Vanderbilt University Medical Center

Center for Programs in Allied Health

2024-2025 Program Catalog

July 1, 2024 – June 30, 2025

Vanderbilt University Medical Center
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Vanderbilt University Medical Center is authorized by the Tennessee Higher Education Commission (THEC). This authorization must be renewed each year and is based on an evaluation of minimum standards concerning quality of education, ethical business practices, and fiscal responsibility.

Vanderbilt University Medical Center is institutionally accredited by the Accrediting Bureau of Health Education Schools (ABHES), a national accrediting agency recognized by the United States Department of Education.

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ABOUT VANDERBILT UNIVERSITY MEDICAL CENTER

WEBSITE: **www.vumc.org**

Vanderbilt University Medical Center (VUMC) is a comprehensive healthcare facility dedicated to patient care, research, and biomedical education. Its reputation for excellence in each of these areas has made VUMC a major patient referral center for the Mid-South. Each year, people throughout Tennessee and the Southeast choose VUMC for their health care needs, not only because of its excellence in medical science, but also because the faculty and staff are dedicated to treating patients with dignity and compassion.

Vanderbilt University Medical Center accommodates more than 3.2 million patient visits per year throughout its seven hospitals and more than 180 clinics. A principal referral center for physicians and patients throughout the region, Vanderbilt University Medical Center and the Vanderbilt Medical Laboratories consistently rank among the premier health care facilities in the United States. Vanderbilt University Medical Center houses the region's Level 1 trauma and burn center, and Monroe Carell Jr Children's Hospital at Vanderbilt provides a Level IV neonatal intensive care unit. Additionally, VUMC operates the fifth largest transplant center by volume with 739 solid organ transplants performed in 2023. Many of the services offered by Vanderbilt University Medical Center have been ranked among the foremost programs in the nation by U.S. News &World Report's listing of "America's Best Hospitals". Vanderbilt's programs in cancer; cardiology and heart surgery; digestive tract; ear, nose, and throat; hormonal disorders; gynecology; orthopedics; respiratory care; rheumatology; and urology were assessed among the top such programs in hospitals nationwide.

Vanderbilt University Medical Center is a major medical treatment, research and education institution comprised of many hospitals and buildings, including Vanderbilt University Hospital (VUH), Rudolph Light Hall (LH), Medical Center North (MCN), Vanderbilt Children's Hospital (VCH), Medical Center East (MCE), and The Vanderbilt Clinic (TVC). VUMC serves the health care needs of the Nashville community and the surrounding areas of Middle Tennessee, southern Kentucky, and northern Alabama. VUMC is dedicated to patient care, biomedical research, and education for health care professionals.

Among Vanderbilt's specialty clinics are the Henry-Joyce Cancer Clinic and Clinical Research Center, the patient care arm of the Vanderbilt-Ingram Cancer Center (VICC). The VICC, a National Cancer Institute Clinical Cancer Center, provides comprehensive care for cancer patients along with basic and bench-to- bedside research. The state-of-the-art research program provides the latest breakthroughs in treatment for our patients. Additionally, VUMC's Level I trauma center, comprehensive burn center, LifeFlight air emergency transport program, the Voice Center, the Vanderbilt Bill Wilkerson Center, and 19 specialty services of Children's Hospital, including the Level IV neonatal intensive care unit, are the only programs of their kind in middle Tennessee.

VUMC HISTORY AND OWNERSHIP

Vanderbilt University Medical Center has been operating non-degree allied health programs since 1929 under Vanderbilt University who is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools; accreditation has been maintained since 1895. Vanderbilt University Medical Center is a Tennessee nonprofit corporation 501(c)(3) operating five certificate programs, each accredited by a programmatic accreditor.

Until April 2016, Vanderbilt University owned and operated several hospitals and clinics collectively known as Vanderbilt University Medical Center, including Vanderbilt University Hospital, Vanderbilt Psychiatric Hospital, and Monroe Carell Jr. Children's Hospital at Vanderbilt, and their associated clinics. Effective April 30, 2016, Vanderbilt University conveyed the clinical assets used in the operation of Vanderbilt University Medical Center to a newly formed, not-for-profit, tax-exempt corporation, which is similarly named Vanderbilt University Medical Center. Vanderbilt University Medical Center now operates independently of Vanderbilt University. It is clinically and academically affiliated with Vanderbilt University.

Center For Programs in Allied Health Mission Statement

The Center for Programs in Allied Health of Vanderbilt University Medical Center is dedicated to preparing students for excellence in their chosen career and instilling compassion and a commitment to the highest quality of patient care through transformative learning programs and access to the delivery of exemplary healthcare.

VUMC Credo

- We provide excellence in healthcare, research, and education.
- We treat others as we wish to be treated.
- We continuously evaluate and improve our performance.

Credo Behaviors

- I make those I serve my highest priority.
- I respect privacy and confidentiality.
- I communicate effectively.
- I conduct myself professionally.
- I have a sense of ownership.
- I am committed to my colleagues.

VUMC BOARD OF DIRECTORS

The Board of Directors provides oversight and counsel to help the medical center achieve its business and organizational goals.

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Business Office Manager, Center for Programs in Allied Health, Vanderbilt University Medical Center

Linda Birdsong, AAS
Program Manager, Center for Programs in Allied Health, Vanderbilt University Medical Center

VUMC EDUCATIONAL FACILITIES

Vanderbilt University Medical Center (VUMC) is a general medical and surgical facility known as a teaching hospital. The building where the administrative offices of the VUMC Center for Programs in Allied Health is located (1301 Medical Center Drive, B-802 The Vanderbilt Clinic, Nashville, Tennessee 37232) is over 500,000 square feet in size. The Vanderbilt University Medical Center encompasses over 20 acres of land that houses a variety of facilities from which students in the allied health programs gain knowledge and experience. Each facility has up-to-date medical equipment and supplies to serve the research / patient needs, which in turn provides students the opportunity to utilize, as their program permits, under the supervision of a qualified supervisor.

VUMC facilities include the following buildings:

Vanderbilt University Adult Hospital

Vanderbilt University Hospital (VUH) opened in 1980, with the major addition of the Critical Care Tower in 2009. The hospital is dynamic, growing, and dedicated to meeting the most critical and complex needs of our region, continuing Vanderbilt's more than century-old tradition of offering the best in patient care. Many patients seen in the hospitals are from states other than Tennessee, with the majority coming from Kentucky, Alabama, and Mississippi. Adjacent and attached to VUH is Medical Center East, primarily an outpatient services building, but also housing some operating rooms, patient rooms for Labor and Delivery, the Vanderbilt Bill Wilkerson Center, and the Vanderbilt Orthopedics Institute.

Monroe Carell Jr. Children's Hospital at Vanderbilt

The Monroe Carell Jr. Children's Hospital at Vanderbilt opened as a stand-alone facility in 2004 and is a place of hope and healing for pediatric patients and their families. Recognized as one of the premier children's hospitals in the nation by *U.S. News and World Report* for nine years running, Children's Hospital cares for the sickest patients in the region and beyond. Children's Hospital is the most comprehensive pediatric facility in Tennessee, providing services including neurosurgery, cancer treatment, trauma care, transplant, and much more. Children's Hospital operates the region's only Level I pediatric trauma unit and a neonatal intensive care unit with the highest designated level of care. The facility is filled with state-of-the-art equipment and information systems to provide the best treatment for patients. It offers a variety of family accommodations to help fulfill its mission of patient-and family- centered care. In addition, Children's Hospital is a top-ranked teaching and research facility. As a nonprofit organization, the hospital cares for children of Tennessee and surrounding states regardless of their ability to pay.

The Vanderbilt Clinic (TVC)

The Vanderbilt Clinic is a comprehensive outpatient facility, opened in 1988 and houses more than 100 medical specialty practice areas, clinical laboratories, a center for comprehensive cancer treatment, and a day surgery center.

Rudolph A. Light Hall (LH)

Light Hall provides classroom and laboratory space for students in the School of Medicine. It houses the Department of Biochemistry, the Department of Molecular Physics and Biophysics, and the Howard Hughes Medical Institute.

Medical Research Building IV (MRB IV)

MRB IV houses a significant amount of wet lab space and supports continued growth in VUMC research programs.

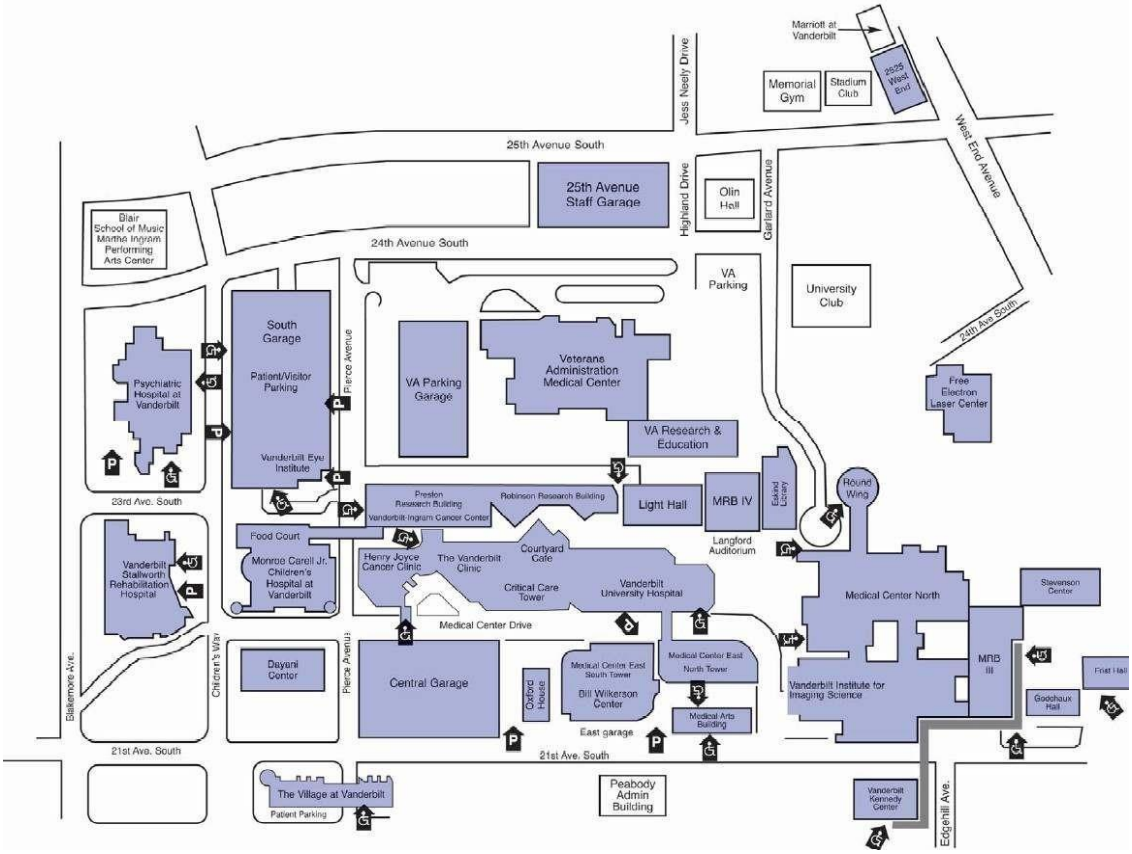
Medical Center North (MCN)

The Newman Clinical Research Center, an inpatient orthopedic unit, and a general-care unit are inside Medical Center North. The complex also houses laboratories and administrative support services for VUMC. Faculty and administrative offices and research space for medical school departments are in Medical Center North. The original portions of the building were completed in 1925. Since then, several connecting wings and buildings have been added.

Vanderbilt Health One Hundred Oaks (OHO)
This 440,000-square-foot doctors' office suite opened for patient care in 2009 and is designed for easy access off the interstate highway system, abundant surface parking, automated check-in, and integrated services, labs, and radiology. It houses numerous specialty clinics, primary care services, and advanced imaging facilities.
vanderbilthealth.com/100oaks

Vanderbilt Dayani Center for Health and Wellness
The Vanderbilt Dayani Center is a medically based fitness/ health promotion center that specializes in modifying risk factors for conditions including cardiovascular disease, weight management, stress, sedentary lifestyle, and smoking. It was the first Certified Medical Fitness Center in Tennessee, is closely aligned with the Department of Physical Medicine and Rehabilitation, and serves patient care, research, and education functions within VUMC.
vanderbilthealth.com/dayani

Shade Tree Clinic
Shade Tree Clinic is a free health clinic run by Vanderbilt University medical students. Students from multiple professions provide care as part of Interprofessional teams at the clinic, and that care is supervised by physicians and other licensed professionals. Shade Tree Clinic provides a medical home for many Nashville residents with limited resources by providing exemplary primary care, care for acute & chronic illnesses, social services, and patient health education. The clinic is in the Melrose/Berry Hill area of Nashville.



CPiAH ADMINISTRATIVE CALENDAR

ACADEMIC YEAR 2024-2025	
New Year's Day 2024	Monday, January 1, 2024
Martin Luther King Jr. Day 2024	Monday, January 15, 2024
Memorial Day 2024	Monday, May 27, 2024
Independence Day 2024	Thursday, July 4, 2024
Labor Day 2024	Monday, September 2, 2024
Thanksgiving 2024	Thursday, November 28, 2024 – Friday, November 29, 2024
Christmas Eve 2024	Tuesday, December 24, 2024
Christmas Day 2024	Wednesday, December 25, 2024
New Year's Day 2025	Wednesday, January 1, 2025
Martin Luther King Jr. Day 2025	Monday, January 20, 2025
Memorial Day 2025	Monday, May 26, 2025
Independence Day 2025	Friday, July 4, 2025
Labor Day 2025	Monday, September 1, 2025
Thanksgiving Day 2025	Thursday, November 27, 2025 – Friday, November 28, 2025
Christmas Eve 2025	Wednesday, December 24, 2025
Christmas Day 2025	Thursday, December 25, 2025

These dates are when the administrative offices of the Center for Programs in Allied Health will be closed. Please refer to each program's section in this Catalog for specific program academic calendars, including starting and ending dates for educational activities.

STUDENT SERVICES

Academic Advising / Tutoring

Advising for the purpose of guiding students is considered an essential part of student support services provided by VUMC and is routinely provided to students by programs. VUMC also provides students tutoring support that may be required. Academic advising for students at academic risk may be initiated by VUMC personnel or by the student when the need is identified. Students receive advice from the institution about attendance and financial aid. VUMC functions in compliance with the Americans with Disabilities Act of 1990 (ADA).

Career Assistance and Planning

VUMC makes every effort to assist graduates in developing job-obtaining skills such as resume and cover letter development, interviewing skills, and appropriate post-interview follow-up activities. Upon program completion, VUMC cannot guarantee employment in the field of designated completion; however, each Program Director and program faculty offer career planning within each program area. Program Directors have established rapport and work with institutions across the country and, from time to time, are able to inform students of openings in the field. VUMC cannot and does not guarantee employment or salary, but it makes every effort to assist each graduate in their job search. Each student is responsible for securing their own employment once completing the program.

Community Resources

Information about national community resources is listed below:

Organization	Website	Phone Number
Alcohol Abuse and Crisis Intervention	www.aa.org	1 (615) 831-1050
Al-Anon	www.al-anon.org	1 (888) 425-2666
Drug and Alcohol Helpline	http://www.alcoholdrughelp.org.nz	1 (800) 787 797 or text 8681
Family and Children's Services	www.acf.hhs.gov	1 (800) 422-4453
National Domestic Violence Hotline	www.thehotline.org	1 (800) 799-7233
Rape Crisis Center	www.therapecrisiscenter.org	1 (888) 366-1640
Suicide Hotline	www.suicidepreventionlifeline.org	1 (800) 273-8255
United Way	www.unitedway.org	Phone: 211

The Center for Programs in Allied Health are available to work individually and confidentially with students to provide additional information and resources as needed.

Counseling Services/Employee Assistance Program (EAP)

VUMC offers an Employee Assistance Program known as Work/Life Connections-Employee Assistance Program (EAP): Located at 1211 21st Avenue South in the Medical Arts Building (MAB), Room B018. They are available Monday through Friday from 8:00AM to 5:00PM. Call Work/Life Connections-EAP at 615-936-1327 for a confidential appointment.

The Employee Assistance Program (EAP) provides confidential, professional consultation, assessment, counseling, and referral for students who have psychological, behavioral and/or social problems adversely affecting performance and/or emotional health and well-being. EAP focuses on improving the health and well-being of its clients by offering prevention services, early identification, intervention, and remediation of behavioral health problems and facilitates access to necessary referral services. EAP offers assistance for alcohol/substance abuse problems; emotional/behavioral problems; family/marital problems; financial and legal concerns; and stress-related problems.

Dining Facilities
There are several facilities in VUMC where food may be purchased.
Vanderbilt University Hospital – Courtyard Cafe
Vanderbilt Children's Hospital – Food Court

Email Accounts
All enrolled students are assigned an official VUMC e-mail address. All school-wide and program-specific communications are provided via e-mail through their VUMC account. Students are expected to check their VUMC e-mail on a daily basis to be aware of important updates.

Enrollment Agreement
Students are required to sign an Enrollment Agreement with VUMC at orientation. The enrollment agreement is the "contract" between the student and the school. A read-only copy of the Enrollment Agreement is provided to all enrolled students for review prior to their arrival on campus for review. An official enrollment agreement will be reviewed and executed at student orientation.

Identification Badges
During orientation, VUMC photo ID badges are issued to students. This badge must be worn during all program activities as a means of identification. Hospital and library access are also provided through the identification badge; entry to clinical areas for educational activities is not allowed without an official VUMC-issued ID badge.

Libraries
VUMC students have access and privileges to the Vanderbilt University Jean and Alexander Heard Library System, including the Eskind Biomedical Library. Library hours may vary, and updates can be found at:
https://www.library.vanderbilt.edu/hours/

Each student has access to numerous professional texts and journals through electronic Eskind Biomedical Library resources, a full Digital Library accessible with a VUNet ID and password, at:
http://www.library.vanderbilt.edu/biomedical/

During each program's orientation students are provided training about how to access the library's physical and online resources. In addition, some programs have a library of reference materials resources specific to each respective profession. These libraries are generally housed in the Program Director's office, and students in the program have borrowing privileges. Information about program-specific libraries is provided during each program's orientation.

Occupational Health Center and Off-Campus Health Resources
Students may access services at the VUMC Occupational Health Clinic (OHC). OHC helps protect VUMC members through a variety of programs used to monitor exposure to workplace hazards and treat work-related illness and injury. OHC is located at 1211 21st Avenue South in the Medical Arts Building (MAB), Suite 640, Nashville, TN 37212.

Off campus, many Vanderbilt Health Clinics (walk-in) serve the greater Nashville community and may be utilized for illness. Services at both walk-in clinics are not free of charge, however, insurance may be accepted, depending on network participation. https://www.myhealthwalkin.com/

Orientation

Orientation is held prior to the first day of class to welcome and acclimate new students to Vanderbilt University Medical Center. Administrative staff and Program Directors are present to provide information to help new students transition into the academic environment.

Occupational health immunization screenings also take place during orientation. Students must provide specific health-related documentation during orientation to be a student at VUMC. See specific requirements under the admissions section of this catalog.

Parking

The VUMC Parking and Transportation office is located on the ground level of the East Garage. The hours are 7:30AM to 4:30 PM Monday through Friday. Parking arrangements will be made during orientation. A VUMC ID badge and state vehicle registration slip must be presented to register. Maps and shuttle schedules can be found here: https://www.vumc.org/med-center-parking/maps-and-shuttle-schedules.

Post Office

There are two branch post offices on campus, one in the basement of Medical Center North (MCN) at B-0106 MCN (Station 17) and one on the lower level of Rand Hall (Station B). Each of these offers all the regular services of a branch post office.

Security and Crime Prevention

VUMC partners with the Vanderbilt University Police Department (VUPD) for campus security. VUPD maintains a Medical Center precinct and provides a variety of safety and crime prevention services to the VUMC community. https://police.vanderbilt.edu/

VUMC urges students to be aware of conditions that could potentially jeopardize their safety, to avoid hazardous situations by taking common sense measures (e.g., park in lighted areas, keep car locked, maintain possession of items such as purses or bags), and to report any suspicious activities to program or school leadership or to law enforcement. Walking escorts are available for students who wish to be escorted when walking from point to point on campus during periods of darkness. Telephone the security dispatcher at extension 1-8888. This service is also provided for those who arrive at or leave work during the early morning or late-night periods of darkness. Because the demand for escorts heightens at night, a delay should be expected at that time.

Shuttle bus service is available and operates according to the schedule published on the VUMC Parking and Transportation Services website. The shuttle buses are accessible to persons with disabilities.

Emergency Preparedness and Emergency Numbers

Medical Emergency	1-1111
Occupational Health	6-0905
Environmental Health and Safety	2-2057
Plant Services	3-4443
Risk and Insurance Management	6-0660
Environmental Services	3-1000
Administrator On-Call – (VU Operator)	0
VUPD/Security	2-2745

PROGRAM DELIVERY

Programs may be offered in the traditional in-resident format, or in a blended distance education format. Programs and courses presented in this catalog may indicate either residential or blended delivery format. Courses may use a combination of lectures, clinical activities, simulation, lab activities, and out-of-class assignments. Courses may be graded by in-class assignments, out-of-class assignments, quizzes, projects, written examinations, and practical evaluation of techniques. Students in blended distance education courses should also expect to post to threaded discussions and submit written or weekly assignments electronically.

Residential Format

Students physically attend class for the scheduled hours and complete outside preparation as required. Please see program requirements in the program section of this catalog or in the Program Handbook for additional information about participation and attendance requirements.

Blended Distance Education Format

The Blended Distance Education format courses may consist of both classroom and online instruction. Students may be required to attend scheduled classroom sessions and participate in online activities, as defined by the course syllabi. Regular participation in the classroom, as well as online, is required. Please see program requirements in the program section of this catalog or in the Program Handbook for additional information about required participation and attendance.

Students enrolled in programs that contain blended format courses will receive training on the navigation of the Learning Management System (LMS) Canvas and be provided with access to an orientation to assist them as they begin their respective programs. Blended distance education students have access to technical support on site through the Canvas Technical Support listed below:

Learning Management System (Canvas)

Canvas is a full-fledged Learning Management System (LMS). Canvas provides user-friendly ways to create advanced tools for dynamic online activities that support each course's objectives. All students will receive basic Canvas training during program orientation. Be sure to refer to the technology requirements under the admission policies that apply to all VUMC CPiAH programs.

Canvas:

- Easily scales up or down in size, depending on the needs of each program/course.
- Allows different course styles, from conducting fully online courses, to face-to-face courses.
- Provides activity modules (such as forums, databases, and wikis) to build richly collaborative communities of learning, to deliver content to students and to assess learning using assignments or quizzes.
- Canvas has many features, including:
    - Assignment submission
    - Discussion forum
    - File download
    - Grading
    - Instant messages
    - Online calendar
    - Online news and announcement
    - Online quiz
    - Multimedia integration
    - Question bank
    - Data analysis & reports
    - Device compatibility; fully functioning iPhone and Android App
    - Push notifications to devices on the app

Canvas Learn Technical Support & Requirements
Students needing technical assistance at any time may contact technical support for each application as found below:

- Canvas Student Access Help Site: https://community.canvaslms.com/t5/Student-Guide/tkb-p/student
- VUMC Canvas Support: E-mail Jennifer Alexander at Jennifer.Alexander@vumc.org
- Canvas Browser/Computer Requirements: https://community.canvaslms.com/t5/Canvas-Basics-Guide/What-are-the-browser-and-computer-requirements-for-Canvas/ta-p/66

Off-Site Learning Activities
Students are expected to provide their own transportation to and from offsite learning activity locations and assume responsibility for all risks associated with the travel, unless otherwise notified by school officials. Because offsite learning activities are scheduled during classroom training hours, students who do not participate will be considered absent for the class session and are subject to the terms of the current attendance policy. Students who are unable to participate in a scheduled offsite learning activity must contact his/her instructor and/or Program Director prior to the date of the offsite learning activity to inquire as to the possibility of completing an alternative assignment in lieu of offsite learning activity participation.

ADMISSIONS

Accessibility for Disabled Students

VUMC is committed to the provisions of the Rehabilitation Act of 1973 and Americans with Disabilities Act as it strives to be an inclusive community for students with disabilities. VUMC uses the definition of disability set forth in Section 504, which states that a disabled person is anyone who:

- Has a physical or mental impairment which substantially limits one or more major life activities;
- Has a record of such impairment;
- Is regarded as having such impairment.

Admissions decisions are made using criteria independent of an applicant's disability. Students with disabilities desiring to enroll in a program must be able to meet the admissions standards of VUMC. Specific concerns pertaining to services for people with disabilities or any disability issue should be directed to the Director of the Center for Programs in Allied Health.

VUMC will make efforts to provide reasonable accommodation to qualified individuals with disabilities to the extent that such accommodation is readily achievable. Though VUMC takes the needs of students with disabilities seriously, it is not able to guarantee that all services can or will be provided. Specifically, accommodation that is unduly burdensome or fundamentally alters the nature of the service, program or activity may not be provided.

In order to receive accommodation, a student must meet the following criteria:

- Have a documented disability (documentation must be supplied) that presents a significant barrier to the educational process, and
- Request services by contacting the Director of the Center for Programs in Allied Health.

Students are required to provide medical documentation as part of their request for accommodation. All medical information remains confidential and is released to other VUMC personnel only with the student's written permission.

Application Procedures

All program applications and supplemental documents are submitted electronically through the Student Information System (SIS) utilized by the Center for Programs in Allied Health – Orbund.

Each program establishes its own admission and application procedures. Please refer to the program-specific admission and application procedures in this Catalog.

Minimum Requirements for Admission

All applicants must possess a high school diploma, a high school diploma equivalency, a current Tennessee license in the field for which the training is intended, or postsecondary credit in a degree program. If the applicant has a post-secondary degree (i.e., Associate's, Bachelor's or Master's), an official copy of the original college or university diploma, transcript, or its equivalent must be provided and verified no later than 30 days after classes commence. The evidence of graduation must include the name of the institution, city, state, and graduation year, and designation of approval by the applicable governing or state authority. VUMC periodically verifies that the institution or program was approved by the applicable governing or state authority. Applicants should speak with the program director to which they are applying for more information.

Some programs may have additional education requirements for admission. Please check the relevant program section in this catalog for additional information.

Verification of High School Completion

If VUMC has reason to suspect an applicant's high school diploma, transcript or other information is fraudulent or not valid, the Assistant Director will investigate the matter. VUMC reserves the right to deny or rescind admission in cases where fraudulence is found. If the Administration doubts validity of high school completion, the student will be required to submit an official high school diploma or transcript with completion date. If the student does not produce proof, the Assistant Director will contact the state Department of Education in which the student completed high school for confirmation. If the state Department of Education cannot produce proof, the Assistant Director will deny or rescind admission to VUMC.

Blended Programs' Admission Requirements (Distance Education)

Students applying for blended programs are assessed to ensure they have the appropriate skills and abilities necessary to succeed in the distance education components of these programs. This assessment is administered through Smarter Measure and does not take place until a student is admitted into the program. The assessment is related to the student's experience with online learning management systems and general computer and internet experience. Only students who are deemed competent with online systems will be admitted to these programs. Experience with VUMC- specific systems is not a requirement.

Health Insurance

All students enrolled in a program under The Center for Programs in Allied Health must be covered by health insurance for their entire duration of training. VUMC does **not** offer a student health insurance policy. The student must maintain health insurance coverage through his/her tenure in the program and must provide proof of insurance (copy of insurance card or letter from insurer) during new student orientation and annually while enrolled.

Background Check

All accepted students are required to undergo a criminal background check prior to matriculation. Students are made aware of this requirement on the application signature page that their VUMC enrollment is conditional upon passing a criminal background check. Students who wish to obtain a copy of their background check report must directly contact the vendor with such request.

A criminal record will jeopardize eligibility for employment; therefore, students are advised to review any criminal record concerns with the director of the program in which they are applying to prior to deciding to apply. In the event an adverse criminal history report is returned, it is reviewed by the Program Director and the Director of the Center for Programs in Allied Health. The Executive Vice President for Educational Affairs may also be consulted. Decisions regarding non-admission of students deemed unfit due to the information in criminal background reports are final.

Individual programs may require additional screening, such as fingerprinting or more extensive background check. Information for any additional required screenings is provided by programs to students at the time of admission.

Drug Screen

Perfusion and Dietetic Internship students admitted into VUMC programs are required to undergo a drug screen prior to matriculation. Students are made aware of this requirement on the application signature page that their VUMC enrollment is conditional upon passing a drug screen. The student will be given a form at orientation to complete the necessary screening within the first 48 hours of the orientation date.

Immunization and Health Records

Upon acceptance, students must provide documentation of the immunization requirements listed on the Occupational Health website: https://www.vumc.org/health-wellness/all-aboard/vumc-immunization-requirements

Professional Liability Insurance

Students enrolled in VUMC programs are covered by the Vanderbilt University Medical Center liability insurance policy. The cost is paid by students as a fee included in their cost of attendance. This coverage is limited only to the care participated in by students of the direction of the Program Director or designee, whether at VUMC or an official clinical education affiliate.

Late Enrollment

The Center for Programs in Allied Health at Vanderbilt University Medical Center does not allow late enrollment.

International Applicants

VUMC is not able to admit international students at this time. Green Card holders are not considered International Applicants and are therefore eligible for admission consideration.

Instructional Language

At VUMC all instruction occurs in English. VUMC does not offer English as a Second Language (ESL) instruction. Applicants whose native language is not English may be required to submit scores on the Test of English as a Foreign Language (TOEFL) or International English Language Testing Service (IELTS) as part of the admission process. Program-specific requirements are provided in program sections of this catalog.

Foreign Transcript Evaluation

Applicants whose prior education was obtained at a non-U.S. Institution are required to submit with the application for admission a full translation of the transcript into U.S. equivalency (i.e., equivalence of credits per course and of degree conferred; translation into English language only is NOT accepted). This translation must be conducted and provided by an independent evaluation provider. The following are examples of foreign transcript and degree evaluators. VUMC does not endorse any evaluators.

- Foreign Consultants: http://www.foreignconsultants.com/
- Educational Credential Evaluators: http://www.ece.org/
- Educational Perspectives: http://www.educational-perspectives.org/
- International Consultants of Delaware: http://www.icdeval.com/
- International Research Foundation, Inc.: http://www.ierf.org/
- World Education Services: http://www.wes.org/

Technology Requirements (All Students)

Students must have a computer (desktop or laptop) with the minimum system requirements listed below.

Operating Systems

- Windows 7 and newer (users on Windows 10 need to download the Windows 10 Anniversary Update)
- Mac OSX 10.6 and newer
- Linux – chromeOS

Mobile Operating System Native App Support

- iOS 7 and newer (versions vary by device)
- Android 4.2 and newer

Computer Speed and Processor

- Use a computer 5 years old or newer when possible
- 1GB of RAM
- 2GHz processor

Internet Speed

- Minimum of 512kbps

Please see program-specific information in this catalog for additional program requirements.

Readmission Policy

Students dismissed from a VUMC program may be considered for readmission at VUMC on a case-by-case basis. Students must apply for admission consideration, and the entire application and selection process must be carried out. Students applying for readmission may be asked to interview with the Director of the Center for Programs in Allied Health. A student may be readmitted to VUMC no more than one time.

Reapplying students may be required to repeat coursework taken during a previous period of study at VUMC. The eligibility of coursework previously completed at VUMC to be applied toward graduation requirements following readmission will be determined on an individual basis, and the decision will be based on the following:

- Length of absence
- Reason for withdrawal (personal, illness, academic, etc.)
- Performance in program-recommended/required remediation, if any, during original period of enrollment
- Whether or not the student was in good academic standing when the withdrawal took place

Didactic courses previously completed at VUMC will be considered for credit toward certificate graduation requirements per the VUMC Transfer of Clock Hours or Credit to VUMC Policy. Students may be tested to determine continued proficiency in knowledge previously covered in courses. No credit for prior clinical courses, internships, labs or practical is given. Those requirements must be taken regardless of the circumstances of the student withdrawal.

Employment Requirements in Allied Health Fields

In Allied Health fields, states and employers may require licensure, certification, registration, etc., before an individual may be employed in a given field. Licensure eligibility and other requirements vary from state to state. Students are advised to check licensure and certification guidelines specific to their program of study for the states in which they plan to seek employment.

Transfer of Clock Hours or Credit to VUMC

VUMC evaluates for transfer credit all clock hours and/or credit earned at institutions accredited by organizations recognized by the U.S. Department of Education or the Council for Higher Education Accreditation (CHEA). Credits earned at other educational institutions are reviewed by VUMC and may or may not be accepted by VUMC as credit toward VUMC programs' graduation requirements. Prospective students must clearly understand which credits earned at other institutions will and will not be accepted by VUMC before executing an enrollment agreement with VUMC.

Clock hour or credit transfer requests must be made by the student in writing during the admissions process. Official evaluation of a collegiate transcript is conducted upon receipt of an official transcript directly from the institution at which the courses under consideration were earned. The student is responsible for ensuring that VUMC receives all official transcripts. An official transcript must be provided from each institution for which credit and/or clock hours are to be transferred. Transcripts provided become the property of VUMC.

Up to 25% of program clock hours and/or credit may be accepted for transfer, depending on the determination of equivalency. Only hours or credits for which a grade of C or better was awarded and that were earned within the past five years are eligible for transfer consideration. VUMC may ask the student to provide additional documentation to establish coursework completed, and VUMC may require testing and/or demonstration of skills to verify student competency related to requested transfer credit/clock hours.

Advanced Placement and Experiential Learning

VUMC does not accept hours toward advanced placement through challenge examinations, achievement tests, or experiential learning.

Transfer of Credits or Clock Hours to Other Institutions

Transferability of credits varies considerably from institution to institution. Vanderbilt University Medical Center makes no representation whatsoever regarding transfer or acceptance of VUMC credits by any other institution. Vanderbilt University Medical Center does not guarantee the transferability of its credits to any other institution unless there is a written agreement with another institution explicitly denoting transferability.

