Health Science 2 - 5551

Description: Health Science 2 applies the knowledge and skills that were learned in Health Science 1 while further challenging the students to learn more about the healthcare field. Health Science 2, will continue teaching in more detail, the units of study that include advanced study of infection control. They will learn about ***"Transmission Based Precautions"*** and become more familiar with OSHA, HIPPA, and the CDC. Students in Health Science 2 will learn how to take vital signs, record them and learn what the data means. Students will learn about the stages of life and **Maslow's Hierarchy** of needs. Students will learn how law and ethics are **applied** in the healthcare setting. This course will introduce students to basic patient care skills. Medical terminology, medical math and pharmacology are incorporated throughout the lessons being taught. Students will be certified in **First Aid and CPR** in this course. Career pathways and scenarios are introduced through each section. Students in this course should further their knowledge of healthcare careers and future goals by participating in a **job shadowing experiences**. This course provides a foundation for further advancement in Health Science. It is recommended that students should score an 80% or higher in this course to advance to Clinical Study.

General Requirements: This course is recommended for students in grades 11-12. The pre-requisites to this course are successful completion of Health Science 1, Sports Medicine 1, or EMS 1.

Credit: CP - 1 unit =(120 hours) or 2 units = (240 hours).

NOTE*: In schools/districts/career centers - that only offer HS1 & HS2 for 2 units each(and therefore HS completers) should incorporate body systems into Academic Foundation Standard 1 in order to prepare the students for the end of program assessment.* Students enrolled in this course as their 4th earned unit are considered completers in the Health Science Program and are expected to take the end of program National Health Science Assessment. This assessment is a Perkins fund 2S1 indicator and should be required for all students who **earn** 4 units of credit in the Health Science subject area. (including HS1 & HS2.)

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Foundation Standard 1: Academic Foundation

Healthcare professionals will know the academic subject matter required for proficiency within their area. They will use this knowledge as needed in their role. The following accountability criteria are considered **essential for students** in a health science program of study. Understand medical math principles.

1. **Demonstrate the ability to Analyze** diagrams, charts, graphs, and tables to interpret healthcare results.
2. **Demonstrate** Competency in basic math skills and conversions as they relate to healthcare**. Perform** mathematical applications to determine vital sign applications and basic pharmacology equations.
   a. Metric System (such as centi, milli, kilo)
   b. Mathematical (average, ratios, fractions, percentages, addition, subtraction, multiplication, division)
   c. Conversions (height, weight/mass, length, volume, temperature, household measurements)
3. **Recognize** physical, mental, social, and emotional development through the life span and identify patient needs at each developmental stage.
4. **Identify** stages of death and dying.

Foundation Standard 2: Communications

Healthcare professionals will know and demonstrate the various methods of giving and obtaining information. They will **communicate effectively, both orally and in writing**.

1. **Report and Identify s**ubjective and objective information.
2. **Use medical terminology and medical math to communicate information. Oral and written.**
   Use common roots prefixes, and suffixes to communicate information.
   Interpret medical abbreviations to communicate information.
   a. Common Abbreviations
   b. Joint Commission Official "Do Not USE List"
3. Recognize and **Interpret** elements of written and electronic communication (spelling, grammar, formatting, and confidentiality).
4. Prepare examples of technical, informative and creative writing.
5. **Document, report, and communicate** in a straightforward, understandable, accurate, and timely manner. (understanding how to correct errors, read labels and report information and data)
6. **Apply and Practice** active speaking and listening skills.
7. **Modify communication** to meet the needs of the patient/client and be appropriate to the situation.

Foundation Standard 3: Systems

Healthcare professionals will understand how their role fits into their department, their organization, and the overall healthcare environment. They will **identify how key systems affect services** they perform and quality of care.

1. **Explain** factors influencing healthcare delivery systems. (Example: Affordable Care Act, aging populations etc..)
2. **Discuss** common methods of payment for healthcare to include Medicaid, Medicare, TRICARE, private insurance, worker's compensation, etc.
3. **Describe responsibilities of consumers** within the healthcare system related to admission, discharge, and follow-up (such as: self-advocacy, patient compliance, provider and consumer obligations).
4. **Assess and Explain the impact** of emerging issues such as technology, epidemiology, genetics, bioethics, and socioeconomics on healthcare delivery systems.

