

M Northwestern Medicine[®]

Feinberg School of Medicine

Designing and Implementing Simulation-Based Mastery Learning Curricula

Course Directors: William C. McGaghie, PhD; Jeffrey Barsuk, MD, MS

Location: Northwestern University, Northwestern Simulation, 240 E Huron St., Chicago, IL

Session: Three-day Course | Chicago, IL

Course Preamble

Mastery learning is a hybrid approach to competency-based education. The central tenets of mastery learning are (1) education excellence is expected and can be achieved by all learners, and (2) little or no variation in measured outcomes will be seen in a mastery environment. Mastery learning means that trainees acquire essential knowledge, skills, and affective and professional attributes measured rigorously, compared to fixed achievement standards, without limiting the time needed to reach the outcome. Mastery learning results are uniform, with little or no variation among learners. By contrast, education time can vary among learners.

Course Description

The Northwestern Simulation Mastery Learning Course is substantive, engaging, and practical. Experts in simulation-based mastery learning in health professions education present the course. The course gives participants from various health professions opportunities to gain fundamental mastery learning skills and knowledge. This combination of skills and knowledge prepares learners to design, implement, and evaluate mastery learning health professions curricula focused on at least three key domains:

- Resuscitation
- Procedural skills
- Communication skills

After this course, participants will be able to:

- Acquire foundation mastery learning skills and knowledge
- Design simulation-based mastery learning curricula
 - Perform a needs assessment
 - Design a new mastery learning curriculum or modify an existing curriculum to align with mastery learning principles
 - Set mastery learning minimum passing standards (MPS)
 - Select or develop instruments for pre and post-learner assessments
- Implement simulation-based mastery learning curricula
 - Create a psychologically safe learning environment needed for actionable performance feedback and rigorous deliberate practice
 - Structure feedback and debriefing to achieve mastery learning goals
 - Assess mastery learning outcomes among individuals and teams
 - Complete a mastery learning curriculum project for implementation at one's home institution
 - Present the mastery learning curriculum project for peer and faculty feedback
 - Measure and evaluate mastery learning curriculum or program outcomes

Course Format

- On-site:
 - Classroom and medical simulation lab
- Independent work
 - Reading selected chapters and sections from McGaghie WC, Barsuk JH, Wayne DB, eds. *Comprehensive Healthcare Simulation: Mastery Learning in Health Professions Education*. New York: Springer Nature Switzerland AG, 2020.
 - Other readings, videos, and exercises as required and suggested.
 - Design and develop a mastery learning curriculum project (individually or as an institutional team)
- Capstone: Curriculum project presentations featuring peer and faculty feedback

Detailed Course Overview

The course offers participants interactive and didactic inputs and hands-on practice in areas essential for implementing mastery learning curricula.

Day 1 7:30 am-5:30 pm

- Introduction to Mastery Learning
- Bringing Mastery Learning to Life
- Curriculum Development/Improvement
- Assessment Essentials
 - Instrument Selection & Creation
 - Feedback and Debriefing
- Hands-On Sessions
 - Advanced Life Support Skill
 - Procedural Skills

Day 2 7:30 am-5:30 pm

- Hands-On Sessions
 - Advanced Life Support Skills
 - Procedural Skills
- Rater Trainer
- Standard Setting
- Communication Skills

6:30 pm – 8:30 pm Course Dinner

Day 3 7:30 am-5:30 pm

- Powerful Medical Education
- Procedural Skills: Unpacking the Sessions and Education Strategies
- Program Evaluation
- Project Advancement
- Curriculum Presentations