



HEALTH SCIENCE CLINICAL STUDY – 5560 (CNA 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 review and 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, and be a completer in any health science cluster pathway or have met all the pre-requisites before enrolling in this clinical course.

For optional certification paths offered within this course, students must follow the rules of the agency or vendor, as well as the clinical site requirements. *If the certification requires in-person clinical rotations, facility requirements may include: background checks, TB tests, drug testing, and required immunizations.*

Pre-requisites: The clinical study student should be a successful three or four- unit completer in any health science pathway (with an overall course average of 75% or higher or with the approval of the health science clinical teacher). Alternate approval may be made for students who are concentrators in any pathway and then take the approved anatomy substitution course. *(*For Clinical Study admission requirement purposes - HS 3 may be substituted with the following courses: PLTW Human Body Systems, Science-based Anatomy, and Physiology, AP Biology, or Medical Terminology including AHS 102 & 104.)* ****Please note:** Only HS3, Medical Terminology, PLTW HBS, AHS 102 or AHS 104 will count as a unit in the completer path for the Health Science Cluster. (AP Biology or Science A& P, **will not**)

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

Concentrator: Completes the two required courses in a health science pathway.

Completers: *Health Science Completer Requirements*

Three Unit Completer Sample: HS 1, HS 2, HS Human Structure, Function and Disease.

Four Unit Completer Sample: 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 in the Health Science Program and are expected to take the end of the program National Health Science Assessment if not taken previously. Students seeking a certification must be a completer in any health science pathway or have met all the pre-requisites for the Health Science Clinical Course.*

Foundation Standards:

1. **Foundation 1: Academic Foundations:**
 - a. Review and apply human anatomy, physiology, common diseases and disorders, and medical math principles prior to students participating in their assigned clinical experience.
2. **Foundation 2: Communications:**
 - a. Demonstrate methods of delivering and obtaining information while communicating effectively before, during, and after the clinical experience.
3. **Foundation 3: Systems:**
 - a. Discuss how key systems affect services performed and quality of care in relation to the clinical experience that students are assigned. (This may become clear to students after their participation in the clinical experience).
4. **Foundation 4: Employability Skills:**
 - a. Utilize employability skills to enhance employment opportunities and job satisfaction.
Students should participate in a clinical experience determined by the student certification that a school chooses. Clinical experiences tend to last 2-6 weeks and can be at the same facility or several different facilities to achieve a broad experience. Experiences that are at the same facility for a minimum of 40 hours logged may count this experience as WBL career ready experience. Refer to the WBL manual on the SCDE website. Should a school choose a certification path of Nurse Aide, Patient Care Tech, Clinical Medical Assistant, etc...the clinical experiences should follow the guidelines of the testing agency/vendor and tie into the skills needed for the certifications.
 - b. Discuss and demonstrate soft skills prior to clinical experiences.
5. **Foundation Standard 5: Legal Responsibilities:**
 - a. Review and apply legal responsibilities, limitations, and implications for healthcare worker actions prior to the clinical experience.
 - b. Apply to real life experiences through the work- based learning opportunity that students are currently participating in.
 - c. Discuss and expand on any experiences that students may have questions about.
6. **Foundation Standard 6: Ethics:**
 - a. Review and apply accepted ethical practices with respect to cultural, social, and ethnic differences within the healthcare environment prior to the clinical experience.
 - b. Apply to real life experiences through the work- based learning opportunity in which students are currently participating.
 - c. Discuss and expand on experiences that students may have questions about.