Transferability of Credit Disclosure

You should also contact any educational institutions that you may want to transfer credits earned at VUMC to determine if such institutions will accept credits earned at VUMC prior to executing an enrollment contract or agreement. It is highly recommended, and you are advised, to consult with all educational institutions in which you consider transferring credit earned at VUMC before you execute an enrollment contract or agreement.

TRANSFERABILITY OF CREDITS DISCLOSURE

Credits earned at Vanderbilt University Medical Center (VUMC) may not transfer to another educational institution. Credits earned at another educational institution may not be accepted by VUMC. You should obtain confirmation that VUMC will accept any credits you have earned at another educational institution before you execute an enrollment contract or agreement. You should also contact any educational institutions that you may want to transfer credits earned at VUMC to determine if such institutions will accept credits earned at VUMC prior to executing an enrollment contract or agreement. The ability to transfer credits from VUMC to another educational institution may be limited. Your credits may not transfer, and you may have to repeat courses previously taken at VUMC if you enroll in another educational institution. You should never assume that credits will transfer to or from any educational institution. It is highly recommended, and you are advised to make certain that you know the transfer of credit policy of VUMC and of any other educational institutions you may in the future want to transfer the credits earned at VUMC before you execute an enrollment contract or agreement.

_____ _____

Signature of Student Date

GRADUATION REQUIREMENTS

Certificates for each VUMC program are awarded based on the successful completion of all graduation requirements for each program. Details regarding each program's graduation requirements are provided in the program-specific section of this catalog. All programs require students to maintain Satisfactory Academic Progress, as outlined in the standards of this Catalog.

All students are required by VUMC to complete an exit interview prior to graduation. Also, in order to graduate, students must have no outstanding financial balance with VUMC Center for Programs in Allied Health (this does not include educational loans to third-party lenders).

Satisfactory Academic Progress (Qualitative and Quantitative Elements)

All VUMC Students are required to maintain Satisfactory Academic Progress (SAP). SAP is a measure that consists of both qualitative (e.g., grades) and quantitative (e.g., number of hours completed in the clinical setting) measurements. Both measurements are evaluated regularly for each program. Details about the timing and frequency of SAP review for each program are contained in the program- specific sections of this catalog. Each program's SAP requirements are also stated within each program section of this catalog. To maintain Satisfactory Academic Progress, a student must meet the minimum standards established by each program for both qualitative and quantitative measures.

This VUMC Satisfactory Academic Progress policy applies to all VUMC students. These standards are consistently applied by each program to its students, regardless of financial aid status. To graduate, a student must successfully complete all courses in the program with the designated minimum score for passing (which varies from program to program).

CPiAH SAP Policy for Both Credit Hour and Clock Hour Programs

Qualitative Elements of SAP for Credit Hour Programs

All Programs except Dietetic Internship

General Information for Credit Hour Programs

Qualitative measurement consists of a student's grades, whether expressed numerically or with letter grades (see Grading Scale chart below). Credit hour programs may calculate these grades into a cumulative Grade Point Average (GPA). Some courses may be graded according to the pass/fail system. In these cases, student performance of competency tasks is assessed to determine whether or not a student has obtained competency (pass) or not (fail). All credit hour programs adhere to the following grading scale.

Qualitative Elements of SAP -- Grading Scale for Credit Hour Programs

Scale	Grade	GPA
95-100%	A	4
90-94%	A-	3.5
85-89%	B	3
80-84%	B-	2.5
75-79%	C	2
<75%	F - FAILURE	0
P	Pass - Any course with a "P" grade is not calculated into the grade point average.	
F	Fail - Any course with an "F" grade is not calculated into the grade point average. However, the course must be repeated and passed to graduate.	
I	Incomplete - May be used at the discretion of the instructor in those cases in which the student is not able to complete work in the normal time. In those instances, the student and instructor develop a written plan for an extension to provide work by a specific date that falls within the period of time specified by the relevant program's requirements (but in no circumstances greater than one month). An "I" that is not replaced by a letter grade within the period of time specified by the relevant program's requirements, due to unsatisfactory completion of the student's plan, will be changed to an F after the period specified by the program (a period not to exceed one month). Any course with an "I" grade is not calculated into the grade point average. Once a grade is assigned to the course (when conditions are met that allow for the removal of the "I" and assignment of a final grade), that grade will factor into the student's GPA.	
W±	Withdrawal – Utilized when a student leaves the course due to an approved leave-of-absence or withdraws from the school prior to the scheduled completion of a course. Any course with a "W" grade is not calculated into the grade point average.	

± Non-punitive grades for courses awarded by the school include "W". Non-punitive grades are not included in the computation of a student's overall Cumulative Grade or Point Average. The clock hours or credit hours associated with any courses for which non-punitive grades are assigned are included as credits attempted when calculating the student's Maximum Time Frame and credit completion percentage.

Minimum Average Required for Satisfactory Academic Progress for Credit Hour Programs

All students enrolled in Credit Hour Programs must maintain a minimum qualitative average (expressed as percentage points, grades, GPA and/or competencies passed) of 75% or a cumulative GPA of 2.0 to maintain Satisfactory Academic Progress*. Students must achieve the minimum qualitative average at each review of SAP to maintain Satisfactory Academic Progress. Students not maintaining SAP will face remedial action, up to and including dismissal from the program.

The table below presents the minimum qualitative average required for each program. More detailed information is available in the program-specific section of this catalog for each program.

Program Name	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Diagnostic Medical Sonography	75% average	75% average	75% average	75% average	75% average	75% average
Medical Laboratory Science	75% average	75% average				
Nuclear Medicine Technology	75% average	75% average	75% average			
Perfusion	75% average	75% average	75% average	75% average	75% average	

*Clock hour programs may have different measurements of SAP and are detailed in the Clock Hour SAP Section below

Quantitative Elements of SAP for Credit Hour Programs

Students enrolled in credit hour program must successfully earn annually a cumulative minimum of 2/3 or 66.67% of all hours attempted. Successfully completed hours are earning a letter grade of a C or higher. Some courses may have a specific passing grade requirement. In such cases, the student must earn the specified grade to be considered to have successfully completed the hours. The maximum allowable time frame is 150% of the hours required for the completion of the academic program. Example: A degree takes 120 hours to complete, so a student may attempt up to 180 credits (120 x 150% = 180) before being ineligible for federal aid.

Qualitative Elements of SAP for Clock Hour Programs:
Dietetic Internship

Dietetic Internship SAP Policy

Grading Scale for Dietetic Internship –

Scale	Grade	GPA
90-100%	A	4.0
80-89%	B	3.0
70-79%	C	2.0
0-69%	F	1.0
	P	Pass - Any course with a "P" grade is not calculated into the grade point average.
	F	Fail - Any course with an "F" grade is not calculated into the grade point average. However, the course must be repeated and passed to graduate.
I	Incomplete - May be used at the discretion of the instructor in those cases in which the student is not able to complete work in the normal time. In those instances, the student and instructor develop a written plan for an extension to provide work by a specific date that falls within the period of time specified by the relevant program's requirements (but in no circumstances greater than one month). An "I" that is not replaced by a letter grade within the period of time specified by the relevant program's requirements, due to unsatisfactory completion of the student's plan, will be changed to an F after the period specified by the program (a period not to exceed one month). Any course with an "I" grade is not calculated into the grade point average. Once a grade is assigned to the course (when conditions are met that allow for the removal of the "I" and assignment of a final grade), that grade will factor into the student's GPA.	
W±	Withdrawal – Utilized when a student leaves the course due to an approved leave-of-absence or withdraws from the school prior to the scheduled completion of a course. Any course with a "W" grade is not calculated into the grade point average.	

Minimum Average Required for Satisfactory Academic Progress for Dietetic Internship

Program Name	Term 1	Term 2	Term 3	Term 4
Dietetic Internship	75% average (rotations & assignments)	75% average (rotations & assignments)		

Quantitative Elements of SAP for Dietetic Internship

For all programs, the quantitative measurement of SAP consists of a student's satisfactory completion of program hours, based on a rate-of-progress calculation. The rate of progress calculation is the percentage of total hours completed of those hours the student has attempted. This measurement ensures that all students progress at a rate sufficient to allow them to complete their programs within the maximum time allowed. Each program establishes a number of hours to be attempted and a number required to be completed for the student to maintain Satisfactory Academic Progress. More information is available in each program's section in this catalog, but an outline of program requirements is presented in the following table.

Program Name	Term 1	Term 2	Term 3	Term 4
Dietetic Internship	600 of 1200 hours completed	600 of 1200 hours completed		

Credit Hour Definitions for All Credit Hour Programs

CPiAH adheres to the following definitions and uses the formula in calculating credit hours awarded on a course-by-course basis:

Semester Credit Hours (Perfusion, Nuclear Medicine Technology, and Medical Laboratory Science)
Semester - minimum of 15 weeks in length. One semester credit is equal to:

a. one hour of lecture per week for a semester or the equivalent number of hours.
b. two hours of lab per week for a semester or the equivalent number of hours.
c. three hours of externship/clinical per week for a semester or the equivalent number of hours.

Quarter Credit Hours (Diagnostic Medical Sonography)
Quarter - minimum of 10 weeks in length. One quarter credit is equal to:

a. one hour of lecture per week for a quarter or the equivalent number of hours.
b. two hours of lab per week for a quarter or the equivalent number of hours.
c. three hours of externship/clinical per week for a quarter or the equivalent number of hours.

An example of the calculation is as follows:

Quarter System
6 hours lecture = 0.60
25 hours lab = 1.25
70 hours externship = 2.30
Total = 4.15

Semester System
6 hours lecture = 0.40
25 hours lab = 0.83
70 hours externship = 1.55
Total = 2.78

Partial credits for a course are rounded to the next lowest half or whole number. A course may be comprised of any combination of lecture, laboratory, and/or externship. Care is taken in scheduling breaks.

If a program offers both a distance education and a traditional campus-based component, the quality of the education and credit awarded is equivalent in all three aspects of the curriculum: didactic, laboratory, and clinical.

Non-Credit / Remedial Courses / Proficiency Credit

VUMC does not offer non-credit or remedial courses, or grant proficiency credit.

Student Grievance Concerning Grades

Students should seek redress of a problem with a grade as soon as possible after receiving it and not later than one (1) week after it is released. Students should confer directly with the course director about grade concerns. Every effort should be made to resolve the problem fairly and promptly at this level. If the student cannot resolve the problem through discussion with the course director, the student should formally request an appeal from the Program Director within one (1) week of talking with the course director. If the Program Director is the course director in question, the appeal should be made to the Director of the Center for Programs in Allied Health. The decision of any appeal is final.

Transfer and Readmitted Students/Students Changing Majors

If a student transfers to VUMC from another postsecondary institution, the transfer credits accepted by VUMC will count as credits attempted and completed for calculating the student's quantitative progress. The corresponding grades will not count toward the student's qualitative progress.

If a student is re-admitted into VUMC, changes program of study, or seeks to earn an additional credential, the credits that are applicable to the student's current program of study will be included in determining the student's satisfactory academic progress standing and the appropriate evaluation level for the student in terms of establishing the total number of credits attempted and completed at each of the student's evaluation periods. Students may repeat a course in accordance with the VUMC academic policy. Credits from both course attempts will be counted in total credits attempted and in minimum cumulative credits completed at VUMC, but only the highest grade earned will be included in the calculation of minimum cumulative GPA. Credits from both course attempts will also count towards the Maximum Time frame for Completion.

Progress Evaluations

Students are notified in writing should they fail to meet the minimum standards of Satisfactory Academic Progress during an evaluation period/term. Students who fail to maintain SAP in an evaluation period are placed on SAP Warning, unless there are two or fewer terms left in the program following the term for which the evaluation is provided, in which case the student will be placed on Academic Probation. More information on Academic Probation is contained in the Academic Probation section of this catalog.

SAP Warning

Each program establishes a timeframe for its SAP warning period, but in no case does a SAP warning period last more than one term. Student loan funds may be disbursed during SAP warning periods. When placed on SAP warning, students are provided notification in writing that outlines the reasons why the student has been placed on SAP warning and the requirements the student must meet in order to be removed from SAP warning (an "Academic Plan"). The Academic Plan is designed to bring the student into compliance with Satisfactory Academic Progress standards within a single term. The student's Academic Plan and progress toward its completion will be reviewed with the student during the period of SAP Warning according to the details of the Plan.

At the end of the warning period, if the minimum standards of Satisfactory Academic Progress are not met, a student will be placed on Academic Probation. Students who satisfy the conditions of SAP at the end of the Warning period will be returned to Satisfactory Academic Progress status. School personnel, including the appropriate instructor, the Program Director, the Assistant Director, and/or the Director of the Center for Programs in Allied Health are available to discuss any concerns students may have.

Academic Probation

Students failing to maintain Satisfactory Academic Progress as defined by their program may be placed on academic probation. When placed on academic probation, students are provided written notification that outlines the reasons why the student has been placed on probation and the requirements the student must meet in order to be removed from probation (an "Academic Plan"). The Academic Plan is designed to bring the student into compliance with Satisfactory Academic Progress standards within a designated period of time as defined by the Program Director. The student's Academic Plan and progress toward completion will be reviewed with the student during the period of Probation according to the details of the Plan.

Students are not allowed more than one probation period while enrolled in their program. Students on probation who do not successfully complete the terms of their Academic Plan will be provided with the opportunity to withdraw. If the student refuses to withdraw, he or she will be dismissed from the program. Students on probation who successfully complete the terms of their Academic Plan will return to Satisfactory Academic Progress standing, and academic probation status will be removed.

Academic Probation Appeal

Students who have been placed on academic probation may appeal the probation decision. To do so, the student must submit an appeal request to the Director of the Center for Programs in Allied Health in writing (email is acceptable) within five (5) working days of being placed on probation.

The appeal request must include:

- Information about the circumstances or events that prevented the student from maintaining Satisfactory Academic Progress, and
- What changed in the student's situation to allow the student to be successful in the future?

The student may submit documentation along with the appeal request. The Director of the Center for Programs in Allied Health will review and discuss with involved faculty and staff. The student will be notified of the appeal's outcome in writing within five business days of the submission. The decision of the Director of the Center for Programs in Allied Health is final.

If the appeal is not successful, probation status will continue until 1) the student meets the requirements of the Academic Plan and returns to Satisfactory Academic Progress status, or 2) the student fails to meet the requirements of the Academic Plan and subsequently withdraws or is dismissed from the program. If the appeal is successful, the student will not be placed on probation, but the program may impose requirements the student must complete to return to Satisfactory Academic Progress.

Student Dismissal Policy

Students who have been placed on probation and do not return to Satisfactory Academic Progress (SAP) status within the time required by their Academic Plan will be given the opportunity to withdraw or be dismissed from the program. Students may also be dismissed from the program after a period of temporary suspension. Student dismissal requires immediate return of student ID, books, equipment, or other materials issued by VUMC.

VUMC programs pursue dismissal only after a student has been given a reasonable period of warning and/or probation to address deficiencies. Dismissal may also be recommended at any time for a student who demonstrates either a singular egregious behavior or is involved in one or more serious incidents inconsistent with the expectations for students of VUMC, or in violation of VUMC policy.

A decision to pursue dismissal requires participation of the program director, relevant program faculty and administrators. The Program Director will meet with the student to hear the student's explanation, including any mitigating circumstances in the situation. The Program Director will then meet with relevant program faculty and administrators to consider factors in the situation and render a determination. The dismissal decision is described

in a notice to the student written by the Program Director. This communication is presented to the student, in person whenever possible, by the Program Director, although an in-person meeting may not be possible in all cases.

Student Dismissal Appeal

A student who is dismissed from a VUMC program has the right to appeal. Each appeal is decided on an individual basis. The process for appealing a dismissal decision is as follows:

- The student must submit a written appeal to the Director of the Center for Programs in Allied Health. The appeal must be submitted at least 30 days prior to the start of the term in which the student wishes to be granted entrance into the program.
- Appeals must include a detailed explanation of the circumstances related to the dismissal. As relevant, such appeals should include official/professional documentation (i.e., medical records, court documents, or any other documentation which would support an appeal).
- The appeal will be reviewed by the Director of the Center for Programs in Allied Health and approved or denied based on the student's individual circumstances, past academic record, and potential to successfully complete the program.
- The Program Director will provide a written decision to the student within fourteen (14) business days. The decision on the dismissal appeal is final.
- If the student can re-enroll, the Program Director may place conditions that the student must meet to be reinstated. The Program Director may also reinstate the student on a probationary basis. Reinstatement is based on class and space availability.
- If reinstated students are required to repeat coursework, it must be satisfactorily completed to continue in the program.
- Reinstated students must maintain VUMC student financial accounts in good standing and may not default on any loan.

VUMC reserves the right to terminate a student's enrollment if, during the student's program of study, VUMC determines that the student has failed to maintain the minimum standards of satisfactory academic progress or has reached the maximum timeframe (150% of the program credits/hours) without successfully completing the program; failed to comply with the VUMC rules and regulations as published in VUMC's Catalog; or has failed to meet their financial obligations. Any refund due to the student or other agencies will be calculated and refunded according to the Tuition Refund Policy. A student who has been dismissed for failure to maintain SAP may reapply for admission. A student making an application for re-admission must first satisfy all current requirements for admission. In addition, if a student's enrollment was terminated for failure to maintain SAP, the applicant's academic records will be evaluated to determine if it is possible for a satisfactory cumulative grade point average to be achieved and if the program can be completed within the maximum time frame.

Temporary Student Suspension

VUMC reserves the right to temporarily suspend a student for conduct disrupting or otherwise negatively affecting the learning environment, pending consideration of the student's situation by the Program Director and other relevant program faculty and administrators. The Program Director will notify the student in writing of the temporary suspension conditions. If the student is reinstated, the student will work with the Program Director to address any course work missed during the suspension.

Maximum Time to Complete Program

All students are expected to complete their program of study within an acceptable period of time, as defined by each program, but in no case to exceed 150% of normal program length. Students failing to complete their program of study within the maximum time will be dismissed from the program. These students are not eligible for reinstatement.

Time spent in any of the following situations/activities counts toward the maximum time to complete VUMC programs:

- Courses for which a grade of incomplete or failure was recorded
- Courses from which the student withdrew
- Repeated coursework (e.g., following prior failure of the course)
- Time in a VUMC-approved leave-of-absence.

STUDENT POLICIES

Attendance

Attendance is an essential component of success in VUMC programs. Students enrolled at the institution make a commitment to participate fully in their education by attending classes, clinical rotations, and other educational activities as required by their program of study, and accounting for any absences according to program policy. Each program establishes its detailed tardiness, absence and make-up time policies and procedures. Please refer to the program-specific Program Handbook for more information.

Clock hour programs are required to complete **all** specified clock hours to successfully complete their program of study. Refer to the specific program sections for number of clock hours required for completion. It is the student's responsibility to address any issues related to his/her attendance. The Program Director and the instructor/preceptor will meet to determine the number of hours required to be made up by the student to meet graduation requirements.

All programs have processes to allow for absence in cases of emergency, of illness, of the death of a close relative, or when observing a religious holiday. See program-specific information in this catalog for further details. Each program has policies regarding unexcused consecutive absences and consequences for such, up to and including dismissal from the program.

Leaves of Absence

VUMC offers students the option to take a leave of absence from study at VUMC for medical, family, or other reasons. Students must request the leave of absence in advance, except in emergency cases. The student must submit a written request to the Assistant Director, indicating the beginning and ending dates of the leave. Additional documentation to support the request may be required (e.g., medical records, legal records). Each student's request is evaluated on an individual, case-by-case basis.

A student may be granted a leave of absence not exceeding 180 calendar days in a 12-month period. Students may take no more than one leave of absence while enrolled in a VUMC program. Time spent in a VUMC-approved leave-of-absence counts toward the maximum allowable time to complete any VUMC program. Exceptions cannot be made to each program's maximum time for completion (150% of normal program length) for student leave-of-absence or for any other reason.

Academic plans are developed to accommodate students' needs upon returning from leave of absence. At the discretion of the Program Director, students returning from a leave of absence may be required to complete coursework in a different academic year than the one in which they matriculated. Students may be required to present medical documentation to return from medical leave-of-absence.

If a student does not return on the documented return date, they may be dismissed from the program. Students who are eligible to register in the term following the leave but do not do so may be unenrolled and may be required to re-apply to the program. Programs may require students to complete some or all coursework, clinical rotations and other educational activities.

Time spent in leave-of-absence counts toward the maximum time allowed to complete VUMC programs. It is the student's responsibility to be aware of these limits for the program in which the student is enrolled.

Copyright Infringement Policy

VUMC expects all VUMC faculty and staff members, as well as all students, to comply with Federal law for the use of copyrighted material when using VUMC's computers, networks, and copiers. Unauthorized use of copyrighted material is illegal, regardless of whether that use is by a faculty, staff member or a student. All faculty, staff, and students are expected to be aware of and follow laws around the use of copyrighted materials. Any member practicing unauthorized use or distribution of copyrighted material is subject to sanctions by VUMC, up to dismissal or termination. Violators are also subject to Federal criminal penalties for copyright law violations. The following web link provides further information on copyright law: https://www.copyright.gov/help/faq/index.html

Surveys of Enrolled Students and Graduates

Vanderbilt University Medical Center conducts surveys of enrolled students, graduates, and others to continuously learn about its effectiveness and guide improvements on both the institutional and program levels. Feedback from current students and graduates is critical to understanding the performance of the institution and the programs. Students and graduates are encouraged to participate in these surveys, given the importance of this feedback.

Surveys of students and graduates include at least:

- Course evaluations (administered by the Center for Programs in Allied Health following conclusion of courses)
- Student satisfaction survey (administered by the Center for Programs in Allied Health at least once a year)
- Graduate satisfaction survey (administered by the Center for Programs in Allied Health at least once a year)
- Program-specific surveys of students (details are available in each program's Program Handbook)

Employment While Enrolled at VUMC

Many students work while enrolled at VUMC. Each program may establish its own policies regarding types of employment that pose a conflict with the student role, scheduling requirements, and other issues related to student work. In addition, each program may establish its own procedures related to student compliance with program policies (e.g., disclosure requirements). For additional information on working while enrolled at VUMC, prospective and current students should refer to the Program Handbook for the appropriate program(s).

Student Records

Student records are maintained for a minimum of five years from the end of the VUMC fiscal year July 1 – June 30) during which a student was last enrolled, with transcripts being maintained permanently.

Central student files are retained in the administrative office of the Center for Programs in Allied Health, secured under lock. Program Directors also maintain some student records, also secured under lock. The student has the right to inspect academic and financial records by appointment with the administrative office of the Center for Programs in Allied Health. Student files may not be removed.

Transcripts/Verification Statements

Permanent transcripts are maintained by the Center for Programs in Allied Health. The Dietetic Internship provides a verification statement that serves as the equivalent of the transcript for all ACEND-accredited internship programs, including the VUMC Dietetic Internship. Students are provided with one official transcript (or verification statement, in the case of the Dietetic Internship) at graduation. Additional copies may be requested by completing a transcript request form found on the VUMC-CPiAH website at https://www.vumc.org/allied-health/transcript-request

Students who completed a VU Allied Health program prior to 2016-2017 may submit a Transcript Request Form found on the VUSM website at https://medschool.vanderbilt.edu/explore-vusm/enrollment-services/ by mail, fax, or email to: Vanderbilt University Office of Enrollment Services, 224 Eskind Biomedical Library, Fax: 615-343-2313, medverify@vanderbilt.edu

Official Program Communications

Vanderbilt University Medical Center delivers required communications with students via each student's official VUMC email account. Official electronic notifications including those required by VUMC policy, will be sent to students' VUMC email addresses. Students are required to be familiar with the contents of official VUMC notifications, and to respond to instructions and other official correspondence requiring a response. VUMC makes every effort to avoid inundating students with nonessential email (often called "spam") and maintains separate lists from which students may unsubscribe for announcements of general interest.

Change of Contact Information

Students are responsible for updating their student profile in Orbund Student Information System (SIS) immediately of any change of mailing address, email address, telephone number or emergency contact.

Course Syllabus Policy

Each didactic and clinical course director must provide a written syllabus to each student at the outset of the course or clinical experience. In this syllabus, the student will find all pertinent information for course objectives and requirements, and grading information. The instructor will review and explain the syllabus contents at the outset of the course or rotation. The student is responsible for understanding and following the guidelines in the syllabus. If a student feels the instructor has violated content provided in the syllabus, they may file a complaint under the Grievance Policy outlined in this catalog.

Dress Code and Personal Appearance

Students must dress professionally, in keeping with VUMC institutional dress code. Uniforms or scrubs may be required for some programs. Please refer to information from programs regarding specific dress requirements based on learning setting.

- Identification badges are worn in clear sight above the waist with name, title, and picture clearly visible.
- Clothing is well-fitting, clean, and free of holes, tears or other signs of wear
- Clothing is not tight, sheer, or revealing (leggings allowed if worn with attire that is mid-thigh in length)
- Tops are not backless, midriff, strapless, off the-shoulder, or spaghetti strap
- Clothing does not restrict proper handwashing technique (e.g., thumb shirts/sweaters)
- Closed toe shoes, clean and in good condition
- Hats, caps, bandanas, hair bags/shower caps are not worn when in buildings unless for medical condition, safety purposes, or established religious customs
- No heavy perfume, cologne, or scents
- No visible body piercing/jewelry except for ears/nose with simple (i.e., stud or tiny) earrings
- No visible tattoos on face; no other visible tattoos that are obscene, commonly associated with gangs, extremists, and/or supremacist organizations, or that advocate sexual, racial, ethnic, or religious discrimination
- Jeans of any kind are not permitted, denim or colored
- No sports attire (e.g., athletic sportswear, including hoodies), unless part of unit approved VUMC uniform
- Hair is clean and contained in such a manner that it does not come in contact with a patient or visitor.
- Fingernails are kept clean and no longer than 1/16 inch from fingertip. Fingernails of the appropriate length are barely visible when viewed from the palm surface of the hand. Artificial nails are prohibited for individuals with direct patient care responsibilities. Artificial fingernails include, but are not limited to, acrylic nails, all overlays, tips, bondings, extensions, tapes, inlays, and wraps. Nail jewelry is not permitted. Nail polish, if worn, is well maintained. Chipped nail polish is not allowed.
- Reasonable accommodations can be made for medical and or religious/spiritual/deeply held personal beliefs unless such accommodations pose a risk to the safety or health of the individual or others

News/Media Inquiries

Contact with the news media regarding Vanderbilt University Medical Center must be cleared through the VUMC Office of Public Affairs. If you should receive a request from newspaper, television, social media, or radio reporters, contact the Office of the Center for Programs in Allied Health, who will clear this through the Office of Public Affairs. This ensures a more accurate flow of information. No contact with the news media related to VUMC or affiliated facilities should take place without the express written consent of the Director of the Center for Programs in Allied Health.

Personal Possessions

Vanderbilt University Medical Center and affiliated institutions are not responsible for loss of, or for damage to, any personal possessions brought to the Medical Center, University campus or affiliated facility. It is advisable to bring only the amount of money you will need for the day you are on duty. Keep money with you or in a secure (preferably locked) location. Valuable coats, watches, jewelry, or other valuable items should be left at home for safekeeping. Check with designated affiliate staff members regarding personal belongings storage space at external affiliation locations.

Smoking/Tobacco Policy

As a premier research enterprise and health care provider, VUMC recognizes the effects and costs of smoking, tobacco, and nicotine use on our society. VUMC is committed to promoting a healthy environment for its staff and visitors without the hazards associated with these products. This policy establishes VUMC as a smoke-free institution and includes cigarettes, tobacco, and devices such as e-cigarettes, pipes, vaporizers. The use of these items is prohibited in all property owned by VUMC including vehicles and property leased by VUMC, campus grounds, parking lots, garages, plazas, courtyards, except in locations that have been designated for smoking and related devices.

Smoking restriction is within two hundred (200) feet of all entrances to the Vanderbilt University Medical Center Facilities. A violation is a misdemeanor, carrying a $50 fine and Vanderbilt University Police Department (VUPD) enforces the ordinance as appropriate. (See Ordinance No. BL 2012- 115.)

The sale of smoking/tobacco material is prohibited in all VUMC facilities.

Alcohol/Drug Use and Under-the-Influence Policy

In compliance with the 1990 Federal Drug-Free Schools and Campuses regulations, Vanderbilt University Medical Center enforces the following policy; VUMC prohibits the unlawful possession, use or distribution of alcohol and illicit drugs by students and employees on its property or as part of any VUMC-sponsored activity. The prohibition extends to off-campus activities that are officially sponsored by VUMC, its departments or organizations. In addition, the prohibition extends to off-campus professional or organizational activities, including attendance at conferences, when participation is sponsored by VUMC, or when the participant is representing VUMC. Finally, the prohibition extends to “private” events off campus where VUMC may have an interest.

Students in VUMC programs may be asked to participate in a drug screen. The drug policy is intended to comply with all state laws governing drug and alcohol screening and is designed to protect the students’ right to privacy. The following behaviors are unprofessional and will subject the student to severe disciplinary action, up to and including dismissal from the program.

- Possession or use of alcohol or illegal drugs while on campus or clinical affiliate premises.
- Being under the influence of alcohol or illegal drugs while on campus or clinical affiliate premises, specifically while performing duties in patient care areas, surgical operating rooms or attending program related functions.
- Conviction of a crime related to possession, use or distribution of illegal drugs while enrolled in the program.

Services for persons needing assistance around substance use, dependence or abuse are encouraged to reach out for assistance. VUMC Center for Programs in Allied Health offers its students access the VUMC an Employee Assistance Program, known as Work/Life Connections-Employee Assistance Program (EAP), more information can be found under the student services section of this catalog.

The following is a summary of Tennessee and federal sanctions for the unlawful use of illicit drugs and alcohol. While the summary is a good faith effort to provide information, VUMC does not guarantee that it is an error-free or exhaustive accounting. Under federal law, a civil penalty of up to $100,000 and imprisonment of up to one year may be imposed for simple possession of certain specified controlled substances. Possession of crack cocaine may lead to civil penalties of up to $250,000 and imprisonment of up to twenty years. Also, possession of a controlled substance can result in the denial of federal benefits, such as student loans, grants, contracts and professional and commercial licenses, and the forfeiture of personal property and real estate used to transport, conceal, or facilitate such possession. In addition, possession of a controlled substance can lead to ineligibility to receive or purchase a firearm.

Under federal law, it is unlawful to manufacture, distribute, dispense, deliver, sell, or possess with intent to manufacture, distribute, dispense, deliver, or sell controlled substances. The penalty imposed depends upon many factors that include the type and amount of controlled substance involved; the number or prior offenses, if any; whether death or serious bodily harm resulted from the use of such substance; and whether any other crimes were committed in connection with the use of the controlled substance. Even a first-time violation can result in life imprisonment; a fine of up to $4,000,000 per individual; supervised release; or any combination of these penalties. These sanctions are doubled when the offense involves either: (1) distribution or possession at or near a school or university campus, or (2) distribution to persons under 21 years of age. Repeat offenders may face greater penalties.

Under Tennessee law, it is unlawful for any person under the age of 21 to buy, possess, transport (unless in the course of their employment) or consume alcoholic beverages, including wine or beer. It is unlawful for any adult to buy alcoholic beverages for or furnish them for any purpose to anyone under 21 years of age. These offenses are classified as Class A Misdemeanors punishable by imprisonment for not more than eleven months and twenty-nine days or a fine of not more than $2,500 or both. The offense of public intoxication is a Class A Misdemeanor punishable by imprisonment of not more than thirty days or a fine of not more than $50 or both.

Under Tennessee law, the offense of possession or casual exchange of a controlled substance (such as marijuana) is punishable as a Class A Misdemeanor (eleven months, twenty-nine days and/or a fine of $2,500). For the third and subsequent offense of possession of ½ oz. or less of marijuana, punishment is one to six years of imprisonment and a $3,000 fine. If there is an exchange from a person over 21 years of age to a person under 21 and the older person is at least two years older than the younger and the older person knows that the younger person is under 21, then the offense is classified as a felony. Possession of more than ½ oz. of marijuana under circumstances where intent to resell may be implicit is punishable by one to six years of imprisonment and a $5,000 fine for the first offense. Maximum Tennessee penalties for possession, manufacture, or distribution of substantial quantities of a controlled substance range from fifteen to sixty years of imprisonment and up to a $500,000 fine. The State of Tennessee may, under certain circumstances, impound a vehicle used to transport or conceal controlled substances.

Weapons Policy

Vanderbilt University Medical Center prohibits student possession of firearms or other dangerous weapons while on the VUMC Campus or at clinical affiliations. Any student found in violation of this policy will be subject to disciplinary action. If a student receives information or observes another individual, staff member or patient/family, possessing a firearm or dangerous weapon on one of the previously mentioned campuses he/she should report this immediately to a Clinical Instructor or another staff member in authority.

Firearms and other weapons are prohibited at Vanderbilt University Medical Center (VUMC), except by Law Enforcement Officers as defined by T.C.A. § 39- 17-1350(d). Primary exterior entry doors have signage posted with "No Firearms Allowed" in accordance with the Tennessee Code Annotated § 39-17-1359, it is an offense to possess a firearm in a building or on property that is properly posted in accordance with this section.

Other prohibited weapons per T.C.A. § 39-17-1302, are as follows:

- An explosive or an explosive weapon;
- A device principally designed, made, or adapted for delivering or shooting an explosive weapon;
- A machine gun;
- A short-barrel rifle or shotgun;
- A firearm silencer;
- Hoax device;
- Knuckles; or
- Any other implement for infliction of serious bodily injury or death that has no common lawful purpose.

