

# Designing and Implementing Simulation-Based Mastery Learning Curricula

**Course Director:** William C. McGaghie, PhD

**Location:** Course will be held Mondays and Wednesdays from 5:30pm – 8:00pm CST

**Sessions:** *March 1<sup>st</sup> – 31<sup>st</sup>, 2021*

*August 2<sup>nd</sup> – September 1<sup>st</sup>, 2021*

No sessions on Wednesdays March 3<sup>rd</sup> and August 4<sup>th</sup>

## 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. The course is presented by leading experts in the field of simulation-based mastery learning in health professions education. The virtual online course gives participants from a variety of health professions opportunities to acquire fundamental mastery learning skill and knowledge. This fund of skill 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 skill 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

- 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)
- Asynchronous work through Canvas
- Synchronous group meetings via Zoom
- Faculty consultations via Zoom
- Capstone: Curriculum project presentations featuring peer and faculty feedback

## Detailed Course Overview

The course is structured to provide participants with interactive and didactic inputs and hands-on practice in areas essential for implementing mastery learning curricula

### Module 0.5: 5:30pm to 8:00pm

- Welcome and getting started
- Participant and faculty introductions
- Course structure, operations, & expectations
- Introduction to mastery learning

### Module 1: 5:30pm to 8:00pm

- Curriculum development: needs assessment, learning objectives, education strategies, implementation, assessment & evaluation

### Module 5: 5:30pm to 8:00pm

- Resuscitation RCDP - ACLS – The Experience
- Resuscitation RCDP - ACLS – Unpacking

### Module 2: 5:30pm to 8:00pm

- Creating or selecting measurement instruments
- Standard setting

### Module 6: 5:30pm to 8:00pm

- Procedural Skills – The Experience
- Procedural Skills – Unpacking

### Module 3: 5:30pm to 8:00pm

- Rater training
- Feedback and debriefing

### Module 7: 5:30pm to 8:00pm

- Program evaluation research
- Office Hours

### Module 4: 5:30pm to 8:00pm

- Communication skills – The Experience
- Communication skills – Unpacking

### Module 8: 5:30pm to 8:00pm

- Capstone: Curriculum project presentations
- Course closing