Foundation Standard 4: Employability Skills

Healthcare professionals will understand and utilize employability skills to enhance their employment opportunities and job satisfaction. **They will demonstrate key employability skills** and will maintain and upgrade skills, as needed.

1. **Demonstrate** process for obtaining employment. **Identify** strategies for pursuing employment (social media, personal networking, job sites, internships).
2. **Demonstrate** employability skills (as they apply to hygiene, dress, language, confidentiality, behavior and work ethic)
3. **Develop and** Expand components of a personal **portfolio** (letter of introduction, resume, healthcare project, writing sample, work-based learning, oral presentation, service learning, credentials, technology, and leadership experience).
4. **Participate i**n healthcare **work-based learning** experiences (guest speakers, virtual tours, job shadowing, blood drives, community service projects, etc.).

Foundation Standard 5: Legal Responsibilities

Healthcare professionals will **understand and describe the legal responsibilities, limitations, and implications of their actions within the healthcare delivery setting**. They will perform their duties according to regulations, policies, laws, and legislated rights of clients.

1. Analyze and explain legal responsibilities and explain laws governing harassment, labor and **scope of practice.**
2. **Apply** procedures for accurate documentation and record keeping. (legally correcting errors on medical records etc.)

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3. **Apply** standards for safety, privacy, and confidentiality of the Health Insurance Portability and Accountability Act **(**HIPAA privileged communication**).**
4. **Describe advance directives**, informed consent and explore the Patient's and Residents Bill of Rights.

Foundation Standard 6: Ethics

Healthcare professionals will **understand accepted ethical practices with respect to cultural, social, and ethnic differences within the healthcare environment**. They will perform quality healthcare delivery.

1. Discuss **bioethical issues** related to healthcare.
2. **Apply ethical behaviors** in healthcare including personal, professional, and organizational ethics.
3. Discuss and utilize **procedures for reporting** activities and behaviors that affect health, safety, and welfare of others (such as an incident report)

Foundation Standard 7: Safety Practices

Healthcare professionals will understand and be able to identify the existing and potential hazards to clients, coworkers, and self. They will prevent injury or illness through safe work practices and follow health and safety policies and procedures.

1. **Demonstrate** principles of infection control related to **Transmission Based** Precautions (gowns, gloves, masks, etc). Recognize the difference between Transmission Based Precautions and Standard Precautions.
   Differentiate methods of controlling the spread and growth of microorganisms.
   a. Aseptic control (antisepsis, disinfection, sterilization, sterile technique)
   b. Standard precautions
   c. Isolation precautions
   d. Blood borne pathogen precautions
   e. Vaccinations
2. Define and **understand language** associated with Infection control, including medical and surgical asepsis.
3. **Apply** principles of body mechanics and patient safety during transfers and positioning and in all areas of healthcare activities.
4. Discuss implications of **hazardous materials** and recognize Safety Data Sheets (SDS).
5. Comply with safety signs, symbols and labels.
6. Summarize principles of **basic emergency response in natural disasters** or other emergencies (safe location, contact emergency personnel, follow protocol).

Foundation Standard 8: Teamwork

Healthcare professionals will **understand and Identify the roles** and responsibilities of individual members as part of the healthcare team, including their ability to promote the delivery of quality healthcare. They will interact effectively and sensitively with all members of the healthcare team.

1. Act responsibly as a team member.

2. Collaborate with others to formulate team objectives.
3. Apply effective techniques for managing team conflict (negotiation, assertive communication, gather the facts, clear expectations, mediation).

Foundation Standard 9: Health Maintenance Practices

Healthcare professionals will understand and be able to differentiate between the **fundamentals of wellness and the prevention** of disease processes. They will practice and promote disease prevention and model healthy behaviors .

1. **Apply** behaviors that promote **health and wellness**.
   Promote behaviors of health and wellness (such as: nutrition, weight control, exercise, sleep habits).
2. Describe strategies for **prevention of diseases**.

   a. Routine physical exams
   b. Medical, dental, and mental health screenings
   c. Community health education outreach programs
   d. Immunizations
   e. Stress management
   f. Avoid risky behaviors

*Foundation Standard 10: Technical Skills

Healthcare professionals will apply technical skills required for all career specialties. They will demonstrate skills and knowledge as appropriate.

