Jessica Townsend is an Associate Professor of Mechanical Engineering at the Franklin W. Olin College Of Engineering, a new engineering school in Needham, Massachusetts. She teaches classes across the entire Olin curriculum, including first year engineering classes, mechanical engineering requirements and electives, and the senior capstone design course. Dr. Townsend’s research interests include thermal-fluid system design, renewable energy, turbine blade cooling and engineering education. Dr. Townsend has spent time in industry working both in the gas turbine and rocket propulsion fields. She received her Ph.D. in Aeronautics and Astronautics from the Massachusetts Institute of Technology, her M.S. from the Mechanical and Aeronautical Engineering Department at the University of California at Davis, and her B.S. at the University of Massachusetts at Amherst in Mechanical Engineering.

The Olin College Curriculum: An Engineering Education by Design

Olin College was founded in 1999 to address emerging needs in engineering education, including business and entrepreneurship skills, design, creativity, and an understanding of the social and economic contexts of engineering. The curriculum development process first focused on the skills, knowledge and attitudes that were desired in Olin College graduates, and in identifying the kinds of experiences that would best engage the students to develop these skills. Because Olin College has no departments and offers only engineering degrees, we were able to incorporate many of the desired experiences into first year introductory classes and in other engineering requirements to serve all majors. The mechanical engineering curriculum was developed within this framework to provide mechanical engineering majors with much of the specific content they would need to move on to industry or graduate school. This talk will provide an overview of the Olin curriculum, and will highlight some of the unusual and unique offerings that became possible in a curriculum designed from scratch.