the lack of elective courses and the **absence of an educational culture that emphasizes the importance of international experience**. Of the almost 206,000 American students who studied abroad in 2004-2005, ... less than 3 percent were engineering students."*

- ASEE Prism (Summer 2007).

"Structural impediments to expanded study-abroad participation."

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IUPUI *engineering and technology students rated "opportunities for overseas study" number **26 in importance among a list of 26 items***. Students enrolled in all other IUPUI schools rated overseas study as significantly more important.
- IUPUI Office of Information Management and Institutional Research, 2007.

"Structural impediments to expanded study-abroad participation."

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"... absence of an educational culture that emphasizes the importance of international experience"?

Global Purdue answer:
"... develop a global mindset... Purdue University will institute the needed organizational structure to accelerate the development of a collective global mindset."

Global Purdue:

*"... **develop a global mindset**... Faculty and staff will be champions for the transformation, encouraged and **rewarded** for infusing global perspectives into all aspects of their work."*

The foundation of
"A **rich portfolio of global learning experiences**... "

German-engineering dual-degree program:
http://www.engr.iupui.edu/international/dual_german.shtml?menu=dual

Go Green program, Germany:
http://www.engr.iupui.edu/international/gogreen.shtml?menu=sa

Poland: Computer Graphics Technology
http://www.engr.iupui.edu/international/cgtpoland.shtml?menu=sa

Project-based learning in Mexico:
http://www.engr.iupui.edu/international/mexico.shtml?menu=sa

International research.

- Identify and implement incentives that reward research that has international scope or impact.
- Establish and publish a list of all ongoing research that has an international dimension.

"Serving the international needs of the State of Indiana."
(Guidance from DIAC welcomed.)