




DACUM Competency Profile for Simulation Technology Specialist

The Simulation Technology Specialist is one who provides technological expertise, instructional support and advocacy in health care simulation.

Duties		← Tasks								
A		A-1 Orient students and faculty to simulation lab.	A-2 Coordinate room and staff scheduling.	A-3 Perform clerical functions related to lab management.	A-4 Maintain professional and safe environment.	A-5 Collaborate with onsite resources.	A-6 Maintain lab attendance records.	A-7 Track laboratory usage.	A-8 Provide technical support to students during lab time.	A-9 Provide encouragement for faculty and students.
			A-10 Support compliance with regulatory standards.	A-11 Support compliance with campus policies.	A-12 Assist coordinator in their absence.	A-13 Assist in managing student employees.				
B		B-1 Install new hardware and software equipment.	B-2 Perform hardware and software upgrades.	B-3 Perform operational checks on equipment.	B-4 Ensure security of equipment.	B-5 Troubleshoot equipment failure.	B-6 Consult with technical support.	B-7 Determine need for outside vs. internal repair.	B-8 Repair simulation equipment per manufacturer specifications.	B-9 Coordinate outside repair for equipment.
			B-10 Coordinate transport of simulation equipment.	B-11 Oversee scheduled maintenance.	B-12 Maintain equipment warranties.	B-13 Clean equipment per manufacturer recommendation.	B-14 Recommend equipment purchases to management.	B-15 Procure updated hospital equipment.		
C		C-1 Assess supply needs.	C-2 Create database for inventory of supplies.	C-3 Perform inventory of supplies.	C-4 Organize storage of supplies.	C-5 Order simulation supplies.	C-6 Make supplies available for students.	C-7 Track usage of inventory.	C-8 Manage hazardous materials per established standards.	C-9 Liaison with vendors.
			C-10 Solicit supply donations.							

D	Perform Pre-Simulation Activities	D-1 Program patient scenarios.	D-2 Assemble pre-simulation learning materials.	D-3 Prepare scenario props.	D-4 Create scenario moulage.	D-5 Assist in creating documentation for scenario.	D-6 Obtain signed student release forms.	D-7 Setup control room for simulation activity.		
E	Execute Simulation Experience.	E-1 Pre-brief students, staff and faculty.	E-2 Operate simulation console and software.	E-3 Manipulate simulator during scenario.	E-4 Record simulation activities.	E-5 Assist directing the activities in the scenario.	E-6 Assist faculty in monitoring students' safety.	E-7 Perform "on the fly" trouble shooting.	E-8 Provide theatrical support.	
F	Perform Post-Simulation Activities	F-1 Operate debriefing equipment.	F-2 Provide technical evaluation of simulation experience.	F-3 Administer student evaluations of simulation lab experience.	F-4 Provide technical recommendations for simulation improvement.	F-5 Restore lab to pre-scenario conditions.	F-6 Salvage re-usable equipment.	F-7 Manage student simulation recordings.		
G	Collaborate with Faculty and Staff	G-1 Collaborate with faculty for scenario building.	G-2 Collaborate to establish standardized procedures.	G-3 Update faculty and staff on schedules and maintenance.	G-4 Advise faculty of equipment failure and alternatives.	G-5 Assist with implementation of new technology.	G-6 Coordinate technical training.	G-7 Provide technical support and advice.		
H	Maintain Simulation Lab Documentation and Resources	H-1 Develop operational manual/policies and procedures.	H-2 Produce simulation orientation materials.	H-3 Assist with development of in-house software applications.	H-4 Generate reports related to simulation lab.	H-5 Manage digital media.	H-6 Maintain technical reference library.	H-7 Assist in maintaining division website.		
I	Maintain Professional Development	I-1 Maintain competencies in technology.	I-2 Keep updated on best practices.	I-3 Network with industry professionals.	I-4 Participate in conferences on simulation.	I-5 Participate in conferences in related technologies.	I-6 Participate in conferences on future development.	I-7 Conduct educational workshops.	I-8 Research future simulation products.	I-9 Participate in research studies.
J	Promote Marketing and Growth of Simulation	J-1 Advocate for simulation integration into courses.	J-2 Participate in simulation lab design.	J-3 Assist in solicitation of space on campus.	J-4 Produce promotional materials.	J-5 Participate in community outreach programs and marketing.	J-6 Conduct tours of simulation lab.	J-7 Explore possible funding opportunities.	J-8 Document history of simulation lab.	