Computer Use Policy

Students must adhere to all VUMC policies relating to computer systems use, both on campus and remotely. Students are required to adhere to the following Medical Center policies:

Responsibilities

Security of Information

1. Individuals using VUMC's electronic resources are responsible for maintaining the security of information stored on each system.
2. Individuals conducting Vanderbilt business may not use a personal email address. All electronic business communications must be conducted through an approved VUMC email address.
3. Students may only use electronic resources for which access is approved. A student has the responsibility to notify his/her supervisor if he or she has access to resources that are not necessary to perform his or her job, for which the student's authorization has expired, is given by mistake, or is otherwise unauthorized or excessive.
4. Confidentiality of systems' accounts, passwords, personal identification numbers (PINS) and other types of authentications assigned to individual users must be maintained, protected, and not shared. Students may not use authentications that are not their own. Students may not use electronic systems or equipment while signed in under another student's account or password unless given express authorization under extraordinary circumstances by their supervisor/manager. Responsibility for activity which occurs under a user-assigned authentication rests with the user to whom the authentication is assigned.
5. Individuals need to be aware of computer malware, such as viruses, spyware, trojans, root kits, and other destructive programs. Individuals should contact their technical support person for minimum security recommendations to prevent damage to VUMC's data, equipment, and systems.
6. VUMC resources must not be used by anyone to gain or attempt to gain unauthorized access to confidential information.
7. Deliberate or inappropriate propagation of any destructive or information gathering tools or disregard for minimum security recommendations that impact confidentiality, availability, or integrity of VUMC systems and/or data, including but not limited to, viruses, keyboard loggers, packet sniffers, etc., is prohibited

Inappropriate Activity on Systems Outside VUMC

When using outside electronic communication systems that are accessible to others, including web logs (blogs), internet chat rooms or bulletin boards, or social networking sites, staff may not engage in the following activities, to the extent they are not considered protected concerted activity:

1. Simultaneously identify oneself as a VUMC student and send, solicit, or display materials that are offensive, including sexually oriented material, graphic depictions of violence, or material that offends or harasses on the basis of race, sex, religion, color, national or ethnic origin, age, disability, leave status, veteran status, military service, sexual orientation, gender identity, gender expression or genetic information.
2. Unprofessional communication that it intentionally false, recklessly disloyal that negatively impact VUMC's reputation or interfere with VUMC's core mission, or unprofessional/inappropriate communication that is harassing, discriminatory or can viewed as a threat of violence.
3. Acting on behalf of VUMC or acting in a way that would cause others to believe that you are acting as a representative of VUMC when not authorized to do so (e.g., contacting the media or responding to investigations or complaints or questions about VUMC business on internet discussion groups on behalf of VUMC etc.).
4. Sending, receiving, printing or otherwise disseminating proprietary data, trade secrets or other confidential non-public information of VUMC in violation of VUMC policy, proprietary agreements, or other contractual terms. Using VUMC-owned data or work product for personal gain. Using VUMC trademarks (name, logos), or branding for commercial purposes without authorization from the Office of Trademark Licensing. For more information about the scope of VUMC's ownership of data and work product, see the Vanderbilt Policy on Technology and Literary and Artistic Works located on the Center for Technology Transfer and Commercialization's website.
5. Inappropriately sharing or posting confidential information related to VUMC business, including but not limited to, research material, proprietary processes, business plans and/or patient information. This includes sharing or positing photos of a patient or partial information even when names of patients or faces are not used.
6. Any activity in violation of local, state, or federal law as it relates to the student's enrollment at VUMC, including but not limited to maliciously false statements; destruction of VUMC data or equipment; or accessing or sharing information in violation of HIPAA (Health Insurance Portability and Accountability) or FERPA. This includes any activity that would cause VUMC to not be in compliance with state or federal law

Social Media Policy

This policy is intended for internet activities that associate or identify VUMC personnel with VUMC, use VUMC email addresses, or discusses VUMC. In keeping with the Electronic Communications and Information Technology Resources policy (HR-025), VUMC email addresses should not be used with unofficial or personal social media accounts and profiles. This policy is not intended to guide online communications when students do not associate or identify themselves with VUMC.

Online social media allows VUMC personnel to engage in professional and personal conversations. These guidelines apply to VUMC employees (including faculty, staff, students, and house staff) who identify themselves with VUMC in social medical venues such as professional society blogs, LinkedIn, and/or Facebook, for deliberate professional engagement or casual conversation.

Because of the evolving nature of social media platforms, these guidelines do not attempt to name every current and emerging platform. Rather, they apply to those cited and any other online platform available and emerging, including social networking sites and sites with user-generated content. Examples include, but are not limited to the following: a. You Tube; b. Facebook; c. Instagram; d. TikTok; e. LinkedIn; f. Twitter; g. Blogs; and h. social media content that is hosted internally and protected by VUMC ID/Password.

1. Follow the same VUMC Credo behavior, HIPAA*, Conflict of Interest policy, Privacy and general civil behavior guidelines cited above including respecting copyrights and disclosures, and not revealing proprietary financial, intellectual property, patient care, or similar sensitive or private content. *Note: Examples of specific HIPAA violations include: posting a photo/video recording of a patient; referring to a patient by name; posting a diagnostic image or chart; describing a patient encounter with enough detail that someone who knows the patient would be able to identify them; responding online to a post or patient about their health care.
2. If student identify themselves as a member of VUMC in any online forum, they make it clear that they are not speaking for VUMC, and what they say represents their individual personal views and opinions and not necessarily the views and opinions of VUMC. This can be accomplished by including the phrase "views my own" in the social account bio information. Personal social media handles and avatars/profile images should not include any of Vanderbilt University's registered marks, including logos or the words Vanderbilt, VUMC, Vandy, a V that clearly implies Vanderbilt or other iterations.
3. VUMC students are thoughtful about how they present themselves in online networks. By virtue of identifying oneself as a part of VUMC in such a network, students connect themselves to, and reflect upon, VUMC colleagues, managers, VUMC patients and donors, and the health care and biomedical research professions.
4. Remember that all content contributed on all platforms becomes immediately searchable and can be immediately shared. This content immediately leaves the contributing individual's control forever.
5. If someone or some group offers to pay a student for participating in an online forum in their VUMC role, and/or offers advertising for pay and/or for endorsement, this could constitute conflict of interest, and VUMC policies and guidelines apply. If a member of VUMC's workforce is compensated financially or in product as an "influencer," this should be discussed with their supervisor or department chair (in case of faculty) to avoid a conflict of interest.
6. If someone from the media or press contacts about posts made in online forums that relate to Vanderbilt University or VUMC in any way, students alert their program staff and contact VUMC News & Communications before responding.
7. If a patient or family member posts complaints about service or other issues, contact M&E's social media team via direct message: on Twitter @VUMCHealth or on Facebook/Instagram @VanderbiltHealth. Alternatively, between 8 a.m. and 5 p.m. on weekdays, an email to socialmedia@vumc.org may also be used, with "social media complaint" in the subject line.
8. Job postings follow VUMC's Human Resources (HR) established processes. Social Media may be used to share postings with individuals' professional networks but may not be used in place of HR processes but may be used to share official job postings with personal networks.

VUMC Emergency Preparedness

Students are introduced to VUMC emergency response policies and plans at orientation, and they are required to be familiar with and follow policies at all times. The VUMC Emergency Preparedness Guide can be found in the Program Director's office and throughout the hospital. While assigned at the Medical Center, students are expected to respond appropriately to any emergency in a timely and appropriate manner. The Medical Center Safety Guidelines may be accessed at https://www.vumc.org/emergency/welcome. Emergency preparedness policies and procedures are discussed during student orientation.

The following is a brief description of emergency codes that student may hear announced at the medical center:
STAT - medical emergency defined by location.
RED alert- Fire condition

- If the fire is in the immediate area – respond with R.A.C.E/P.A.S.S.
- If the fire is not in the immediate area – close doors and hallways and keep patients and visitors within the area.

Code Black – bomb threat
Code Silver – active shooter
Code Pink – Missing infant (<1 years old) identified by location and description

Code Purple – Missing child (1-12 years old) identified by location and description.
Code Walker – Missing teen/adult identified by location and description.
Yellow Alert – Potential emergency condition; prepare to activate emergency response.
Orange Alert – Emergency condition present; activate emergency response.
Yellow and Orange Alerts may be announced for the following emergency conditions:

- Mass Casualty
- Phone system outage
- Steam outage
- Electricity outage
- Medical Air
- Tornado
- Vacuum system outage
- Water outage
- Beeper system outage

Once the emergency has passed, announcements will be made to cancel the emergency response.

VUMC Exposure and Infection Control Policy

Students enrolled at VUMC will be at risk for exposure to potentially hazardous material, chemicals and blood-borne pathogens or other work-related injury. Occupational exposure occurs when there is a puncture, scratch, laceration, splash, prolonged skin contact or contact with broken skin involving blood, body fluids, or other potentially infectious materials. Among the hazards that a student may be exposed to are:

- Housekeeping and/or cleaning agents
- Flammable and/or explosive chemicals and gases
- Electrical or mechanical equipment
- Fumes
- Radiation
- Blood-borne pathogens

Students will be instructed in infection control, standard precautions, and workplace safety. If exposure or injury does occur during scheduled clinical education time, the student should follow the documented procedure for treatment.

1. Report the exposure/injury to the supervising staff IMMEDIATELY.
2. Take appropriate first aid measures (clean wound with soap/water; flush mucous membranes with water/saline for 15 minutes). If life-threatening, see Emergency Department (ED) physician immediately. If non-life threatening, seek treatment at the Occupational Health Clinic in the Medical Arts Building. If after-hours, seek treatment in the ED.
3. Get the name, medical record number and location of the exposure source, if the source is a patient.
4. Notify the Program Director.
5. Complete the Tennessee First Report of Injury and forward it to Risk Management within 48 hours.
6. It is the student's responsibility to report any exposure/injury to their instructor and Program Director. Any identified incident found not to be reported may result in disciplinary action, up to or including dismissal from the program.

Infection Control for Patients

During their normal program activities students will encounter patients who are in an immunosuppressed condition, putting these patients at a particularly substantial risk of contracting infectious diseases, including a cold, influenza, and other communicable diseases. To some patients such an infection could be life- threatening. Because of this, if a student suspect(s) he or she has acquired (or if he or she has been diagnosed with) an infectious condition, the student is prohibited from the clinical setting. This is essential to protect patients from infection by ill students. Any infectious condition should be reported by the student to the Program Director as soon as possible. Any student found to be withholding this type of information will face disciplinary action for unethical behavior. A clinical instructor who suspects that a student may be infectious may ask the student to leave the clinical setting and will notify the Program Director. After absence due to infectious disease, the student must be evaluated by a physician, and written permission from his/her physician must be obtained before returning to the clinical setting.

Mandatory Student Training Requirements/Compliance

Students participate in VUMC training modules related to patient safety, hygiene practices, professional conduct, etc., at the beginning of their enrollment and at certain intervals during enrollment. The specific modules required by each program vary. Program sections of this catalog and/or program/student handbooks outline specific requirements for each program. All students are required to take at least the following modules:

A. Safety Training – Infection control, fire safety, and OHSA requirements
B. Standards of Conduct (AIDET)
C. HIPAA Regulations (Health Insurance Portability and Accountability Act)

Maintenance of Program-Issued Equipment

All equipment – e.g., parking permits, ID badges, keys, etc. – remains the property of VUMC, and the student to whom such items are issued is responsible for their care and use. Failure to return school- or program-issued items as required will result in the student being liable for the cost of such items. Such fees will be assessed and paid prior to the student enrolling for the next term or, for students in their final term, before graduation.

Limits of Confidentiality

Imminent Harm to Self or Others. Consistent with Federal Law and Vanderbilt University Medical Center policy, VUMC may release student information normally considered confidential to appropriate individuals (e.g., health care personnel, police, etc.) if such information is necessary to protect the health or safety of the student or other individuals.

Program-Specific Policies, Rules and Regulations

In addition to the student policies listed in this catalog, each VUMC program has student policies and regulations that are detailed in program-specific documentation, including the program sections of this catalog, each program's student/program handbook, course syllabi, etc. All students are also required to abide by all rules and regulations of VUMC and of the program in which they are enrolled. Students will receive access to their program's student/program handbook at orientation and may request a copy at any time.

Catalog Changes

Information about the Center for Programs in Allied Health at Vanderbilt University Medical Center is published in this catalog, which contains a description of policies, procedures, and other information about the Center. Vanderbilt University Medical Center reserves the right to change any provision of the catalog at any time. Notice of changes will be communicated in a revised catalog, an addendum or supplement to the catalog, or other written format with an effective date. Students are expected to read and be familiar with the information contained in this catalog; in any revisions, supplements, and addenda to the catalog; and with all institutional and program policies. By enrolling in Vanderbilt University Medical Center, the student agrees to abide by the terms stated in the catalog and all VUMC and program policies.

STUDENT RIGHTS AND RESPONSIBILITIES

Student Rights

- Students have the right to an impartial, objective evaluation of their academic performance.
- Students shall receive in writing, at the beginning of each course, information outlining the method of evaluating student progress toward, and achievement of, course goals and objectives, including the method by which the final grade is determined.
- Students are treated in a manner conducive to maintaining their worth and dignity. Students are not subject to any acts or threats of intimidation, harassment, mockery, insult, or physical aggression.
- Students are free from the imposition of disciplinary sanctions without proper regard for due process. Formal procedures have been instituted to ensure adequate notice and hearing for all students undergoing the disciplinary process.
- When confronted with injustices, students may seek redress through established grievance procedures. Details about these procedures are available in this VUMC Center for Programs in Allied Health (CPiAH) Catalog.
- Students may take reasonable exception to the data or views offered in any course of study and may form their own judgments, but they are responsible for learning the academic content of any course in which they are enrolled.
- Students will be given full disclosure and explanation of all fees and financial obligation to VUMC.
- Students have the right and responsibility to participate in course and preceptor evaluations and give constructive criticism of the services provided by VUMC.
- Students have the right to a quality education. This right encompasses quality programs; appropriate instructional methodologies and content; preceptors who have sufficient educational qualifications and practical expertise in the areas of instruction; the availability of adequate materials, resources, and facilities to promote the application of theory; and an environment that stimulates creativity in learning as well as personal and professional growth.

Student Responsibilities

- Students have the responsibility to conduct themselves in a professional manner at all times and to abide by VUMC and CPiAH policies.
- Students are punctual, attentive, and courteous in all classes, clinical rotations, and all other program activities.
- Students do not give or receive help during exams or on assignments (unless students are given permission to collaborate, such as with group assignments). Any student found to engage in these behaviors will be subject to disciplinary action, up to and including dismissal from the program.
- Unless explicitly permitted by an individual program or activity, cell phones and other electronic devices must be turned off during all learning activities.
- Children, family, or friends of students are not permitted in VUMC teaching areas unless expressly authorized in advance by VUMC CPiAH personnel.
- Animals are not allowed on VUMC premises, unless as a part of a plan for special needs accommodation developed in conjunction with VUMC CPiAH administration. Students must follow all VUMC health and safety standards and guidelines.
- Each program outlines additional rules of conduct, and students are required to abide by these rules, in addition to those above.
- Students conduct all relationships with the staff and faculty, their peers, and patients with honesty and respect.
- Students comply with instructions from faculty and staff members acting within the scope of their employment.

- Students have the right and responsibility to develop personally through opportunities, such as formal education, work and volunteer experiences, extracurricular activities, and involvement with others.
- Students are encouraged to apply creativity to their own learning processes while striving for academic and clinical excellence and to share their knowledge and learning.

Standards of Professional Conduct

To fulfill its health care mission of education, research and service to patients, VUMC adopts specific standards of ethics and conduct, which shall be followed by each member of the VUMC community. VUMC has created a standardized Code of Conduct, which provides a uniform set of guidelines that all VUMC faculty, staff and students must follow. Students are required to sign an acknowledgement of these standards during orientation. The full VUMC Code of Conduct is available at https://www.vumc.org/compliance/codeofconduct

In the VUMC Code of Conduct, the term "staff/faculty" includes VUMC faculty or staff members, as well as other persons who provide services at VUMC, including health care professionals with privileges at VUMC. The same level of conduct is expected of students.

Honor Code of the VUMC Center for Programs in Allied Health / Academic Integrity

Students are admitted into VUMC programs based on their level of maturity and desire to become health care professionals. They are expected to demonstrate the highest level of honesty and ethical behavior. Plagiarism and cheating will not be tolerated. Such acts (and acts such as those listed below) will warrant an investigation, and findings will be presented to the Director of the Center for Programs in Allied Health for review. Appropriate disciplinary action will be determined by the Director of the Center for Programs in Allied Health, in consultation with the Program Director and any course-related faculty. Students may appeal the decision of the Director of the Center for Programs in Allied Health to the VUMC Executive Vice President for Educational Affairs. The decision of the VUMC Executive Vice President for Educational Affairs is final.

Student probation or dismissal from the program may result from concerns such as the following (this list is not exhaustive, but is provided as an example of violations of academic integrity expectations):

- Violation of standards of professionalism and academic integrity
- Cheating on an examination, test, or written project
- Plagiarizing (incorporating into one's own work the work of another without identifying the source) in an assigned paper, report, or project
- Submitting work prepared by another person as one's own (including use of texts, papers, computer programs, or other class work prepared by commercial or noncommercial agents)
- Submitting work prepared for another course without the specific prior authorization of the instructor of the course for which work is to be completed.
- Falsely reporting personal illness or work hours
- Falsification of results of study and research
- Alcohol and /or other substance abuse
- Patient Confidentiality (HIPAA) Violations – Based on institutional policy, students violating HIPAA regulations relating to patient confidentiality may be placed on probation or dismissed from the program depending on the severity of the violation.
- Other actions that may warrant discipline ranging from probation to immediate dismissal from the program.
- Actions, including but not limited to dishonesty, violation of the law, material risks to Vanderbilt University Medical Center operations or to the safety or well-being of oneself or others.

Anti-Harassment, Nondiscrimination, and Anti-Retaliation

Vanderbilt University Medical Center (VUMC) is an Equal Employment Opportunity and Affirmative Action Employer. VUMC's Equal Opportunity and Affirmative Action Policy is reflected in the following statements (full policy is available online, at https://hr.vumc.org/policies/anti-harassment

It is important that Vanderbilt University Medical Center ("VUMC") faculty, staff and students enjoy an environment free from implicit and explicit behavior used to control, influence, or affect the well-being of any member of the VUMC community. Harassment of or discrimination against individuals based on their race, sex, religion, color, national or ethnic origin, age, disability, veteran status, or genetic information or any other characteristic protected under applicable federal, or state law is unacceptable and grounds for disciplinary action, and also constitutes a violation of federal and/or state law. Equally unacceptable within VUMC is the harassment of or discrimination against individuals based on their sexual orientation, gender identity, or expression.

For this policy's purposes, harassment is any verbal or physical conduct designed to threaten, intimidate, or coerce an employee, student, co-worker, or anyone working for or on behalf of VUMC. Verbal taunting (including racial and ethnic slurs) that, in the student's opinion, impairs his or her ability to perform his or her job is included in the definition of harassment.

Sexual Harassment
Sexual harassment is a form of sex discrimination. It is illegal under state and federal law and is a violation of VUMC policy. Sexual harassment is prohibited under Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendment of 1972, and other applicable federal and state laws. Sexual harassment may take different forms. The following examples of sexual harassment are intended to be guidelines and are not exclusive when determining whether there has been a violation of this policy:

- Verbal sexual harassment may include, without limitation, innuendoes, suggestive comments, jokes of a sexual nature, sexual propositions, lewd remarks, and threats; requests for any type of sexual favor (this includes repeated, unwelcome requests for dates); and verbal abuse or “kidding” that is oriented toward a prohibitive form of harassment, including that which is sexual in nature and unwelcome.
- Nonverbal sexual harassment may include, without limitation, the distribution, display or discussion of any written or graphic material, including calendars, posters and cartoons that are sexually suggestive or show hostility toward an individual or group because of sex; suggestive or insulting sounds; leering; staring; whistling; obscene gestures; content in letters and notes, facsimiles, e-mail, photos, text messages, tweets and Internet postings; or other form of communication that is sexual in nature and offensive.
- Physical sexual harassment may include, without limitation, unwelcome, unwanted physical contact, including touching, tickling, pinching, patting, brushing up against, hugging, cornering, kissing, and fondling and forced sexual intercourse or assault.

The Office for Civil Rights of the Department of Education sets forth sexual harassment under Title IX as conduct can include unwelcome sexual advances, requests for sexual favors, and other verbal, nonverbal, or physical conduct of a sexual nature by an employee, by another student, or by a third party that is sufficiently severe, persistent, or pervasive to limit a student's ability to participate in or benefit from an education program or activity, or to create a hostile or abusive educational environment.

Racial and Other Harassment in the Work Environment
Harassment against individuals based on their race, color, religion, or national origin is a form of unlawful discrimination and is prohibited under Title VII of the Civil Rights Act of 1964 and other applicable federal and state laws. When harassment based on an individual’s race, color, religion, or national origin has the “purpose or effect of substantially interfering with an individual’s work performance or creating an intimidating, hostile, or offensive working environment,” it rises to the level of unlawful discrimination. In addition, these principles apply to harassment based on age, disability, leave status and genetic information under the Age Discrimination in Employment Act, the Americans with Disabilities Act, the Family and Medical Leave Act and the Genetic Information Nondiscrimination Act, respectively. Finally, VUMC, through its nondiscrimination statement, applies these principles to harassment based on an individual’s sexual orientation, gender identity, and expression.

The following examples of harassment are intended to be guidelines and are not exclusive when determining whether there has been a violation of this policy:

- Verbal harassment includes comments that are offensive or unwelcome regarding a person's nationality, origin, race, color, religion, gender, sexual orientation, age, body, disability, or appearance, including epithets, slurs, and negative stereotyping.
- Nonverbal harassment includes distribution, display, or discussion of any written or graphic material that ridicules, denigrates, insults, belittles or shows hostility, aversion, or disrespect toward an individual or group because of national origin, race, color, religion, age, gender, sexual orientation, pregnancy, appearance, disability, sexual identity, marital or other protected status.

Discrimination
Discrimination against individuals based on their race, sex, religion, color, national or ethnic origin, age, disability, veteran status, genetic information sexual orientation, gender identity, or gender expression, or any other characteristic protected under applicable federal, or state law is unacceptable and grounds for disciplinary action, and also constitutes a violation of federal and state laws.

Retaliation
In compliance with the law, VUMC does not retaliate against individuals for 1) filing or encouraging one to file a complaint of unlawful discrimination or report of illegal activity, 2) participating in an investigation of unlawful discrimination, or 3) opposing unlawful discrimination. In addition, the VUMC does not retaliate against individuals for filing or encouraging one to file a complaint of discrimination, participating in an investigation of discrimination, or opposing discrimination based on grounds not necessarily protected by federal or state law, but protected by the VUMC's nondiscrimination policy such as sexual orientation. "Retaliation" includes any adverse employment action or act of revenge against an individual for filing or encouraging one to file a complaint of discrimination, participating in an investigation of discrimination, or opposing discrimination.

Complaint Procedure
Any member of the VUMC community who experiences harassment or discrimination based on his or her race, sex, religion, color, national or ethnic origin, age, disability, veteran status, military status, genetic information, sexual orientation, gender identity, or gender expression should report immediately by creating a case through Workday Help by logging in with their VUNet ID and Password or by contacting VUMC Employee & Labor Relations at 615-343-4759 or employeerelations.vumc@vumc.org.

FERPA Rights (Family Educational Rights and Privacy Act)

VUMC respects the rights and privacy of its students and acknowledges the responsibility to maintain confidentiality of personally identifiable information. The Family Educational Rights and Privacy Act (FERPA) is a federal law that affords students certain rights with respect to their educational records. FERPA defines the rights of students to review their records, request a change to their records, and provide written consent to disclose personally identifiable information to a third party. The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. The following link provides further information about FERPA: https://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html

The Family Educational Rights and Privacy Act (FERPA), also referred to as "The Buckley Amendment", afford eligible students certain rights with respect to their education records. (An "eligible student" under FERPA is a student who is 18 years of age or older or who attends a postsecondary institution.) These rights include:

1. The right to inspect and review the student's education records within 45 days after the day the Vanderbilt University Medical Center, Center for Programs in Allied Health receives a request for access. A student should submit to the VUMC CPiAH office a written request that identifies the record(s) the student wishes to inspect. The school official will make arrangements for access and notify the student of the time and place

where the records may be inspected. If the records are not maintained by the school official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of the student's education records that the student believes is inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA. A student who wishes to ask the school to amend a record should write the school official responsible for the record, clearly identify the part of the record the student wants changed and specify why it should be changed. If the school decides not to amend the record as requested, the school will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.
3. The right to provide written consent before the VUMC discloses personally identifiable information (PII) from the student's education records, except to the extent that FERPA authorizes disclosure without consent.

The Family Educational Rights and Privacy Act provides the VUMC the ability to designate certain student information as "directory information." Directory information may be made available to any person without the student's consent unless the student gives notice as provided below. VUMC CPiAH has designated the following as directory information: the student's name, addresses, telephone number, e-mail address, date and place of birth, field of study, school, classification, dates of attendance, degrees and awards received, the most recent previous educational agency or institution attended by the student, and other similar information. Any new entering or currently enrolled student who does not wish disclosure of directory information should notify their Program Director in writing. No element of directory information as defined above is released for students who request nondisclosure except in situations required by law. The request to withhold directory information will remain in effect as long as the student continues to be enrolled, or until the student files written request with their Program Director to discontinue the withholding. To continue nondisclosure of directory information after a student cease to be enrolled, a written request for continuance must be filed with their Program Director during the student's last term of attendance.

If a student believes VUMC has failed to comply with The Family Educational Rights and Privacy Act, he or she may file a formal written complaint with the Center for Programs in Allied Health, Vanderbilt University Medical Center, 1301 Medical Center Drive, B-802 The Vanderbilt Clinic, Nashville, TN 37232. The complaint will be investigated by the Director of the Center for Programs in Allied Health, and the requesting student will be notified of the outcome of the investigation. Students may also file a written complaint with the Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue SW, Washington, DC 20212-5920.

FERPA permits the disclosure of PII from students' education records, without consent of the student, if the disclosure meets certain conditions found in §99.31 of the FERPA regulations. Except for disclosures to school officials, disclosures related to some judicial orders or lawfully issued subpoenas, disclosures of directory information, and disclosures to the student, §99.32 of FERPA regulations requires the institution to record the disclosure. Eligible students have a right to inspect and review the record of disclosures. A postsecondary institution may disclose PII from the education records without obtaining prior written consent of the student:

- To other school officials, including teachers, within the VUMC, whom the school has determined to have legitimate educational interests. This includes contractors, consultants, volunteers, or other parties to whom the school has outsourced institutional services or functions, provided that the conditions listed in §99.31(a)(1)(i)(B)(*1*) - (a)(1)(i)(B)(*2*) are met. (§99.31(a)(1))
- To officials of another school where the student seeks or intends to enroll, or where the student is already enrolled if the disclosure is for purposes related to the student's enrollment or transfer, subject to the requirements of §99.34. (§99.31(a)(2))
- To authorized representatives of the U. S. Comptroller General, the U. S. Attorney General, the U.S. Secretary of Education, or State and local educational authorities, such as a State postsecondary authority that is responsible for

supervising the VUMC's State-supported education programs. Disclosures under this provision may be made, subject to the requirements of §99.35, in connection with an audit or evaluation of Federal- or State-supported education programs, or for the enforcement of or compliance with Federal legal requirements that relate to those programs. These entities may make further disclosures of PII to outside entities that are designated by them as their authorized representatives to conduct any audit, evaluation, or enforcement or compliance activity on their behalf. (§§99.31(a)(3) and 99.35)

- In connection with financial aid for which the student has applied or which the student has received, if the information is necessary to determine eligibility for the aid, determine the amount of the aid, determine the conditions of the aid, or enforce the terms and conditions of the aid. (§99.31(a)(4))
- To organizations conducting studies for, or on behalf of, the school, in order to: (a) develop, validate, or administer predictive tests; (b) administer student aid programs; or (c) improve instruction. (§99.31(a)(6))
- To accrediting organizations to carry out their accrediting functions. ((§99.31(a)(7))
- To parents of an eligible student if the student is dependent for IRS tax purposes. (§99.31(a)(8))
- To comply with a judicial order or lawfully issued subpoena. (§99.31(a)(9))
- To appropriate officials in connection with a health or safety emergency, subject to §99.36. (§99.31(a)(10))
- Information the school has designated as "directory information" under §99.37. (§99.31(a)(11))
- To a victim of an alleged perpetrator of a crime of violence or a non-forcible sex offense, subject to the requirements of §99.39. The disclosure may only include the final results of the disciplinary proceedings with respect to that alleged crime or offense, regardless of the finding. (§99.31(a)(13))
- To the general public, the final results of a disciplinary proceeding, subject to the requirements of §99.39, if the school determines the student is an alleged perpetrator of a crime of violence or non-forcible sex offense and the student has committed a violation of the school's rules or policies with respect to the allegation made against him or her. (§99.31(a)(14))
- To parents of a student regarding the student's violation of any Federal, State, or local law, or of any rule or policy of the school, governing the use or possession of alcohol or a controlled substance if the school determines the student committed a disciplinary violation and the student is under the age of 21. (§99.31(a)(15))

STUDENT GRIEVANCE POLICY

The purpose of the grievance policy is to provide a prompt and equitable means of resolving student grievances. This procedure is available to any student or applicant for admission, who believes a decision or actions, has adversely affected their status, rights, and/or privileges. VUMC strongly urges students who have a grievance to pursue the grievance until a satisfactory resolution is reached. Most grievances can be resolved at their origin, and it is suggested that students utilize the following procedure:

- Discuss the problem with the person directly involved. If in fear of safety or need to speak in confidentially, please inform the Program Director or other trusted program faculty member. If the program has program-level grievance procedures, those procedures should be followed before moving to an institutional level grievance (next step).
- If the concern is not resolved to the student's satisfaction by the Program Director (or otherwise at the program level), the student should submit the grievance in writing, and by appointment, meet with the Director of the Center for Programs in Allied Health regarding the unresolved concern, by mail to the Center for Programs in Allied Health, Vanderbilt University Medical Center, 1301 Medical Center Drive, B-802 The Vanderbilt Clinic, Nashville, TN 37232 or by telephone at (615) 875-3666.
- If at this time the grievance is not resolved, the grievance will be heard by the VUMC Executive Vice President of Educational Affairs (EVP-EA). The final decision of the EVP- EA will be provided to the Program Director and to the student within five business days. The decision of the EVP-EA is final.
- Any person claiming damage or loss as a result of any practice by this institution that may be a violation of the Title 49, Chapter 7, Part 20 or Rule Chapter 1520-01-02, students may file a complaint with the Tennessee Higher Education Commission, Division of Postsecondary State Authorization. The Tennessee Higher Education Commission can be contacted by telephone at (615) 741-3605 or by mail at Tennessee Higher Education Commission, 312 Rosa Parks Ave, 9th Floor, Nashville, TN 37243

FINANCIAL RESPONSIBILITIES

VUMC Program's cost of attendance for the academic year beginning July 1 – June 30 of the following year is as follows (tuition and fees other than Books/Laptop are not estimates; students will be responsible for the amounts for those items as they appear below):

Tuition and fees are made payable to VUMC, unless otherwise indicated.

CENTER FOR PROGRAMS IN ALLIED HEALTH					
2024 - 2025 COST OF ATTENDANCE					
	MEDICAL LABORATORY SCIENCE	**DIAGNOSTIC MEDICAL SONOGRAPHY**	**NUCLEAR MEDICINE**	**PERFUSION**	**DIETETIC INTERNSHIP**
TUITION	7,500	14,000	4,500	39,000	12,500
FEES	575	1,025	625	1,207	2,500
APPLICATION FEE	50	50	50	75	115
BOOKS, MATERIALS, SUPPLIES, & EQUIPMENT	2,157	2,475	3,176	5,207	1,698
LICENSURE/CERTIFICATION	350	725	425	700	450
LIVING EXPENSES (FOOD & HOUSING)	31,610	43,768	29,178	53,494	24,315
TRANSPORTATION & PARKING	5,748	7,647	5,401	9,367	8,706
MISC/PERSONAL	1,300	1,800	1,200	2,200	1,000
GRAND TOTAL	**$49,290**	**$71,490**	**$44,555**	**$111,250**	**$51,284**

*Please note that fees may vary by program.

Students are required to pay the tuition and fees for each term 2 weeks prior to the beginning of classes for that term. Students with an unpaid tuition balance may be ineligible to attend class unless other arrangements have been made with the Center for Programs in Allied Health.

Students are required to pay various fees to VUMC upon application, enrollment, and during the course of study. Other expenses not directly related to education, such as health insurance fees, housing, transportation, meals, etc., are considered when calculating the anticipated cost of attendance, but in some cases, they may not be payable to VUMC. See "third party expenses" for an estimate of these costs.

All other expenses related to attending the program are the responsibility of the student. Specific additional expenses vary by program and are outlined in the program section of this catalog. Examples of such expenses include, but are not limited to:

- Health insurance
- CPR certification
- Immunizations
- Uniforms
- Travel to and from clinical assignments
- Housing Expenses
- Meals
- Parking
- Books
- Professional Credentialing

Please check the relevant program section of this catalog for more information on fees specific to each program. There are no additional administrative fees related to distance/blended educational activities.

Student's Right to Cancel / Cancellation Refund Policy

A student has the right to cancel their program of instruction, without any penalty or obligations, through the third (3rd) business day after signing the enrollment agreement ("Cancellation Period"). Subsequent to this three-day cancellation period, but prior to the start of orientation/classes, the student may request cancellation and will receive a refund of all monies paid, less a non-refundable processing fee of $100 and any necessary deductions for books, equipment, supplies or services provided to the student by VUMC. All property of VUMC including the student issued ID badge must be returned in new condition, within five (5) business days after the notice of cancellation takes effect. After the end of the cancellation period, the student also has the right to withdraw from school at any time (please see "Withdrawal Policy", below).

