



University
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Pittsburgh

School
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Medical
Education

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Human Patient Simulation Mini-Elective Spring 2010

<u>Course Dates:</u>	February 1, 8, 15, 22 Mondays, 1:00-3:00 PM
<u>Maximum Students:</u>	6
<u>Class Year:</u>	MS1 and MS2
<u>Course Director:</u>	William McIvor, MD Assistant Professor of Anesthesiology Director of Medical Student Education, WISER
<u>Contact Information:</u>	William McIvor, MD mcivorwr@anes.upmc.edu 412-303-2192
<u>Registration:</u>	Betsy Nero, Office of Medical Education betsy@medschool.pitt.edu

Description:

This will be a highly interactive course which will focus on the use of human patient simulators (HPS) in medical education. Specifically, it will examine how HPS is currently used at the University of Pittsburgh School of Medicine, and try to envision how it can be employed in the future. Students will explore the realm of simulation available at the Winter Institute of Simulation Education and Research (WISER) and see some of the development efforts there and other local facilities through hands-on experiences. The overall goal of the course is give UPSOM students a feel for simulation education through experimentation and exploration.

Objectives:

1. Identify a partial-task trainer, full scale patient simulator, and screen-based simulator.
2. Describe the benefits that flight simulation has realized in aviation.
3. Describe the proposed benefits to medicine in HPS.
4. List the strengths and weakness of various simulators and partial-task trainers for a variety of applications,
5. Present to the class an outline of a simulation the student believes should be developed, focusing on the current ability to perform the simulation, and what needs to be developed to make the simulation as realistic as possible.

Requirements:

- Active participation in all five course sessions
- Preparation of a clinical simulation that runs on a HPS at WISER

Course Outline:

Human Patient Simulation

Course Directors:

William McIvor, MD

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Location:

WISER Center

Week One– February 1, 2010

Introduction

- Brief overview of the course.
- WISER scavenger hunt.
Students will be broken up into three teams of two and will explore the various simulators in WISER. Each group will be responsible for exploring WISER to find a specific type of simulator (partial-task trainer, full scale patient simulator, and screen-based simulator). Through self-directed experimentation and exploration of the equipment, students will identify the type of simulator they have found and try to determine how it works. Students will be able to alternate between the control panel and the simulator to determine its functionality. Senior medical students will be on hand to help guide the search!
- Review of flight simulators.
Development
Recognized benefits
- Description of creating a simulation assignment (due at Session 4).

Week Two– February 8, 2010

How are HPS's Being Used in Medical Education at the University of Pittsburgh School of Medicine?

- Undergraduate medical education, Graduate medical education, Continuing medical education, Board certifications and credentialing.
- How could simulation be used at the UPSOM?
- Simulation development workshop.
Working in pairs, students will use actual simulation software to transform a clinical scenario into a simulation. These simulations will be demonstrated to the course students and faculty.

Week Three– February 15, 2010

State of the Art in HPS

- Brief review of strengths and weaknesses of current partial-task trainers and HPS's
- Discussion of ongoing research and development work at WISER, CMU and IngMar Medical
- Simulation Scenarios:
Students will be active participants in various programmed clinical scenarios which highlight the simulators' capabilities. Students will assume clinical roles and practice various procedures. This is your chance to be the physician trying to intubate a patient with airway compromise!

Week Four– February 22, 2010

Does it Fly?

- Student demonstrations

Students will give a 15 minute presentation of their personally designed simulation.

Course Logistics:

Six students may take the course. Five 2 hour sessions will be held at the WISER.