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DACUM PANEL MEMBERS

<p>Manuel Abroguena ISA, Media College of the Desert Palm Desert, CA</p>	<p>Lance Baily Simulation Technician LA Harbor College/LA Valley College Torrance, CA</p>
<p>Erika Bloss Simulation Coordinator AHNL, Santa Barbara City College Santa Barbara, CA</p>	<p>Darin Bowers Nursing Simulation Center Technician California State University, Fullerton Fullerton, CA</p>
<p>Pam Boyd Assistant Director Health Science Rio Hondo College Whittier, CA</p>	<p>Benito Briones Senior IS Technician City College of San Francisco San Francisco, CA</p>
<p>Isaac Dannelley Nursing Simulation Lab Assistant Riverside Community College Riverside, CA</p>	<p>Johnny DiBonaventura Simulation Lab Tech Providence Little Company of Mary Hawaiian Gardens, CA</p>
<p>Rachel Mary Failano Clinical Simulation/Skills Lab Coordinator Salinas Valley Memorial Hospital Salinas, CA</p>	<p>Angie Fangonil- Gagalang Simulation Coordinator Chaffey College Rancho Cucamonga, CA</p>
<p>Bobbie Merica Simulation Technologist California State University Chico Chico, CA</p>	<p>Christina Overmiller Instructional Assistant Computer Campus Laboratories Los Rios Community College District: American River College Sacramento, CA</p>
<p>DACUM FACILITATOR Mary O'Connor, RHORC Director Golden West College 15744 Golden West Street P.O. Box 2748 Huntington Beach, CA 92647 (714) 895-8975 Fax (714) 895-8976 moconnor@gwc.cccd.edu</p>	

Acronyms Used

A&P- Anatomy and Physiology	ID- Identification
ABG-Arterial Blood Gas	INT - Intermittent
ACLS- Advanced Cardiac Life Support	I/O- Intake/Output
ADN- Associate Degree Nursing	IP- Internet Protocol
A/V- Audio/Visual	IR- Infraray
BG- Blood Glucose	IS- Information Systems
BLS- Basic Life Support	IT- Information Technology
BP- Blood Pressure	IV- Intravenous
BS- Bowel Sounds	IVF- Intravenous Fluids
BSN-Bachelor of Science in Nursing	IVP- Intravenous Push
CAT 5- Category 5 (Networking cable)	IVPB- Intravenous Piggy Back
CD- Compact Disc	JCAHO- Joint Commission on Accreditation of Health Care Organizations
CE- Continuing Education	LCD- Liquid Crystal Display
CEU- Continuing Education Unit	LR- Lactated Ringers
CNA- Certified Nursing Assistant	LS- Lung Sounds
CO- Cardiac Output	LVN- Licensed Vocational Nurse
CPR- Cardio-Pulmonary Resuscitation	MB- Motherboard
CPU- Central Processing Unit	METI- Medical Education Technologies Inc.
CRT- Cathode Ray Tube (type of monitor)	MSN-Masters of Science in Nursing
CV- Cardiovascular	NCLEX-National Council Licensure Examination
CVP- Central Venous Pressure	NICU- Neonatal Intensive Care Unit
DMR- Disaster Medicine Recovery	NPO- Nothing by Mouth
DNS- Domain Name Service	MSDS- Material Safety Data Sheets
D5W- 5% Dextrose in Water	NRM- Non-Rebreather Mask
DV- Digital Video	NS- Normal Saline
DVD- Digital Video Disc	O ₂ - Oxygen
DVR- Digital Video Recorder	O ₂ Sat- Oxygen Saturation
DX- Diagnosis	OB- Obstetrics
ECS- Emergency Care Simulator (METI)	OR- Operating Room
ED- Emergency Department	OSHA- Occupational Safety and Health Administration
EKG/ECG- Electrocardiogram	P&P- Policy and Procedures
E/MAR- Electronic/Medication Administration Record	PC- Personal Computer
EMR- Electronic Medical Record	PNCI- Program Nursing Curriculum Integration (METI)
EMS- Educational Management Solutions	P.O.- Purchase order
FERPA- Family Education Rights and Privacy Act	PO- By Mouth
FTP- File Transfer Protocol	PTZ- Pan- Zoom- Tilt
FX- Fracture	Pulse Ox- Pulse Oximetry
GI- Gastrointestinal	RAM- Random Access Memory
GU-Genitourinary	RFID- Radio Frequency Identification
GUI- Graphical User Interface	RN- Registered Nurse
HD- Hard Drive	RR- Respiratory Rate
Hep-loc – Heparin Lock	RT- Respiratory Therapist
HIPAA- Health Information Portability and Accountability Act	SBAR-Situation Background Assessment Recommendation
HPS- Human Patient Simulator (METI)	STAT- Immediately
HR- Heart Rate	TCP- Transport Control Protocol
HTTP- Hypertext Transfer Protocol	
ICU- Intensive Care Unit	