- The written notice of cancellation if sent by e-mail communication is effective upon sent timestamp. If the written notice of cancellation is hand-delivered, it is effective when it is received by the Center for Programs in Allied Health.
    - E-mail: CPiAHadministration@vumc.org
    - Hand Delivery: 2215 Garland Ave, Nashville, TN 37232-0495 (Light Hall, Room 312)

Students who cancel according to the terms described above will be refunded within thirty (30) business days after notification of cancellation occurs.

Student Withdrawal from the Program / Withdrawal Refund Policy

A student may withdraw from the school at any time after the cancellation period (described above) and receive a pro rata refund of tuition and all fees not yet paid to a third party by VUMC on the student's behalf if the student has completed sixty (60) percent or less of the scheduled program hours in the current payment period for credit-hour programs or sixty (60) percent or less of the scheduled program hours for clock-hour programs. The percent completed is based on the last day of documented attendance. The refund will be less a processing fee not to exceed $100, and less any deduction for books, equipment, or supplies (not including scrubs or lab coat) provided by the program but not returned in new condition, within five (5) business days of withdrawal. If the student has completed more than 60% of the current payment period, the tuition is considered earned, and the student will receive only a refund of fees that have not been paid to a third party by VUMC on the student's behalf.

For the purpose of determining a refund under this section, a student may be deemed to have withdrawn from a program of instruction when any of the following occurs:

- Withdrawal is considered to have occurred when the student provides written notice of his or her desire to withdraw via e-mail communication or by hand delivery.
    - The written notice of withdrawal if sent by e-mail communication is effective upon sent timestamp. If the written notice of cancellation is hand-delivered, it is effective when it is received by the Center for Programs in Allied Health.
        - E-mail: CPiAHadministration@vumc.org
        - Hand Delivery: 2215 Garland Ave, Nashville, TN 37232-0495 (Light Hall, Room 312)
- The student fails to participate as required in educational activities for at least three (3) consecutive business days.
- The student fails to return from a leave of absence.
- The institution terminates the student's enrollment for failure to maintain satisfactory academic progress; failure to abide by the rules and regulations of the institution; absences in excess of the maximum set forth by the program; and/or failure to meet financial obligations to VUMC.

If the student is owed a refund, all monies due will be refunded within thirty (30) business days after the date of VUMC's determination that the student has withdrawn.

Definitions:

- Last date of attendance is the last day a student had academically related activity, which may include projects, clinical experience, or examinations.
- Date of withdrawal determination is the date that an institution determined that a student was no longer in school.
- Payment period for a **credit-hour** program is considered the semester or quarter.
- Payment period for a **clock-hour** program *if the program is one academic year or less in length:*
    - The first payment period is the period in which the student successfully completes half of the credit or clock-hours AND half of the weeks of instructional time in the program.
    - The second payment period is the period in which the student completes the remainder of the program.

For the purpose of determining the amount of the refund, the date of the student's withdrawal shall be deemed the last date of recorded attendance. The amount owed equals the daily charge for the program (total institutional charges, minus non-refundable fees, divided by the number of days in the program), multiplied by the number of hours scheduled to attend, prior to withdrawal.

Refund Policy

After a student starts school, he/she will be obligated for tuition payments as follows:

FOR A CREDIT-HOUR STUDENT WHO TERMINATES	**VUMC WILL REFUND**
within the first 10% of the payment period	90% of the payment period cost
within the first 20% of the payment period	80% of the payment period cost
within the first 30% of the payment period	70% of the payment period cost
within the first 40% of the payment period	60% of the payment period cost
within the first 50% of the payment period	50% of the payment period cost
after 60% of the payment period	0% of the payment period cost

FOR A CLOCK-HOUR STUDENT WHO TERMINATES	**VUMC WILL REFUND**
within the first 10% of the program	90% of the program cost
within the first 20% of the program	80% of the program cost
within the first 30% of the program	70% of the program cost
within the first 40% of the program	60% of the program cost
within the first 50% of the program	50% of the program cost
after 60% of the program	0% of the program cost

Private Loans

If a student receives a private loan to pay for the educational programs, VUMC is in no way involved with the agreement between the lender and the student. All inquiries related to such loans should be directed to the lender. VUMC will confirm appropriate student enrollment information with a private lender at the lender's request, in order to process private loans.

Veterans Benefits and Transition Act of 2018

Section 103 of Public Law 115-407, the Veterans Benefits and Transition Act of 2018, prohibits denial of access and/or other penalties against student veterans using Post 9/11 (Chapter 33) or Vocational Rehabilitation (Chapter 31) benefits effective August 1, 2019. As part of the Veterans Benefits and Transition Act of 2018, section 3679 of title 38, United States Code was amended. The State approving agency, or the Secretary when acting in the role of the State approving agency, shall disapprove a course of education provided by an educational institution that has in effect a policy that is inconsistent with the areas below:

NOTE: A Covered Individual is any individual who is entitled to educational assistance under chapter 31, Vocational Rehabilitation and Employment, or chapter 33, Post-9/11 GI Bill® benefits. GI Bill® is a registered trademark of the Department of Veterans Affairs (VA)

VUMC permits any covered individual to attend or participate in the course of education during the period beginning on the date on which the individual provides to the educational institution a certificate of eligibility for entitlement to educational assistance under chapter 31 or 33 (a "certificate of eligibility" can also include a "Statement of Benefits" obtained from the Department of Veterans Affairs' (VA) website – eBenefits, or a VAF 28-1905 form for chapter 31 authorization purposes) and ending on the earlier of the following dates:

1. The date on which payment from VA is made to the institution.
2. 90 days after the date the institution certified tuition and fees following the receipt of the certificate of eligibility.

VUMC ensures that it will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individual's inability to meet his or her financial obligations to the institution due to the delayed disbursement funding from VA under chapter 31 or 33.

VA Benefits Enrollment Verification

Enrollment verification is a requirement for Post-9/11 *GI Bill®* students to verify that they have remained enrolled in the same courses or training each month. Students who receive MHA/kicker payments **will have their payments withheld** if they fail to verify or report that they are no longer enrolled in their courses or training. To streamline the process, VA is providing the options to **verify enrollment easily and securely via text message, email, and online at VA.gov**.

This requirement is only for Post-9/11 *GI Bill®* and does not impact other benefit programs, such as the Montgomery GI Bill (MGIB), Veteran Employment Through Technology Education Courses (VET TEC), Survivors' and Dependents' Educational Assistance (DEA), Veterans Rapid Retraining Assistance Program (VRRAP), or the Edith Nourse Rogers STEM Scholarship.

DIAGNOSTIC MEDICAL SONOGRAPHY PROGRAM

Program Description

The VUMC Diagnostic Medical Sonography Program is an 18-month-long certificate program in general sonography. The curriculum offers an integrated didactic and clinical education plan which provides students with the resources necessary to begin a career as a credentialed entry-level sonographer. The small class size provides an excellent learning environment with a high faculty to student ratio. Students are required to participate in all class, lab, and clinical sessions. Sonography is an operator- dependent imaging specialty and the program provides ample hands-on opportunities in which students will prepare for a career in the field. The program was established in the VUMC Department of Radiology in 2002 after operating for a brief period of time in the 1980s.

Certification/Credentialing

Students receive a certificate, which qualifies the DMS Program graduates to apply for and take the following certification exams for the American Registry of Diagnostic Medical Sonography (ARDMS):

- Sonographic Principles and Instrumentation
- Abdomen Sonography
- Obstetrics & Gynecology Sonography

Program Costs

Application Fee $50 + Tuition $14,000 + Fees $1,025 Books, Materials, Supplies and Equipment $2,475 + Licensure/Certification $725 = Total Cost $18,275

Program Length

The program consists of 109 quarter credit hours/72 weeks, typically beginning in mid- to late- September and ending 18 months later in mid- to late-March.

Program Delivery Method

The DMS Program is a blended curriculum, in that some courses, assessments, and assignments are delivered using one or all components of an online Learning Management System (LMS).

Program Mission & Goals

Mission

The VUMC Diagnostic Medical Sonography Program is dedicated to providing quality education for its students in order to promote excellence in the art and science of sonography. Guided by the Mission of Vanderbilt University Medical Center, the DMS Program strives to provide academic and clinical experiences that produce competent and compassionate sonographers with a commitment to the performance of quality imaging and the pursuit of lifelong learning.

Philosophy

It is the philosophy of the Program that all patients have the right to receive competent and compassionate care to promote overall health and wellness. Diagnostic medical sonographers must possess the skills and knowledge necessary to think critically during the delivery of such care while performing sonographic procedures. The Program is committed to providing the healthcare system with sonographers who are competent and compassionate critical thinkers with a goal of continuously learning throughout their career.

Goal & Objectives

The sonography profession requires the ability to provide diagnostic sonographic imaging utilizing critical thinking skills to make judgments in the process. Sonographers are professionals who must possess high level skills in diagnostic sonographic techniques under the guidance of a licensed physician. A sonographer is responsible for providing excellent patient care and gathering adequate data necessary for diagnoses to be determined.

The Vanderbilt DMS Program's goal is to prepare competent entry-level sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains for the Abdominal sonography - Extended and Obstetrics and gynecology sonography concentrations. Graduates of the VUMC Diagnostic Medical Sonography Program will be able to perform, at minimum, the following objectives:

- Cognitive
    - Obtain, review and integrate pertinent patient data to facilitate optimum diagnostic results.
    - Demonstrate critical thinking skills during the performance of sonographic procedures to provide optimum diagnostic services.
- Psychomotor
    - Perform sonographic procedures appropriately and accurately recording all anatomic and physiologic information for interpretation by a physician.
    - Document and present complete and accurate sonographic findings to the interpreting physician in order to facilitate patient diagnosis.
    - Maintain optimal function of the sonographic equipment.
    - Assist physician during invasive ultrasound guided procedures.
- Affective
    - Demonstrate effective communication skills with patients and all members of the healthcare team.
    - Provide compassionate patient care and education to promote overall well-being.
    - Act in a professional manner within recognized ethical and legal standards.
    - Demonstrate a commitment to lifelong learning.

Upon graduation, students will have demonstrated and completed all clinical and academic competencies required for eligibility to take the American Registry of Diagnostic Medical Sonography (ARDMS) certification exams in the area(s) of study. Complete information about the program curriculum may be found on its website, at https://www.vumc.org/dms

Programmatic Accreditation/Approvals

The Diagnostic Medical Sonography Program is programmatically accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). This accreditation is granted only after recommendation by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC- DMS) based on a programmatic review and site visit.

CAAHEP: Commission on Accreditation of Allied Health Education Programs www.caahep.org
9355- 113th St. N, #7709, Seminole, FL 33775 | P: 727-210-2350 F: 727-210-2354

JRC-DMS: Joint Review Committee on Education in Diagnostic Medical Sonography www.jrcdms.org
6021 University Boulevard, Suite 500, Ellicott City, MD 21043 | P: 443-973-3251 F: 866-738-3444

Program Academic Calendar

2024-2025 DMS Academic Calendar	
Fourth Rotation (Class of 2025)	**July 1, 2024 - September 20, 2024**
Independence Day	*July 4, 2024*
Labor Day	*September 2, 2024*
Program Orientation (Class of 2026)	**September 23 - 27, 2024**
Fifth Rotation (Class of 2025)	**September 23, 2024 - December 20, 2024**
First Rotation (Class of 2026)	**September 30, 2024 - December 20, 2024**
Thanksgiving Break	*November 25-29, 2024*
Winter Break	*December 23, 2024 - January 3, 2025*
Sixth Rotation (Class of 2025) **Second Rotation (Class of 2026)**	**January 6, 2025 - March 28, 2025**
Martin Luther King, Jr. Holiday	*January 20, 2025*
Graduation	*Week of March 31st, Date/Time TBD*
Third Rotation (Class of 2026)	**March 31, 2025 - June 20, 2025**
Memorial Day Holiday	*May 26, 2025*
Summer Break	*June 23-27, 2025*

Program Faculty/Staff

Rochelle Filker Andreotti, MD, Medical Director (Full-time)
Fellowship in Body Imaging Mount Sinai Medical Center, 1986; Residency in Diagnostic Radiology University of Miami Health System, Jackson Memorial Hospital, 1985; Residency Duke University Health System, 1981; Internship Duke University Health System, 1979; Doctor of Medicine University of Florida, 1978; Bachelor of Science, Medical & Biological Sciences, University of Florida, 1975

Jill D. Webb, BS, RDMS, RVT, Program Director (Full-time)
Bachelor of Science, Health Arts, 2001, University of St. Francis, Joliet, IL; Certificate, Radiologic Technology, 1988, Floyd Medical Center School of Radiologic Technology, Rome, GA

Andrea L. Taylor, BS, RDMS, RVT, Clinical Coordinator (Full-time)
Bachelor of Science, Diagnostic Medical Sonography, 2021, Oregon Institute of Technology, Klamath Falls, OR; Associates Degree, Diagnostic Medical Sonography, 2012, Mountain State University, Beckley, WV

Mary Ann Keenan, DMP, Instructor (Full-time)
Registered State Inspector, TN; Qualified Radiation Expert, KY/AL; Diagnostic Medical Physics, American Board of Radiology; Doctorate, Medical Physics, 2011, Vanderbilt University, Nashville, TN; MS, Medical Physics, 2007, Vanderbilt University, Nashville, TN; BS, Chemistry, 2003, Athens State University

Program Advisory Board

The DMS Program utilizes an Advisory Committee of educators and professionals who represent all of the communities of interest related to program outcomes. Each cohort of students selects a classmate as the Student Representative to the DMS Program Advisory Committee. The Committee is charged with the responsibility of meeting at least annually, in order to assist the program and sponsor personnel in formulating and periodically revising appropriate goals and learning domains, monitoring needs and expectations, and ensuring program responsiveness to change.

Member Name	Credentials	Title
Jill Webb	BS, RDMS, RVT	Program Director
Andrea Taylor	BS, RDMS, RVT	Clinical Coordinator
Rochelle Andreotti	MD	Professor/Medical Director
Arthur Fleischer	MD	Professor
Christine Dove	MD	Associate Professor
Glynis Sacks	MD	Professor
Karen Tisdale	BS, RDMS	Supervisor
Rachel Campbell	RDMS	Senior Sonographer
Stephanie Smith	RDMS	Senior Sonographer
Donna Rosenstiel	MS	Admin Dir, OHSE
Nyah Webb	BS	Student, VUMC DMS 2025 Cohort
TBD		Student, VUMC DMS 2026 Cohort
Michelle Malone	MA	Business Office Director
Kelly Barrett	RT, RDMS	Staff Sonographer/ Graduate VUMC
D'Arcy Paul	RDMS, RVT	Ultrasonographer II
Tracy Wrye	RDMS	Sonographer
Tamra Roberts	CST, CSFA, CDEI	Director of Distance Education
Ebony McHaskell	MS	Director, CPiAH
Jennifer Alexander	PhD	Faculty/Instructional Design Manager, CPiAH

Admissions

Candidates for admission must satisfy each of the following criteria by submission of official transcripts:

1. All applicants must possess a high school diploma, a high school diploma equivalency, a current Tennessee license in the field for which the training is intended, or postsecondary credit in a degree program.
2. Post-secondary education which, at minimum, meets one (1) of the following, with a cumulative GPA of no less than 2.75*:
    - A Bachelor's or an Associate's Degree (Applied Associate's is also acceptable) from an accredited allied health program in direct patient care and possess the recognized credential in the healthcare specialty*
    - Bachelor's Degree from an accredited college or university
    - Demonstrate eligibility for the Bachelor's Degree upon completion of the VUMC Diagnostic Medical Sonography Program curriculum from the following Affiliate Institutions (*this option requires written recommendation from the affiliate institution's faculty advisor).*
        - Middle Tennessee State University
3. Six (6) pre-requisite courses* at an accredited post-secondary institution with a grade of 'C' or better:
    - Algebra or College Math equivalent
    - General Physics (Radiographic Physics will be accepted)

- Minimum of 2 semesters of Biological Sciences, including one semester of Human Anatomy and Physiology
- Medical Terminology
- English Composition or Speech (must be completed at a college or university within the United States)

*Individuals may submit an application prior to degree or pre-requisite coursework completion. As part of the selection process, applicants must be prepared to demonstrate evidence that all admission criteria can be satisfied prior to an offer of admission.

Physical Activity Standards

- Diagnostic medical sonographers must be able to perform a variety of physical movements in order to care for and manipulate patients and heavy equipment. Any student admitted to the Program must acknowledge his/her ability to carry out the following technical standards with or without reasonable accommodations:
- Push, pull or lift 50 pounds routinely and more than 50 pounds occasionally
- Bend, stoop, kneel, squat or sit and reach routinely
- Adequately control imaging transducer and manipulate equipment weighing up to 500 pounds on wheels
- Adequately visualize and perceive image data on computer and video monitors to acquire and interpret sonographic image data with color distinction
- Sufficiently distinguish fine audible differences including Doppler signals, patient and co- worker communication and patient conditions such as respiration or movements
- Fluently demonstrate English language skills to provide optimum communication with patient and healthcare team members
- Follow verbal and written instructions to provide optimum care for patients

Intellectual and Emotional Standards

Diagnostic medical sonographers must also possess intellectual and emotional qualities that permit adequate care for patients and response to unexpected or emergent situations. Any student admitted into the program must acknowledge his/her ability to demonstrate the following qualities with or without reasonable accommodations:

- Problem-solve and interpret data in both routine and emergent situations
- Empathy
- Emotional stability and maturity
- Courtesy and compassion to patients and their families, as well as co-workers
- Adaptability and flexibility to clinical or didactic schedule changes
- Follow protocols and organize sonographic examination data accurately to facilitate patient diagnosis
- Maintain patient confidentiality

Application Procedures

All applications will be submitted online. The link to the application can be found on the DMS website during the application window. Applications are accepted by the Allied Health Programs Office between January 1 and March 31 for admission each academic year. Application documentation includes:

- Submission of application and non-refundable deposit
- Submission of official transcripts or translation of international transcripts into US Equivalence (not just the English language) for all post-secondary coursework
- Submission of a current resume
- Three (3) references (web-based survey used)

- Personal essay regarding: 1) the current state of sonography, 2) the future of sonography and 3) the applicant's contribution to the field of sonography

All above documents will be attached to the electronic submission. Applicants are responsible for sending the survey link to the chosen references. This link can be found on the Admissions page of the website. Official transcripts may be sent AFTER the application is submitted but MUST be received by the CPiAH Administration Office by the application deadline. Instructions for submitting these documents can be found on the DMS website and within the application. ***Incomplete applicant documentation will not be considered for admission.***

Applicants with pre-requisite course work from an institution outside of the United States MUST have an official, detailed translation of their coursework into the US equivalency (see CPiAH institutional policy above). International applicants who do not provide official documentation of acceptable US course and degree equivalency will not be considered during the application process.

Any application submitted after March 31 is processed only on an as-available basis. Application reviews and interviews are scheduled with top qualified applicants each year after the deadline listed.

Interview
Top qualified applicants are granted a phone interview with the Program Director (under the direction of the Admissions Committee). After completion of the application reviews and phone interviews, select candidates are offered a virtual or on-site interview with Faculty and Staff from the Admissions Committee. The method of the second interviews is dependent on public health concerns and the visitor policy at the Medical Center.

Student Selection and Acceptance
The following criteria are considered in the evaluation of all applicants:

- Overall GPA
- Completed pre-requisite coursework GPA
- Reference scores
- Interviews
- Professional Potential (comprehensive rating of the applicant's overall preparedness)

After all interviews are conducted, the scores are calculated, and a report generated. The Admissions Committee reserves the right to request additional interviews before this report is generated. The top five (5) applicants are offered admission status and the next five (5) applicants are offered an alternate position for the same year. ***The applicant pool is reviewed annually with no waiting list or rollover applications to the following year.***

Academic Program and Assessment

Curriculum Integration
The curriculum for the VUMC DMS Program effectively integrates content from both the didactic and clinical education arenas. Students are provided classroom and laboratory instruction prior to the assignment of clinical requirements on the same material. Details that outline this integration are provided in a document titled Curriculum Threads, located in the DMS Program Handbook.

Curriculum Sequence/Program Delivery

Curriculum

Q1/FALL			
Course Code	**Course**	**Clock Hours**	**Total Academic Credits**
DMS100	Foundations of Ultrasound and Healthcare	4.00	0.00
DMS105	Sonographic Patient Care	20.00	2.00
DMS110	Cross-Sectional Anatomy	22.00	2.00
DMSA101	Abdominal Sonography Techniques I	44.00	4.00
DMSG101	Gynecological Sonography Techniques I	33.00	3.00
DMSC101	Clinical Practicum I	72.00	2.00
DMSL101	Clinical Lab I	66.00	3.00
	Total weeks of instruction for this term:	**261.00**	**16.00**
Q2/SPRING			
Course Code	**Course**	**Clock Hours**	**Total Academic Credits**
DMS100	Foundations of Ultrasound and Healthcare	4.00	0.00
DMSO201	Obstetrical Sonography Techniques I	36.00	3.50
DMSP201	Basic Physics and Instrumentation	48.00	4.50
DMS200	Pathophysiology as Related to Sonography	12.00	1.00
DMSC202	Clinical Practicum II	192.00	6.00
DMSL202	Clinical Lab II	72.00	3.50
	Total weeks of instruction for this term:	**364.00**	**18.50**
Q3/SPRING			
Course Code	**Course**	**Clock Hours**	**Total Academic Credits**
DMS100	Foundations of Ultrasound and Healthcare	4.00	0.00
DMSA302	Abdominal Sonography Techniques II	36.00	3.50
DMSG302	Gynecological Sonography Techniques II	24.00	2.00
DMSA301	Superficial Structure Sonography Techniques I	24.00	2.00
DMSP302	Advanced Physics and Instrumentation	24.00	2.00
DMSC303	Clinical Practicum III	280.00	9.00
DMSL303	Clinical Lab III	48.00	2.00
	Total weeks of instruction for this term:	**440.00**	**20.50**
Q4/FALL			
Course Code	**Course**	**Clock Hours**	**Total Academic Credits**
DMS100	Foundations of Ultrasound and Healthcare	4.00	0.00
DMSO402	Obstetrical Sonography Techniques II	36.00	3.50
DMSA402	Superficial Structure Sonography Techniques II	12.00	1.00

DMSA403	Advanced Abdominal Sonography Techniques	24.00	2.00
DMS400	Medical Ethics and Law	12.00	1.00
DMSC404	Clinical Practicum IV	272.00	9.00
DMSL404	Clinical Lab IV	48.00	2.00
	Total weeks of instruction for this term:	**408.00**	**18.50**

Q5/FALL

Course Code	Course	Clock Hours	Total Academic Credits
DMS100	Foundations of Ultrasound and Healthcare	4.00	0.00
DMS500	Certification Preparation	24.00	2.00
DMSO503	Advanced Ob/Gyn Sonography Techniques	36.00	3.50
DMSV501	Introduction to Basic Vascular Sonography	12.00	1.00
DMSC505	Clinical Practicum V	336.00	11.00
	Total weeks of instruction for this term:	**412.00**	**17.50**

Q6/SPRING

Course Code	Course	Clock Hours	Total Academic Credits
DMS100	Foundations of Ultrasound and Healthcare	2.00	2.00
DMS600	Case Study Review	24.00	2.00
DMS610	Registry Reviews	24.00	2.00
DMS602	Basic Vascular Sonography Lab	24.00	1.00
DMSC606	Clinical Practicum VI	336.00	11.00
	Total weeks of instruction for this term:	**410.00**	**18.00**

Total Quarter Credit Hours: 109

Unless noted differently, courses are delivered in the classroom, lab or clinical setting.

Course Descriptions

Diagnostic Medical Sonography Program Director - Jill Webb			
Q1			
Course Code	**Course**	**Course Length (Weeks)**	**Course Description**
DMS100*	Foundations of Ultrasound and Healthcare	2	2 weeks in each rotation. This course is designed to develop the student's understanding of the history of medical sonography and its role in the healthcare system while emphasizing the importance of a commitment to the profession and its growth by becoming a lifelong learner. Students will be instructed in the identification of sonographers' roles and responsibilities, the delivery of patient care utilizing the Mission of Vanderbilt University Medical Center, the agencies and professional societies in medical sonography, methods for facilitating conflict resolution in the workplace and promoting interprofessional collaboration, the exercise of critical thinking and the value of continuing education. Career planning and advising will also be introduced to assist the students in the transition from student to sonographer.
DMS105	Sonographic Patient Care	5	This course is designed to provide instruction of patient care techniques for all clinical settings. Course content is delivered to assist the student in utilizing safe practices while caring for the patient in routine, critical and emergent situations. Students will be introduced to patient care equipment used in the healthcare facility and techniques for maintaining isolation or sterile environments. Instruction will provide an introduction to basic pharmacology and processes for conducting interventional procedures. Communication techniques, both verbal and written, will be demonstrated and practiced throughout the course delivery.
DMS110	Cross-Sectional Anatomy	11	This course is designed to introduce the sonography student to cross-sectional anatomy through the use of sonography and other imaging modality exams. Instruction will utilize actual cases to demonstrate image orientation, anatomical relationships, and correlation of data/findings between imaging modalities. An emphasis will be placed on the critical thinking skills necessary to facilitate diagnosis for the sonography patient.
DMSA101	Abdominal Sonography Techniques I	11	This course is designed to provide the student with the techniques and protocols required to perform sonographic examinations of the major organs and great vessels of the upper abdomen. Sonographic examinations include imaging techniques and evaluation of normal anatomy and its appearance, the interpretation of pertinent lab values along with clinical indications and the transmission of all pertinent data to the interpreting physician to facilitate diagnosis.
DMSG101	Gynecological Sonography Techniques I	11	This course is designed to provide students with the techniques and protocols required to perform transabdominal and transvaginal sonographic examinations of the female pelvis organs. Sonographic examinations include imaging techniques and evaluation of normal anatomy and its appearance, the interpretation of pertinent lab values along with clinical indications and the transmission of all pertinent data to the interpreting physician to facilitate diagnosis.
DMSC101	Clinical Practicum I	6	This clinical course is designed to introduce the student to the ultrasound department and its protocol and procedures. The student will perform basic patient care competencies that promote preparation of the patient and the exam room, as well care of the department equipment and utilization of protocol. Students will be observing a variety of sonographic exams and procedures in the assigned clinical area.
DMSL101	Clinical Lab I	11	This lab is designed to provide the student with direct supervision and instruction for correlating didactic coursework to the clinical setting. The student will be instructed through role playing, supervised scanning and demonstration techniques. An emphasis will be placed on ergonomics to include best practices and exercises to minimize the risks of work-related musculoskeletal disorders common among sonographers. The use of abbreviations in the medical setting will be exercised and evaluated.

Q2			
Course Code	**Course**	**Course Length (Weeks)**	**Course Description**
DMS100*	Foundations of Ultrasound and Healthcare	2	2 weeks, each rotation
DMSO201	Obstetrical Sonography Techniques I	12	This course is designed to provide the student with the techniques and protocols required to perform sonographic examinations of the gravid patient. Sonographic examinations include imaging techniques and evaluation of the normal pregnancy. This evaluation includes the sonographic anatomy, interpretation of pertinent lab values along with clinical indications and the transmission of all pertinent data to the interpreting physician to facilitate diagnosis.
DMSP201	Basic Physics and Instrumentation	12	This course is designed to provide the student with the fundamental principles of ultrasound physics and instrumentation. The student will develop an understanding of the function of the ultrasound equipment as well as imaging techniques.
DMS200	Pathophysiology as Related to Sonography	12	This course is designed to introduce the sonography student to the mechanisms of disease processes. The student will learn to identify the etiology and pathogenesis of common pathological conditions as they relate to sonographic imaging.
DMSC202	Clinical Practicum II	12	This clinical course is designed to provide the student with the opportunity to begin scanning in the clinical setting and demonstrating competency in the performance of exam segments. The student will begin to develop a proficiency of imaging techniques in a progressive manner for the abdomen and pelvic examinations. Direct clinical supervision and instruction will provide guidance for the student to acquire the skills required for quality sonographic imaging.
DMSL202	Clinical Lab II	12	This lab is designed to further develop the student's skill for abdominal and pelvis ultrasound examinations with direct supervision and instruction. The student will also be introduced to obstetrical sonographic techniques in a controlled and closely supervised environment through the OB Volunteer Program. A continued emphasis will be placed on ergonomics to include best practices and exercises to minimize the risks of work-related musculoskeletal disorders common among sonographers.
Q3			
Course Code	**Course**	**Course Length (Weeks)**	**Course Description**
DMS100*	Foundations of Ultrasound and Healthcare	2	2 weeks, each rotation
DMSA302	Abdominal Sonography Techniques II	12	This course is designed to expand the student's knowledge of normal abdominal sonography technique and appearance in order to evaluate pathological conditions with ultrasound. Correlation of pertinent data and patient history to sonographic appearance is developed to facilitate diagnosis.
DMSG302	Gynecological Sonography Techniques II	6	This course is designed to expand the student's knowledge of normal gynecological sonography techniques and appearance in order to evaluate pathological conditions with sonography. Correlation of pertinent data and patient history to sonographic appearance is developed to facilitate diagnosis. Both didactic and case discussion will be utilized.
DMSA301	Superficial Structure Sonography Techniques I	12	This course is designed to provide the student with the techniques and protocols required to perform sonographic examinations of general superficial structures, including the musculoskeletal system, breast, neck, male pelvis (including scrotum, prostate, and penis), abdominal wall, and non-cardiac chest (including lung sonography). Sonographic examinations include imaging techniques and evaluation of the normal and pathological appearance of these structures. This evaluation includes the sonographic anatomy, interpretation of pertinent lab values and prior imaging studies, along with clinical indications and the transmission of all pertinent data to the interpreting physician to facilitate diagnosis.
DMSP302	Advanced Physics and Instrumentaiton	6	This course is designed to provide the student with the knowledge to optimally utilize Doppler techniques in the evaluation of blood flow. Instruction includes vascular hemodynamics and the application of the Doppler Effect to evaluate for blood flow abnormalities. The student will gain an understanding of the artifacts associated with

			ultrasound imaging. Methods of quality assurance and the bioeffects of ultrasound are presented to develop equipment maintenance knowledge.
DMSC303	Clinical Practicum III	12	This clinical course allows the student to continue progressive skill development for the abdominal, gynecological and obstetrical sonographic examination. The student will begin demonstrating the critical thinking skills required to adapt each exam and its findings to department protocol.
DMSL303	Clinical Lab III	12	This lab is designed to provide the student with the direct supervision and instruction to develop the skills needed for performing complete abdominal, gynecological and obstetrical examinations, as well as an introduction to advanced ultrasound examinations including assisting physicians with ultrasound guided procedures. The student will also receive instruction for obstetrical sonographic techniques in a controlled and closely supervised environment through the OB Volunteer Program. A continued emphasis will be placed on ergonomics to include best practices and exercises to minimize the risks of work-related musculoskeletal disorders common among sonographers.
Q4			
Course Code	**Course**	**Course Length (Weeks)**	**Course Description**
DMS100*	Foundations of Ultrasound and Healthcare	2	2 weeks, each rotation
DMSO402	Obstetrical Sonography Techniques II	12	This course is designed to expand the student's knowledge of normal obstetrical sonography techniques and appearance in order to evaluate pathological conditions with sonography. Correlation of pertinent data and patient history to sonographic appearance is developed to facilitate diagnosis.
DMSA402	Superficial Structure Sonography Techniques II	12	This course is designed to provide the student with the techniques and protocols required to perform sonographic examinations of pediatric and neonatal superficial structures, including the neonatal head, neonatal spine, infant hips, and pediatric gastrointestinal abnormalities. Sonographic examinations include imaging techniques and evaluation of the normal and pathological appearance of these structures. This evaluation includes the sonographic anatomy, interpretation of pertinent lab values, correlation with other imaging modalities, along with clinical indications and the transmission of all pertinent data to the interpreting physician to facilitate diagnosis.
DMSA403	Advanced Abdominal Sonography Techniques	12	This course is designed to provide the techniques and protocols for advanced imaging techniques of the abdomen, including the retroperitoneum, abdominal vascular evaluation, ultrasound guided procedures, contrast-enhanced imaging, and recent developments in Sonography. Sonographic examination includes the evaluation of anatomy and its sonographic appearance, correlation of pertinent data to the sonographic findings and the transmission of all data to the interpreting physician to facilitate diagnosis.
DMS400	Medical Ethics and Law	12	This course is designed to provide the student opportunities to learn issues regarding the ethical and legal standards of providing care for patients. The issues include topics such as patient confidentiality, patient's bill of rights, medical malpractice and the importance of holding and maintaining professional credentials. Emphasis will be placed on the responsibility and accountability of the Diagnostic Medical Sonographer.
DMSC404	Clinical Practicum IV	12	During this clinical course the student will perform clinical demonstration of competency in the performance of complete abdominal and gynecological sonographic examinations under the supervision of qualified sonographers. The skills required to perform complete obstetrical sonographic examinations will develop progressively through direct supervision and instruction. The student will demonstrate an increased competence in problem-solving and correlation of all clinical data for the interpreting physician to facilitate diagnosis.
DMSL404	Clinical Lab IV	12	This lab is designed to provide the student with the direct supervision and instruction to develop the skills needed for performing complete abdominal, gynecological and obstetrical examinations, as well as an introduction to advanced ultrasound examinations including assisting physicians with ultrasound guided procedures. The student will also receive instruction for obstetrical sonographic techniques in a controlled and closely supervised environment through the OB Volunteer Program. A continued emphasis will be placed on ergonomics to include best practices and

			exercises to minimize the risks of work-related musculoskeletal disorders common among sonographers.

