



**HEALTH SCIENCE CLINICAL STUDY – 5560
(CNA, MA or CPCT/A or other Clinical Experience)**

Course Description: Health Science Clinical Study is a course that guides students to make connections from the classroom to the healthcare industry through clinical experiences/activities. This course is designed to provide for further development and application of knowledge and skills common to a wide variety of healthcare professions. The students in this course will build on all the information and skills presented in the previously required course foundation standards. The students will relay these skills into real-life experiences. The student, teachers, and work-based learning coordinators will work together to create opportunities for the students to get the best experience available in the district's geographic region. **Students in this course must be BLS Healthcare Providers CPR certified and HIPAA trained before participating in any healthcare experience outside of the classroom. OSHA Safety Training – Healthcare certification is highly recommended.**

General Requirements: Students are required to be grade 12

Pre-requisites: Successful completion of Health Science 1, 2 & 3* with an **overall score in each course of 75% or higher**. Or a 3-course completer in any Health Science pathway. (*HS 3 may be substituted with the following courses: PLTW Human Body Systems, Science-based Anatomy, and Physiology, AP Biology, or Medical Terminology.) ****Please note:** Only HS3, Medical Terminology, PLTW HBS, AHS 102 or AHS 104 will count towards being a completer in the Health Science Cluster. (AP Biology or Science A& P **will not**)

Also recommended, **but not required**, pre-requisites or co-requisites for the course are Biology and Chemistry.

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

Concentrator: Completes two required courses: HS1 and HS 2.

Completers: *Health Science Completer Requirements*

Three Course: HS 1, HS 2, HS Human Structure, Function and Disease (Or it's approved replacements – see Student Reporting Guide)

Four or more courses: HS 1, HS 2, Plus any other two courses in the Health Science Cluster

Industry Aligned Credentials: 1. BLS Healthcare Providers CPR/AED 2. OSHA Healthcare or any others applicable listed in the Student Reporting Guide.

Stackable Credentials: 1. Heartsaver CPR/AED 2. First-Aid or any others applicable as listed in

the Student Reporting Guide.

Other: *Students enrolled in this course as their 3rd or 4th course are considered completers (as long as all the pre-requisite courses are met) in the Health Science Program and are expected to take the end of the program National Health Science Certificate (NHSC) assessment if they haven't taken the assessment prior to completing this course.*

Certifications available during this course are specific to school choice: Also, all agreements and correspondence are between vendors or certifying agencies and have no bearing on applying, learning, and completion of the Clinical Study Course offered by SCDE. Certifications are in addition to the clinical study standards and are just an option that schools have if they choose to participate.

Certified Nurse-Aide (CNA) candidates. Under the direction and supervision of a registered nurse, students are prepared to perform nursing-related services to patients and residents in hospitals or long-term care facilities. For Nurse –Aide programs students will review all foundation standards in the clinical study program, as well as the addition of the South Carolina Nurse Aide Curriculum, found in the training program packet.

<http://www.asisvcs.com/publications/pdf/074118.pdf>

This is a state level certification course. This course meets all DHHS federal and state requirements for a certified nurse aide program in an approved NA training facility (NA program is optional and requires an RN with specific long-term care experience to instruct this course) All correspondence and questions for this course or the required training should be directed to DHHS.

Certified Patient Care Technician/Assistant (CPCT/A) candidates. Under the direction and supervision of a registered nurse, students are prepared to perform patient care services in hospitals or other clinical settings, including phlebotomy and electrocardiogram skills. For Patient-Care Technician/Assistant programs, students will review all foundation standards in the clinical study program, as well as complete the objectives covered in the "NHA Test Plan."

[http://www.nhanow.com/docs/default-source/pdfs/exam-documentation/test-plans/nha-certified-patient-care-technician-assistant-\(cpct-a\)-test-plan.pdf?sfvrsn=2he](http://www.nhanow.com/docs/default-source/pdfs/exam-documentation/test-plans/nha-certified-patient-care-technician-assistant-(cpct-a)-test-plan.pdf?sfvrsn=2he)

This is a national certification .(CPCT/A program is optional and in SC requires an RN with hospital experience to instruct this course. (Experience with trach tubes, stomas, phlebotomy, and EKG as well as other technical skills acquired in medical-surgical settings). All questions or correspondence should be directed to the certifying agency.

Certified Clinical Medical Assistant (CCMA). Under the direction and supervision of a registered nurse, students are prepared to perform in a variety of patient care services. A medical assistant is a multi-skilled allied health care professional that specializes in procedures commonly performed in the ambulatory health care setting. Medical assistants perform both clinical and administrative duties and assist a variety of providers including physicians, nurse practitioners and physician assistants. They typically work in medical offices, clinics, urgent care centers and may work in general medicine or specialty practices.

https://www.nhanow.com/docs/default-source/pdfs/exam-documentation/test-plans/2017-ccma-test-plan-documents/nha-2017-ccma-test-plan_public_detail--final.docx?sfvrsn=10.