TEMP- Temperature
TJC - The Joint Commission
TO- Telephone orders
TX- Treatment
TX-Transferred

UO- Urine Output
USB- Universal Serial Bus
VCE- Virtual Clinical Experience
VS- Vital Signs
WLAN- Wireless Local Area Network

Worker Characteristics and Behaviors

Ability to learn	Effective communicator	Professional respect and
Ability to problem solve	Empathetic	courtesy
Ability to work independently with little supervision	Flexible	Progressive
Accountable	Fiscally responsible	Punctual
Adaptive	Friendly	Responsive
Advocate	High level of customer service	Self- motivated
Analytical	Holistic view	Sense of humor
Assertive	Honesty	Strong ability to be creative
Committed	Innovative	Strong interpersonal skills
Compassionate	Inquisitive	Strong organizational skills
Creative	Integrity	Strong public relations skills
Desire to learn	Multi-task	Task oriented
Detail oriented	Patient	Team player
Diplomatic	Positive attitude	Thorough
Discreet	Proactive	Trustworthy
	Professional behavior and attire	Works well under pressure

Future Trends/Concerns

- Accreditation of Simulation center
- Additional collateral/supportive professionals and occupations (vocational)
- Bachelors in Health Science in Simulation (Diploma)
- Budget constraints
- Certification and Accreditation (CEUs)
- Change of market share in simulation vendors
- Changes in pharmacology
- Distance learning
- Educating faculty and administrators
- Expanding to hospital or community-based centers
- Extended application of simulation to all health professions such as EMT, CNA, Paramedic, Rescue, Respiratory care, etc.
- Increased student population
- Lack of clinical facilities
- Lack of faculty
- Lack of instructional facilities
- Maintaining confidentiality of recordings (web-based)
- Radio Frequency Identification (RFID)
- Remote simulations
- Replacement of outdated or broken equipment
- Robotics (3G SimMan)
- Simulation replacing clinical experience
- Standardized training for job of sim lab technology specialist
- Using simulation in licensure exams
- Virtual Sim Lab/Hospital

Tools, Equipment, Supplies, and Materials

3- pc small pliers set	Cream of Wheat	Isolation cart
4- pc large pliers set	CRT Monitor	IV arm
4x4 gauzes	Crutches	IV fluids
8- pc screwdriver set	Culture swabs	IV pumps
Locking tape measure	Patient Cup	IV saline lock
12- pc combination wrench set	Debriefing software	IV start kit
ABD dressing	Defibrillator	IV tubing
Air cleaners (HEPA filters)	Denture cup	Kling dressing
Air compressor	Diapers	KY Jelly
Alcohol wipes	Disinfectant	Labeler
Angiocatheter	Dressing change cart	Laptops
Audio cables	DV	LCD Monitor
Audio leveling	DVD	Lenses (telephoto/wide angle/zoom)
Audio mixers	DVD Burner	Light meter
Automatic BP cuff	Electrodes	Lights
A/V equipment	Emesis basin	Linens
Baby powder	Enteral pumps	Manikins/Low fidelity
Backboard	Equipment cases	Medication cart
Bandages	Fetal monitor belts	Media managers
Band-Aid	Fire wire	Microphones (shotgun/omni/boom)
Batteries	Flash memory stick	Mini DV
Battery chargers	Foley catheter	Mini tool flashlight
Beds	Food coloring	Monopods
Bedside table	Food items	Moulage book reference
Biohazard bags	Frosting	Moulage cart
Blood drain kit	Fundus kit	Nasal cannula
Body parts	Gait belts	Nebulizer
Bounce boards	Gastric tubes	Needles
B/P cuff/machine	Gel effects	NG tubing
Dry erase markers	Glasses	Non-rebreather mask
Cable ties	Glucometer	No touch suction catheter
Camera controllers	Goof off	O ₂ mask
Camcorders	Goo gone	Office supplies
Cane	Gowns	Orange spray
Cardiac Monitor	Graphic design software	OR cart
Chair	Hammer	Overhead projectors
Chest tubes	Headphones	Oxygen
Chest tube drainage system	Hospital supplies	Paint
Chicken/animal bone parts	Immobilization boot	Pitcher
Circuit testers	Immobilization equipment	Plastic sealable bags
Clocks with a second hand	Incubator/infant warmer	Pocket level
Coaxial cables	Laryngoscope	Powdered makeup
Compressed gas	Laryngoscope blades	Power adapters
Cosmetic items	Intubation tray	Power cords
Mutil-Drawer combo tool center	Intubation tubes	Power strips
Crash cart with supplies	INT caps	
Cream based white makeup		

