

GEDC

**global engineering
deans council**



Accreditation in Engineering Education

Session Co-Chair: Hasan Mandal, Satish Udpa & Ashok Saxena



Global Engineering Deans Leadership Institute Pilot Project (supported by HP) March 21, 2009

Priorities

1. Deans Development

- 1A. How to be a successful Dean
- 1B. Raise \$
- 1C. Organizing an industry advisory council
- 1D. Learn from other associations

2. Innovation in Engineering Education

- 2A. **Global Engineer**
- 2B. **Technology in Education/Distance Education**
- 2C. Interdisciplinary Collaboration
- 2D. **Accreditation**

3. Partnerships

4. Faculty Development

- 4A. Effective teaching and learning - Innovation
- 4B. Research in engineering education
- 4C. Statistics related to current engineering education



The Global Engineering Deans Council (GEDC)
Institute for Deans
Workshop on
*“The Influence of Globalization in Engineering Education,
Pedagogies and Accreditation”*

Budapest, Hungary
Monday October 12, 2009
09:30- 17:30

GEDC Strategic Direction Summary 2011-2013

MISSION
Serve as a global network of engineering deans*, and to leverage on the collective strengths, for the advancement of engineering education and research.

VISION
Empower deans* in advancing their college or school's mission in preparing the next generation of engineers to successfully tackle the challenges of the 21st century and serve society more effectively.

1. Institutional Leadership
Provide a world-wide forum for exchanging information, discussing experiences and challenges, and sharing best practices in leading an engineering school.

2. Curriculum Leadership
Provide a means for engineering deans to partner with one another in curriculum development and innovation, and to collaborate with industry and other stakeholders.

3. Policy Leadership
Build a network that would support engineering deans to play a leadership role in the development of regional, national and international policies to advance societies.

4. Accreditation Leadership
Actively participate in the development and maintenance of a global system of quality standards for engineering education.

Organize periodic meetings and other mechanisms to discuss emerging issues and challenges, and to share best practices pertaining to leading an engineering school

Organize periodic meetings and web-based fora to discuss emerging issues and challenges, and to share best practices pertaining to curriculum development and student learning experiences

Host forums and speakers to share information about emerging policy issues and strategies for impacting change.

Collaborate with national and multi-national accreditation organizations to encourage the development and adoption of national accreditation standards.

Identify and address critical, cutting-edge institutional leadership issues that are of strategic interest and value to engineering deans

Identify and address critical, cutting-edge curriculum development issues that are of strategic interest and value to engineering deans.

Identify and address critical opportunities where deans could help influence appropriate policies.

Host forums and speakers at meetings to share information on accreditation standards and best practices

Develop pathways for the collaboration with industry and other stakeholders.

Develop and share tools and resources to enable deans to be effective in playing a leadership role

Organize Deans Leadership Institute to mentor and support development of engineering deans

Organize Deans Leadership Institute to mentor and support development of engineering deans

Strategies

* For the purposes of the GEDC, a dean is defined as a person in charge of an engineering college or school in a university, or a person in charge of an education institution of higher learning that is primarily focused on engineering education and research.



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Panel Members

David K. Holger

Deputy Chair, IEA Governing Group, President ABET 2009-2010, Associate Provost for Academic Programs & Dean of Graduate College, Iowa State University

Paul S. Peercy

University of Wisconsin-Medison, Dean of College of Engineering

R. Natarajan

Former Chairman, AICTE, Former Director, IIT Madras

Tuncay Döğeroğlu

Anadolu University, Dean of Faculty of Engineering and Architecture

Zhang Xiong

Beihang University (BUAA) Dean of Sino-French Engineer school

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QUESTIONS

- 1) What are the main challenges of the accreditation processes in your country?
- 2) Are the current accreditation processes appropriate for preparing engineers to address multidisciplinary problems in a global economy? If not, what changes would you like to see implemented?
- 3) How GEDC help to encourage accreditation processes?

Strategic Direction Summary

2011-2013

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Objective 4 – Accreditation Leadership

Actively participate in the development and maintenance of a global system of quality standards for engineering education.

