

CARL SANDBURG COLLEGE
SPECIFICATIONS
Patient Simulator

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Minimum specifications for **(2) two Patient Simulators** are listed below and each bidder must state to the right of listed specifications the compliance details that pertain to the unit bid indication size, quality, and range of information as necessary to determine unit quality. Bidder's specifications must meet or exceed minimum specifications and must be listed in detail to be considered to be a qualified bidder. All specifications shall meet or exceed the following specifications.

The final selection will be made on factors including price, availability, service, etc., which we feel to be in the best interest of the college. Questions regarding these specifications should be directed **to Dr. Emily Schaeffer, Dean of Nursing Professions, phone: 309-341-5253 or email eschaeffer@sandburg.edu**.

The Carl Sandburg College of Nursing seeks bids from qualified vendors for the provision of two **(1 adult, 1 pediatric)** realistic, full-body, wireless patient simulator manikin systems designed for scenario-based training for the care and management of basic patient handling skills to advanced nursing skills. This is a combination bid that requires a price for both simulators. Delivery of both simulators must be no later than June 30th, 2023.

Adult Patient Simulators

Please note deviations and/or exceptions from

1. Multiple airway skills/features

- ♣ Controllable open/closed airway that is automatically or manually controlled
- ♣ Head tilt/chin lift capabilities
- ♣ Jaw thrust w/articulated jaw
- ♣ Suctioning capabilities (both oral and nasopharyngeal)
- ♣ Bag-mask ventilation
- ♣ Orotracheal intubation
- ♣ Nasotracheal intubation
- ♣ Combitude, LMA, and other airway placement
- ♣ Variable lung compliance
- ♣ Variable airway resistance
- ♣ Right main stem intubation
- ♣ Stomach distension

2. Breathing Features

- ♣ Simulated spontaneous breathing
- ♣ Bilateral and unilateral chest rise and fall
- ♣ CO2 exhalation
- ♣ Normal and abnormal breath sounds
- 5 anterior auscultation sites

- 6 posterior auscultation sites _____
- ♣ Oxygen saturation and waveform _____

3. Airway Complications

- ♣ Detection of proper head position _____
- ♣ Can't intubate/ventilate _____
- ♣ Tongue edema _____
- ♣ Pharyngeal swelling _____
- ♣ Laryngospasm _____

4. Circulation Features

- ♣ BP measures manually by auscultation of Korotkoff sounds _____
- ♣ Carotid, femoral, radial, dorsalis pedis, posterior tibialis pulses synchronized with ECG _____
- ♣ Pulse strength variable with BP _____
- ♣ Pulse palpitation is detected and logged _____

5. Vascular Access

- ♣ IV arm (ability to establish an IV) _____
- ♣ Intraosseous access (tibia) _____
- ♣ Automatic drug recognition system _____

6. Circulatory Skills and IV Drug Administration

- ♣ Articulating IV training arm with replaceable skin and infusible vein system allows peripheral intravenous therapy and site care _____
- ♣ Venipuncture possible in the antecubital fossa and dorsum of the hand _____
- ♣ Accessible veins including media, basilica, and cephalic _____

7. CPR

- Compliant with 2015 Guidelines _____
- CPR compressions generate palpable pulses, blood pressure wave form, and ECG artifacts _____
- Realistic compression depth and resistance _____
- Detection of depth, release and frequency of compressions _____
- Hand position sensor _____

8. Eyes

- ♣ Blinking eyes (slow, normal, fast, and

winks)

- ♣ Eyes open, closed and partially open
- ♣ Pupillary accommodation:
 - synchrony/asynchrony
 - normal and sluggish speed of response

Other Features

- ♣ Seizure
- ♣ Bleeding
 - Simulation of bleeding at multiple sites
 - Arterial and venous
 - Vital signs automatically respond to blood loss and therapy
- Works with various wound modules and moulage kits
- ♣ Urine output (variable)
- ♣ Foley catheterization
- ♣ Bowel sounds – four quadrants
- ♣ Patient voice
 - Pre-recorded sounds
 - Custom sounds
 - Instructor can simulate patient’s voice wirelessly

Pharmacology

- ♣ Automatic drug recognition system identifies drug and dose
- ♣ Extensive drug formulary
- ♣ Automatic or programmable physiological responses

System Features

- ♣ Wireless tablet PC controls simulator remotely
- ♣ Ability to control multiple manikins from one interface
- ♣ Control simulations from anywhere on your network
- ♣ Multiple interfaces can control/observe a single simulation
- ♣ Instructor mode
 - Precise control “on the fly”
 - Design and program custom scenarios
 - Create custom events
 - Run pre-packaged scenarios
- ♣ Ability to function in auto mode
 - Physiological and pharmacological models run pre-packaged simulations
 - Unique, simple slider control difficult

and pace

♣ Simulation controls

- Fast forward, pause, rewind,
save/restore

♣ Integrated video debriefing

♣ Data logging

♣ Instructor comments

Patient Monitor

♣ Wireless

♣ Highly configurable

♣ Includes

- ECG

- SpO2

- CO2

- ABP

- CVP

- ICP

- Anesthetic Agent

- PH

- PTC

- PAP

- PCWP

- NIBP

- TOF

- Cardiac output

- Temperature (core and peripheral)

- Additional and programmable
parameters

♣ 12 Lead ECG Display

♣ Custom Image Display

♣ Custom Video Display

5. **Warranty & support**

6. **Estimated Delivery Date**

Pediatric Patient Simulator

Please note deviations and/or exceptions from

1. Airway features

♣ Airway is anatomically modeled as far as
the trachea.

♣ Realistic airway with landmarks

♣ Oral and nasal intubation

♣ LMA or ET insertion

♣ Tongue edema

♣ NG tube insertion

♣ Cricoid cartilage

♣ Head tilt & jaw thrust

2. Breathing Features

♣ Spontaneous breathing with chest rise

♣ Variable respiratory rates

♣ Multiple upper airway sounds

♣ Bag Valve Mask capable

♣ Oxygen saturation and waveform

♣ Breathing complications

♣ Lungs can be closed or open to allow ventilations

3. Cardiac Features

♣ Defibrillation and cardioversion

♣ Pacing

♣ Extensive ECG library

♣ Multiple heart sounds synchronized with ECG

♣ ECG rhythm monitoring

♣ 12 lead ECG display

4. Circulation Features

♣ Blood pressure measured manually by

auscultation of Korotkoff sounds

♣ Bilateral carotid and unilateral brachial and radial pulses synchronized with ECG

♣ Pulse strength variable with BP

♣ Pulse palpation detected and logged

♣ CPR compressions generate palpable pulses,
blood pressure waveform, and ECG artifacts

5. Vascular Access

♣ IV access (right arm and hand)

♣ Intraosseous access (right tibia)

6. Additional Features

♣ Interchangeable pupils - normal, dilated, and constricted

♣ Sounds: Heart, lung, bowel, and patient voice (pre-recorded sounds and wireless microphone)

7. Control multiple manikins from one interface

♣ Manual Mode to run “on-the-fly” for total control over all parameters

♣ Automatic Mode with pre-programmed scenarios

♣ Simulation controls; fast forward, pause, rewind, save/restore

♣ Integrated video debriefing

♣ Time stamped activities, vital signs, and instructor comments are captured in the event log

5. **Warranty & support**

6. **Estimated Delivery Date**