7. **Foundation Standard 7: Safety Practices:**
 - a. Review and apply existing and potential hazards to clients, co-workers, and self.
 - b. Employ safe work practices and follow health and safety policies and procedures to prevent injury and illness.
8. **Foundation Standard 8: Teamwork:**
 - a. Review and apply roles and responsibilities of individual members as part of the healthcare team.
 - b. Discuss the experience of working as a team member during the assigned clinical experience.
9. **Foundation Standard 9: Health Maintenance Practices:**
 - a. Differentiate between wellness and disease.
 - b. Promote disease prevention and model healthy behaviors.
 - c. Discuss how stress and anxiety can play a role in wellness and disease
 - d. Discuss and demonstrate activities that may decrease stress and anxiety.
10. **Foundation Standard 10: Technical Skills:**
 - a. 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 demonstrate proficiency in Basic Life Support for Healthcare Provider certification from American Heart Association (preferred), American Red Cross or another valid agency. *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 based on their governing and testing agency. *Patient Care Technician and Medical Assistant students will satisfy skill requirements based on certification objectives through their choice of vendor.*

11. **Foundation Standard 11: Information Technology Applications:**
 - a. 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

Certifications are available during Health Science Clinical Study can be specific to school choice: Also, all agreements and correspondence are between vendors or outside agencies and have no bearing on applying, learning and completion of the Clinical Study Course. If there are questions or issues with the certification that you are offering, you will need to contact the vendor or agency that you have an agreement with. Although websites of vendors are included as samples for each certification, SCDE

does not have an agreement with these vendors. All agreements are at the school/district level. Certifications are in addition to the clinical study standards and are just an option that schools have if they want to participate.

You may ask: *What if we do not offer any 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 to 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 should still be required if going out to a clinical situation. Incorporating OSHA Safety Training (healthcare) and HIPAA training should be components of all programs with clinical components. Please refer to the WBLG – (Work Based Learning Guide) on ways to count WBL experiences

Students seeking a certification through this clinical course offering, must be a completer in any health science pathway or have met all the pre-requisites for the Health Science Clinical Course.

SC's most popular certifications include:

1. SC Certified Nurse Aide (Teacher must be RN or LPN working under the supervision of an RN, with at least 1-2 years of long-term care experience). 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.

- For the most up to date and current nurse aide training program information and application please contact the nurse aide training program at the SC Department of Health and Human Services (SC DHHS) or check their website: [Nurses Aid FAQs | SC DHHS](#). Check the resources link under Health Science Clinical on the table of standards to see the last correspondence information sent to SCDE. All correspondence about nurse aide should be directed to:

Division of Long -Term Living, 7th Floor
PO Box 8206
Columbia, SC 29202
Phone: 803-898-2590
Fax: 803-255-8290
Email: scnar@scdhhs.gov

- Test taking information may be found at <https://credentia.com/test-takers/sc>
- *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.*

An approved application for a Nurse Aide course meets all DHHS federal and state requirements for a certified nurse aide program in an approved NA training facility (NA program is optional in SC and requires an RN with long term care experience or an LPN who is supervised by an RN, to instruct this course. The RN in charge must submit an application and be approved by DHHS.)

2. Certified Patient Care Technician/Assistant (CPCT/A) candidates. Under the direction and supervision of a RN or an LPN, 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." [Patient Care Technician Certification | CPCT/A \(nhanow.com\)](http://www.nhanow.com) or [Patient Care Technician Certification | AMCA \(amcaexams.com\)](http://amcaexams.com) **This is a national certification. (CPCT/A program is optional and in the *SC Health Science pathway* requires an RN or LPN 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).**

3. Certified Clinical Medical Assistant (CCMA). Under the direction and supervision of a RN, an LPN, or an experienced certified or registered clinical medical assistant, 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. [Medical Assistant Certification | CCMA \(nhanow.com\)](http://www.nhanow.com) or [Clinical Medical Assistant Certification | AMCA \(amcaexams.com\)](http://amcaexams.com) **This is a national certification. (CCMA program is optional and in the *SC Health Science pathway* requires an RN or LPN to lead this course or a Health Science Certified Teacher with a clinical CMA certification and approved medical assisting experience. It would be beneficial if the teacher had ambulatory care experience or experience working in a doctor's office).**

4. Phlebotomy Technician Certification (CPT) (Teacher must have approved experience or obtain certification). **This is a national certification. Instructors in the SC Health Science pathway, must be an RN, LPN, Phlebotomist or MA with blood draw experience or a Health Science Certified Teacher willing to obtain this certification, in order to instruct students.**

