NCTM
NATIONAL CENTER FOR THERAPEUTICS MANUFACTURING

100 Discovery Drive
College Station, TX 77845

HUMAN ERROR & RESILIENCE IN BIOMANUFACTURING SYSTEMS

January 14th (Thu) *and* 15th (Fri), 2016

This course examines how human error impacts the safety and quality of operations in biomanufacturing processes. Reason's error classification model and the Skill-Rule-Knowledge behavioral modes are reviewed in order to highlight how individual breakdowns may lead to error within a system. Case studies are presented to illustrate how environmental and human factors, such as workload, stress, and time pressure interact to significantly affect the outcome of processes. Discussion of strategies including error prediction and analysis, operator practices and training, and system design is included to explore how Biomanufacturing systems can be built safer and more resilient. ***Participants will receive 1.6 CEUs from Texas A&M University upon completion.***

Course Objectives

- *Introduce the fundamentals of systems engineering and systems modeling within Biomanufacturing*
- *Investigate the basic physical, cognitive, and social factors affecting human components in sociotechnical systems, and the error that may arise from these factors*
- *Provide an understanding of the role humans play in automated systems*
- *Discuss Reason's human error classifications and how errors follow from basic human Skill-Rule-Knowledge behavioral modes*
- *Introduce error prediction and analysis tools to utilized to form process risk assessments*
- *Examine the basic concept of resilience engineering and how it differs from most common safety programs*

***SPECIAL* Discount Price*: $125**

Student Discount Price: $50*

**Workshop costs subsidized by federal funds.*

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If you don't already have an account, select "Create Account", be sure to make note of your User Name and Password. Once your account has been created, select "Login". Enroll in your course of choice from the course catalog.

ABOUT THE INSTRUCTOR

Dr. Thomas Ferris is an Assistant Professor within the Industrial and Systems Engineering Department of the Texas A&M Dwight Look College of Engineering. Dr. Ferris' research interests are in Human Factors and Cognitive Ergonomics, and can be described as the study of cognition in human-machine engineered systems. His primary focus involves human information processing and design to support attention and interruption management. In particular, he investigates novel interface design techniques, employing alternative display modalities such as the sense of touch. Other research interests include human error, decision making under time pressure, and human-automation interaction. He has interest and experience in applying his research to the domains of medicine, military operations, aviation, and ground transportation.