World Congress on Engineering Invited Speech by Nael Barakat, PhD, P.Eng.

Professional issues associated with global practice of engineering.

Engineering is a profession that is involved with human life and welfare as much as a medicine. However, the public does not normally realize the significance of this involvement. From a professional perspective, this makes engineering ethics critical for reasons beyond keeping out of legal trouble and guarding the health and safety of humans. Ethics are necessary for the survival and continuity of the profession itself. To this effect, engineering codes of ethics have been set by professional societies and engineering ethics have been emphasized by accreditation organizations to be added to the engineering curricula. These arrangements include many professional issues related to engineering under the umbrella of ethics. One major problem with these arrangements, that emerged recently, is that none of it considers the global dimension of the practice. This is because of historic reasons, among others. However, since globalization has influenced every aspect of life, especially technology, engineering practice now includes this dimension and consequently is faced with many questions and issues about the professional and ethical angles of the practice in a global setting. This lecture will highlight professional and ethical dimensions of the engineering profession that are not normally covered in regular engineering curricula but beneficial to practicing engineers. It will also shed some light on the influence of globalization of the practice and the ethical and professional issues that could be related to it.