<http://www.nhanow.com/certifications/phlebotomy-technician>
[Phlebotomy Technician Certification | AMCA \(amcaexams.com\)](http://amcaexams.com)

5. BLS – Healthcare Providers CPR: **Must be a trained BLS CPR Instructor**
[Basic Life Support \(BLS\) | American Heart Association CPR & First Aid](http://www.heart.org)

6. Certified EKG Technician (CET) (Teacher must have approved experience or obtain certification) **This is a national certification. Instructors in the SC health science pathway should be an RN, LPN, ATC or MA with EKG experience or a Health Science Certified Teacher willing to obtain this certification, in order to instruct students.**

<http://www.nhanow.com/certifications/ekg-technician>

[EKG Technician Exam | AMCA \(amcaexams.com\)](#)

7. Certified Medical **Administrative** Assistant. **May be taught by any Health Science Certified teacher.** [Medical Administrative Assistant Certification | CMAA \(nhanow.com\)](#)
[Medical Administrative Assistant Certification | AMCA \(amcaexams.com\)](#)

8. Career Safe – Healthcare Providers OSHA – Includes HIPAA training
[CareerSafe | \\$25 OSHA 10 General Industry \(Healthcare\) Course \(careersafeonline.com\)](#)

Other optional certifications that are available to obtain include:

9. Electronic Health Record Specialist (CEHRS)
<http://www.nhanow.com/certifications/electronic-health-records-specialist>
[Electronic Health Record Certification | AMCA \(amcaexams.com\)](#)
10. Paid Feeding Assistant (PFA) **In SC a PFA must be trained and supervised by an RN or LPN in accordance with SCDHHS guidelines.** [Microsoft Word - Bull NursFac-HosPaid Feeding Assistant Program etc..doc \(scdhhs.gov\)](#)
11. Direct Support Professional (DSP) SC DDSN – A **Health Science Certified Teacher** may instruct students in this certification. An RN may be the best fit, but not required. All teachers will be approved by the SC DDSN. <https://ddsn.sc.gov/services/youth-transition-services-high-school-dsp-training-program/south-carolina-direct-support>
12. Emergency Medical Services – EMT – **May only be taught by a paramedic.** Must be an approved DHEC program at the secondary school or career center, or with dual enrollment through a technical college or with affiliation of a regional EMT training center. [Emergency Medical Technician \(EMT\) Certification Requirements | SCDHEC](#)

This is not a full list of the certifications that are offered. The below list of vendors are the most commonly used but are not a complete list of the vendors that may offer the certifications. There are many certifications that are stackable and a few other industry certifications that may not be on the list above. Always check the most updated Student Reporting Guide for the certifications that are approved for the school year in question. [CTE Student Data Reporting and Collection - SCDE](#)

Most Commonly Used Credentialing Contacts:

Nurse Aide (CNA)-SCDHHS (Department of Health and Human Services)

<http://www.dhhs.state.sc.us>

Email: SCNAR@scdhhs.gov

Contact: Reauta Scott Phone: 803-898-2590

National Healthcareer Association- NHA

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

Email: Tammy.stine@nhanow.com

Contact: Tammy Stine Phone: 913-225-5869

Kaduceus-Hands on Career Training

www.KaduceusInc.com

Toll Free: 877-523-8238

PassAssured –Pharmacy Tech

<https://passassured.com/>

Email: admin@passassured.com

Phone: 1-866-778-7277

American Medical Certification Association (AMCA)

<https://www.amcaexams.com/exam-candidates/certification-exam/>

American College of Sports Medicine (ACSM)

<https://www.acsm.org/get-stay-certified/get-certified>

CPR & FA

American Heart Association

<https://cpr.heart.org/>

<https://cpr.heart.org/en/training-programs/blended-learning-and-elearning-guide>

WEB SITES:

South Carolina Department of Education

www.ed.sc.gov

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

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.

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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.

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.

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: InteliHealth, <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/>