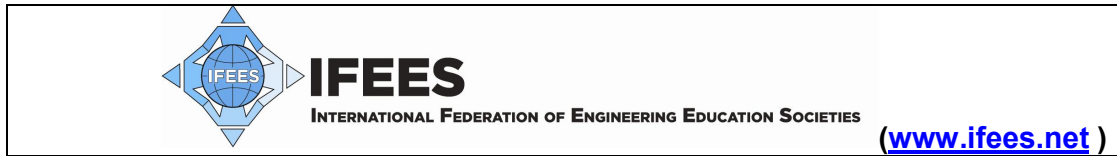


GLOBAL ENGINEERING DEANS COUNCIL (GEDC)



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➤ **This draft Concept Paper on GEDC is intended for inviting comments and suggestions**

➤ **Please send your inputs to:**

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GLOBAL ENGINEERING DEANS COUNCIL (GEDC) CONCEPT

INTRODUCTION

We live in a world that is witnessing unprecedented changes primarily caused or led by innovation. Internet and digital technologies are enabling humans to interact with each other across the planet with much ease and greater speed. We are able to access large amounts of information round the clock at an ever-increasing pace. Globalization aided by technologies and conducive international trade and fiscal policies are enabling companies to span their supply chains across the planet to respond quickly to market needs and opportunities. Companies are realizing a substantial portion of their revenues outside their home bases. In some cases, trans-border transactions are larger than the national economies. The global research and development expenditure by industry and government has risen to 500 billion dollars per annum, resulting in the generation of phenomenal amounts of new knowledge and accelerated pace of innovation in products, processes and services, and expansion of the global economy. We now live in a world that is far more inter-connected and inter-dependent than ever before. The global human population has increased exponentially over the last three centuries, exceeding six-billion. Nearly half of this population is set to live in urban areas.

The above-mentioned trends are posing serious challenges to human societies in terms of energy and water supplies, security, healthcare and infectious diseases, as well as in terms of impact on environment and sustainability. These global challenges require innovative solutions, which can be realized through close cooperation between societies across the planet.

There are approximately four thousand engineering colleges/schools/faculties/institutions of higher learning around the world, producing nearly a million engineers annually to meet

the diverse engineering manpower and innovation needs of respective nations' economies (http://www.eng.nus.edu.sg/eir/about_us/deans_msg/). These institutions are at different stages of development and achievement. With the advent of globalization, engineering educators intrinsically feel the need to better prepare engineers for the globalized economy. Stakeholders are increasingly expecting engineering colleges to act as leaders in innovation, and to provide solutions to society's challenges. The key challenges faced by the leaders of engineering institutions, herein referred as 'engineering deans' (broader meaning of Dean is applicable), include the following "how tos":

- a) deliver locally-pertinent and globally-relevant engineering education?
- b) make engineering more attractive to top students, who are being drawn away from science and technology disciplines, and make engineering more attractive to our future generations of students?
 - Stagnant engineering enrollments in higher per capita income cities/regions/nations
 - Growing engineering enrollments in rapidly growing economies
- c) improve the quality of teaching and learning and increasing the output of engineers?
- d) recruit and retain quality faculty members (there is a shortage in many countries)?
- e) strengthen "capacity building" such as staffing, funding and infrastructure in engineering schools
- f) improve the quality of governance practices in engineering schools?
- g) develop adequate models for facilitating partnerships between engineering schools and industry (consensus on evaluation metrics to be used by stakeholders)?
- h) develop adequate funding models for engineering schools?

WHAT OTHERS SAY

“This is an excellent idea and would be a great way for us to learn about engineering education on a global scale. This will be important as the global pressure for engineering solutions to growing problems and issues continues to increase. While there are big and small institutions, different visions and missions for our programs, and emphases on research etc., we can all benefit from taking a global look at what we are doing in engineering education. I think a forum for exchange of ideas globally would benefit deans and the profession immensely.” (A straw poll of engineering deans around the world).

“In a world where talent and skills have become the world’s most sought-after commodities, Faculties of Engineering and their leaders face tremendous challenges. A Global Engineering Deans Community would go a long way in breaking up their relative isolation, and in speeding up the transformation of their institutions through mutual support and knowledge sharing.” (Bruno A Laporte, World Bank Institute)

GLOBAL ENGINEERING DEANS COUNCIL (GEDC)

Recognizing the global need, one of the strategic initiatives of the International Federation of Engineering Education Societies, IFEES, (www.ifees.net) is the creation of a world-wide forum of Engineering Deans called Global Engineering Deans Council (GEDC). The GEDC idea was first mooted during the IFEES meeting at Rio de Janeiro, Brazil on 9 October 2006. The IFEES executive board decided to go forward with the GEDC concept at its 30 September 2007 meeting in Istanbul, Turkey. The first GEDC Executive Committee meeting is scheduled for 8-9 May, 2008 in Paris.

The GEDC membership shall comprise a person-in-charge of:

- 1) an engineering college, school or faculty in a university or institution of higher learning

- 2) an education institution of higher learning that is primarily focused on engineering education and research
- 3) engineering deans councils in respective countries and/or regions, and
- 4) industry leaders that identify with the mission and vision of GEDC.

Vision

To enhance the capabilities of engineering deans to transform their schools in support of their societies in a globalized world.

Mission

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

Strategic Goals:

- Provide a world-wide forum for exchange of information, and discussion of experiences, challenges and best practices in leading an engineering school.
- Provide a means for engineering deans to partner with one another in innovation, and to collaborate with the industry and other stakeholders.
- Build a network that would support engineering deans to play a leadership role in developing regional and national policies to advance economies.

Action Items

- Facilitate global preparation of engineering students through exchanges.
- Mentoring of engineering deans (Deans' Training Institute).
- Host regular meetings to discuss issues, challenges and best practices.
- Catalyze the formation of a Global Academy of Engineering.