Q5

Course Code	Course	Course Length (Weeks)	Course Description
DMS100*	Foundations of Ultrasound and Healthcare	2	2 weeks, each rotation
DMS500*	Certification Preparation	12	This course is designed to promote and facilitate the student's identification of content areas that need reinforcement prior to taking the ARDMS (American Registry of Diagnostic Medical Sonographers) National Registry Exams. The course will assist students in organization and time management to begin the preparation for obtaining the Registered Diagnostic Medical Sonographer credential in Abdomen and Obstetrics/Gynecology.
DMSO503	Advanced Ob/Gyn Sonography Techniques	12	This course is designed to provide advanced imaging techniques and protocols for the sonographic evaluation of the gravid and non-gravid female pelvis, as well as reinforce the basic techniques of previous courses. Students will be introduced to Doppler evaluation and imaging techniques for the assessment of fetal growth and well-being, maternal conditions and complications, genetic evaluations, advanced fetal echocardiography techniques, the role of sonography in the treatment of infertility, the role of the sonographer during invasive sonographic procedures and the latest advances in Ob/Gyn imaging. Course content includes the correlation of pertinent data to the sonographic findings and the transmission of all data to the interpreting physician in order to facilitate diagnosis and exposure to literature review in the advancement of sonographic imaging.
DMSV501	Introduction to Basic Vascular Sonography	12	This course is designed to introduce the student to basic vascular anatomy and hemodynamics. Instruction will include indications, sonographic anatomy, techniques and protocol for the performance of peripheral vascular and extracranial vascular exams to prepare the students for lab sessions in the following Rotation.
DMSC505	Clinical Practicum V	12	During this clinical course the student will perform clinical demonstration of competency in the performance of complete abdominal, gynecological and obstetrical sonographic examinations under the supervision of qualified sonographers. The student will begin to demonstrate the skills required to assist physicians during invasive ultrasound guided procedures while under the direct supervision of the physician and qualified sonographer. The student will demonstrate an increased competence in problem-solving and correlation of all clinical data for the interpreting physician to facilitate diagnosis.

Q6

Course Code	Course	Course Length (Weeks)	Course Description
DMS100*	Foundations of Ultrasound and Healthcare	1	1 week in Rotation VI
DMS600	Case Study Review	12	This review course will allow the student the opportunity to analyze and critique sonographic examinations, including clinical data, pertinent diagnostic imaging results, sonographic results, image quality and the correlation of all patient data. The emphasis of this course will be on the critical thinking skills of a Diagnostic Medical Sonographer.
DMS610	Registry Reviews	12	This course is designed to facilitate the student's identification of content areas that need reinforcement prior to taking the ARDMS (American Registry of Diagnostic Medical Sonography) National Registry Exams. The course will provide students with discussions to facilitate content review and self-assessment, along with regular quizzes and mock board examinations for preparation in obtaining the Registered Diagnostic Medical Sonographer credential in Abdomen and Obstetrics/Gynecology.
DMS602	Basic Vascular Sonography Lab	12	This course is designed to introduce the student to basic vascular scanning and hemodynamics assessment. Instruction will include sonographic anatomy, techniques and protocol for the performance of peripheral vascular and extracranial vascular exams. Lab sessions will be provided to demonstrate vascular techniques and an opportunity for the student to practice basic techniques.

DMSC606	Clinical Practicum VI	12	This final clinical course is designed to allow the student to demonstrate competence and proficiency in the performance of all sonographic examinations included in the areas of study. Close clinical supervision and instruction provides the student with the opportunity to be prepared for entrance into the field of sonography as a competent and compassionate professional.

* indicates distance education (DE) course

Student Assessment and Grading

Letter grades are assigned and 'quarter credit hours' recorded on final transcripts. Overall grade point average is calculated using the following scale:

Scale	Grade	GPA
95-100%	A	4.0
90-94%	A-	3.5
85-89%	B	3.0
80-84%	B-	2.5
75-79%	C	2.0
<75%	F - FAILURE	0
P	Pass - Any course with a "P" grade is not calculated into the grade point average.	
F	Fail - Any course with an "F" grade is not calculated into the grade point average. However, the course must be repeated and passed to graduate.	
I	Incomplete - May be used at the discretion of the instructor in those cases in which the student is not able to complete work in the normal time. In those instances, the student and instructor develop a written plan for an extension to provide work by a specific date that falls within the period of time specified by the relevant program's requirements (but in no circumstances greater than one month). An "I" that is not replaced by a letter grade within the period of time specified by the relevant program's requirements, due to unsatisfactory completion of the student's plan, will be changed to an F after the period specified by the program (a period not to exceed one month). Any course with an "I" grade is not calculated into the grade point average. Once a grade is assigned to the course (when conditions are met that allow for the removal of the "I" and assignment of a final grade), that grade will factor into the student's GPA.	
W±	Withdrawal – Utilized when a student leaves the course due to an approved leave-of-absence or withdraws from the school prior to the scheduled completion of a course. Any course with a "W" grade is not calculated into the grade point average.	

Each course syllabus clearly delineates how final grades are calculated. Students who do not complete required work or hours in a course will be assigned a failing grade for the course.

Student Clinical Assessment

The DMS Program Clinical Education Plan guides student clinical assessment, and is divided into the following two (2) sections of required clinical performance evaluations:

1. Technical Competencies
   These are unique skill sets, outlined in the DMS Program Technical Competencies Plan, which appears in the DMS Program Handbook. The technical competencies provide a pathway for progressive skill development from basic patient care and portions of abdominal, gynecological, and obstetrical exams to complete exams and advanced imaging skills. Each technical competency must be practiced multiple times during the student's time in the program, with observation and rating by credentialed clinical staff (preceptors). Variable levels of assistance by the preceptor are permitted, but students must meet the minimum requirements of competence, as described in the Technical Evaluation Criteria table, which also appears in the Program Handbook. Specific deadlines for successfully completing the required number of technical competencies are specified in each clinical syllabus.

2. Technical Competency Challenges
   In addition to achieving the required technical competencies as described above, the student is required to pass Technical Competency Challenges during each clinical practicum in order to document progressive entry level skill development and complete satisfactory clinical requirements. Technical Competency Challenge requirements are described in the DMS Program Handbook. Technical Competency Challenges may be performed only after 70% of assigned Technical Competencies are satisfactorily completed. Technical Competency Challenges may only be completed with designated, appropriately credentialed clinical staff (Clinical Instructors). Minimal levels of assistance are permitted (as described in the Technical Evaluation Criteria table).

Students who are not successful in completing a Technical Competency Challenge must complete additional repetitions of the competency and consult with the clinical coordinator before he or she may repeat the Technical Competency Challenge. Two unsuccessful attempts at the same Technical Competency Challenge will result in the student being placed on SAP Warning, and the implementation of a written plan of action required for the student to return to satisfactory academic status. Timely performance of Technical Competency Challenges is required, and failure to meet Challenges by the dates specified in each clinical syllabus will affect Clinical course grades.

Entry level skills and competence are determined in the last Rotation of clinical coursework through the Final Competency Assessment with designated, appropriately credentialed Clinical Instructors.

Satisfactory Academic Progress Policy (SAP)

A student is considered to be maintaining satisfactory academic progress if he/she 1) maintains a 75% academic average in all didactic and clinical courses throughout each curriculum Rotation (12 weeks); 2) maintains a satisfactory performance pace (completion of hours required) within the curriculum course sequence and clinical competency plan, per the course syllabi; and 3) complies with all program policies found in this catalog and in the Program Handbook. Performance will be monitored in an on-going manner throughout activities and a grade for each course assessed at the end of each Rotation.

Code of Conduct and Ethics

In addition to the VUMC Code of Conduct, students in the Diagnostic Medical Sonography Program are bound by standards of conduct specific to their profession. Adherence to the VUMC Code of Conduct and the SDMS Professional Code of Ethics is required of students at all times.

SDMS Professional Code of Ethics

The Society of Diagnostic Medical Sonography (SDMS) was founded in 1970 to promote, advance, and educate its members and the medical community in the science of diagnostic medical sonography. The SDMS is a network of over 28,000 sonographers practicing in all specialty areas, sonography students, educators, physicians, nurses, and other healthcare providers who practice or have an interest in diagnostic medical sonography.

Code of Ethics for the Profession of Diagnostic Medical Sonography

Re-approved by SDMS Board of Directors, February 8, 2017.

PREAMBLE

The goal of this code of ethics is to promote excellence in patient care by fostering responsibility and accountability among diagnostic medical sonographers. In so doing, the integrity of the profession of diagnostic medical sonography will be maintained.

OBJECTIVES

1. To create and encourage an environment where professional and ethical issues are discussed and addressed.
2. To help the individual diagnostic medical sonographer identify ethical issues.
3. To provide guidelines for individual diagnostic medical sonographers regarding ethical behavior.

PRINCIPLES:

Principle I: In order to promote patient well-being, the diagnostic medical sonographer shall:

A. Provide information to the patient about the purpose of the sonography procedure and respond to the patient's questions and concerns.
B. Respect the patient's autonomy and the right to refuse the procedure.
C. Recognize the patient's individuality and provide care in a non-judgmental and non- discriminatory manner.
D. Promote the privacy, dignity and comfort of the patient by thoroughly explaining the examination, patient positioning and implementing proper draping techniques.
E. Maintain confidentiality of acquired patient information, and follow national patient privacy regulations as required by the "Health Insurance Portability and Accountability Act of 1996 (HIPAA)."
F. Promote patient safety during the provision of sonography procedures and while the patient is in the care of the diagnostic medical sonographer.

Principle II: To promote the highest level of competent practice, diagnostic medical sonographers shall:

A. Obtain appropriate diagnostic medical sonography education and clinical skills to ensure competence.
B. Achieve and maintain specialty specific sonography credentials. Sonography credentials must be awarded by a national sonography credentialing body that is accredited by a national organization which accredits credentialing bodies, i.e., the National Commission for Certifying Agencies (NCCA); http://www.noca.org/ncca/ncca.htm or the International Organization for Standardization (ISO); http://www.iso.org/iso/en/ISOOnline.frontpage.
C. Uphold professional standards by adhering to defined technical protocols and diagnostic criteria established by peer review.

D. Acknowledge personal and legal limits, practice within the defined scope of practice, and assume responsibility for his/her actions.
E. Maintain continued competence through lifelong learning, which includes continuing education, acquisition of specialty specific credentials and recredentialing.
F. Perform medically indicated ultrasound studies, ordered by a licensed physician or their designated health care provider.
G. Protect patients and/or study subjects by adhering to oversight and approval of investigational procedures, including documented informed consent.
H. Refrain from the use of any substances that may alter judgment or skill and thereby compromise patient care.
I. Be accountable and participate in regular assessment and review of equipment, procedures, protocols, and results. This can be accomplished through facility accreditation.

Principle III: To promote professional integrity and public trust, the diagnostic medical sonographer shall:
J. Be truthful and promote appropriate communications with patients and colleagues.
K. Respect the rights of patients, colleagues and yourself.
L. Avoid conflicts of interest and situations that exploit others or misrepresent information.
M. Accurately represent his/her experience, education and credentialing.
N. Promote equitable access to care.
O. Collaborate with professional colleagues to create an environment that promotes communication and respect.
P. Communicate and collaborate with others to promote ethical practice. H.
Q. Engage in ethical billing practices.
R. Engage only in legal arrangements in the medical industry.
S. Report deviations from the Code of Ethics to institutional leadership for internal sanctions, local intervention and/or criminal prosecution. The Code of Ethics can serve as a valuable tool to develop local policies and procedures.

Graduation/Completion Requirements

Students of the VUMC Diagnostic Medical Sonography Program are required to do the following in order to graduate with a Certificate in General Sonography:

1. Complete all didactic and clinical coursework in the Curriculum Plan with a grade of "C" or better as outlined in the Satisfactory Academic Progress Policy.
2. Complete all assigned technical competencies as outlined in the Clinical Competency Plan.
3. Demonstrate competency in technical ability by successfully completing all assigned competency challenges as outlined in the Clinical Competency Plan, including the Final Competency Assessment.
4. Complete all assigned hours in accordance with the Attendance Policy.
5. Satisfactorily complete an original research project and perform a 10-minute presentation for the clinical staff of the VUMC Ultrasound Section. (An opportunity will be available to conduct this research and present it in competition or scientific paper presentation as a group project.)
6. Submit documentation for a total of twelve (12) hours of approved professional development activities.

Upon satisfaction of these requirements, each student is required to participate in an Exit Interview with the Program Director prior to the release of a certificate or transcript.

Other Program Policies

Professional Progression, Career Advising

Each student enrolled in the VUMC DMS Program has access to faculty and staff members for academic and professional advising. The Program Director and/or the Clinical Coordinator are the primary sources for this type of student advising; however, the student may approach other faculty members, clinical instructors or staff of the VUMC Ultrasound and/or Radiology Department. The Student Support Services Manager in the Center for Programs in Allied Health is also available by appointment to assist students as necessary. All official academic advising conducted by program faculty and staff is documented and retained in the student's record.

Employment Placement for Program Graduates

The DMS Program's accreditor (CAAHEP) requires reporting of outcomes and achievement of designated outcomes pertaining to graduate placement in a related position of employment. The DMS Program assumes that all graduates desire to obtain employment within a relative short time beyond graduation (if a position is not secured prior to graduation). While VUMC does not guarantee employment offers or engage in job searches for students, Program Faculty and Staff can offer assistance and advising related to searching for a position. There are numerous ways the program can assist a self-driven student to secure employment. These include, but are not limited to:

- Notification to students about available positions
- Review and feedback on resume development
- Provide resources for conducting job searches
- Provide references and/or academic verification

Since the DMS Program is required to report information on student employment placement to the accrediting bodies, graduates are asked to provide detailed information regarding employment. Necessary information will be requested at the Exit Interview. If the student has not yet obtained employment, he or she will be expected to provide the information as soon as it becomes available. VUMC will contact graduates regarding employment status in order to fulfill accreditation reporting requirements. Employment information (including changes) is needed by the program for the first 12 calendar months beyond graduation. Compliance with this request is necessary for outcomes documentation and distribution of graduate and employer surveys.

Certification/Credentialing/National Examination/State Licensure

The DMS Program's accreditor (CAAHEP) requires reporting of program outcomes and achievement of designated benchmarks. Graduate credentialing rates are among the numerous outcomes assessed. CAAHEP requires reporting for all eligible specialties. The Program exhausts all efforts to provide students with the information and resources necessary to be successful at professional credentialing exams. The ARDMS has transitioned over the past few years to permit students attending accredited programs the opportunity to apply and take these credentialing exams prior to graduation from the program. While a student may successfully complete the exams prior to graduation, the credential is not released until the Program Director indicates successful completion of the program (see Graduation Requirements).

In order to earn the RDMS (Registered Diagnostic Medical Sonographer) credential, one must successfully complete the Sonography Principles and Instrumentation (SPI) exam AND a corresponding Specialty exam (i.e., Abdomen, Obstetrics/Gynecology, etc.). VUMC is accredited as an Abdominal sonography-extended and Obstetrics and gynecology sonography program that deems its students eligible to apply for and earn the RDMS credential in Abdomen and Obstetrics/Gynecology. This credentialing process results in one (1) credential in two (2) specialties. These exams may be taken while still enrolled in the program under the following parameters:

- Sonography Principles and Instrumentation may be taken immediately upon satisfactory completion of the Physics coursework
- Specialty exams (Abdomen and Obstetrics/Gynecology) may be applied for and taken within the last sixty (60) days of the Academic Calendar

While the DMS Program is required by its accreditors to achieve high rates of student credentialing, it is of utmost importance to the student that appropriate credentials are obtained in the search for employment. Few employers hire graduates prior to being credentialed, but they often offer employment with a condition of obtaining certain credentials. The Program Faculty and Staff expect that VUMC students, as leaders in their field, pursue the full credentialing for which they are eligible prior to and upon graduation.

Students are advised that while the DMS Program provides an introduction to the Vascular Technology specialty, the program does NOT have the clinical resources to ensure proficiency in the full spectrum of vascular examinations. However, with the foundation of knowledge gained at VUMC, many graduates have secured employment that provided the necessary additional training to prepare for the RVT (Registered Vascular Technologist) credential. A graduate can earn the RVT after gaining additional clinical training and experience, and subsequently successfully completing the Vascular Technology (VT) Specialty Exam. Additional details are available from the Program Director for those interested.

Organizations Related to Sonography
Numerous professional organizations are open and available to students for membership or general information:

- American Registry of Diagnostic Medical Sonography www.ardms.org
- Society of Diagnostic Medical Sonography www.sdms.org
- American Institute of Ultrasound in Medicine www.aium.org
- Commission for Accreditation of Allied Health Education Programs (CAAHEP) www.caahep.org
- Joint Review Commission for Education in Diagnostic Medical Sonography (JRC-DMS) www.jrcdms.org

Equipment List
Sonography Equipment
Three (3) Philips® ultrasound units:

- Two (2) Epiq
- One (1) iU22

Full complement of transducers:

- C5-1 and C9-2
- V6-2
- L8-4, L9-3, L12-5, L12-3, L18-5, L17-5
- S5-1
- X6-1 (matrix array)

Equipment and supplies include:
Computer with Internet and network access; Sectra® image storage system, eStar® EMR, VUnet ids/passwords, hospital supplies (i.e. gel, linens), various anatomical models and charts are also available (i.e., fetal heart model, liver anatomy/pathology chart).

This catalog contains only a summary of program policies and procedures. Students should refer to the program handbook for additional information.

DIETETIC INTERNSHIP PROGRAM

Program Description

The Vanderbilt University Medical Center (VUMC) Dietetic Internship Program is a post-baccalaureate certificate program located within a comprehensive medical center and healthcare organization. The VUMC Dietetic Internship program is aligned with a Master of Education (M.Ed.) in Human Development Studies, Dietitian/Nutritionist Specialization Program at Peabody College of Vanderbilt University. At completion of the MEd/DI program, students will be eligible to take the credentialing exam for registered dietitian nutritionists (RDNs). Students must be admitted to both the VU M.Ed. program and the VUMC Dietetic Internship program. The Dietetic Internship participates in the DICAS national application and D & D Digital computer matching processes.

The VUMC Dietetic Internship Program's principal focus is to provide comprehensive supervised practice experiences which meet the competencies for entry level practice as a registered dietitian nutritionist. To do this, the Dietetic Internship utilizes a competency- based curriculum; designed to ensure the students develop the breadth and depth of knowledge and skills needed for entry level practice. The 50 ACEND core competencies are the cornerstones for rotations, didactic presentations, and hands-on activities. The curriculum includes a concentration in disease management and health promotion.

The Internship Faculty plan the curriculum and guide the supervised practice experiences. An orientation series (Rotation Readiness) prepares students for rotation experiences. A rotation schedule guides students thru disease management- health promotion rotations. Training sites are primarily on the Vanderbilt campus and within the Nashville community. Professional development class days are scheduled on most Friday's and include workshops, simulations, case studies, and interprofessional meetings. Students complete 4 weeks of entry level and 2 weeks of concentration practice experiences; demonstrating their readiness to entry level practice in disease management-health promotion settings.

The VUMC Dietetic Internship Program has a robust supervised practice network of preceptors and instructors who serve as role models and donate their time and expertise to train the next generation of Registered Dietitian Nutritionists.

Additional innovative areas of personalized student focus include:

- Leadership growth
- Health literacy
- Critical care nutrition
- Development of a comprehensive nutrition counseling style

Licensure/Certification/Credentialing

Upon successful completion of the MEd/DI program, the VUMC Dietetic Internship Program Director will provide each student with a certificate of completion (verification statement) that affords the graduate eligibility for the national credentialing examination for Registered Dietitian Nutritionists, as well as for state licensure. Upon successful completion of the MEd/DI program, the VUMC Dietetic Internship Program Director submits the graduate's Candidate Eligibility Application (using the Registration Eligibility Processing System (REPS) On-Line System) to the Commission on Dietetic Registration.

Program Costs

Application Fee $115 + Tuition $12,500 + Fees $2,500 Books, Materials, Supplies and Equipment $1,698 + Licensure/Certification $450 = Total Cost $17,263

This amount is included in the Peabody College Master's in Human Development Studies cost of attendance.

Program Length

The VUMC Dietetic Internship program is a 47 week (July-June), post-baccalaureate, supervised-practice certificate

program during which students complete 1200 hours of supervised practice. The Dietetic Internship Program provides 8 credits towards a 30- hour masters aligned with the program. The maximum timeframe for completion of MEd/DI program requirements is within 23 months.

Program Delivery Method
Residential

Program Mission, and Goals

Dietetic Internship Mission Statement
The Vanderbilt Dietetic Internship's mission is to provide a pre-eminent supervised practice program model for training competent and compassionate entry level registered dietitian nutritionists delivering personalized nutrition therapy in the hospital, and innovative nutrition programming within community-based systems and healthcare networks.

Goals of the Dietetic Internship

GOAL#1: Graduates will be prepared as competent entry level registered dietitian nutritionists in the core and concentration competency area of disease management/health promotion.

Program Objectives for Goal #1

1. At least 80% of program interns complete program requirements within 23 months (150% of program length).
2. The program's one-year pass rate (graduates who pass the registration exam within one year of first attempt) on the CDR credentialing exam for dietitian nutritionists is at least 80%.
3. At least 80% of program graduates take the CDR credentialing examination for dietitian nutritionists within 12 months of MEd/DI completion.

GOAL#2: Graduates will fulfill employment needs at Vanderbilt University Medical Center and nationally as competent entry-level registered dietitian nutritionists.

Program Objectives for Goal #2

1. Of graduates who seek employment, at least 80% are employed in nutrition and dietetics or related fields within 12 months of graduation.
2. Program graduates will fulfill at least 25% of dietitian roles at Vanderbilt University Medical Center
3. At least 80% of surveyed employer respondents will be "satisfied" or above with the graduates' preparation for entry level practice.

Programmatic Accreditation/Approvals
The Vanderbilt University Medical Center Dietetic Internship program is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics (AND). As the accrediting agency for education programs preparing students for careers as registered dietitian nutritionists (RDN) or dietetic technicians, registered (DTR), ACEND serves and protects students and the public by assuring the quality and continued improvement of nutrition and dietetics education programs.

ACEND:
Accreditation Council for Education in Nutrition and Dietetics
120 South Riverside Plaza, Suite 2190, Chicago, IL 60606-6995
Phone: 312.899.0040 ext. 5400 https://www.eatrightpro.org/acend

Program Academic Calendar

Dietetic Internship	
2024-2025 Academic Calendar	
Graduate Courses Begin	June 4, 2024
Dietetic Internship Begins	July 15, 202
Labor Day	September 2, 2024
Fall Break	October 10-11, 2024
Thanksgiving Break	November 23-December 1, 2024
Holiday Break	December 14, 2024 – January 5, 2025
Martin Luther King Day	January 20, 2025
Spring Break	March 8-16, 2025
Memorial Day	May 26, 2025
Dietetic Internship Completion	June 7, 2025
Graduate Courses Conclude	August 8, 2025

Program Faculty/Staff

Sarah Ferguson, MPH, RDN, LDN, Program Director (Full-time)
Kerri Baxter, MS, RDN, LDN, CNSC, Educational Coordinator: Disease Management (Full-time)
Katie Hinton, MS, RDN, LDN, Educational Coordinator: Health Promotion (Full-time)

Program Advisory Board

Member Name	Credentials	Title
Sarah Ferguson	MPH, RDN, LDN	VUMC Dietetic Internship Director
Kerri Baxter	MS, RDN, LDN, CNSC	DI Educational Coordinator, Disease Management
Katie Hinton	EdD, MS, RDN, LDN	DI Educational Coordinator, Health Promotion
Jenny Pafford	EdD	Program Director, Nuclear Medicine Technology Program
Cynthia Facemire	MHA, MS, RDN, LDN, FADN	Administrative Director, Facilities Planning & Transitions
Jamie Pope	MS, RDN, LDN, FAND	Associate Professor, Nutritional Sciences
Marilyn Holmes	MS, RDN, LDN	Associate Director
Brandon Hulette	MBA	Associate Prof, Military Science
Abbie Kozomara	MS, RDN, LDN	Senior Program Services Manager
Sarah Martin	MPP, RDN, LDN	Nutritionist, Product Development
Leslie Meehan	MPA, AICP	Director of Primary Prevention
Ronlanda Foley	BS, RN	Public Health RN/ Pediatric Case Mgmt
Nicholas Rush	RDN, CDN	CEO & Lead Dietitian
Elizabeth Robinson	MEd, RDN, LDN	Advisor, Program Accreditation
Heather Smith	PhD, LPC-MHSP, NCC, RD, LDN	Associate Professor
Myrtis Walker	RDN, LDN	VUMC Outpatient Clinical Dietitian
Kathryn (Alex) Wallace	MS, RDN	Manager, Patient Services Operations
Patience Ergish	RDN, LDN	Pediatric Dietitian, Heart Failure & Transplant
Jen McManus	RDN, LDN	Diabetes Educator
Amy Qazi	RDN.LDN	Senior Manager
Megan Toomey	MS, RDN, LDN	Renal Dietitian

Brad Erford	PhD	Vanderbilt University
Peggy Valentine	EdD	Vice President, Allied Health Education
Ebony McHaskell	MS	Director, CPiAH
Jennifer Alexander	PhD	Faculty/Instructional Design Manager, CPiAH

Admissions

VUMC requires that all applicants must possess a high school diploma, a high school diploma equivalency, a current Tennessee license in the field for which the training is intended, or postsecondary credit in a degree program.. Further, VUMC allows an applicant to submit a copy of a post- secondary degree (i.e., Associate's, Bachelor's or Master's) in lieu of a copy of the high school diploma.

In addition to the minimum requirements listed above, the admission requirements include the following:

- Completed accredited undergraduate or certificate nutrition program in dietetics
- Minimum DPD (Didactic Program in Dietetics) GPA of 3.0 on a 4.0 scale
- Minimum overall GPA of 3.0 on a 4.0 scale.
- DPD Verification statement from an approved undergraduate or certificate program in dietetics indicating coursework completion within the past 3 years.
- Completed DICAS application for the dietetic internship
- Completed Vanderbilt University's Peabody College graduate school application

Application Procedures

The Dietetic Internship Program uses the online centralized internship application, referred to as DICAS (Dietetic Internship Centralized Application System). There are 2 steps to the complete application process:

1) Complete the DICAS dietetic internship application based on the fall and spring key dates outlined by ACEND
2) Complete Vanderbilt University's Peabody College application based on the fall and spring key dates outlined by ACEND

Student Selection and Acceptance

A selection committee, consisting of preceptors, internship faculty, CPiAH administrative leadership, and graduate program faculty review online applications. Each committee member individually considers GPA, extracurricular activities, work/volunteer experience, personal statement, and references. Vanderbilt University and VUMC will notify students of acceptance based on the fall and spring key dates outlined by ACEND. Academic Program and Assessment

Academic Program and Assessment

Program Sequence and Delivery

Course	Lecture	Lab	Practicum / Clinical	Total Hours
Dietetic Internship	0	0	1200.00	1200.00
Program Totals	0	0	1200.00	1200.00

The full-time VUMC dietetic internship begins in July with a three-week orientation and concludes in June. Following the three-week orientation:

- Students complete 15 weeks of disease management rotations + 2 weeks of entry level practice in disease management and
- Students complete 15 weeks of health promotion rotations + 2 weeks of entry level practice in health promotion

At mid-point of the dietetic internship (January),

- Students previously in disease management rotations, transition into 15 weeks of health promotion rotations + 2 weeks of entry level practice in health promotion and
- Students previously in health promotion rotations, transition into 15 weeks of disease management rotations + 2 weeks of entry level practice in disease management

At the completion of health promotion and disease management rotations, students transition into a 2-week concentration rotation. Successful completion of this rotation confirms their ability to practice as an entry level dietitian in disease management-health promotion practice settings.

Professional Development Days are scheduled consistently throughout the internship and include presentations by preceptors and interprofessional teams. Supervised practice and professional development day schedules are designed around 8-hour schedules. Additional professional development experiences (i.e. qualitative research, clinic-based nutrition care, community presentations, and interprofessional teaming) contribute to the overall total hours.

Student Assessment and Grading

At the completion of the rotation, preceptors evaluate the students' performance based on written projects, rubrics, quizzes, etc using the following grading scale:

SCALE	GRADE	DEFINITION
100-90%	A	Excellent
89-80%	B	Good
79-70%	C	Satisfactory
69-0%	F	Failing

Additionally, the preceptor provides a professional assessment of the student's ability to function within each practice domain. The performance levels for the practice domains are:

Scale	Definition
Minimal Competence	Needs assistance on many projects; requires guidance to achieve pre-determined objectives
Developing Competence	Performs all activities with some assistance; generally, achieves pre-determined objectives
Competent	Performs all activities correctly; works w/minimum assistance once guidelines are established; meets pre-determined objectives
Mastery of Competence	Performs all activities w/great accuracy; works independently once guidelines are established; exceeds pre-determined objectives

Internship Faculty translate preceptor professional assessment scale into numeric scores as follows:

Scale	Grade
Minimal Competence	65 = F
Developing Competence	75 = C
Competent	85 = B
Mastery of Competence	100 = A

Professional development experiences are evaluated by Internship Faculty and reviewed individually with students. These experiences enrich job ready skills development in disease management-health promotion practice settings. Competency based experiences may include:

- Professional Development Day (classes include simulations, case studies, role playing, seminar presentations)
- Research & Development of a Clinical Case Study and Pilot Proposal Project
- Interprofessional Case Collaborations
- Internship Leadership Co-Chair

Overall scores for each rotation and professional development programming are determined utilizing rubrics and objective scores from core competencies (60%) and subjective performance ratings (40%). Subjective performance ratings are based on professional performance behavior and readiness to practice as assessed by the preceptor. The grading scales detailed above apply to rotation and professional development programming.

Grade information is accessible to students at any time in the student online learning management system (Canvas). Conferences may be scheduled at any time by the Internship Faculty or at the students' request.

After each rotation, students review competency grading forms during individual evaluation conferences with rotation preceptors. Students review scores on written projects, objective scores for core competencies and subjective performance ratings for professional behavior and readiness for entry level practice.

- If a project score is below 70, an alternative project is assigned and scored by the Internship Faculty; in consultation with the preceptor.
- If a student submits work late (beyond the documented and/or re-negotiated due date), a minimum of 5 points per day is deducted from the earned score.
- If a student earns an overall rotation score of less than 75 in one rotation, the student will meet with the Internship Director and Educational Coordinator(s) to prepare a written action plan for improvement to meet competency within a specified time period, depending on the learning needs of the student, and within the 47-week program.
- Failure to achieve a minimum score of 75 in a second rotation will result in the student being placed on academic probation.
- Failure to return to satisfactory academic progress status after being placed on academic probation within the time required by the student's written action plan for improvement may result in dismissal from the program.

Mid-internship (December/January) students are required to have an overall average score of 80. This score represents student performance in core rotations, entry level practice, and professional development experiences.

At program completion (June), a minimum overall score of 85 must be achieved to meet requirements for internship program completion. This score represents student performance in core rotations, entry level practice rotations, concentration rotation, and all professional development experiences.

Internship Faculty meet with each student during summary week to summarize performance in the internship program. Failure to achieve a final overall average score of 85 will result in termination prior to or at the summary week conference.

Satisfactory Academic Progress (SAP)

SAP Standards
VUMC Dietetic Internship Program students are required to maintain established program standards of competence and knowledge. The student is considered as maintaining satisfactory academic progress if he/she maintains overall rotation average scores of 75 or greater and as indicated below in these additional categories:

Rotations in disease management-health promotion	>=75	Overall rotation average score
Required mid-internship grade	>=80	Overall grade required at mid-internship for continuance in the program
Internship Completion – average in each domain	>=85	Overall average grade required at program completion in practice domain categories I-V
Internship Completion – clinical case study and pilot proposal projects	>=85	Overall project score for the clinical case study and the pilot proposal projects
Internship Completion - clinical and health promotion entry level practice rotations and concentration rotation	>=85	Overall rotation average score for entry level practice and concentration rotations
Internship Completion – total overall average	>=85	Required at completion of internship

Code of Conduct and Ethics
In addition to the VUMC Code of Conduct, VUMC Dietetic Internship Program students are bound by standards of conduct specific to their profession. Adherence to the VUMC Code of Conduct and the Code of Ethics for the Profession of Dietetics is required of students at all times.

Code of Ethics for the Profession of Dietetics
Preamble: When providing services the nutrition and dietetics practitioner adheres to the core values of customer focus, integrity, innovation, social responsibility, and diversity. Science-based decisions, derived from the best available research and evidence, are the underpinnings of ethical conduct and practice.

This Code applies to nutrition and dietetics practitioners who act in a wide variety of capacities, provides general principles and specific ethical standards for situations frequently encountered in daily practice. The primary goal is the protection of the individuals, groups, organizations, communities, or populations with whom the practitioner works and interacts.

The nutrition and dietetics practitioner supports and promotes high standards of professional practice, accepting the obligation to protect clients, the public and the profession; upholds the Academy of Nutrition and Dietetics

(Academy) and its credentialing agency the Commission on Dietetic Registration (CDR) Code of Ethics for the Nutrition and Dietetics Profession; and shall report perceived violations of the Code through established processes.

The Academy/CDR Code of Ethics for the Nutrition and Dietetics Profession establishes the principles and ethical standards that underlie the nutrition and dietetics practitioner's roles and conduct. All individuals to whom the Code applies are referred to as "nutrition and dietetics practitioners". By accepting membership in the Academy and/or accepting and maintaining CDR credentials, all nutrition and dietetics practitioners agree to abide by the Code.

