



# INTRODUCTION TO COGNITIVE ENGINEERING & SYSTEM DESIGN SHORT COURSE & WORKSHOP

**When:** July 12th, 9:00am-3:00pm

**Where:** Auburn University Research and Innovation Campus  
Cummings Research Park, 345 Voyager Way NW,  
Huntsville, AL 35806

**Cognitive Engineering** is the field of study that focuses on how well a system aligns with the cognitive capabilities of its users. It draws on our understanding of human perception, mental processing, and memory and aims to apply this knowledge to enhancing the design and usability of technology.

## Overview:

Over the next 25 years, automation and artificial intelligence (AI) breakthroughs are poised to usher in an era of fully autonomous vehicles for personal transportation, collaborative spaces where robots and humans work together in manufacturing, the integration of autonomous drones for freight handling, and other cutting-edge technologies. These advancements have the potential to reshape the landscape of business and industry. The question arises: How can we design systems to facilitate the seamless interaction of operators with these technologies? This workshop introduces concepts that enable the creation of systems prioritizing usability, ensuring users can readily comprehend and navigate these innovations. **The course topics include:** Usability, Cognition Theory: How do we Know?, Designs that Aid Cognition, Understanding Human Error. Decision Making & Cognitive Biases, Automation vs Autonomy, Automation & Interface Design.



**Richard Sesek, PhD, MPH, CPE**, is the Tim Cook Professor of the Industrial and Systems Engineering Department at Auburn University, where he teaches occupational safety, human factors, and ergonomics. With more than 25 years of teaching and research experience at Auburn, he is actively involved in the Thomas Walter Center's Business Engineering Technology Program, where he teaches in technology management, creativity, and innovation. Contact Richard Sesek at [rfs0006@auburn.edu](mailto:rfs0006@auburn.edu).

**Richard F. Garnett, PhD, PE, CSP**, is a Senior Lecturer in the Department of Industrial and Systems Engineering at Auburn University. Garnett teaches courses in manufacturing, cognitive engineering, and engineering & technology management. He has more than 35 years of industrial experience in the engineering consulting, chemical, and automotive industries. Contact Richard Garnett at [rfg0004@auburn.edu](mailto:rfg0004@auburn.edu).



## REGISTER HERE

Lunch will be provided. Professional Development Hours (PDH) provided through the UAB Deep South Center for Occupational & Safety Health.

[aub.ie/ICESD-workshop](http://aub.ie/ICESD-workshop)



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