Strategy 4.a

Collaborate with national and multi-national accreditation organizations to encourage the development and adoption of national accreditation standards

Key Action Plans:

- i. Provide support to Deans who are new to accreditation processes
- ii. Produce a report about the status and trends of Engineering accreditation in the country and the relationship with licensure for each of the countries represented in GEDC.
- iii. Create an on-line tool where GEDC members can upload information about the programs that they have available (disciplines/accreditation). This tool will facilitate having a Directory of programs represented by GEDC members)
- iv. Deploy lobbying efforts (jointly with IFEES) with Washington Accord and EUR-ACE to try to get an agreement about mutual recognition.
 - . Produce a letter on behalf of GEDC encouraging the Washington Accord and EUR-ACE to come up with a mutual recognition agreement
 - . Invite officers of Washington Accord and EUR-ACE to participate in next GEDC meeting

Strategy 4.b

Host forums and speakers at meetings to share information on accreditation standards and best practices

Key Action Plans:

- i. Invite deans of accredited programs and officers of Washington Accord and EUR-ACE to participate in next GEDC meetings
- ii. Promote in the regional deans meetings the inclusion of sessions related to accreditation standards and best practices

Key Expected results:

- i. Accelerated formation of a global system for the accreditation of engineering programs
- ii. Heightened recognition and transparency of engineering education programs
- iii. Enhanced global mobility of engineering students
- iv. Documented growth of dual/double degree engineering programs

Key Expected results:

- i. Accelerated formation of a global system for the accreditation of engineering programs
- ii. A platform for collaboration between the leaders of engineering schools

Detailed Action Plans

2011-2013 Strategic Direction

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Objective 4: Accreditation Leadership

Strategy 4.a: Collaborate with national and multi-national accreditation organizations to encourage the development and adoption of national accreditation standards

Key Expected Results	Major Action Items (Milestones)	Owner	Timetable (Critical dates)	Verifiable Indicators	Caveats
i. Accelerated formation of a global system for the accreditation of engineering programs ii. Heightened recognition and transparency of engineering education programs iii. Enhanced global mobility of engineering students iv. Documented growth of dual/double degree engineering programs	i. Provide support to Deans who are new to accreditation processes	Committee to be established	Ongoing; assure at least Q4 2011 (Beijing meeting)	#of Deans receiving help from GEDC for orientation on accreditation process and practices.	
	ii. Produce a report about the status and trends of Engineering accreditation in the country and the relationship with licensure for each of the countries represented in GEDC.	Committee to be established	Q3 2011	# of countries represented on GEDC that appear on the report	
	iii. Create an on-line tool where GEDC members can upload information about the programs that they have available (disciplines/accreditation). <ul style="list-style-type: none"> This tool will facilitate having a Directory of programs represented by GEDC members 	Committee to be established	Creation: Q1 2011 Upload: Q3 2011	<ul style="list-style-type: none"> Creation of tool Ratio of GEDC members with their information uploaded 	

Objective 4: Accreditation Leadership

Strategy 4.a: Collaborate with national and multi-national accreditation organizations to encourage the development and adoption of national accreditation standards (cont.)

Key Expected Results	Major Action Items (Milestones)	Owner	Timetable (Critical dates)	Verifiable Indicators	Caveats
i. Accelerated formation of a global system for the accreditation of engineering programs ii. Heightened recognition and transparency of engineering education programs iii. Enhanced global mobility of engineering students iv. Documented growth of dual/double degree engineering programs	iv. Deploy lobbying efforts (jointly with IFEES) with Washington Accord and EUR-ACE to try to get an agreement about mutual recognition. <ul style="list-style-type: none"> • Produce a letter on behalf of GEDC encouraging the Washington Accord and EUR-ACE to come up with a mutual recognition agreement • Invite officers of Washington Accord and EUR-ACE to participate in next GEDC meeting 	Committee to be established	Progressively over 3 years, beginning Q1 2011 Letter: Q1 2011 Invitation: Q1 2011 Participation Q4 2011	Letter submitted and response received Number of officers that participate on next GEDC meeting.	<ul style="list-style-type: none"> • IFEES should support this action. • In countries where the accreditation agency is not associated with Washington Accord nor EUR-ACE, promote a way in which the agency can include the attributes of a global engineer as part of their accreditation criteria.

Objective 4: Accreditation Leadership

Strategy 4.b: Develop Host forums and speakers at meetings to share information on accreditation standards and best practices

Key Expected Results	Major Action Items (Milestones)	Owner	Timetable (Critical dates)	Verifiable Indicators	Caveats
i. Accelerated formation of a global system for the accreditation of engineering programs ii. A platform for collaboration between the leaders of engineering schools	i. Invite deans of accredited programs and officers of Washington Accord and EUR-ACE to participate in next GEDC meetings	Chair/co-Chair Beijing meeting	Invitation: Q1 2011 Participation: Q4 2011	<ul style="list-style-type: none"> •Number of accreditation-related sessions in annual meeting. •Number of Deans participating in sessions 	Plan to have the sessions one day before the event starts.
	ii. Promote in the regional deans meetings the inclusion of sessions related to accreditation standards and best practices	Committee to be established	Progressively over 3 years, beginning Q1 2011	Number of accreditation-related sessions	

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2011-2013 Strategic Plan
Accreditation Leadership Group