1. **Apply** procedures for **measuring and recording vital signs** (blood pressure, height, and weight) including recognition of normal ranges and understanding what the data means.
2. **Apply s**kills to obtain training or certification in adult, child, and infant cardiopulmonary resuscitation (**CPR)** and automated external defibrillator (**AED)**.
3. Demonstrate **First Aid** skills for certification if needed or not received in Level 1

Foundation Standard 11: Information Technology Applications

Healthcare professionals will **apply technology skills** required for all career specialties. They will demonstrate use as appropriate to healthcare applications.

1. Identify records and files common to the healthcare setting. (including electronic health record - EHR). Explore different types of health record data collection tools (such as: patient monitoring equipment, telemedicine, phone application, and medical wearable devices).
   Identify the types and content of an EHR/EMR (such as: pharmacy, laboratory, radiology).
   Create documentation in EHR/EMRs that reflect timeliness, completeness, and accuracy.
2. Adhere to information systems policies, procedures, and regulations as required by national, state, and local entities.

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3. Use health record data collection tools (such as input screens, document templates)
4. Create documentation in the health record that reflects timeliness, completeness, and accuracy while adhering to information systems policies and procedures at the local, state, and national and organizational level.
5. Recognize technology applications in healthcare. (including file storage)
6. Differentiate types and content of health records. (patient, pharmacy, laboratory etc.)
7. **Privacy and Confidentiality of Health Information**

   Apply fundamentals of privacy and confidentiality policies and procedures (HIPAA).
   Identify legal and regulatory requirements related to the use of personal health information (such as: Health Information Technology Act [HITECH Act], American Recovery and Reinvestment Act [ARRA]).
   Identify common policies and procedures for proper access, disclosure and protection of personal he information (such as: passwords, administrative safeguards, database security).
   Describe consequences of inappropriate use of health data in terms of disciplinary action.
8. Understand the principle and demonstrate the appropriate methods to correct inaccurate information/errors personally entered into EHR/MHR (such as: adding, clarifying, and correcting information).

Resources:

Browse catalog at www.mysctextbooks.com for latest instructional materials

available to South Carolina public schools for health science technology courses.

Simmers, Louise. Diversified Health Occupations. Albany, New York: Delmar, latest edition. -------, -------. ------: Teacher's Resource Kit, latest edition.

-------, -------. ------: Workbook, latest edition.

HealthCenter21 (SC Gerontology)

https://learn.aeseducation.com

OTHER RESOURCES:

Colbert, Bruce J. Workplace Readiness for Health Occupations: A Foundation for Excellence. Delmar, latest edition.

Today's Class

http://www.toadysclass.com

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Benjamin-Chung, Michele. Math Principles and Practice, Preparing for Health Career Success. Upper Saddle River: NJ: Prentice Hall, latest edition.

Haroun, Lee and Royce, Susan. Delmar's Teaching Ideas and Classroom Activities or Health Care. Albany, NY: Delmar, latest edition.

Toner, Patricia Rizzo, Consumer Health and Safety Activities, The Center for Applied Research in Education, latest edition.

Toner, Patricia Rizzo, Relationships and Communication Activities, The Center for Applied Research in Education, latest edition.

Toner, Patricia Rizzo, Stress Management and Self- Esteem Activities, The Center for Applied Research in Education, latest edition.

Umstatter, Jack. Brain Games: Ready-to-Use Activities That Make Thinking Fun for Grades 6-12. San Francisco: Jossey-Bass, latest edition.

Zedlitz, Robert H. How to Get a Job in Health Care. Albany, NY: Delmar, latest edition.

WEB SITES:

South Carolina Department of Education www.ed.sc.gov

South Carolina Health Science Education Teacher Resource Guide
www.cateresources.net/HSTETeacherResourceGuide/index.html

Health Science Educator Resources www.HealthScienceTeacher.com

National HOSA www.hosa.org

SC HOSA www.schosa.org

National Consortium for Health Science Education
www.healthscienceconsortium.org

South Carolina Occupational Information System (SCOIS)
www.scois.net

Personal Pathways to Success™
http://www.palmettopathways.org/EEDA2/default.aspx

EDUCATIONAL/CLASSROOM RESOURCES

American Medical Association: Careers in Healthcare
http://www.ama-assn.org/ama/pub/education-careers/careers-health-care.shtml

America's Career InfoNet
http://www.acinet.org/
American Heart Association
http://www.americanheart.org/presenter.jhtml?identifier=1200000