This is a national certification (CCMA program is optional and in SC requires an RN to lead this course. It would be beneficial if the RN had ambulatory care experience or experience working in a doctor's office).

OSHA – Healthcare training is recommended and offered by CareerSafe.

<http://careersafeonline.com/courses/healthcare-industry>

Other optional industry-recognized certifications available are:

<http://www.nhanow.com/>

<http://kaduceusinc.com/>

- Electronic Health Record Specialist (CEHRS) Any Health Science Certified Instructor
- Medical Administrative Assistant (CMAA) Any Health Science Certified Instructor
- Billing and Coding Specialist (CBCS) Any Health Science Certified Instructor- preferably with billing and/or coding experience.
- EKG Technician (CET) RN or Health Science Certified Instructor with specific EKG experience
- Phlebotomy Technician (CPT) RN or Health Science Certified Instructor with specific experience.

Other:

Direct Support Professional (DSP) SC DDSN – Health Science Certified Teacher (RN preferred but not required) <https://ddsn.sc.gov/services/youth-transition-services-high-school-dsp-training-program/south-carolina-direct-support>

Emergency Medical Services – EMT 3- Paramedic only – SC DHEC

<https://www.scdhec.gov/health-regulation/emergency-medical-technician-emt-certification-requirements>

You may ask: *What if we do not offer any of the above certifications?* That is perfectly fine. On your own, or in conjunction with your WBL coordinators, you can still create quality worked-based learning /clinical opportunities for students who have satisfactorily demonstrated the professional qualities and the technical skills needed. Students may go on extended rotations in the hospital, dental, veterinary, chiropractic, pharmacy, medical clinic, and doctor office settings (etc.) during the designated class time for 2 weeks or **more**. They should have common learning goals and assignments, based on the standards. All should have the same training and review in the classroom for testing purposes. BLS certification would still be required, and you should incorporate OSHA Safety Training – Healthcare Certification and HIPAA training.

Foundation Standards:

1. **Foundation 1: Academic Foundations:** Review and apply human anatomy, physiology, common diseases and disorders, and medical math principles.
2. **Foundation 2: Communications:** Demonstrate methods of delivering and obtaining information while communicating effectively.
3. **Foundation 3: Systems:** Identify how key systems affect services performed and quality of care.
4. **Foundation 4: Employability Skills:** Utilize employability skills to enhance employment opportunities and job satisfaction. *Students should participate in a clinical experience based on the school's choice. Clinical experiences tend to last 2-6 weeks and can be at the same facility or several different facilities to achieve a broad experience. Should a school choose a certification path of Nurse Aide, Patient Care Tech, Clinical Medical Assistant, etc...the*

clinical experiences should follow the guidelines and tie into the skills needed for the certifications.

5. **Foundation Standard 5: Legal Responsibilities:** Review and apply legal responsibilities, limitations, and implications for healthcare worker actions.
6. **Foundation Standard 6: Ethics:** Review and apply accepted ethical practices with respect to cultural, social, and ethnic differences within the healthcare environment.
7. **Foundation Standard 7: Safety Practices:** Review and apply existing and potential hazards to clients, co-workers, and self. Employ safe work practices and follow health and safety policies and procedures to prevent injury and illness.
8. **Foundation Standard 8: Teamwork:** Review and apply roles and responsibilities of individual members as part of the healthcare team.
9. **Foundation Standard 9: Health Maintenance Practices:** Differentiate between wellness and disease. Promote disease prevention and model healthy behaviors.
10. **Foundation Standard 10: Technical Skills:** Apply and technical skills required for all career specialties and demonstrate skills and knowledge as appropriate. **As a review – Demonstrate proficiency in taking vital signs and responding to emergencies such as performing first aid, CPR, etc. *Clinical Study Students should receive Basic Life Support for Healthcare Provider certification from American Heart Association (preferred) or American Red Cross.*** OSHA ***Specific skills may be included in a program of study based on career specialties. For example, -*Nurse Aide candidates will need to satisfy skill requirements for their certification assessment. *Patient Care Technician and Medical Assistant students will satisfy skill requirements based on level of certification through National Healthcareers Association.**
11. **Foundation Standard 11: Information Technology Applications:** Utilize and understand information technology applications common across health professions.

Detailed Foundation Standards Curriculum can be found on the SCDE Website through the Career and Technical Education Link on the Health Science webpage.

