

# AAES Celebrates the Release of the Engineering Competency Model

The American Association of Engineering Societies (AAES) and its Lifelong Learning Working Group ("working group") announced the release of the Engineering Competency Model ("the model") in July 2015. As part of its mission to serve as one voice for the U.S. engineering profession, AAES identified the development of an engineering competency model as a key priority to help educators, employers, professionals and future engineers understand the knowledge and skills needed to thrive in the workplace.

*"The Engineering Competency Model has the potential to unite the profession on the fundamental requirements that engineers will need to solve the global challenges we are facing."*

— Jerry Carter, CEO, National Council of Examiners for Engineering and Surveying

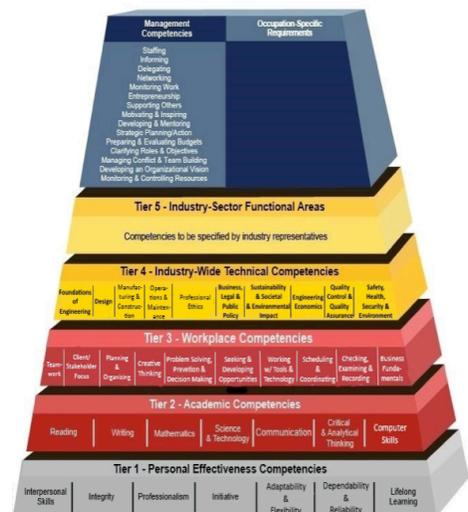
AAES partnered with the U.S. Department of Labor's Employment and Training Administration to build the model and provide a universal template for the knowledge, skills and abilities necessary not only for entering the engineering profession but also for maintaining competency and proficiency during one's career.

## A Framework for the Engineering Profession

The Engineering Competency Model is designed to establish a more consistent guideline for the engineering profession. The model is intended for use by

- Industry leaders, employers and human resource professionals, to identify skill needs and assess competencies and performance
- Educators/academics, to inform the development of competency-based curricula and training
- Workforce professionals and career counselors, to develop resources for career exploration and guidance
- Current and future engineers, to gain a clear understanding of the skills and abilities necessary to enter, advance and succeed in the industry

At its core, the Engineering Competency Model is a four-tier model that uses a pyramid to depict the required key competencies. Tiers one through four include personal, academic, workplace and technical competencies that are common to the engineering profession. There is an opportunity to adopt the model and apply a fifth tier to include discipline-specific competencies. Tier six, a final optional tier, is divided into two areas: competencies needed for management and occupation-specific requirements for a particular position within the engineering profession. The graphic shown below lists the different competencies within each tier. The online model has more-detailed explanations of each of those competencies.



## Engineering Competency Model Development Process

To begin development of the model, the U.S. Department of Labor's Employment and Training Administration assigned a dedicated research team to oversee the project, and members of the AAES Lifelong Learning Working Group provided the team with a vast amount of background information to review, including ABET accreditation criteria, bodies of knowledge from various engineering societies, the Project Lead the Way outline, and curricula and related resources from academic institutions around the country. The working group also identified subject matter experts from AAES member societies, which represent industry and academia, to assist the research team in developing and critiquing the draft model through a series of webinars designed to gather feedback and further refine the draft.