A Digital Library for Engineering Education

NEEDS is a digital library designed for engineering faculty and students of all ages with links to online learning materials in engineering and related areas of science and math. Service Learning is our current monthly theme.

As we focus on Service Learning and the future of Engineering, we invite you to use our resources to educate and inspire the engineers of tomorrow. Suitable for classroom or individual use, the resources available at NEEDS are at your command.

Looking forward, "...engineers must understand the principles of leadership and be able to practice them in growing proportions as their careers advance. They must also be willing to acknowledge the significance and importance of public service and its place in society, stretching their traditional comfort zone and accepting the challenge of bridging public policy and technology well beyond the roles accepted in the past.”

-- The Engineer of 2020

“Educators have increasingly realized the importance of developing not just good engineers, but also good citizens. While giving students the opportunity for extensive design work, we can also show them needs that exist and the impact their work can have on their communities. I hope that each of our EPICS students takes a sense of responsibility to service with them when they leave their universities.”

-- Prof. Leah Jamieson, Co-founder, EPICS

THE ENGINEER OF 2020

Written from the perspective of engineering practice, this report focuses on the future of engineering, detailing the necessary characteristics of the engineer of 2020 and the ways in which the education and training of engineers must improve in order to ensure their ability to face the complexities future technologies hold.

“The practice of engineering is changing much more rapidly than higher education has. We need to undergo fundamental changes in the “what”, “how” and “who” we teach if we are to meet the needs of 2020.”

- William A. Wulf, President, National Academy of Engineering

PAST THEMES

- African American Engineers
- The Engineer of 2020
- Premier Courseware of 2004
- Pre-Engineering
- 100 Years of Flight
- Premier Courseware of 2003
- Gender Equity