<https://www.ed.sc.gov/instruction/career-and-technical-education/programs-and-courses/career-clusters/health-science-education/>

Our detailed state standards are based off of the general national standards from the National Consortium for Health Science Education (NCHSE).

https://www.healthscienceconsortium.org/wp-content/uploads/2019/05/NATIONAL_HEALTH_SCIENCE_STANDARDS.pdf

- SC Certified Nurse Aide (Teacher must be RN with at least 1-2 years of long-term care experience)
<http://www.asisvcs.com/publications/pdf/074118.pdf>
South Carolina requires that a certified Nurse Aide Training Program consist of a minimum of one- hundred (100) hours. This is to include forty (40) hours of classroom instruction, twenty (20) hours of documented skills practicum and forty (40) hours of clinical experience in a long-term care (LTC) facility.
- Patient Care Technician Assistant (Teacher must be an RN)
<http://www.nhanow.com/certifications/patient-care-technician>

- Medical Administrative Assistant (CMAA)
<http://www.nhanow.com/certifications/medical-administrative-assistant>
- Certified Clinical Medical Assistant (CCMA) (Teacher must be an RN)
<https://www.nhanow.com/certifications/clinical-medical-assistant>
- Billing and Coding Specialist (CBCS)
<http://www.nhanow.com/certifications/billing-coding>
- Electronic Health Record Specialist (CEHRS)
<http://www.nhanow.com/certifications/electronic-health-records-specialist>
- Paid Feeding Assistant (PFA) (stackable credential)
<https://www.scdhhs.gov/internet/pdf/NursFacHosPaid%20Feeding%20Assistant%20Program.pdf>
- Certified EKG Technician (CET) (Teacher must have approved experience or obtain certification)
<http://www.nhanow.com/certifications/ekg-technician>
- Phlebotomy Technician Certification (CPT) (Teacher must have approved experience or obtain certification)
<http://www.nhanow.com/certifications/phlebotomy-technician>
- BLS – Healthcare Providers CPR
http://cpr.heart.org/AHA/ECC/CPRAndECC/Training/HealthcareProfessional/BasicLifeSupportBLS/UCM_473189_Basic-Life-Support-BLS.jsp

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>

Sorrentino, Sheila A. Mosby's Textbook for Nursing Assistants. Student Edition, Elsevier, Inc. Mosby and WB Saunders, latest edition.

Thibodeau, Gary A., and Kevin T. Patton, Structure & Function of the Body. Student Edition, Elsevier, Inc. Mosby and WB Saunders, latest edition.

Grubbs, Peggy A. Essentials for Today's Nursing Assistant, Upper Saddle River, New Jersey: Brady, latest edition.

Hegner, Barbara R., Ester Caldwell, and Joan F. Needham. *Nursing Assistant*, Albany, New York: Delmar Publishers, Latest edition.

South Carolina Nurse Aide Curriculum. Developed by the South Carolina Department of Health and Environmental Control and the South Carolina Department of Health and Human Service, and the South Carolina Department of Education from national guidelines.

South Carolina Nurse Aide Training Program

<http://www.asisvcs.com/indhome.asp?CPCAT=0741NURSE> -This page has information about testing, licensing and certification, and related support services like fingerprinting. The following documents and resources are available at this site.

OTHER RESOURCES:

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

Today's Class <http://www.toadysclass.com>

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

(link no longer works) 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>

CareerOneStop formerly known as America's Career InfoNet
<https://www.careeronestop.org/Toolkit/ACINet.aspx>

American Heart Association <http://www.americanheart.org/presenter.ihtml?identifier=1200000>

American Journal of Nursing, <https://www.jstor.org/journal/americanj nursing>

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, <https://www.assessment.com/>

Aetna: IntelliHealth, <http://custom.aetna.com/Inova/intelihealth.shtml>

Become an RN, <https://www.learnhowtobecome.org/nurse/registered-nurse/>

Be Something Amazing – Video of Virtual Surgeries and Occupations in Healthcare
<https://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

<https://webarchive.library.unt.edu/eot2008/20080916003633/http://careervoyages.gov/>

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://explorehealthcareers.org/en/home>

Health Central, <http://www.healthcentral.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://www.nrccte.org/resources/lesson-plans/health-science/health-science-back-basics>

Medical Mysteries on the Web

<http://webadventures.rice.edu/stu/Games/MedMyst/>

Medical Reserve Corps, <https://mrc.hhs.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/index.html>

Transcription 411: The Online Resource Center for Medical Transcription Students and Professionals

<http://transcription411.com/>

National Institutes of Health, Office of Science Education

<https://www.nih.gov/research-training/science-education>

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/>

Nurse Spectrum | NurseWeek, <http://www.nurse.com/>

Oncolink: Abramson Cancer Center of the University of Pennsylvania
<https://www.pennmedicine.org/cancer/navigating-cancer-care/getting-started/patient-education/oncolink-cancer-education>

Physicians' Desk Reference, <http://www.pdr.net/browse-by-drug-name>

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.reuters.com/news/health>

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, <https://www.stayhealthy.com/>

Texas Health Science, <http://www.texashste.com/>

The Educator's Reference Desk, <http://www.eduref.net/>

The Riley Guide: Employment Opportunities and Job Resources on the Internet
<https://www.myperfectresume.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/>

Health World Online, <http://www.healthy.net/>

Yahoo Health, <https://www.yahoo.com/beauty/tagged/health/>