Principles and Standards:

1. **Competence and professional development in practice (Non-maleficence)**
   Nutrition and dietetics practitioners shall:
   a. Practice using an evidence-based approach within areas of competence, continuously develop and enhance expertise, and recognize limitations.
   b. Demonstrate in depth scientific knowledge of food, human nutrition and behavior.
   c. Assess the validity and applicability of scientific evidence without personal bias.
   d. Interpret, apply, participate in and/or generate research to enhance practice, innovation, and discovery.
   e. Make evidence-based practice decisions, taking into account the unique values and circumstances
   f. of the patient/client and community, in combination with the practitioner's expertise and judgment.
   g. Recognize and exercise professional judgment within the limits of individual qualifications and collaborate with others, seek counsel, and make referrals as appropriate.
   h. Act in a caring and respectful manner, mindful of individual differences, cultural, and ethnic diversity.
   i. Practice within the limits of their scope and collaborate with the inter-professional team.
2. **Integrity in personal and organizational behaviors and practices (Autonomy)**
   Nutrition and dietetics practitioners shall:
   a. Disclose any conflicts of interest, including any financial interests in products or services that are recommended. Refrain from accepting gifts or services which potentially influence or which may give the appearance of influencing professional judgment.
   b. Comply with all applicable laws and regulations, including obtaining/maintaining a state license or certification if engaged in practice governed by nutrition and dietetics statutes.
   c. Maintain and appropriately use credentials.
   d. Respect intellectual property rights, including citation and recognition of the ideas and work of others, regardless of the medium (e.g. written, oral, electronic).
   e. Provide accurate and truthful information in all communications.
   f. Report inappropriate behavior or treatment of a patient/client by another nutrition and dietetics practitioner or other professionals.
   g. Document, code and bill to most accurately reflect the character and extent of delivered services.
   h. Respect patient/client autonomy. Safeguard patient/client confidentiality according to current regulations and laws.
   i. Implement appropriate measures to protect personal health information using appropriate techniques (e.g., encryption).
3. **Professionalism (Beneficence)**
   Nutrition and dietetics practitioners shall:
   a. Participate in and contribute to decisions that affect the well-being of patients/clients.
   b. Respect the values, rights, knowledge, and skills of colleagues and other professionals.
   c. Demonstrate respect, constructive dialogue, civility and professionalism in all communications, including social media.

d. Refrain from communicating false, fraudulent, deceptive, misleading, disparaging or unfair statements or claims.
e. Uphold professional boundaries and refrain from romantic relationships with any patients/clients, surrogates, supervisees, or students.
f. Refrain from verbal/physical/emotional/sexual harassment.
g. Provide objective evaluations of performance for employees, coworkers, and students and candidates for employment, professional association memberships, awards, or scholarships, making all reasonable efforts to avoid bias in the professional evaluation of others.
h. Communicate at an appropriate level to promote health literacy.
i. Contribute to the advancement and competence of others, including colleagues, students, and the public.

4. **Social responsibility for local, regional, national, global nutrition and well-being (Justice)**
Nutrition and dietetics practitioners shall:
a. Collaborate with others to reduce health disparities and protect human rights. b. Promote fairness and objectivity with fair and equitable treatment.
b. Contribute time and expertise to activities that promote respect, integrity, and competence of the profession.
c. Promote the unique role of nutrition and dietetics practitioners.
d. Engage in service that benefits the community and to enhance the public's trust in the profession.
e. Seek leadership opportunities in professional, community, and service organizations to enhance health and nutritional status while protecting the public.

References:

1. Fornari A. Approaches to ethical decision-making. *J Acad Nutr Diet.* 2015;115(1):119-121.
2. Academy of Nutrition and Dietetics Definition of Terms List. June, 2017 (Approved by Definition of Terms Workgroup Quality Management Committee May 16, 2017). Accessed October 11, 2017. http://www.eatrightpro.org/~/media/eatrightpro%20files/practice/scope%20standards%20of%20practice/academydefinitionoftermslist.ashx
3. Academy of Nutrition and Dietetics: Revised 2017 Standards of Practice in Nutrition Care and Standards of Professional Performance for Registered Dietitian Nutritionists. *J Acad Nutr Diet.* 2018; 118: 132-140.
4. Academy of Nutrition and Dietetics "Diversity Philosophy Statement" (adopted by the House of Delegates and Board of Directors in 1995).

Honor Code

The purpose of the Honor Code is to preserve and promote academic integrity. To ensure students clearly understand the behaviors that are expected/acceptable and unacceptable, the following examples are provided. These are considered violations of the VUMC Center for Programs in Allied Health Honor Code and/or the Code of Ethics for the Profession of Dietetics:

- Cheating on an examination, test or written project
- Plagiarizing (incorporating into one's own work the work of another without identifying the source) in an assigned paper, report or project
- Submitting work prepared by another person as one's own (including use of texts, papers, computer programs, or other class work prepared by commercial or noncommercial agents)
- Submitting work prepared for another rotation without the specific prior authorization of the supervising dietitian

- Falsely reporting personal illness or work hours on monthly time sheets
- Falsification of study and research results

Such acts (as those listed above) will warrant an investigation, and findings will be presented to the CPiAH Director for review. Appropriate disciplinary action will be determined by the CPiAH Director in consultation with the Dietetic Internship Director.

Student Grievance Procedure

The purpose of the grievance policy is to provide a prompt means of resolving student grievances. This procedure is available to any student who believes a decision or action has adversely affected his or her status, rights and/or privileges. Most grievances can be resolved at their origin and it is suggested that students use the following procedures:

- Schedule a meeting with the rotation preceptor (include the Internship's Educational Coordinator), discuss concerns, and attempt to resolve the issue.
- If the concern is not resolved to the student's satisfaction, the student should schedule a meeting with the Dietetic Internship Program Director. Three business days before the meeting the student should submit in writing: the problem/grievance, courses of action taken up to that point and an explanation for lack of resolution.
- If the concern is not resolved to the student's satisfaction by the Internship Director, the student should submit the grievance in writing, and by appointment, meet with the Director of Center for Programs in Allied Health or submit by mail to 2215 Garland Avenue, Suite 312 Light Hall, Nashville, TN, 37232-0495 or contact by phone at (615)875-3666.
- If at this time the grievance is not resolved, the grievance will be heard by the VUMC Executive Vice President of Educational Affairs (EVP-EA). The final decision of the EVP-EA will be provided to the Program Director and to the student within five business days. The decision of the EVP-EA is final.
- As a final recourse, students are advised to submit grievances directly to ACEND only after all options within the Dietetic Internship Program, the Center for Allied Health and VUMC's executive levels have been exhausted. The address and phone number of ACEND is 120 South Riverside Plaza, Suite 2190, Chicago, IL 60606-6995; 1-800-877-1600.
- The Dietetic Internship Program Director maintains (for 7 years) written documentation of student grievances/complaints and outcomes/resolutions as well as submits student grievance/complaint documentation to the Center for Programs in Allied Health.

Graduation/Completion Requirements

Program completion occurs when the student completes VUMC Dietetic Internship Program requirements and graduate coursework for all associated MEd courses as confirmed by Peabody College of Vanderbilt University. The maximum timeframe for completion of MEd/DI program requirements is within 23 months (150% of the program length).

- A minimum of 1200 hours of supervised practice experience in disease management- health promotion rotations and professional development programming.
- Demonstrates ethical and professional performance competence as an entry level practitioner in professional practice and disease management -health promotion settings.
- Achieves a minimum overall average score of 85. Overall scores for each rotation and professional development programming are determined utilizing rubrics and objective scores from core competencies (60%) and subjective performance ratings (40%)
- All financial obligations are met as confirmed by Vanderbilt University.
- Completion of the Commission on Dietetic Registration Exit Packet including Registration Eligibility Application Form, RDNE and RDE Mis-Use Form, and demographic information on the CDR REPS portal

- Official Graduate Degree Transcript from Peabody College of Vanderbilt University

Equipment List

A personal, laptop computer with Microsoft Office is required. Students do have access to a shared computer lab with computers, workstations for patient charting and printers.

This catalog contains only a summary of Dietetic Internship program policies and procedures. Students should refer to the Dietetic Internship Program Handbook and Syllabus for more detailed information

MEDICAL LABORATORY SCIENCE PROGRAM

Program Description

The Vanderbilt University Medical Center (VUMC) sponsors the Medical Laboratory Science (MLS) program within the Department of Pathology, Microbiology, and Immunology and the VUMC Medical Laboratories. The Veterans Administration (VA) Hospital originally sponsored the VUMC Medical Laboratory Science Program and graduated its first class in 1954. Sponsorship transferred to Vanderbilt University Hospital in 1968, and the program has been in continuous operation since then.

Medical laboratory scientists are trained in all major clinical pathology areas, including Clinical Chemistry, Hematology, Hemostasis and Thrombosis (Coagulation), Immunoserology, Immunohematology (Blood Bank), Infectious Disease (including Microbiology and Molecular Infectious Diseases), Urinalysis & Body Fluids, Molecular Diagnostics, Hematopathology, Histocompatibility, and Management/Supervisory skills.

Training includes didactic, student laboratory, and practical experiences. Student laboratory and classroom spaces are located in Light Hall on the VUMC campus and within the Vanderbilt Medical Laboratories at MetroCenter. Additional space is provided throughout the Diagnostic Labs in The Vanderbilt Clinic (TVC) for student use. The Medical Laboratory Science program administration office and library are also found in Vanderbilt Medical Laboratories. The program officials include a Medical Director, Program Director, two Educational Coordinators, and faculty from each area of the laboratory who are experts in their respective departments.

Licensure/Certification/Credentialing

Upon successful completion of the program, students are awarded a Certificate in Medical Laboratory Science and are eligible to sit for exams to receive national certification. Upon receipt of national certification by a recognized national agency, students become eligible for licensure from the State of Tennessee as a Medical Laboratory Technologist and are eligible for licensure by other state licensing boards.

Program Costs

Application Fee $50 + Tuition $7,500 + Fees $575 Books, Materials, Supplies and Equipment $2,157 + Licensure/Certification $350 = Total Cost $10,632

Program Length

Students complete 75 semester credit hours during 56 weeks of full-time study. Classes begin the first week of June and continue until the end of June the following year.

Program Delivery Method

Residential

Program Mission, Credo and Goals

Program Philosophy and Mission Statement

We support excellence in patient care and safety by providing accurate and timely laboratory information and services to improve the health of the individuals and communities we serve. As a leading academic medical center laboratory, we advance knowledge and the development of medical professionals through the Vanderbilt University Medical Center pillar goals of people, service, quality, growth and finance, and innovation.

Our program's mission is to cultivate a generation of highly skilled and compassionate medical laboratory scientists through comprehensive education and practical training within a hospital-based setting. We are committed to fostering a learning environment that promotes excellence, integrity, and innovation in laboratory medicine. Our program aims to equip students with the knowledge, critical thinking abilities, and technical proficiency necessary to

excel in the dynamic field of medical laboratory science. By instilling a dedication to patient care, ethical practice, and continuous professional development, we aspire to empower graduates to positively impact healthcare outcomes and contribute to the advancement of medical science. The Medical Laboratory Science Program strives to maintain a quality education program to accomplish the following outcomes.

To provide proficient employees with advanced knowledge and skills for diagnostic laboratories at VUMC and other healthcare organizations.

Students perform high throughput and high complexity testing on a diverse patient population after training in VUMC's diagnostic laboratories. Students become familiar with VUMC policies and procedures, preparing them to begin training as employees immediately after graduation. This integration of students in the VUMC laboratory environment decreases the expenses VUMC pays in recruitment and employee selection. Students who choose to work at other health care organizations after graduation apply the knowledge and experiences from the program to work in a fast-paced environment of varying complexities.

To provide a stimulating learning environment for students and laboratory staff.

Being involved in laboratory education provides an atmosphere in which laboratory professionals are pushed to maintain knowledge of current theory and testing procedures. Employees are challenged to investigate new and emerging trends in the field, positively affecting patient care. Interacting with students also allows employees to improve their skills in communication and instruction.

To maintain a source of professionals who constantly and consistently bring new knowledge into the laboratory field to drive change in health care.

Stagnation, job dissatisfaction, and burnout are reduced in the laboratory by providing a constant source of new professionals to alleviate staffing issues. These new professionals are motivated to learn and support patient care and laboratory testing. Laboratory professionals engage and share knowledge with students, ensuring that the students will have current, practical knowledge upon entering the workforce. Students also participate in seminar activities that prepare theme to be leaders in their selected focus after graduation. Graduates of the program are encouraged to participate in professional organizations and other activities to influence the direction and remain on the forefront of their chosen career.

Program Goals/Objectives

The Medical Laboratory Science Program at Vanderbilt University Medical Center bases its educational program on principles essential to the preparation of students to achieve the ideals of the profession.

The VUMC Medical Laboratory Science program strives to instill the following goals in each student through teaching and experiential learning:

1. **Goal 1: Proficiency in Laboratory Techniques and Procedures**
    - Perform laboratory tests of moderate and high complexity accurately and efficiently.
    - Demonstrate proficiency in specimen collection, processing, analysis, and interpretation of results.
    - Utilize laboratory instrumentation and technology effectively to conduct tests and troubleshoot equipment issues.
2. **Goal 2: Critical Thinking and Problem-Solving Skills**
    - Apply critical thinking skills to analyze laboratory data, identify patterns, and draw appropriate conclusions.
    - Troubleshoot technical issues encountered during laboratory procedures and propose solutions.
    - Evaluate the reliability and validity of laboratory results, recognizing potential sources of error and taking corrective actions.

3. **Goal 3: Knowledge of Laboratory Sciences**
    - Demonstrate a comprehensive understanding of the principles, theories, and concepts underlying laboratory sciences, including biochemistry, microbiology, hematology, immunology, and clinical chemistry.
    - Apply knowledge of human anatomy, physiology, and pathophysiology to laboratory practice and interpretation of laboratory results.
    - Stay updated with advancements in laboratory medicine, research methodologies, and emerging technologies relevant to the field.
4. **Goal 4: Communication and Interpersonal Skills**
    - Communicate effectively with healthcare professionals, patients, and laboratory staff, demonstrating professionalism, empathy, and cultural sensitivity.
    - Document laboratory procedures, findings, and results accurately and clearly in written reports and electronic medical records.
    - Collaborate with interdisciplinary healthcare teams to ensure accurate diagnosis, treatment, and monitoring of patient conditions.
5. **Goal 5: Professionalism and Ethical Conduct**
    - Adhere to professional standards, codes of ethics, and regulatory requirements governing laboratory practice.
    - Maintain confidentiality of patient information and protect the privacy and rights of individuals in accordance with HIPAA regulations and institutional policies.
    - Demonstrate integrity, honesty, and ethical behavior in all aspects of laboratory practice, including patient care and interactions with colleagues and patients.
6. **Goal 6: Quality Assurance and Laboratory Management**
    - Implement quality control measures and quality assurance protocols to ensure accuracy, precision, and reliability of laboratory results.
    - Participate in the development, implementation, and evaluation of laboratory policies, procedures, and protocols.
    - Manage laboratory resources efficiently, including inventory control, equipment maintenance, and compliance with safety regulations.
7. **Goal 7: Lifelong Learning and Professional Development**
    - Engage in continuous professional development activities, such as attending conferences, workshops, and seminars, and pursuing advanced certifications or degrees to navigate changing trends in the profession.
    - Seek opportunities to contribute to the advancement of laboratory medicine and scientific knowledge and to advance within the career.
    - Demonstrate a commitment to lifelong learning, self-reflection, and personal growth as a healthcare professional.

Programmatic Accreditation/Approvals

The Medical Laboratory Science Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). NAACLS is recognized by the Council for Higher Education Accreditation and is committed to quality in education and educational review. The program is also licensed by the State of Tennessee as required by the Tennessee Laboratory Act and is approved to operate by the Tennessee Department of Health. Students completing the year of training are eligible for the national certification as a Medical Laboratory Scientist by examination through agencies such as the American Society of Clinical Pathologist Board of Certification (BOC).

Upon receipt of national certification, the graduate becomes eligible for state licensure by the Tennessee Department of Health.

National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
5600 N. River Road, Suite 720, Rosemont, IL 60018-5119
Phone: 773.714.8880 Fax: 773.714.8886 E-mail: info@naacls.org

American Society of Clinical Pathologist Board of Certification (ASCP BOC)
33 W. Monroe Street, Suite 1600, Chicago, IL 60603 www.ascp.org

Tennessee Department of Health: Medical Laboratory Board
665 Mainstream Drive, 2nd Floor, Nashville, TN 37243
Phone: 615.532.5128 local or 1.800.778.4123 nationwide

Program Academic Calendar

Medical Laboratory Science Program	
2024-25 ACADEMIC CALENDAR	
Program Start Date	**Monday, June 3, 2024**
Independence Day 2024	**Thursday, July 4, 2024**
Fall Break 2024	**Monday, September 2, 2024 - Friday, September 6, 2024**
Labor Day 2024	**Monday, September 2, 2024**
Thanksgiving 2024	**Thursday, November 28, 2024 - Friday, November 29, 2024**
Winter Break 2024	**Monday, December 23, 2024 - Friday, January 3, 2025**
New Year's Day 2025	**Wednesday, January 1, 2025**
Martin Luther King Jr. Day 2025	**Monday, January 20, 2025**
Spring Break 2025	**Variable 5-day period***
Memorial Day 2025	**Monday, May 25, 2025**
Program Completion Date	**Friday, June 27, 2025**

*Due to clinical rotation schedules, each student has a different spring break week. Students may request specific spring break weeks and are notified of their spring break dates in November of the prior year.

Program Faculty/Staff

Holly Covas, EdD, MPH, MLS (ASCP)^{CM}, MLS Program Director (Full-time)
EdD, Learning and Organizational Change, Baylor University, Baylor, TX; MPH, Public Health, University of California, Berkeley, 2014; BS, Clinical Laboratory Science, 2010, University of Mississippi Medical Center, Jackson, MS; AAS, Medical Laboratory Technology, 2007, Meridian Community College, Meridian, MS

Sylvia Verhoven, MLS (ASCP)^{CM}, MLS Program Education Coordinator (Full-time)
Certificate, Medical Laboratory Science, Vanderbilt University, Nashville, TN, 2014, BS, Biology, University of Alabama, Tuscaloosa, AL, 2010

Jessie Smith, MLS (ASCP)^{CM}, MLS Program Clinical Coordinator (Full-time)
Certificate, Medical Laboratory Science, Vanderbilt University, Nashville, TN, 2016, BS, Biochemistry, Middle Tennessee State University, Murfreesboro, TN 2014

Garrett Booth, MD, MS, Medical Director
Professor of Pathology, Microbiology & Immunology (Part-time) Associate Medical Director, Transfusion Medicine
MD, 2007, University of Arizona College of Medicine, Tucson, AZ; MS, Epidemiology, 2002, Johns Hopkins Bloomberg

School of Public Health, Baltimore, MD; BS, Neuroscience and Psychobiology, 2000, UCLA Honor's College, Los Angeles, CA

Emily Bishop, MLS (ASCP) Instructor (Part-time)
Certificate, MLS, 2006, Vanderbilt University, Nashville, TN; BA, Biology, Carson Newman College, Jefferson City, TN

Sharon Glover, MLS (ASCP) Instructor (Part-time)
Certificate, 1987, Medical Technology, St. Francis, Memphis, TN; BS, Biology, 1986, Middle Tennessee State University, Murfreesboro, TN

Erika Hall, MLS (ASCP) Instructor (Part-time)
Certificate, MLS, 2008, Vanderbilt University Medical Center; BS, Biology, 2006, Middle Tennessee State University, Murfreesboro, TN; AAS, Science, 2000, Patrick Henry Community College, Martinsville, VA

Alli Leaver, MLS (ASCP)^{CM} Instructor (Part-time)
Certificate, MLS, 2019, Vanderbilt University Medical Center; BS, Biology, 2016, Lipscomb University, Nashville, TN

Carly Marcum, MLS (ASCP)^{CM}, Instructor (Part-time)
BS, MLS, 2010, Purdue University, West Lafayette, IN

Samanwi Munagala, MLS (ASCP)^{CM}, Instructor (Part-time)
Certificate, MLS, 2017, Vanderbilt University Medical Center, Nashville, TN; BS, Biology, Chemistry minor, Middle Tennessee State University, Murfreesboro, TN

Doris Ortez, MLS (ASCP), Instructor (Part-time)
Certificate, MLS, 2012, Vanderbilt University, Nashville, TN; BS, 2008, Middle Tennessee State University, Murfreesboro, TN

Program Advisory Board

The Program Advisory Committee is composed of representatives from multiple laboratory sections within the VUMC Diagnostic Laboratories, the VUMC Department of Pathology, and the community. Representation includes pathologists, administrators, managers, supervisors, program graduates, and clinical instructors/medical laboratory scientists and representatives from the community. The Program Advisory Committee (PAC):

- Provides input into any aspect of the program/curriculum with regard to its current learning outcomes, relevancy, and effectiveness.
- Serves as the admission committee to review and make decisions on student selection or dismissal.
- Reviews any grievances that require resolution. This function activates the ad hoc members.
- Members serve a four-year term, on a rotating basis.

The Program Advisory Committee is composed of the following individuals:

Member Name	Credentials	Title
Dr. Holly Covas	Ed.D. MPH, MLS (ASCP)^{CM}	Program Director
Sylvia Verhoven	MLS (ASCP)^{CM}	Educational Coordinator
Jessie Smith	MLS (ASCP)^{CM}	Clinical Coordinator
Dr. Garrett Booth	MD, MS	Program Medical Director
Dr. David Gaston	MD, PhD	Laboratory Medical Director
Bruce Greig	MT, ASCP	Team Leader
Erika Hall	MLS (ASCP)^{CM}	Quality Coordinator
Pat Purcell	CLS, MBA, FACHE	Associate Vice President
Jill White-Abell	MT (ASCP)	Team Leader
Martha Dagen	MT (ASCP)	MLS 2
Adam Blacker	MS, CHS (ACHI), MLS (ASCP) CM	Manager
Angie Mueller	MLS (ASCP) CM	Manager
Ashely Davis	MLS (ASCP)^{CM}	MT
Pamela Fair	Ph.D, MT(ASCP)	MLT Program Director
Diamondie Smith	MLS (ASCP)CM	MLS 2
Victoria Davis	MLS (ASCP)CM	MLS 2
Ebony McHaskell	MS	Director, CPiAH
Jennifer Alexander	PhD	Faculty/Instructional Design Manager, CPiAH

Admissions

Admission Requirements

VUMC requires that all applicants must possess a high school diploma, a high school diploma equivalency, a current Tennessee license in the field for which the training is intended, or postsecondary credit in a degree program. VUMC allows an applicant to submit a copy of a post-secondary degree (i.e., Associate's, Bachelor's or Master's) in lieu of a copy of the high school diploma.

Applicants to the Medical Laboratory Science program must:

- Possess a bachelor's degree from an accredited college or university
  OR
- Be eligible to receive a bachelor's degree from one of the program's academic affiliated schools upon successful completion of the VUMC Medical Laboratory Science program.

Eligible applicants are required to have a minimum of three years (90 semester or 136 quarter hours) of college credits at a regionally-accredited college or university.

Out of the 90 total semester hours (136 quarter hours) required for acceptance into the program, qualified applicants must complete the following with a total and science (biology and chemistry) GPA of 2.5 or greater before starting the program:

- At least 16 semester hours or 24 quarter hours of Chemistry
    1. Required:
        - General/College Chemistry I
        - General/College Chemistry II
        - Organic Chemistry *or* Biochemistry
    2. Recommended: Quantitative Analytical Chemistry, Clinical Instrumentation

- At least 16 semester or 24 quarter hours of Biological Sciences
    1. Required:
        - Microbiology
        - Immunology
    2. Recommended: Genetics, Anatomy & Physiology
- At least 3 semester hours or 4.5 quarter hour of College Mathematics (at College Algebra level or higher)

*Individuals who completed coursework in Immunology, Microbiology, Genetics, and Organic Chemistry or Biochemistry at least 7 years prior to application are requested to complete updated courses in each.

The content of courses must be applicable towards a major in that area or in medical laboratory science. Survey, CLEP, or AP courses are not accepted toward the requirements.

Essential Functions
As a student enrolled in the Medical Laboratory Science program, it is essential to understand and fulfill certain functions to ensure successful participation and completion of the program. These essential functions are necessary for academic and professional success in the field of laboratory medicine. Students must possess, and maintain throughout their time in the program, the ability to perform the following required actions:

Physical and Motor Skills:

1. Demonstrate the physical and motor skills necessary to safely and effectively perform laboratory procedures, including specimen collection, handling, and analysis.
2. Possess the dexterity and coordination required to manipulate laboratory equipment, instruments, and tools with precision and accuracy.
3. Perform laboratory procedures with manual dexterity, including repetitive hand motions, such as pipetting and typing.
4. Ability to stand, sit, and move around in a laboratory setting for extended periods.
5. Ability to properly lift and carry equipment and supplies up to 25 pounds as needed.

Sensory and Perceptual Abilities:

1. Possess adequate sensory and perceptual abilities, including vision, hearing, and tactile sensation, to accurately interpret laboratory results, distinguish colors, and detect changes in specimen appearance and cellular morphology.

2. Ability to observe and assess laboratory specimens, equipment, and surroundings with attention to detail and accuracy.

Cognitive and Intellectual Abilities:

1. Demonstrate critical thinking skills and intellectual capacity necessary to comprehend complex scientific concepts, theories, and laboratory procedures.
2. Ability to analyze and interpret laboratory data, identify patterns, and draw appropriate conclusions based on data without guidance or advice and within given time constraints throughout the classroom, student laboratory, and medical laboratory settings.
3. Possess problem-solving skills to troubleshoot technical issues, identify sources of error, and implement corrective actions in laboratory settings.

Communication Skills:

i. Ability to communicate effectively and professionally with peers, instructors, physicians, healthcare professionals, and patients, both verbally and in writing.
ii. Demonstrate active listening skills, empathy, and cultural competence in interactions with individuals from diverse backgrounds and perspectives.
iii. Document laboratory procedures, findings, and results accurately and clearly in written reports and electronic medical records.

Interpersonal and Professional Behaviors:

1. Exhibit professionalism, integrity, and ethical conduct in all aspects of laboratory practice, including adherence to professional standards, codes of ethics, and regulatory requirements.
2. Collaborate effectively with interdisciplinary healthcare teams, demonstrating respect, teamwork, and leadership skills.
3. Maintain confidentiality of patient information and protect the privacy and rights of individuals in accordance with HIPAA regulations and institutional policies.

Safety:

1. Wear appropriate personal protective equipment (PPE) based on laboratory activities being performed.
2. Promote a safe working environment through engineering controls and practices and following all safety protocols established by the program, Vanderbilt Medical Laboratories, and accrediting organizations.
3. Demonstrate safe working practices.
4. Seek ways to support and improve patient safety.

Time Management and Organizational Skills:

1. Manage time effectively to prioritize tasks, meet deadlines, and balance academic coursework, laboratory responsibilities, and clinical rotations.
2. Demonstrate organizational skills to maintain accurate records, manage laboratory resources efficiently, and keep laboratory workspaces clean and organized.

Emotional Resilience and Stress Management:

1. Develop emotional resilience and coping strategies to manage the demands of the Medical Laboratory Science program, including academic rigor, clinical responsibilities, and exposure to challenging or emotionally taxing situations.

2. Seek support from peers, faculty, and support services as needed to maintain mental and emotional well-being throughout the program.

Commitment to Lifelong Learning and Professional Development:

1. Embrace a commitment to lifelong learning, self-reflection, and continuous professional development to stay updated with advancements in laboratory medicine, research methodologies, and emerging technologies.
2. Engage in opportunities to contribute to the advancement of laboratory science and healthcare delivery.

Application Procedure

Individuals from a regionally-accredited college or university who meet the minimum academic requirements are eligible for admission into the program. Applications are accepted beginning July 1 each year. The link for submission and all accompanying documents required can be found on the MLS website. A final deadline for all materials by the Friday of the second week in January must be met for consideration.

Priority Selection

Applicants may be provided priority selection into the program if and once ALL following requirements are met:

1. The applicant meets all minimum requirements, including the completion of all prerequisite courses before the program will begin in June.
2. The applicant completes his/her interview.
3. The applicant has a total ranked score of 3.60 or greater. Refer to the calculation in the MLS program handbook for information concerning the ranked score.

Applicants who meet all above criteria for priority selection will be notified in writing of acceptance into the program following the processing of the results of the interview score and the subsequent calculation of the overall rank. This process will bypass the typical selection of applicants by the Program Advisory Committee in February, thus providing a “fast track” option in which qualified applicants will be selected for the cohort sooner than February.

Applicants must submit the following:

- Completed program application (link available on MLS program website July 1 – mid January).
- Official transcripts from all universities and colleges attended regardless of graduation status.
- A list of courses in progress or to be completed prior to the June admission date.
- Three references, with at least two from current or previous faculty, and one from an employer or individual familiar with the applicant's character. Reference name and emails will be submitted with the electronic application. Upon submission, references will receive an application to submit their review and an optional letter of recommendation.

Prospective students and applicants may contact the program director, Holly Covas, by email at holly.covas@vumc.org or by phone at 615-322-8681.

Admission Interviews

All applicants who meet the minimum qualifications for acceptance are invited to interview with the program. Interview dates are based on the availability of both the student and program director. Interviews include:

- Interview and program overview with the program director and education coordinator.
- Interviews with one or two additional faculty members or laboratory personnel.
- Tour of the diagnostic laboratories and classroom.

During the interview, the details of the program and the selection process are discussed in detail. Applicants are encouraged to ask questions.

Applicant Selection and Acceptance
The Program Advisory Committee makes offers of admission to the program in February of each year. All participants are evaluated on an individual basis, with selection based on the following criteria:

- Cumulative grade point average (GPA)
- Grade point average in science coursework
- Letters of recommendation or pre-professional evaluation
- Interviews

The selection process includes a review of each applicant based on academic achievement, work experience, interest and knowledge of the medical laboratory science profession, career goals, and personal attributes that would contribute to the success of the applicant in the program and as a medical laboratory scientist. These attributes include the ability to make decisions based on sound knowledge, strong ethical and moral attitudes, and a commitment to quality patient care.

Academic Program and Assessment

Curriculum Sequence/Program Delivery
Classes begin the first week of June and continue until the end of June the following year. Orientation is held during the first week of class and provides an opportunity for students to become acquainted with fellow students, faculty members, and the organization. Course work during this orientation week consists of an introduction and review of basic laboratory operations and skills.

The academic year is divided into two semesters/terms, each approximately six months long.

1. First semester/term: This semester is comprised of the lecture/student laboratory portion of the program. It begins in June and is completed in mid-December. Coursework completed during this portion of the program takes place in a classroom setting, during which students attend lectures and complete student laboratory assignments. Students complete out-of-class assignments such as study questions, case studies, and reading, as well as in-class assessments of quizzes, exams, and laboratory practicals. Classes are taught Monday through Friday from 8:30 am to 4:30 pm with 12-1 pm reserved for lunch. Students attend one morning course from 8:30 am to 12 pm and one afternoon course from 1 pm to 4:30 pm. Course lengths vary from 1 week to 10 weeks.

2. Second semester/term: The second semester runs from January through the end of June and includes the clinical practical (i.e., clinical rotations) in each department of the clinical and diagnostic laboratories. During this time, students work alongside medical laboratory scientists to learn how to operate the instrumentation and interpret results. Students complete case studies, checklists, study questions, unknown patient samples, research papers, and written assessments. Students attend clinical rotations for 8 ½ hours each day with 30 minutes reserved for lunch. Clinical rotation times typically occur from 7 am to 3:30 pm or 8 am to 4:20 pm, depending on the department. One four-day portion of the Blood Bank rotation occurs from 1 to 9 pm. Students complete rotations for all clinical laboratory departments at Vanderbilt University Medical Center and for phlebotomy and specimen receiving. Clinical rotation lengths are 1 day to 4 weeks, and each student will complete the rotations in a separate order.

Students are required to be present on a full-time basis throughout the year of training.

