Audio-Visual Basis of Design

University of Southern Maine

Nursing Simulation Lab

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Contents

Simulation Room

The room supports simulation mannequins, one bed in one room, and two beds in the second room. Each room will be provided with the following A/V systems:

Image Display Systems

- Vital signs monitor each bed

Video/Data Display Sources

- Simulation computer in Control Room for each bed

Sound Amplification Systems

- Monaural speech and program audio playback through ceiling loudspeaker

Simulation Capture/Recording Systems

- Three video cameras:
    - PTZ camera at foot of each bed
    - Fixed camera at head of each bed
    - Fixed camera at one side
- Capture of personal computer screen and sound during simulated telehealth session
- Capture of telephone call
- Ceiling mounted microphone each bed, additional microphone at headwall each bed

Control Room

The room supports simulation and recording activities in the attached Simulation Room. It will be provided with the following A/V systems (typical for each of two control stations):

Image Display Systems

- Flat panel video monitor for split screen display of all available recording sources

Sound Amplification Systems

- Microphone for speaking through mannequin and for announcements into Sim Room

- In-ear monitor system for communication with instructional confederate in Sim Room

- Headphone connections below counter with individual volume controls

Simulation Capture/Recording Systems

- Personal computer for control of recording system and bookmarking

- Sim capture recorder, supports split-screen recording of up to four sources at any time

- Video capture of simulator output (vital signs)

- Live streaming of composite images and sound (slight delay in live streamed output is acceptable)

- Single recording and streaming system in associated with each Sim Room. For the Sim Room with two beds, recording and streaming serves one bed at a time

Remote Operating Controls

- Joystick controller for cameras

- Touch screen control panel for selection of recording sources

Debrief Room

The room supports debriefing activities for up to nine students. It will be provided with the following A/V systems:

Image Display Systems

- Flat panel display monitor at front wall

Video/Data Display Sources

- Installed personal computer at conference table. Supports playback of simulation recordings; also receives live streaming from Sim Rooms

- HDMI and VGA/audio connections at conference table, for wired notebook computer or other portable device

- Network presentation gateway, supports wireless presentation from portable device

Sound Amplification Systems

- Stereo program playback through loudspeakers at flat panel display

Simulation Capture/Recording Systems

- Personal computer for control of recording system and bookmarking

- Sim capture recorder, one shared between Debrief Rooms

- Fixed video cameras front and rear for view of instructor or students

- Microphones fixed at conference table for capture of speech

- Zoom video conferencing with software codec on installed computer – *solution must be able to integrate with zoom*

Remote Operating Controls

- Touch screen remote control panel at wall

- Web-based controls for remote supervision

Other Areas: Lobby & Circulation

The space will be provided with the following A/V systems:

Image Display Systems

- Digital signage display

Simulation Capture/Recording Systems

- Pan/tilt/zoom camera and microphone in ceiling outside Simulation Rooms, captures interaction between rooms

- Recording onto capture recorder serving either Simulation Room