



UNIVERSITY OF MIAMI  
MILLER SCHOOL  
of MEDICINE

**iSIM Research  
Gordon Center for Research in Medical  
December 5-6, 2016**

**Course Overview and Structure**

**Purpose of Course:** This program is designed to provide participants with practical research skills that will enable them to become informed consumers of simulation education literature, effective collaborators in simulation education research, and carry out research studies. At a minimum, each participant will be able to carry out evaluations of simulation programs and/or centers.

**Target Audience:** The program is open to all who are interested in improving their educational research skills and is targeted at those with a background in healthcare education with relatively less experience in conducting educational research.

**Course Description:** This two-day highly interactive course is designed as an introduction to quantitative and qualitative research skills related to measurement and evaluation in simulation education. The daily formats vary and include simulation scenarios, lectures, small and large group discussions, case studies and practical exercises with feedback. It emphasizes active participation to maximize the acquisition of simulation research skills.

**Credit Designation:** The University of Pittsburgh designates this educational activity for a maximum of 12 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

The University of Miami Gordon Center in Medical Education is an approved Florida Board of Nursing provider of Continuing Nursing Education, # 50-329. This program has been approved for a maximum of 12 Continuing Nursing Education hours.

**Disclosure and Conflict of Interest Resolution:** All conflicts of interest of any individual(s) in a position to control the content of this CME activity will be identified and resolved prior to this educational activity being provided. Disclosure about provider and faculty relationships, or the lack thereof, will be provided to learners.



## iSIM Research – Schedule of Activities - Monday, December 5, 2016

- 0830 **Welcome & Introduction to the Course** – W McGaghie, SB Issenberg
- 0900 **State of the Art in Simulation-based Research** – SB Issenberg  
At the end of this session, participants will be able to:
1. Articulate the Best Evidence Medical Education (BEME) reviews and practical guide on simulation
  2. Discuss simulation research questions that advance life-long learning
- 1000 **Break**
- 1015 **Formulating Research Questions and Designing Simulation Studies** – W. McGaghie  
In this session, participants will brainstorm research ideas, write, and refine a measurable research question. They will discuss the basics of research design as applied to their selected research question.  
At the end of this session, participants will be able to:
1. Write a FINER (feasible, interesting, novel, ethical, relevant) research question
  2. Specify an educational research area of interest;
  3. Select the correct design for their research question.
- 1200 **Lunch**
- 1300 **Designing a simulation-based research project – Part 1**  
This small group session will guide participants through a step-by step process to design and plan a simulation-based research project. Participants will use the Simulation Research Workbook as a guide throughout these exercises.  
At the end of this session, participants will be able to:
1. Develop a research question and define the important terms of that question.
  2. Search for related work by listing questions that may have already been answered by previous research, relevant theories or models related to the research questions and other background information that will be helpful.
  3. Justify the purpose and goals of the research by addressing the intended audience, the limitations of the current evidence base & implications of various answers.
  4. Develop list of research objectives that guide the methodology.
  5. Generate statement of hypotheses that will predict an answer to research question.
- 1430 **Break**
- 1445 **Continue session**
- 1630 **Wrap-Up Day 1 and Questions**



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## Day 2 - Tuesday, December 6, 2016

0830 **Overview of Day #2** – SB Issenberg

0900 **Measuring Educational Outcomes with Reliability and Validity** – W. McGaghie and SB Issenberg  
This session introduces participants to the principles of measurement reliability and validity, using a review of medical education research projects. The workshop is divided into two parts with group exercises designed to reinforce understanding of the main principles.

At the end of this session, participants will be able to:

1. Describe the relationship between reliability and validity;
2. Describe multiple forms of evidence for validity;
3. Select an approach to validity assessment for a particular study.

1015 **Break**

1030 **Preparing health professions education manuscripts for journal publication**

In this session, the skills of scholarly writing will be explored. The participants will examine review processes that are used by healthcare education journals.

At the end of this session participants will be able to:

1. Discuss the value of educational scholarship in health professions settings.
2. Outline suggestions and ideas to support dissemination of education scholarship in journals.

1200 **Lunch**

1300 **Designing a simulation-based research project – Part 2**

This small group session will continue the previous day's session in guiding participants through a step-by-step process to prepare the research design of simulation-based project. Participants will apply the principles presented in the previous sessions and will continue to develop the research project that was started in the previous day's session.

At the end of this session, participants will be able to:

1. Choose the most appropriate study design to address your research questions and list the advantages and disadvantages of this design.
2. Describe the characteristics of the sample population who will be eligible for the study and how these can be generalized.
3. Describe how sample populations are selected and how this is divided into study groups.
4. Write a flow chart that will illustrate the steps each study group will follow during the study.
5. List study variables considered to be important in the study and indicate the dependent and independent variables.
6. Complete an inventory of outcome measurements that will be made and will include the proposed instruments or data sources.
7. Outline process/procedure for data collection & security.

1430 **Break**

1445 **Continue Workshop**

1600 **Wrap-Up and Awarding of Certificates**