Medical Laboratory Science

Program Director - Dr. Holly Covas

TERM: FALL			
Course Code	**Course**	**Clock Hours**	**Total Academic Credits**
SPT101	Introduction to the Laboratory	35.00	1.50
IMH101	Immunoserology	35.00	2.00
BCH101	Clinical Chemistry	175.00	10.50
BCH102	Urinalysis	35.00	1.50
BCH104	Special Chemistry	87.50	5.50
HEM102	Hemostasis/Thrombosis (Coagulation)	35.00	2.00
HEM103	Hematopathology	17.50	1.00
MIC103	Parasitology	35.00	2.00
HEM101	Hematology	157.50	7.50
SPT104	Molecular	35.00	2.00
MIC101	Microbiology (Bacteriology/Mycology)	157.50	8.50
IMH102	Immunohematology (Blood Bank)	105.00	5.50
BCH103	Body Fluids	17.50	1.00
SPT102	Seminar	75.00	4.50
IMH103	Histocompatibility	17.50	1.00
	Total weeks of instruction for this term: **29**	**1020.00**	**56.00**
TERM: SPRING			
Course Code	**Course**	**Clock Hours**	**Total Academic Credits**
BCH203	Body Fluids Rotation	40.00	0.50
BCH201	Clinical Chemistry Rotation	120.00	2.50
HEM201	Hematology Rotation	120.00	2.50
HEM202	Hemostasis/Thrombosis (Coagulation) Rotation	40.00	0.50
HEM203	Hematopathology Rotation	40.00	0.50
IMH202	Immunohematology (Blood Bank) Rotation	160.00	3.50
IMH201	Immunoserology Rotation	40.00	0.50
MIC201	Microbiology (Bacteriology/Mycology) Rotation	160.00	3.50
SPT204	Molecular Rotation	40.00	0.50
SPT205	Phlebotomy Rotation	40.00	0.50
BCH204	Special Chemistry Rotation	80.00	1.50
BCH202	Urinalysis Rotation	40.00	0.50
	Total weeks of instruction for this term: **26**	**920.00**	**17.00**

Total Clock Hours:	1940
Total SEMESTER Credit Hours:	73
Program Length:	56 weeks

Course Descriptions

TERM: FALL			
Course Code	**Course**	**Course Length (Weeks)**	**Course Description**
SPT101	Introduction to the Laboratory	1	Students are oriented to the program, profession, and VUMC. Students receive presentations to review important information they will need to utilize during the program, such as anatomy and physiology, medical terminology, and immunology. The focus of this course is to give them the basic skills and knowledge they will need to progress in the program.
IMH101	Immunology	2	This course covers immunology and virology principles. Immunology discusses the immunological response in infections and autoimmune diseases, the characterization of lymphocyte populations in neoplasms, and abnormal immunologic responses. Virology studies human viruses. Students learn about the laboratory and clinical manifestations of viruses. They also learn about rapid, screening, and confirmatory tests for these viruses.
BCH101	Clinical Chemistry	10	Clinical Chemistry explores biochemical constituents of body fluids, including physiology and pathophysiology. Emphasis is placed on the analytical methods of the laboratory. This includes the study of the principles, operation and maintenance of laboratory instrumentation, and quality control and quality assurance tools.
BCH102	Urinalysis	2	Urinalysis assesses the physical, chemical, and microscopic properties of urine. Emphasis is placed on laboratory procedures, morphological findings, and the correlation of test results to disease states. The course also introduces students to renal anatomy and physiology.
BCH104	Special Chemistry	5	Special Chemistry includes endocrinology and toxicology. Students explore physiology, pathophysiology, detection, and signs and symptoms related to hormones and their disease states. Toxicology covers therapeutic drugs, illicit drugs, volatiles, pharmacology, and pharmacokinetics and pharmacodynamics.
HEM102	Hemostasis/Thrombosis (Coagulation)	2	Coagulation studies the interaction of blood vessels, platelets, coagulation factors, and fibrinolytic system. Emphasis is placed on the laboratory procedures used in the diagnosis and management of various bleeding and thrombotic disorders.
HEM103	Hematopathology	1	Hematopathology studies diseases and disorders that are found in and affect blood cells and hematopoiesis. The course will focus on flow cytometry and other techniques used to diagnose leukemia and lymphomas, such as immunofixation, isoelectric focusing, and protein electrophoresis.
MIC103	Parasitology	2	Students learn about the life cycles and diagnostic stages of clinically significant parasites, focusing on the etiology and infective stages. Laboratory procedures for detecting and differentiating parasites are emphasized, including microscopic characteristics and molecular methods of detection and identification.
HEM101	Hematology	9	Hematology involves the study of maturation, morphology, and function of blood cells and their role in disease processes. Emphasis is placed on both manual and automated laboratory procedures, blood cell identification, and the relationship of cells with specific diseases such as anemia, leukemia, lymphomas, and reactive processes.
SPT104	Molecular	2	This course is the study of human and infectious agents' DNA, RNA, and chromosomes as they relate to normal and pathophysiology. Emphasis is placed on basic molecular theory, basic and advanced laboratory procedures, and the correlation of test results to disease states.
MIC101	Microbiology (Bacteriology/Mycology)	10	Microbiology focuses on bacteria and fungi that infect humans. The course includes the laboratory identification of bacteria and fungi using conventional biochemical methods as well as rapid systems, antimicrobial susceptibility testing, and evaluation of clinical specimens for evidence of infection.
IMH102	Immunohematology (Blood Bank)	6	Immunohematology studies blood group antigens and antibodies and their significance in transfusion therapy. This course includes donor selection, laboratory procedures for processing and selecting blood products, identification of blood group antigens and antibodies, blood storage procedures, quality control, transfusion practices and related complications, and component therapy.
BCH103	Body Fluids	1	Body fluids studies the normal and abnormal cells found in body fluids aside from urine and blood, including serous, spinal, and synovial fluids. Students learn about normal and pathophysiology, how to identify poor collection procedures, and how to correlate results with disease processes.
SPT102	Seminar	2	A variety of topics are covered in Seminar, including management and supervisory skills, laboratory operations, educational methodologies, research skills, regulatory issues, quality assurance tools, career planning, and reviews of technical material.
IMH103	Histocompatibility	1	Histocompatibility will introduce students to human leukocyte antigens and other topics related to identifying compatible biomarkers between donors and recipients and ensuring safety in the transplantation process.

TERM: SPRING			
Course Code	**Course**	**Course Length (Weeks)**	**Course Description**
BCH203	Body Fluids Rotation	1	The body fluids rotation allows students to apply conceptual knowledge to principles for manual and automated testing interpretation and troubleshooting. Students will perform cell differentials and use hemacytometers and automated instruments.
BCH201	Clinical Chemistry Rotation	3	The clinical chemistry rotation allows students to apply conceptual knowledge to principles for manual and automated testing interpretation and troubleshooting. Students will operate chemistry instruments, including the track system and standalone instruments.
HEM201	Hematology Rotation	3	The hematology rotation allows students to apply conceptual knowledge to principles for manual and automated testing interpretation and troubleshooting. Students will perform cell differentials manually and will learn how to operate the Cellavision software.
HEM202	Hemostasis/Thrombosis (Coagulation) Rotation	1	The hemostasis and thrombosis rotation allows students to apply conceptual knowledge to principles for manual and automated testing interpretation and troubleshooting. Students will operate coagulation instruments, including instruments used for esoteric testing.
HEM203	Hematopathology Rotation	1	The hematopathology rotation allows students to apply conceptual knowledge to principles for manual and automated testing interpretation and troubleshooting. Students will assess bone marrow samples and operate flow cytometry instruments.
IMH202	Immunohematology (Blood Bank) Rotation	4	The immunohematology rotation allows students to apply conceptual knowledge to principles for manual and automated testing interpretation and troubleshooting. Students will perform manual and automated testing for blood types and compatibility.
IMG201	Immunology Rotation	2	The immnology rotation allows students to apply conceptual knowledge to principles for manual and automated testing interpretation and troubleshooting. Students will perform kit testing and automated testing for virology and immununology.
MIC201	Microbiology (Bacteriology/Mycology) Rotation	4	The microbiology rotation allows students to apply conceptual knowledge to principles for manual and automated testing interpretation and troubleshooting. Students will perform gram stains, manual biochemical testing, and automated biochemical testing to determine the identity and antibiotic sensitivity of organisms.
SPT204	Molecular Rotation	1	The molecular rotation allows students to apply conceptual knowledge to principles for manual and automated testing interpretation and troubleshooting. Students will perform ELISA, PCR, NGS, and other testing to identify genes and sequences in humans and pathogens.
SPT205	Phlebotomy Rotation	1	The phlebotomy rotation allows students to perform phlebotomy in an outpatient setting and focus on preanalytical factors related to clinical testing.
BCH204	Special Chemistry Rotation	2	The special chemistry rotation allows students to apply conceptual knowledge to principles for manual and automated testing interpretation and troubleshooting. Students will prepare samples and operate instruments for toxicology and endocrinology samples.
BCH202	Urinalysis Rotation	1	The urinalysis rotation allows students to apply conceptual knowledge to principles for manual and automated testing interpretation and troubleshooting. Students will identify formed elements in urine through microscopic and automated methods.

Student Assessment

Grading Policies
Definitions:

• *Course:* Any portion of the program that includes instruction, has its own syllabus with grading criteria, and is identified as a discrete unit of instruction on the program calendar.
• *Transcript grade:* Several related courses may be combined for one transcript grade. Individual courses are co-requisites for the final transcript grade. When evaluating acceptable academic progress in the first semester, course grades are considered independently of the final transcript grade.
• *Practicum:* Also called rotations. This portion of the program involves time spent in the patient care laboratory and typically takes place during the second semester.

The grading scale is as follows:

Scale	Grade	GPA
95-100%	A	4.0
90-94%	A-	3.5
85-89%	B	3.0
80-84%	B-	2.5
75-79%	C	2.0
<75%	F - FAILURE	0
P	Pass - Any course with a "P" grade is not calculated into the grade point average.	
F	Fail - Any course with an "F" grade is not calculated into the grade point average. However, the course must be repeated and passed to graduate.	
I	Incomplete - May be used at the discretion of the instructor in those cases in which the student is not able to complete work in the normal time. In those instances, the student and instructor develop a written plan for an extension to provide work by a specific date that falls within the period of time specified by the relevant program's requirements (but in no circumstances greater than one month). An "I" that is not replaced by a letter grade within the period of time specified by the relevant program's requirements, due to unsatisfactory completion of the student's plan, will be changed to an F after the period specified by the program (a period not to exceed one month). Any course with an "I" grade is not calculated into the grade point average. Once a grade is assigned to the course (when conditions are met that allow for the removal of the "I" and assignment of a final grade), that grade will factor into the student's GPA.	
W±	Withdrawal – Utilized when a student leaves the course due to an approved leave-of-absence or withdraws from the school prior to the scheduled completion of a course. Any course with a "W" grade is not calculated into the grade point average.	

Evaluation of the Student
The National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) and the Accrediting Bureau of Health Education Schools (ABHES) require that approved schools maintain detailed records of the students' progress throughout the year. These standards ensure that our program maintains excellence in educating and preparing students to meet the demands of a career in the laboratory.

Student assessment is based on program and course educational objectives, which are based on multiple resources, including ABHES and NAACLS standards, current laboratory practices, textbooks, and the ASCP BOC and ASCLS BOK guidelines. A variety of assessment models are used to determine cognitive, psychomotor, and behavioral learning outcomes. Cognitive learning is assessed throughout the program with study questions, quizzes, examinations, checklists, and other assignments. Psychomotor learning is

assessed through laboratory exercises and practicals. Behavioral assessments are conducted through behavioral evaluations.

Formative assessments monitor initial student learning and provide opportunities for feedback and improvement whereas summative assessments determine student achievement and competency. Courses are designed such that information is scaffolded and revisited throughout the program to encourage students to learn information on multiple levels of understanding.

These areas are assessed by the following methods:

Performance in the Classroom/Student Laboratory

1. **Lecture**
   The lecture portion of the class focuses on physiology, pathophysiology, biomarkers, and related theory. The student is responsible for completing and understanding all lecture objectives, information presented in lecture and/or through handouts, and all assigned reading. Assessment will be made by exams, quizzes, study questions, case studies, and homework. Unless stated otherwise, all assignments, including open-book assignments, are individual assignments and not to be discussed among students. **Refer to the Honor Code for more information.**
2. **Student Laboratory**
   The laboratory portion of the classroom experience focuses on learning proper laboratory techniques, identification of formed elements and reactions that are useful in clinical diagnosis, and the correlation of theoretical knowledge with application. The student is expected to answer all student laboratory objectives as well as perform and demonstrate an understanding of all procedures and results. Assessment will be performed through the testing of unknown samples, practical examinations, written examinations, and performance.

Performance in the Clinical Rotation

This portion of the program is designed for the application of the theory and practical, or technical, aspects of each course. The student is responsible for all objectives and procedures covered in the lecture/student lab and the clinical rotation. The student is evaluated at the end of each rotation. The student is expected to answer all objectives, perform and demonstrate an understanding of all procedures presented, and complete all reading assignments. The student is expected to assimilate into the work environment, though supervision by a licensed medical laboratory scientist is required when performing and reporting patient testing. The student will be assessed in:

Comprehensive Final Exam

Each student must pass a comprehensive final exam as a requirement for graduation. This exam is a multiple-choice, computer-based exam with content and question weights similar to the Board of Certification (BOC) exam. The purpose of this comprehensive final exam is to ensure that students have the knowledge needed for certification and to prepare students for national certification exams. Students must earn at least a 75% to pass the exam and will have three attempts in which to do so. The first attempt for the comprehensive final exam will be scheduled by the program director and administered to the entire class at the end of April or beginning of May. Any students who do not pass on the first attempt will individually schedule their second and, if needed, third, attempt(s) with the program director or education coordinators. Once the student has received a score of 75% or greater, s/he will not need to complete any additional attempts.

Should the student not pass the comprehensive final after the third attempt, the Program Advisory Committee will meet to review the student's academic performance throughout the year. This review will result in either the student being dismissed from the program or in an extension of training in the area(s) of concern. The decision made by the Advisory Committee may be appealed according to the Center for Programs in Allied Health's Appeals Policy. Please refer to the CPiAH Catalog for more information regarding the Appeals Policy.

Transcript Grades

Upon completion of the program, an official transcript is sent to the State of Tennessee Medical Laboratory Board or other state licensing board, the American Society of Clinical Pathology Board of Certification or other certification organization, and, for 3+1 students, the affiliated university or college granting the baccalaureate degree. Affiliated universities or colleges incorporate VUMC transcript grades into the transcript of the affiliated school based on that school's curriculum.

Satisfactory Academic Progress (SAP)

Students are required to maintain established program standards of competence and knowledge. An overall grade of 75% in each course, including the lecture/student laboratory and clinical practicum, is required for the successful completion of the course. Students who do not meet this requirement are removed from Satisfactory Academic Progress status and subject to a range of academic remedial actions, including dismissal from the program, as outlined in this catalog under the policies of the VUMC Center for Programs in Allied Health.

Advanced placement credits are not allowed. The program and all related courses must be completed in their entirety for a transcript to be created and given. Students must successfully complete all components of the program within the 13 months of the program and in the order presented. The Program Advisory Committee reserves the right to extend a student's training to make up for a deficit in a single course, but this remediation is not to extend training more than five (5) months from the end of the program year.

As part of the Academic Probation, the student must independently review presentations and other materials from the deficient coursework for a period of no more than two (2) weeks. During this time, the student will meet with the program director, education coordinator, and the student support services manager to identify issues and discuss ways to improve their grades. The student will not be given time away from the typical program coursework or classes to complete this remedial work. The student is not allowed to be tardy or absent during this two-week period unless an emergency justifies this tardy or absence. At the end of the two-week review period, the student will take a comprehensive exam based on the material from the deficient course. The grade from this comprehensive exam will replace the previous course grade. If the grade is less than 75%, the student will be dismissed from the program.

If a student does not achieve a minimum grade of 75% in a second course, a clinical rotation, or a behavioral evaluation, s/he is dismissed from the program.

Graduation/Completion Requirements

- Students must achieve an overall minimal grade of 75% in all courses.
- Students must achieve a minimum of 75% on all Behavioral Evaluations.
- Students must pass their final comprehensive exam at the end of the year with a 75% or higher.

Students must pay tuition and fees in full.

Upon successful completion of the program, students are eligible to sit for exams to receive national certification. Upon receipt of national certification by a recognized national agency, students become eligible for licensure from the State of Tennessee as a Medical Laboratory Technologist. Successful completion of the Program is not contingent upon passing of any national certification exam.

Code of Conduct

In addition to the VUMC Code of Conduct, students in the Medical Laboratory Science Program are bound by standards of conduct specific to their profession. Adherence to the VUMC Code of Conduct and the ASCLS Code of Ethics is required of students at all times.

ASCLS Code of Ethics

This code of ethics by the American Society for Clinical Laboratory Science (ASCLS) has been adopted as an official part of the program as well as the profession. Students enrolled in the program are expected to abide by this code and the following regulations.

"As a Medical Laboratory Professional, I pledge to uphold my duty to Patients, the Profession and Society by:

- Placing patients' welfare above my own needs and desires.
- Ensuring that each patient receives care that is safe, effective, efficient, timely, equitable and patient- centered.
- Maintaining the dignity and respect for my profession.
- Promoting the advancement of my profession.
- Ensuring collegial relationships within the clinical laboratory and with other patient care providers.
- Improving access to laboratory services.
- Promoting equitable distribution of healthcare resources.
- Complying with laws and regulations and protecting patients from others' incompetent or illegal practice
- Changing conditions where necessary to advance the best interests of patients."
    - ASCLS Code of Ethics -- http://www.ascls.org/about-us/code-of-ethics

A student will be placed on Behavioral Probation if s/he earns less than 75% on a behavioral evaluation. If s/he earns less than 75% on a second behavioral evaluation or is already on academic probation, s/he is dismissed from the program.

Equipment List

Abbott Architect i1000SR
Agglutination viewers
Agilent Technologies mass spectrophotometer
Clinitek 50
DAI Scientific freezer
Differential counters
Fisherbrand refrigerator
Fisher Scientific centrifuges
Fisher Scientific oven
Forma Scientific incubator
Helena Laboratories spife 3000
Hemocytometers
Isotemp 102S
Hologic Infinite F200
Marsters Tube Incubator
Mass spectrophotometer
Microhematocrit centrifuge
Micro-Pipetors
Microscopes
Miscellaneous lab supplies such as timers, hand counters, water baths, centrifuges, vortexes and tube mixers
Phlebotomy Arms
Refractometers

Sedimentation racks
Serofuges
Siemens PFA-100
Slide drying racks
Staining racks
Volumetric and serological pipets
Vortexers
VWR Scientific Bacteriology incubator ~~and cabinet~~
VWR centrifgue

This catalog contains only a summary of program policies and procedures. Students should refer to the program/student handbook for additional information.

NUCLEAR MEDICINE TECHNOLOGY

Program Description

The Vanderbilt University Medical Center (VUMC) Program in Nuclear Medicine Technology (NMT) is a 52-week training program in clinical nuclear medicine technology that was formally established in 1979 as a program in allied health. This program is designed for students who have either completed a minimum of three years pre-radiologic technology work in an affiliated university or have completed their bachelor's degree in a related science field. The VUMC NMT program is approved as the fourth-year externship in a baccalaureate degree program at Austin Peay State University in Clarksville, Tennessee and at Middle Tennessee State University in Murfreesboro, Tennessee.

The VUMC NMT program is accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT) and prepares graduates for certification as nuclear medicine technologists. Students receive training in atomic and nuclear physics, radiochemistry and nuclear pharmacy, patient care and nursing, radiation safety, radiobiology, instrumentation and computer applications, as well as clinical nuclear medicine procedures. Didactic coursework and clinical rotations are scheduled Monday through Friday. Clinical rotations are scheduled in multiple departments within VUMC and VCH, as well as the Vanderbilt Heart and Vascular Institute (VHVI) and the Veterans Administration (VA) Hospital in Nashville. Clinical rotations include general and pediatric nuclear medicine, PET, nuclear cardiology and nursing, as well as nuclear pharmacy and in vitro procedures. Program officials include a Program Director, Medical Director, and Clinical Coordinator.

Upon graduation from the program, students are awarded a certificate from VUMC Allied Health—which makes them eligible to sit for national board certification exams.

Program Costs

Application Fee $50 + Tuition $4,500 + Fees $625 Books, Materials, Supplies and Equipment $3,176 + Licensure/Certification $425 = Total Cost $8,776

Program Length

The VUMC NMT provides a total of 56 semester credit hours in 52 weeks of full-time, didactic and clinical study. Courses typically begin in late August and continue for 12 months, with graduation the following August.

Graduation Document

Upon graduation from the program, students are awarded a certificate from the Center for Programs in Allied Health at Vanderbilt University Medical Center and are eligible to sit for the national board certification exams. Verification of completed hours and transcripts of grades are provided to affiliate universities (Austin Peay State University and Middle Tennessee State University) for completion of a baccalaureate degree.

Delivery Method

Residential, no online or distance education component.

Mission, Credo and Goals

In step with the mission and goals of VUMC, the mission and goals of the VUMC Nuclear Medicine Technology Program are to educate knowledgeable, talented, and compassionate students to use their acquired skills to provide the highest quality of patient care in their chosen profession of nuclear medicine.

Program Goals Include:

- Equip students with the knowledge, skills, and attitude they need to perform clinical nuclear medicine procedures effectively and safely.
- Facilitate an attitude of continuous learning—including both professional development in the field and/or continuance of higher education in the same or related fields.
- Instill in students an attitude of acceptance and adoption of changing trends in the profession.
- Prepare students with capacity to accept leadership roles within the clinical, managerial, educational, or related settings.

Programmatic Accreditation/Approvals

The Nuclear Medicine Technology Program is accredited by the Joint Review Committee for Educational Programs in Nuclear Medicine Technology (JRCNMT). The JRCNMT promotes appropriate standards of quality for postsecondary educational programs in nuclear medicine technology. Accreditation is granted to educational programs that meet or exceed these threshold standards, and JRCNMT conducts periodic on-site reviews of the program. Graduates of the Nuclear Medicine Technology program are eligible for the national certification examinations administered by the Nuclear Medicine Technology Certification Board (NMTCB), and the American Registry of Radiologic Technologists (ARRT).

JRCNMT: Joint Review Committee for Educational Programs in Nuclear Medicine Technology
2000 W. Danforth Road, Ste. 130, #203, Edmond, OK 73003
Phone: 405.285.0546 Fax: 405.285.0579 |E-mail: mail@jrcnmt.org

NMTCB: Nuclear Medicine Technology Certification Board
3558 Habersham at Northlake, Building I Tucker, GA 30084-4009
Phone: 404.315.1739 Fax: 404.315.6502 | E-mail: board@nmtcb.org

ARRT: American Registry of Radiologic Technologists
1255 Northland Drive, St. Paul, MN 55120
Phone: 651-687-4048 | Email: www.arrt.org

Program Academic Calendar

NUCLEAR MEDICINE TECHNOLOGY	
2024-25 ACADEMIC CALENDAR	
Orientation Date(s)	**Monday, August 19, 2024 - Friday, August 23, 2024**
Class Begins	**Monday, August 26, 2024**
Labor Day 2024	**Monday, September 2, 2024**
Thanksgiving 2024	**Thursday, November 28, 2024 - Friday, November 29, 2024**
Winter Break 2024	**Monday, December 16, 2024 - Friday, December 27, 2024**
New Year's Day 2025	**Wednesday, January 1, 2025**
Martin Luther King Jr. Day 2025	**Monday, January 20, 2025**
Spring Break 2025	**Monday, April 21, 2025 - Friday, April 25, 2025**
Memorial Day 2025	**Monday, May 26, 2025**
Independence Day 2025	**Friday, July 4, 2025**
Program Completion Date	**Friday, August 15, 2025**

Annual NMTT Conference

Students are required to participate in the annual Nuclear Medicine Technologists of Tennessee (NMTT) professional society meeting. This conference is typically scheduled in March.

Program Staff, Faculty, and Advisory Board

Jenny Pafford, Ed.D., M.S., CNMT | *Program Director*
Ed.D., Higher Education Leadership and Policy, 2019, Vanderbilt University; M.S., Health Physics, 2012, Vanderbilt University; B.S., Medical Imaging Technology,2009, Belmont University, Nashville, TN; Certificate, Nuclear Medicine Technology, 2009, Vanderbilt University Medical Center - Allied Health, Nashville, TN; Certification, NMTCB, 2009, Nuclear Medicine Technology Certification Board

Gary Smith, M.D. | *Medical Director*
Diplomate, 1987, American Board of Internal Medicine; Diplomate, 1989, American Board of Nuclear Medicine; MD, 1983, Univ. of Texas Health Science Center – Southwestern Med. Sch., Dallas, TX; MS, 1983, University of Texas Health Science Center-Southwestern Medical School, Dallas, TX; BS, Engineering Science, 1978, University of Tennessee, Knoxville, TN

Jennifer Kiddoo, B.S., CNMT, RT(N) | *Clinical Coordinator*
B.S., Radiologic Technology, 2015, Austin Peay State University; Certificate, Nuclear Medicine Technology, 2015, Vanderbilt University Medical Center – Allied Health; Certification, NMTCB, 2015, Nuclear Medicine Technology Certification Board; Certification, RT(N), 2015, American Registry of Radiologic Technologists

Jared Grice, DMP | *Instructor*
Diplomate, 2017, American Board of Radiology (Diagnostic Medical Physics); DMP, 2016, Vanderbilt University; B.S., Physics, 2012, University of Missouri, Columbia, MO

Christopher Helstern, PhD, MS, CHP | *Instructor*
PhD, Physics, University of Tennessee, 2020; American Board of Health Physics, Certified Health Physicist, 2017; M.S., Physics, 2014, University of Tennessee, Knoxville, TN; B.S., Physics, 2009, University of California, Irvine, CA

NMT Advisory Board

Member Name	Credentials	Title
Jenny Pafford	EdD, MS, CNMT	NMT Program Director
Jennifer Kiddoo	CNMT, RT(N)	NMT Clinical Coordinator
Gary Smith	MD	NMT Medical Director
James Patton	PhD	Former Program Director; Professor Emeritus
Phillip Scherer	MD	Section Chief, Nuclear Medicine
Jeremy J. Kennard	MS, CNMT, RT(N)(CT)	Director, Radiology
Paul Searfoss	CNMT, RT(N,CT)	Manager of NM/CT
Aaron Hartley	PharmD	Nuclear Pharmacy Manager; NMT Clinical Preceptor
Christopher Helstern	PhD, CHP	Radiation Safety Officer; NMT Instructor
Heather Smith	MBA, CNMT, RT(N)	CT Education Coordinator
Pam Hodges	CNMT	Supervisor, Nuclear Medicine; NMT Clinical Preceptor
Dawn Shone	CNMT	Director of Radiology, Wilson Co. Hospital
Brandon Moore	CNMT, RT(R)(N)(CT)	Medical Imaging Supervisor; NMT Technical Coordinator

Ashton Evans	CNMT	Nuclear Medicine Technologist; NMT Clinical Preceptor
Amy Lebkuecher	MS, RT(R)(T)	Chair, Allied Health Sciences
Jennifer Thompson	PhD, EdD, BSRT(R)(QM)	Assoc. Prof and PD Radiopgraphy
Eric Miller	M.Ed.	Advising Manager – Health Sci.
Diana Arrington	CNMT	PET/NM Applications Specialist
Roxy Kimes	MBA, CNMT	Radioligand Specialist
Kris Yarnell	CNMT, RT(R)	Nuclear Medicine Technologist
Ebony McHaskell	MS	Director, CPiAH
Jennifer Alexander	PhD	Faculty/Instructional Design Manager, CPiAH

Admissions

Qualified applicants must have a bachelor's degree, preferably in a related science field (i.e., biology, chemistry, physics, radiologic technology), from an accredited college or university, or must be eligible for that degree at the completion of the program through an affiliated university.

Admission Requirements

VUMC requires that all applicants must possess a high school diploma, a high school diploma equivalency, a current Tennessee license in the field for which the training is intended, or postsecondary credit in a degree program. A high school diploma or recognized equivalent comply with the THEC requirement. Further, VUMC allows an applicant to submit a copy of a post-secondary degree (i.e., Associate's, Bachelor's or Master's) in lieu of a copy of the high school diploma.

For the Nuclear Medicine Technology program, in addition to the minimum requirements listed above, qualified applicants with a bachelor's degree from an accredited college or university are eligible for appointment. Students who have not yet received a bachelor's degree must be enrolled at an affiliated university and must meet all other admission requirements.

Candidates for admission to the program must meet the following requirements (in addition to the minimum requirements listed above):

- Baccalaureate degree from an accredited college or university OR eligibility for that degree at the completion of the program at one of the affiliate universities. Applicants in programs at affiliated schools must have satisfactorily completed at least three years of college credit.
- Prerequisite coursework/content (or corresponding content equivalent):
    - Physics 1 and 2 (non-calculus based or higher) with lab
    - Chemistry 1 and 2 with lab
    - Human Anatomy and Physiology 1 and 2 with lab
    - College Algebra, or higher
    - Written communications series (i.e., Eng Comp 1 and 2)
- A minimum overall grade point average of 3.0 is highly recommended, but GPA's lower than 3.0 may be considered.
- Applicants should be of good moral character, personable, and able to relate to patients.

Application Procedures

A completed application with supporting materials must be submitted by March 15th of the application year and includes:

1. Application with fee (link available on NMT Program website)
2. Three letters of reference (link available on NMT Program Website through application)
3. Official transcripts from all higher education institutions attended
4. Optional - Clinical observation form completed by a clinical supervisor documenting 16 hours of clinical nuclear medicine observation experience (form available on the NMT Program website) – see details below.

To apply, prospective students should refer to electronic submission instructions posted on Program website.

Clinical Observation Experience

As part of the preparation for application to the VUMC Nuclear Medicine Technology Program, all applicants are encouraged to spend at least 8 hours engaged in observation at a clinical nuclear medicine department. The purpose of this experience is to allow applicants an opportunity to observe staff, as well as patients, in order to learn the role of a Nuclear Medicine Technologist and of other staff within the Nuclear Medicine Department. To arrange clinical observation hours at VUMC, applicants should contact the Program Director.

To include clinical observation experience as part of an application, applicants should use the Clinical Observation form posted on the Program's website. The form should be completed by a clinic supervisor or appropriate departmental administrator. While this is not a required component of application, it is highly recommended.

Applicant Interviews

Applicants who meet the requirements for admission may be invited to interview for the program. Each interviewee meets individually with the Admissions Committee consisting of the Program Director, Clinical Coordinator, and other program affiliated members (i.e., institutional staff and program faculty).

Student Selection and Acceptance

Student selection is conducted by the Admissions Committee consisting of the Program Director, Clinical Coordinator, and other program affiliated members (i.e., institutional staff and program faculty). Selection is based on academic background, related work or training, references, and interview. Applicants selected for admission to the program must successfully complete a background check before matriculation into the program.

Academic Program and Assessment

Curriculum Sequence/Program Delivery

A series of courses are offered in the program which are divided into three semesters (phases). Course content includes

- Nuclear Medicine Clinical Rotations (Phases 1-3)
- Patient Care
- Radiation Safety
- Basic Sciences
- Physics and Instrumentation
- Clinical Procedures
- Clinical Practice
- Case Based Learning
- Imaging Informatics
- Radiochemistry and Radiopharmacy
- Professional Development
- Research Methods
- Board Review

Students complete clinical rotations in nuclear pharmacy, general nuclear medicine and cardiac imaging, PET/CT imaging, and nursing within various departments located at VUMC Adult and Children's Hospitals as well as the Vanderbilt Heart and Vascular Institute (VHVI) and VA Hospital in Nashville under the supervision of certified preceptors.

Clinical rotations and lectures may be supplemented by special programs and seminars in the Department of Radiology or the Office of Health Sciences Education in an effort to ensure a well-rounded educational experience in Nuclear Medicine Technology.

Students also participate in the annual Nuclear Medicine Technologists of Tennessee (NMTT) professional society meeting. This conference is typically scheduled in March. Students present their own research at the conference through either a poster or oral presentation. Students also attend a comprehensive board review at the conference—as well as scheduled lectures.