Projector screen
PTZ cameras
Pulse Ox
Q-Tips
RCA cable
Respiratory cart
Restraints
Router
Plastic wrap
Self -Cling dressing
Sharps container
Signal boosters
Signal splitters
Silicon spray/lubricant
Simulated blood
Simulated charts
Simulated code drugs
Simple green
Simulated drugs
Signal/network switchers
Soldering iron
Speakers
Spinal needle

Surgical Stapler
Still camera
Suction
Suction canister
Suction equipment
Super Glue
Syringes
Tape
Tape dubbing equipment
Tapioca pudding
Transparent dressings
Telephone
Television
Thermometer
Tracheostomy tubes
Tracheostomy collars
Zip ties/Velcro Ties
Toiletries
Tone generator
Tool box drawer liner pads
Toothbrush
Toothpaste
Tripods
Unit software

Urinary drainage bags
Urinary catheters
USB
Utility knife and blades
Ventilator
Venti mask
Video cables
Video capture/edit/print
Software
Video compressors
Video monitors
Video projectors
Video servers
Vital machine
Wall units
Water-based markers
WD-40
Wheel chair
White board
Wigs
Wire strippers
WLAN
XLR
Yankauer oral suction wand
Y-cables

General Knowledge and Skills

- Adherence to compliance guidelines
- Anatomy and Physiology
- Audio Visual
 - Editing
 - Hardware knowledge
 - Processing (deletion)
 - Recording video
- Basic clerical skills
- Basic familiarity with electromechanical and pneumatic functions of equipment and devices
- Basic reading and comprehension
- Basic familiarity with mechanical/electrical repairs
- Campus and department policies
- Communication skills
 - Written
 - Technical
 - Telephone
 - Verbal
 - E-mail
- Computer and A/V troubleshooting
- Computer security
- Computer skills
 - CompTIA (Computing Technology Industry Association)-certification not required
 - Debriefing software
 - Hardware
 - InfoCom (audiovisual industry organization)-certification not required
 - Computer networking
 - Internet for research
 - MAC and PC
 - Microsoft Office suites
 - Simulator software
 - Software
 - Troubleshooting
 - Video capture/editing software
- Confidentiality
- Conflict Management
- Critical thinking
- Cultural sensitivity for diverse population
- Customer service
- Decision making
- Electrical and mechanical knowledge
 - Aspect rationing
 - Audio leveling
 - Color balancing
 - Light balancing
 - Video burning
 - Video converting and compression
 - Video dubbing/transferring
- Equipment/supply
- General lab safety
- Group dynamics
- Leadership skills
- Learn programming environment
- Inventory management
- Knowledge of bit rates
- Knowledge of FERPA
- Knowledge of Hazardous Waste
- Knowledge of OSHA
- Knowledge of wireless networking
- Knowledge of medical terminology and abbreviations
- Moulage
- Networking skills with campus and off-campus resources
- Networking skills with students, faculty, and staff
- Organizational skills
- Problem solving
- Professional organizations to join/credentialed
- Task prioritization
- Time management
- Web design knowledge and skills