American Journal of Nursing
http://www.ajn.org/

American Red Cross
http://www.redcross.org/

Annals of Internal Medicine
http://www.annals.org/

Anatomy in Clay
http://www.anatomyinclay.com/

Ask Dr. Math
http://mathforum.org/dr.math/dr-math.html

Assessment: Motivational Appraisal of Personal Potential
http://student.assessment.com/

Aetna: InteliHealth
http://www.intelihealth.com/IH/ihtIH/WSIHW000/408/408.html

Become an RN
http://www.becomern.com/

Be Something Amazing – Video of Virtual Surgeries and Occupations in healthcare
http://besomethingamazing.com/

Body Works: A toolkit for healthy teens and strong families
http://www.womenshealth.gov/bodyworks/

Cancer.Net
http://www.cancer.net/portal/site/patient

Cardinal Health: Making healthcare safer and more productive
http://www.cardinal.com/

Career Voyages
http://www.careervoyages.gov/healthcare-main.cfm

CNN Health

http://www.cnn.com/HEALTH/

CollegeNet
http://www.collegenet.com/elect/app/app

CreativEd Services
http://www.creativedservices.com/

Dr. Greene…..caring for the next generation
http://www.drgreene.com/

Estronaut: A forum for women's health
http://www.womenshealth.org/

Explore Health Careers
http://www.explorehealthcareers.org/en/Index.aspx

Health Answers Education
http://www.healthanswers.com/

Health Central
http://www.healthcentral.com/

Health Scout
http://www.healthscout.com/

JAMA: The Journal of the American Medical Association
http://jama.ama-assn.org/

Learn and Serve America's Service Learning Clearinghouse
http://www.servicelearning.org/

Medline Plus: Medical Encyclopedia
http://www.nlm.nih.gov/medlineplus/encyclopedia.html

Medical Math Lesson Plans
http://cehd.umn.edu/NRCCTE/Math-In/MathHealth.html

Medical Mysteries on the Web
http://medmyst.rice.edu/

Medical Reserve Corps

http://www.medicalreservecorps.gov/HomePage

MedicineNet: We Bring Doctors' Knowledge to You (Medical Dictionary)
http://www.medterms.com/script/main/hp.asp
MedlinePlus: Trusted Health Information for You
http://medlineplus.gov/

Medscape from WebMD
http://www.medscape.com/

Merck: A Global Research-Driven Pharmaceutical Company
http://www.merck.com/home.html

MT Desk: Complete Online Resource Center for Medical Transcription Professionals
http://www.mtdesk.com/

National Institutes of Health, Office of Science Education
http://science.education.nih.gov/lifeworks

New England Journal of Medicine
http://content.nejm.org/

NORD: National Organization for Rare Disorders
http://www.rarediseases.org/

North Carolina Association for Biomedical Research
http://www.ncabr.org/biomed/bio_resources/rx.html

Nurse Spectrum | NurseWeek
http://www.nurse.com/

OncoLink: Abramson Cancer Center of the University of Pennsylvania
http://www.oncolink.upenn.edu/

Physicians' Desk Reference
http://www.pdr.net/login/Login.aspx
Pregnancy and Parenting for Today's Mom
http://parenting.ivillage.com/

PubMed: A service of the US National Library of Medicine and the National Institutes of Health
http://www.ncbi.nlm.nih.gov/PubMed
Reuters Health: The premier supplier of health and medical news
http://www.reutershealth.com/en/index.html

RxList: The Internet Drug Index
http://www.rxlist.com/script/main/hp.asp

Starla's Creative Teaching Tips
http://www.starlasteachtips.com/

States' Career Clusters
www.careerclusters.org

Stay Healthy
http://www.stayhealthy.com/page/view.sh?id=home

Texas Health Science
http://www.texashste.com/

The Educator's Reference Desk
http://ericir.syr.edu/

The Riley Guide: Employment Opportunities and Job Resources on the Internet
http://www.rileyguide.com/

U.S. Public Health Service
http://www.usphs.gov/

Us TOO International Prostate Cancer Education and Support Network
http://www.ustoo.com/

Web MD
http://www.webmd.com/

Weil (Andrew Weil, MD) Your Trusted Health Advisor
http://www.drweil.com/

Wellness Web

http://www.wellweb.com/

World Health Online
http://www.healthy.net/
Yahoo Health
http://dir.yahoo.com/Health ADD ~ www.healthscienceconsortium.org