

# EDUCON-2016 Workshop

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## Integrating and Assessing Professional and Leadership Elements in the Engineering Curriculum

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### **Aims:**

This workshop aims at providing some methods to integrate, teach, and assess engineering professional and leadership elements in a typical engineering curriculum while building related assessment instruments and continuously improving the experience. Focus is on elements like: Engineering ethics and social responsibility, sustainability concepts and practices, life-long learning, and knowledge of contemporary issues, as well as common leadership elements. Some of these elements are usually required by accreditation standards, to be integrated and assessed within the engineering curriculum. The workshop will also allow participants to engage in active learning and discuss their own issues while attempting planning their offering of these elements to deliver at their respective institutions.

### **Main topics:**

- Professional and leadership elements in engineering
- Methods of including professional and leadership elements in the engineering curriculum
- Assessment and evaluation
- Planning the delivery
- Sharing experiences

**Target Group:** The workshop is addressed to all engineering educators and administrators, as well as practicing professional engineers

**Background knowledge expected of the participants:** No previous knowledge is expected.

**Workshop Activities:** Lectures, discussions, design and planning of material, short presentations

**Workshop Time:** **Two hours**

### **The Presenter(s):**

Nael Barakat is a professor and the chair of Mechanical Engineering at Grand Valley State University in Grand Rapids, MI. USA. He is also a professionally registered engineer in Ontario, Canada. Dr. Barakat is a fellow of the American Society of Mechanical Engineers (ASME) the program chair of the Division of Engineering Ethics at the American Society of Engineering Education (ASEE). Dr. Barakat expertise and interest is in the areas of Mechatronics, Control, Robotics, Nanotechnology Education, and Automation, as well as Engineering Ethics, Professionalism, Leadership, and Education. He has taught numerous courses and modules, delivered workshops and seminars, and developed research on different professional and educational engineering topics, including: ethics, professionalism, and leadership.