Program Coursework

Nuclear Medicine Technology

Program Director - Dr. Jennifer Pafford

TERM: FALL

Course Code	Course	Weeks	Course Instructor	Clock Hours	Total Academic Credits
	Orientation	1			
NMT511	Basic Sciences	16	Gary Smith, MD	46.00	3
NMT512	Patient Care in Radiology	8	Jennifer Kiddoo, CNMT	20.00	1
NMT513	Physics and Instrumentation I	16	Jared Grice, DMP	46.00	3
NMT514	Radiation Safety I	16	Chris Helstern, CHP	30.00	2
NMT515	Radiochemistry and Radiopharmacy I	16	Jenny Pafford, EdD, CNMT	46.00	3
NMT516	Professional Development I	16	Jenny Pafford, EdD, CNMT	15.00	1
NMT517	Clinical Prodecures	16	Gary Smith, MD	30.00	2
NMT517	Imaging Informatics	8	Jennifer Kiddoo, CNMT	20.00	1
NMT519	Research Methods I	16	Jenny Pafford, EdD, CNMT	15.00	1
NMT510	Clinical Rotations I	16	Jennifer Kiddoo, CNMT	249.00	5.5
Total weeks of instruction for this term:		**16**		**517.00**	**22.50**

TERM: SPRING

Course Code	Course	Weeks	Course Instructor	Clock Hours	Total Academic Credits
NMT521	Physics and Instrumentation II	16	Jared Grice, DMP	32.00	2
NMT522	Professional Development II	16	Jenny Pafford, EdD, CNMT	16.00	1
NMT523	Radiochemistry and Radiopharmacy II	16	Jenny Pafford, EdD, CNMT	32.00	2
NMT524	Research Methods II	16	Jenny Pafford, EdD, CNMT	30.00	2
NMT525	Advanced Clinical Practice	16	Jennifer Kiddoo, CNMT	30.00	2
NMT526	Radiation Safety II	16	Chris Helstern, CHP	16.00	1
NMT 527	Case Based Learning	16	Jenny Pafford, EdD, CNMT	30.00	2
NMT520	Clinical Rotations II	16	Jennifer Kiddoo, CNMT	356.00	7.5
Total weeks of instruction for this term:		**16**		**542.00**	**19.50**

TERM: SUMMER

Course Code	Course	Weeks	Course Instructor	Clock Hours	Total Academic Credits
NMT530	Clinical Rotations III	16	Jennifer Kiddoo, CNMT	529.50	11.5
NMT531	Board Review	13	Jenny Pafford, EdD, CNMT	37.50	2.5
Total weeks of instruction for this term:		**16**		**567.00**	**14.00**
			TOTAL PROGRAM HOURS	**1626.00**	**56.00**

Nuclear Medicine Technology

Program Director - Dr. Jennifer Pafford

TERM: FALL			
Course Code	**Course**	**Course Description**	**Weeks**
	Orientation		1
NMT511	Basic Sciences	This course is designed to be taught in parallel with the Clinical Procedures course and focuses primarily on aspects of basic sciences that are directly applicable to understanding clinical nuclear medicine procedures—including anatomy and physiology, basic organic chemistry, biochemistry, and molecular biology. Various diseases and disorders will be discussed, and the clinical procedures useful in the diagnosis of these pathological conditions in each primary organ system will be identified. In addition to diagnostic procedures, techniques and applications of radionuclides for radiotherapy procedures are also covered. Interpretation of diagnostic images, data, and therapeutic outcomes will also be discussed.	16
NMT512	Patient Care in Radiology	This course provides an overview of the basics of patient care including aseptic techniques, intravenous catheter placement and injections, blood drawing, urinary catheters, moving and lifting patients, ECG monitoring and gating, use of infusion pumps (i.e., gravity IV and syringe pumps), fasting blood sugar and use of glucometers, obtaining and assessing patient history and condition, communication with patients and staff, and the handling of emergencies. Within this course, students obtain venipuncture competencies. Topics related to organizational structure of healthcare teams, medical ethics, patient confidentiality, and HIPPA responsibilities are presented. The course also includes discussions of health records and health information management.	8
NMT513	Physics and Instrumentation I	This course begins with an overview of the basics of nuclear medicine physics, including the structure of the atom, radioactive decay processes and laws, and interactions of radiation with matter. This is followed by a discussion of the topics related to radiation exposure and absorbed dose. The next sections discuss the concepts of radiation detection including gas-filled ionization detectors and scintillation detectors. The remaining sections are devoted to in-depth discussions of imaging instrumentation including scintillation cameras, single photon emission computed tomography (SPECT), positron emission tomography (PET), and x-ray computed tomography (CT) systems. The final section is covers the theory and performance of quality assurance of dose calibrators, scintillation counting systems, and planar, SPECT, PET, and CT systems with emphasis on identifying and solving problems.	16
NMT514	Radiation Safety I	This course covers various topics related to radiation safety in nuclear medicine including protection from external and internal sources of radiation, biological effects of radiation exposure, health physics instrumentation, identification and control of contamination, patient therapy dose considerations, response to radiation related emergencies, and federal and state regulations.	16
NMT515	Radiochemistry and Radiopharmacy I	This course provides a basic review of chemistry, including chemical bonding, solutions, proteins, carbohydrates, lipids, and chelates. Also included is an introduction to radionuclide chemistry, including radionuclide production, labeling techniques, chromatography, isotopes, and technetium chemistry. The organization, recordkeeping responsibilities, quality control procedures, and radiopharmaceutical preparations for which the radiopharmacy is responsible are also presented. In addition, laboratory procedures and techniques including radiopharmaceutical kit preparation, generator handling, dose calculations and calibrations, and handling of long-lived radioisotopes are taught.	16
NMT516	Professional Development I	This course consists of special topics that broadly address professionalism in healthcare, interpersonal communication skills, interprofessional collaboration, ethics, adherence to the scope of practice and performance standards, certification processes and continuing education. Ongoing discussion and reflections on clinical experiences and conflict resolution is emphasized.	16
NMT517	Clinical Prodecures	This course is designed to be taught in parallel with the Basic Sciences course and focuses primarily on the technical and operational aspects of performing clinical nuclear medicine procedures—including verification of orders, patient preparation and contraindications, explanation of procedures, administration of appropriate radiopharmaceutical by the proper route, preparation of proper instrumentation and auxiliary equipment as indicated by protocol, processing of images or data, and analysis of quality. Various clinical procedures useful in the diagnosis of pathological conditions in each primary organ system will be identified. In addition to diagnostic procedures, techniques and applications of radionuclides for radiotherapy procedures are also covered.	16
NMT517	Imaging Informatics	This course provides an introduction to medical imaging informatics for nuclear medicine including computer terminology, languages, and equipment as well as description of current nuclear medicine data acquisition, processing, storage, and image distribution systems. Topics covered include computer analysis of laboratory sample data and data from static, dynamic, and gated studies.	8
NMT519	Research Methods I	This course provides an overview of common research methods in the health sciences. Throughout the course, students will identify a salient research topic in the field of nuclear medicine, design and	16

		complete their own research project, and prepare their projects for presentation. Projects will be presented at an annual professional society conference in either poster or oral format.	
NMT510	Clinical Rotations I	This clinical nuclear medicine experience/training consists of a series of clinical rotations using the clinical nuclear medicine facilities at Vanderbilt University Medical Center, Vanderbilt Children's Hospital, and the VA Medical Center. Rotations include nuclear pharmacy, and in vitro lab, patient care, cardiac stress testing, general nuclear medicine and positron emission tomography imaging procedures in adults and children, and quality assurance. The imaging rotations are established so that each student is assigned to a single independent work assignment supervised by a board-certified technologist, a radiopharmacist (radiopharmacy rotation), or a radiology registered nurse (nursing rotation). Rotations may be modified as needed during the second set of rotations to address noted deficiencies of specific students. Students receive written evaluations weekly from the supervisory staff. Proficiency testing is accomplished during later rotations in the form of clinical competency requirements.	16
TERM: SPRING			
Course Code	**Course**	**Course Description**	**Weeks**
NMT521	Physics and Instrumentation II	This course is part two in the series and is continuation of the course previously described for Physics and Instrumentation I.	16
NMT522	Professional Development II	This course is part two in the series and is continuation of the course previously described for Professional Development I.	16
NMT523	Radiochemistry and Radiopharmacy II	This course is part two in the series and is continuation of the course previously described for Radiochemistry and Radiopharmacy I.	16
NMT524	Research Methods II	This course is part two in the series and is continuation of the course previously described for Research Methods I.	16
NMT525	Advanced Clinical Practice	This course serves as an expansion of the Clinical Procedures course content with a primary focus on advanced critical-thinking, problem-solving, and troubleshooting strategies for various procedures and scenarios within the clinic.	16
NMT526	Radiation Safety II	This course is part two in the series and is continuation of the course previously described for Radiation Safety I.	16
NMT527	Case Based Learning	Clinical cases and scenarios are used as the framework for this course with the goal of facilitating and developing critical thinking skills. Throughout the course, various clinical cases relating to previous or current coursework are presented. Real-time discussions with team members are guided by the faculty facilitator in order to analyze a case for known and unknown variables, determine potential causes/diagnoses of the case and its outcomes, assess various elements of patient care, and identify actionable or troubleshooting strategies. Students are expected to use their collective knowledge as a foundation for understanding cases in addition to researching on their own to collect relevant information in order to piece various case elements together. Completion of cases will provide students experience in working within a team to solve complex clinical issues related to performing nuclear medicine procedures.	16
NMT520	Clinical Rotations II	Nuclear Medicine Clinical Rotations, Part II.	16
TERM: SUMMER			
Course Code	**Course**	**Course Description**	**Weeks**
NMT530	Clinical Rotations III	Nuclear Medicine Clinical Rotations, Part III.	16
NMT531	Board Review	This course provides a thorough content review of major topic areas in the field of nuclear medicine technology with the intent of preparing students to take national board certification exams. In addition, multiple practice board exams are included within this course.	13

Assignment of Credit Hours by Affiliated Universities

The VUMC Nuclear Medicine Technology Program provides official verification of each student's hours completed and a transcript of grades to the affiliate university in which the student is enrolled (Austin Peay

State University and Middle Tennessee State University). These VUMC documents are intended as verification of the VUMC program experience. Each university's methods of assigning credit to the VUMC NMT program experience, as well as the number of college credits ultimately awarded to each student, are determined by each university independently from VUMC, and according to the university's own policies.

Student Assessment

Grading System

Scale	Grade	GPA
95-100%	A	4.0
90-94%	A-	3.5
85-89%	B	3.0
80-84%	B-	2.5
75-79%	C	2.0
<75%	F - FAILURE	0
P	Pass - Any course with a "P" grade is not calculated into the grade point average.	
F	Fail - Any course with an "F" grade is not calculated into the grade point average. However, the course must be repeated and passed to graduate.	
I	Incomplete - May be used at the discretion of the instructor in those cases in which the student is not able to complete work in the normal time. In those instances, the student and instructor develop a written plan for an extension to provide work by a specific date that falls within the period of time specified by the relevant program's requirements (but in no circumstances greater than one month). An "I" that is not replaced by a letter grade within the period of time specified by the relevant program's requirements, due to unsatisfactory completion of the student's plan, will be changed to an F after the period specified by the program (a period not to exceed one month). Any course with an "I" grade is not calculated into the grade point average. Once a grade is assigned to the course (when conditions are met that allow for the removal of the "I" and assignment of a final grade), that grade will factor into the student's GPA.	
W±	Withdrawal – Utilized when a student leaves the course due to an approved leave-of-absence or withdraws from the school prior to the scheduled completion of a course. Any course with a "W" grade is not calculated into the grade point average.	

Students who do not complete required work or hours in a course will be assigned a failing grade for the course.

Clinical Rotation Evaluations

Students receive a clinical evaluation from their respective preceptor at the end of each clinical rotation week. The Program Director and/or the Clinical Coordinator will review these evaluations with each student. These evaluation conversations allow for frequent and constructive feedback to students on their professional development. The evaluations are counted toward course grades in the Clinical Rotations course series as well as the review of Satisfactory Academic Progress.

Satisfactory Academic Progress (SAP)

Each students' academic progress is formally evaluated mid-semester, for a total of three times during the program. A student is considered to be maintaining satisfactory academic progress (SAP) by maintaining a 75 percent academic average in didactic coursework and in clinical rotations. In addition, students must have satisfactory attendance and exemplify professional behavior in order to maintain satisfactory academic progress.

Prior to the determination of SAP status, the student, the Program Director and the Clinical Coordinator meet to discuss the student's progress. These meetings include discussion of grades in didactic courses, evaluations and performance in clinical rotations, radiation dose reports, absences, contact hours, professionalism and conduct, etc. Students are given the opportunity to discuss any questions or concerns they may have related to their academic progress. Following this meeting the Program Director and the Clinical Coordinator determine whether the student is maintaining Satisfactory Academic Progress. A final course grade < 75 at the end of the semester will result in removal from the program.

Code of Conduct

Adherence to the VUMC Code of Conduct, the VUMC Center for Programs in Allied Health Honor Code and the Vanderbilt Nuclear Medicine Technology Program Honor Code is required of students at all times.

Vanderbilt Nuclear Medicine Technology Program Honor Code

As professional students, it is expected that the Vanderbilt Nuclear Medicine Technology Program Honor Code be followed at all times. All projects submitted are presumed to be the student's own work unless appropriate credit to others is given when submitted. The following are considered violations of the Honor Code and will result in disciplinary action up to and including dismissal from the program:

- Cheating on an examination, test or written project
- Plagiarizing (incorporating into one's own work the work of another without identifying the source) in an assigned paper, report or project
- Submitting work prepared by another person as one's own (including use of texts, papers, computer programs, or other class work prepared by commercial or noncommercial agents)
- Submitting work prepared for another rotation without the specific prior authorization of the Program Director
- Falsification of results of study and research

Graduation Requirements

In order to graduate, students must receive a passing grade of 75 or better in all didactic courses, including clinical rotations, and complete a list of clinical competency evaluations ("check-offs"). A complete list of the Clinical Competencies is included as Appendix A. Students must also complete at least 1,626 clock hours during the 12-month program. In addition to hours, total days attended are also monitored. Students are allotted a maximum of 10 personal days, in addition to the scheduled holidays.

Equipment List

Clinical Nuclear Medicine Equipment available for instruction at VUMC

- GE 870 Dual-head CZT with a 16 slice CT
- GE Discovery 670 dual-head scintillation camera with 16 slice CT scanner
- GE Infinia dual-head scintillation camera with single slice Hawkeye CT scanner
- GE Magicam dual-head scintillation camera
- GE Advance PET scanner with 16 slice CT scanner (Mobile)
- GE Discovery MI PET Scanner
- GE Lunar DEXA Bone Densitometry scanning system
- GE PET Trace 16 MeV Cyclotron
- GE Xeleris workstation (x4)

- Capintec dose calibrators with drawing stations (x3)
- Captus 3000 Thyroid uptake probe with well counter (x2)
- Hidex automatic gamma counter
- Ludlum Model 3 GM with pancake probe (3)
- Ludlum Model 26-1 with integrated frisker (2)
- Ludlum Model 14C GM general purpose detector
- Treadmill for cardiac stress testing 2 multi-lead EKG systems
- Fully equipped state-of-the-art sterile clean room Radiopharmacy
- Fully equipped invitro lab

Clinical Nuclear Medicine Equipment available for instruction – VCH

- GE NM/CT 870 DR
- GE Xeleris workstation
- Capintec dose calibrator with chamber and well counter
- Ludlum Model 3 GM with pancake probe

Clinical Nuclear Medicine Equipment available for instruction - Veteran's Administration Hospital

- GE 870 Dual-head CZT with a 16 slice CT
- GE Optima NM640 dual-head scintillation camera with 4 slice CT scanner
- GE Discovery NM630 dual-head scintillation camera
- GE Discovery NM530c solid-state CZT detectors, focused collimators
- GE Case cardiac stress test system with treadmill and multi-lead EKG
- GE Xeleris nuclear medicine workstation
- GE Lunar DEXA Bone Densitometry scanning system
- BIODEX AtomLab 960 thyroid uptake prob and well counter
- Capintec CRC-15R dose calibrator
- Capintec CRC-55tR dose calibrator
- Biodose patient dose drawing software
- GE Advance PET scanner with 16 slice CT scanner
- Ludlum model 3 survey meters with pancake detectors
- Ludlum Model 2200 scaler with well counter detector
- Automated multi-sample gamma counter

Clinical Nuclear Medicine Equipment available for instruction – Vanderbilt Heart & Vascular Institute

- Spectrum Dynamics D-SPECT Cardio, solid-state CZT detectors
- Spectrum Dynamics D-SPECT Cardio, solid-state CZT detectors (there are two)
- Quinton and treadmill with EKG System
- Capintec CRC-15R dose
- Atom Lab 50 well-counter
- Ludlum Model 3 GM with pancake probe.

This catalog contains only a summary of program policies and procedures. Students should refer to the program/student handbook for additional information.

PERFUSION PROGRAM

Program Description

Perfusion involves the study of physiology, pathology, and associated equipment used to support and/or assume the function of the heart and/or lungs during medical procedures. The perfusionist prepares and operates the heart-lung machine and other sophisticated equipment as directed by healthcare physicians. The perfusionist measures various blood and other parameters to identify appropriate mechanical, pharmacological, and thermal manipulation to maintain tissue viability. To perform these tasks the perfusionist must have a thorough understanding of both the physiology and anatomy of respiratory and circulatory systems and be able to operate complex equipment. Additionally, the perfusionist must be capable of handling stressful situations, pay great attention to detail, communicate effectively, and be willing to stay abreast of new developments in the profession.

The Vanderbilt Perfusion Program was founded in 1979. The program is directed in collaboration with the Vanderbilt Heart and Vascular Institute.

Licensure/Certification/Credentialing

Upon completion of the program graduates receive an accredited Certificate in Cardiovascular Perfusion Technology that qualifies graduates to apply for and take the Perfusion Basic Sciences Examination (PBSE) and the Clinical Application in Perfusion Exam (CAPE) administered by the American Board of Cardiovascular Perfusion (ABCP).

Program Costs

Application Fee $75 + Tuition $39,000 + Fees $1,207 Books, Materials, Supplies and Equipment $5,207 + Licensure/Certification $700 = Total Cost $46,189

Program Length

The VUMC Perfusion program requires completion of 96 semester credits/3484 total clock hours/92 weeks. The program typically begins in early August, and students graduate with their cohort in mid- May, after 22 months of full-time study.

Program Delivery

Blended: The Perfusion Program includes both residential and distance learning components.

Program Mission, Credo and Goals

VUMC Perfusion Program Mission Statement

Through the dedication to the cardiovascular perfusion profession and patient care, the Perfusion Program will inspire its students to become leaders in independent thinking in the promotion of medical evolvement. Our students will recognize the commitment to life-long learning and the benefit of interdisciplinary collaboration to provide world class patient care to each and every patient not only today but in the future.

VUMC Perfusion Program Philosophy

It is the philosophy of the program that all patients have a right to receive and deserve competent and compassionate not only cardiac care but medical care. Perfusionists must possess skills and knowledge necessary to operate the heart lung machine (HLM) during the care of a patient who requires cardiac and/or pulmonary support. The perfusionist must possess critical thinking skills, as well as professional collaboration skills. The perfusionist must not only be able to operate the HLM but they must understand the physiological implications of the management of all aspects of cardiovascular perfusion. The program is committed to

providing the healthcare community with perfusionists who are competent, knowledgeable, and compassionate critical-thinking professionals with ability to work well with other medical professionals and with the ultimate goal of delivering safe, efficient, and effective patient care. Perfusionists of this program will understand the value of continuous learning in the promotion of medicine.

Program Objectives and Goals
The VUMC Perfusion Program bases its educational process and strategy on those principles that are essential in preparing students to achieve the ideals of the profession. The Program strives to instill in each student:

- Knowledge, skills and professional attitude necessary to safely and effectively perform clinical perfusion care;
- Concern for others, which carries with it the responsibility of good patient care combined with professional cooperation with fellow students and staff and faculty;
- Desire to strive for new knowledge and to accept and adopt changing trends in the profession;
- Capacity to accept leadership roles, whether in management or education; and
- Interest in the growth and development of the perfusion profession.

Goal 1: To prepare entry level perfusionists in core curriculum competencies and clinical competencies as a route to eligibility for certification by the American Board of Cardiovascular Perfusion.

***Goal 2*:** To provide a supply of competent entry-level perfusionists to influence the supply and distribution of perfusionists for the nation.

Goal 3: To provide the students of the program with a comprehensive and high-fidelity perfusion simulation program.

Programmatic Accreditation/Approvals
The general academic requirements for all perfusion education programs are established by the Accreditation Committee for Perfusion Education (AC-PE), which is responsible for the initial and continuing evaluation of all perfusion education programs. The AC-PE is accredited to so operate pursuant to authority granted by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

The VUMC Perfusion Program is programmatically accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). This accreditation is granted only after recommendation by the Accreditation Committee – Perfusion Education (AC-PE) based on a programmatic review and site visit. Recognition by CAAHEP qualifies the program's graduates for eligibility to apply for and take the Perfusion Basic Sciences Examination and the Clinical Application in Perfusion Exam administered by the American Board of Cardiovascular Perfusion (ABCP).

Commission on Accreditation of Allied Health Education Programs (CAAHEP)
25400 U.S. Highway 19 North, Suite 158, Clearwater, FL 33763
Phone: 727-210-2350 Fax: 727-210-2354 www.caahep.org

Accreditation Committee - Perfusion Education (AC-PE)
6663 South Sycamore Street, Littleton, CO 80120
Phone: 303.794.6283 Fax: 303.738.3223 www.ac-pe.org

Program Academic Calendar

PERFUSION	
2024-25 ACADEMIC CALENDAR	
New Year's Day 2024	Monday, January 1, 2024
Martin Luther King Jr. Day 2024	Monday, January 15, 2024
Spring Break 2024	Monday, March 11, 2024 - Friday, March 15, 2024
Memorial Day 2024	Monday, May 27, 2024
Summer Break 2024	Saturday, June 29 - Sunday, July 7,2024
Independence Day 2024	Thursday, July 4, 2024
Labor Day 2024	Monday, September 2, 2024
Thanksgiving 2024	Thursday, November 28, 2024 - Friday, November 29, 2024
Winter Break 2024	Saturday, December 21 - Sunday, January 5, 2025
New Year's Day 2025	Wednesday, January 1, 2025
Martin Luther King Jr. Day 2025	Monday, January 20, 2025
Spring Break 2024	Saturday, March 8, 2025 - Sunday, March 16, 2025
Program Completion Date	Friday, May 9, 2025

Program Faculty/Staff

The program officials include a Medical Director, Program Director and a Clinical Coordinator as well as clinical instructors, all of whom are experts in the field. Key program staff/faculty are:

Ashish Shah, MD, FACS, Medical Director
Jill Getchell, MEd, CCP, BS, PBMS, Program Director
Mark Meholchick, BS, LP, CCP, Clinical Coordinator

Program Advisory Board

The Perfusion program at Vanderbilt University Medical Center has an active Advisory Committee to assist administration and faculty in fulfilling the program's educational objectives. The Committee includes four (4) external representatives, in addition to members of the Vanderbilt University Medical Center. The committee includes chief perfusionists and graduates from outside medical centers and a community representative, providing a range of voices from the community. All Advisory Committee members are provided an advisory committee guide, which outlines and summaries the program and the responsibilities of the members of the programs advisory committee.

The Advisory Committee convenes annually and addresses a broad range of topics that include the program's mission and objectives; admission policies; curriculum; outcomes; program strength and weaknesses in preparing graduates; current and projected community needs for graduates in the field; annual evaluation of program effectiveness; and student, graduate, clinical affiliate, and employer feedback. Members of the committee review any grievances that require resolution.

Member Name	Credentials	Title
Jill Getchell	MEd, CCP, BS, PBMS	Interim Program Director
Mark Meholchick		Clinical Coordinator
Ashish S. Shah	MD	Cardiac Surgeon
Matthew Warhoover	MS, MMHC, CCP	Chief Perfusionist
Nicole Michaud	MS, CCP, CPBM	Chief of Pediatric Perfusion

Chad Smith	MS, LCP, CCP	Clinical Perfusionist
Emily Foreman		Chief Perfusionist
Linda McLean	CCP, LCP, BS	Public Member
Tamara Roberts		Director of Distance Education
Peggy Valentine	EdD	Vice President, Allied Health Education
Ebony McHaskell	MS	Director, CPiAH
Jennifer Alexander	PhD	Faculty/Instructional Design Manager, CPiAH
Cassandra Anderson		Student Support Services Manager
Kristen Smith		Chief Business Officer
Sable Thornton	CCP	Clinical Perfusionist
Lauren Gawlinski		Perfusion Student
Christian Iulianelli		Perfusion Student

Clinical Competency Committee

The Clinical Competency Committee consists of the Program Director, Clinical Coordinator and clinical perfusion instructors of the Perfusion Program. The Program Director appoints a chairman of the Clinical Competency Committee and requests periodic meetings for the purpose of evaluating a student's clinical performance. Each student is evaluated by the committee prior to graduation to determine whether the student is clinically competent and meets the minimum requirements of the ABCP.

Admissions Committee

The admission committee reviews applications on an annual basis and is composed of different clinical perfusionists who collaborate with the program in clinical education as well as the program director and clinical coordinator. In addition, those members of the admission committee available participate in the interviews for the final selection of the incoming class. The admission committee meets annually to discuss the entrance requirements for the program as well as the selection process for the program.

Admissions

Admission Requirements

All applicants must possess a high school diploma, a high school diploma equivalency, a current Tennessee license in the field for which the training is intended, or postsecondary credit in a degree program.

While prior medical experience is not required for admission to the program, it is highly recommended. Strong candidates in the past have functioned in some capacity in the medical arena for a minimum of one year. This experience has proven to be an asset to them in their understanding of medical terminology and practices, but it is not required.

Academic requirements for admission to the Perfusion program include VUMC's minimum requirements and the following:

- Completion of a bachelor's level or higher degree from a regionally accredited college or university.
- Completion of the following prerequisite coursework:
    - Biology: First full year, 8 credit hours, 2 semesters with labs
    - Chemistry: First full year, 8 credit hours, 2 semesters with lab
    - Physics: First full year, 8 credit hours, 2 semesters with labs
    - Human Anatomy and Physiology: 8 credit hours, 2 semesters with labs
    - Biochemistry or Microbiology: 4 credit hours with lab

        - Organic Chemistry w/lab
        - Biochemistry w/lab
        - Microbiology w/lab
    - Statistics: 3 credit hours
- Cumulative GPA of 3.0 in the prerequisite courses

**It is preferred that Applicants complete all prerequisites by December 31 of the year of application.

Application Procedure
Prospective students of the Perfusion Program may apply by submitting a completed application form and required supporting materials, as listed below. The application and all accompanying documentation are submitted electronically. The application for admission is posted on the VUMC Perfusion Program website each summer. The following materials must be submitted to be considered:

1. Completed application.

2. Three (3) professional references from individuals familiar with the applicant's academic and/or professional experience. References will receive the survey upon application submission

3. Official transcripts from all institutions of higher learning the applicant has attended (submission instructions for official transcripts can be found on the Perfusion website)

4. A non-refundable application fee, made payable to Vanderbilt University Medical Center. The submission application fee is $75.

5. Applications are accepted from the September 15th (when the application is made available to applicants) through the fall, with a final deadline of December 15th of each year.

All applicants meeting the criteria for the program are reviewed and scored by the committee.

Applicant Interview
After submission of a complete application package, qualified candidates are invited to attend an interview with the admissions committee. Interviews may take up to 60 minutes of the applicant's time and are conducted between February and March of each year. Interviews are a required for admission to the program. Interviews include the following components:

1. Knowledge about perfusion and all it entails
2. Ability to trouble shoot and rapid decision making
3. Demeanor with others in various situations
4. Physical and mental demands
5. Sensory and motor skill
6. Commutation abilities
7. Technical and mechanical skills
8. Independence
9. Work ethic
10. Patient advocacy

Applicant Selection
The Perfusion Program seeks to admit applicants that will be successful all aspects of the program. The Admission Committee is committed to selecting a class that will be able to work as team members, both fostering and challenging their student colleagues to reach their potential in the program. In addition, to

meeting admission requirements, candidates with the following qualities are viewed favorably by the Admission Committee:

- Personal perfusion experience and ambition
- Commitment to learning
- Attention to detail
- Passion for professional excellence

The final selection of students in the Perfusion Program is based on a scoring system taking into considerations all aspects of the application and interview process.

Academic Program and Assessment

Program Sequence and Delivery

Students in the Perfusion Program at Vanderbilt University Medical Center experience 22 months of clinical and didactic training, leading to a certificate in Perfusion from the Center for Programs in Allied Health at Vanderbilt University Medical Center. The Perfusion Program does not accept advanced placement credits. Students in the program must complete the entirety of the program curriculum in sequential order to successfully complete and graduate from the program. The program starts at the beginning of August each year and ends in mid-May. Modes of delivery of clinical objectives:

- Clinical Rotational Experience
- Simulation
- Medical Conferences/Presentations
- Competency Modules/Checklist

Cardiovascular Perfusion Technology

TERM: FALL				
Course Code	**Course**	**Weeks**	**Clock Hours**	**Total Academic Credits**
AP501	Anatomy and Physiology	16	68.00	4.50
PHARM501	Pharmacology	16	48.00	3.00
CVPT501	Cardiovascular Perfusion Technology I	16	163.00	6.50
RES501	Research Lab I	16	46.00	2.00
SIM501	Simulation I	16	76.00	3.00
	Total weeks of instruction for this term:	**16**	**401.00**	**19.00**
TERM: SPRING				
Course Code	**Course**	**Weeks**	**Clock Hours**	**Total Academic Credits**
CVPT502	Cardiovascular Perfusion Technology II	16	34.00	2.00
RES502	Research Lab II	16	17.00	1.00
CR501	Clinical Rotation I	16	694.00	15.00
SIM502	Simulation II	16	38.00	1.00
PATHO501	Pathophysiology	16	60.00	4.00
	Total weeks of instruction for this term:	**16**	**843.00**	**23.00**
TERM: SUMMER				

Course Code	Course	Weeks	Clock Hours	Total Academic Credits
CR502	Clinical Rotation II	13	553.00	12.00
SEM501	Seminars in Perfusion **(Blended)**	2	26.00	1.50
	Total weeks of instruction for this term:	**13**	**579.00**	**13.50**
TERM: FALL				
Course Code	**Course**	**Weeks**	**Clock Hours**	**Total Academic Credits**
CVPT503	Cardiovascular Perfusion Technology III **(Blended)**	16	36.00	2.00
RES503	Research Lab III **(Blended)**	16	17.00	1.00
CR503	Clinical Rotation III	16	730.00	16.00
SIM503	Simulation III	16	40.00	1.00
	Total weeks of instruction for this term:	**16**	**823.00**	**20.00**
TERM: SPRING				
Course Code	**Course**	**Weeks**	**Clock Hours**	**Total Academic Credits**
CVPT504	Cardiovascular Perfusion Technology IV **(Blended)**	16	38.00	2.50
RES504	Research Lab IV **(Blended)**	16	30.00	1.00
CR504	Clinical Rotations IV	16	730.00	16.00
SIM504	Simulation IV	16	40.00	1.00
	Total weeks of instruction for this term:	**16**	**838.00**	**20.50**

Definition of Credit Hour

Credit hours are determined based on the following equivalencies:

- 15 lecture semester hours is equivalent to 1 credit
- 30 laboratory semester hours is equivalent to 1 credit
- 45 practicum semester hours is equivalent to 1 credit

Each Perfusion Program course 1) has its own syllabus outlining grading criteria, 2) is assigned semester credit hours and 3) is delivered as outlined in the program curriculum.

Course Descriptions

TERM: FALL			
Course Code	**Course**	**Course Length (Weeks)**	**Course Description**
AP501	Anatomy and Physiology	16	Overview of specific areas of human anatomy and physiology: cardiac, vascular, renal, and respiratory. Emphasis is placed on the application of these areas as it applies to cardiovascular and perfusion technology. The student will understand the complex interaction of the patient with the mechanisms of extracorporeal circulation, applications of techniques, and utilizing modes of perfusion in the treatment of different disease states. Course work will include both class time and observations within the surgical suite, cardiac cath labs, as well as cardiovascular intensive care units.

PHARM501	Pharmacology	16	This course provides the entry-level perfusion student with an emphasis of the overview of cardiovascular pharmacology, to act as a basis for the understanding of the interactions of pharmacologic agents with the cardiac patient. The fundamental principles of pharmacology necessary for an understanding of the mechanisms of action of drugs and knowledge of their rational and effective and monitoring are presented. The student is introduced to the management coagulation cascade and platelet aggregation as it relates to the cardiac patient.
CVPT501	Cardiovascular Perfusion Technology I	16	The student will be presented with the history, basic components, equipment, physiological monitoring and measurement, laboratory measurement, priming components and physiology as related to extracorporeal perfusion. Students will examine the relationship between blood flow internal and external to the body with use of cardiovascular devices to facilitate extracorporeal circulation.
RES501	Research Lab I	16	This course introduces the entry-level perfusion student to basic laboratory techniques / experiments to reinforce the understanding of circuit components and their specifications. The student will be introduced to writing lab reports and presenting their results. This course will involve both lecture and laboratory time.
SIM501	Simulation I	16	This course prepares the perfusion student for clinical experience as it relates to the identification of circuit components, circuit set-up, and priming of the cardiopulmonary bypass circuit. The instructor is able to focus on the student's development of the psychomotor skills and the application of circuit components. Each student is able to develop their knowledge in circuit design and operation in and environment that promotes confidence in their abilities.
TERM: SPRING			
Course Code	**Course**	**Course Length (Weeks)**	**Course Description**
CVPT502	Cardiovascular Perfusion Technology II	16	This course will build upon the fundamental principles taught in CVPT 501. The course will expand upon the fundamental principles and introduce new areas where perfusion techniques will be utilized. Students will demonstrate an understanding of perfusion policies and procedures and the ability to complete a perfusion plan based on specific patients. The student will be introduced to the patient workup and management, review various cardiac medications, perfusion safety, hematology, blood components, blood types, hemodilution, coagulation cascade and testing, hypothermia, hemostasis management, myocardial protection, cerebral protection, anticoagulation and reversal, and blood conservation. Prerequisites: SIM501, CVPT501, PHARM501, RES501, AP501
PATHO501	Pathophysiology	16	This course is designed to provide the entry level perfusion student with a course linking anatomy, physiology, pathophysiology and the application of perfusion practice. The course will provide the detailed foundation and skills that are necessary to understand the interplay between the science of extracorporeal technology and the pathophysiologic considerations that play a role in the initiation, maintenance, and termination of extracorporeal circulatory support. Students will understand the basic diagnostic principles involved in determining the nature and extent of the disease process necessitating surgical intervention. Both acquired and congenital heart disease processes will be examined, as well as other pathologies that may present in conjunction with the use of extracorporeal equipment. The course is divided into three pathophysiology sections: blood and coagulation, acquired heart disease, and congenital heart disease. Prerequisites: SIM 501, CVPT501, PHARM501, RES501, AP501
RES502	Research Lab II	16	This course provides the student with the fundamental knowledge required to develop and publish scientific articles within the field of perfusion. The students will be introduced to evidence-based medicine, literature reviews, randomized and observational studies, the techniques to blind studies, specific aims and how to critique the literature. Student will develop a research hypothesis as through the completion of a literature review. Prerequisites: SIM501, CVPT501, PHARM501, RES501, AP501
CR501	Clinical Rotation I	16	This course is the first clinical rotation the student will have during their study. The course gives the student an introduction to the preparation and management of cardiopulmonary bypass and extracorporeal circulation procedures under a clinical instructor's direct supervision. The student will apply their knowledge of anatomy,

			physiology, pathophysiology, and pharmacology to the patient's assessment to develop a management plan for the patient undergoing cardiac surgery. The student will begin to assist in the operation and management of the cardiopulmonary bypass circuit and will progress through the semester to establish the ability to function in the primary role under the direct supervision of a clinical instructor. The student may be rotating "on-call" responsibilities during the week and weekend with their colleagues for the second half of the semester. Prerequisites: SIM501, CVPT501, PHARM501, RES501, AP501
SIM502	Simulation II	16	This course builds upon the skills acquired in SIM 501 to continue preparing perfusion students for clinical experience. Students will continue developing in patient workups, circuit choice, pre-pump procedures, checklist verification, initiation of cardiopulmonary bypass, management of cardiopulmonary bypass, venous return and arterial line events, and termination of cardiopulmonary bypass. This course helps students develop psychomotor skills, learn clinical management skills, and apply their conceptual knowledge to the clinical setting. Prerequisites: SIM501, CVPT501, PHARM501, RES501, AP501
TERM: SUMMER			
Course Code	**Course**	**Course Length (Weeks)**	**Course Description**
CR502	Clinical Rotation II	16	This course is the second clinical rotation the student will have during their course of study. This course will continue to build upon the clinical foundation of the student with regards to the preparation and management of cardiopulmonary bypass and extracorporeal circulation procedures under the direct supervision of a clinical instructor. The student will apply their knowledge of anatomy, physiology, pathophysiology, and pharmacology into the assessment of the patient in order to develop a management plan for the patient undergoing cardiac surgery. The student will participate under the direct supervision of the clinical instructor in the operation and management of the cardiopulmonary bypass circuit developing the ability to function in the primary role. The student will be rotating "on call" responsibilities during the week and weekend with their colleagues. Prerequisites: SIM502, CVPT502, RES502, CR501, PATHO501
SEM501	Seminars in Perfusion	16	This course introduces students to various perfusion products. Company representatives will demonstrate how to use products such as ventricular assist devices, perfusion disposables, and cardiac surgery machines. Students will learn the protocols for these products, including on- and off-label use, as well as perioperative management. Prerequisites: SIM502, CVPT502, RES502, CR501, PATHO501
TERM: FALL			
Course Code	**Course**	**Course Length (Weeks)**	**Course Description**
CVPT503	Cardiovascular Perfusion Technology III	16	This course is the third part of a four-part series and will continue to build upon the fundamental principles taught in CVPT 501 and 502. This course will expand upon the fundamental principles while incorporating new areas of perfusion technology. The student will be introduced to special patient management, review of acid base management and laboratory measurements, blood management therapies, pediatric congenital considerations, and special applications of perfusion techniques. Students not on site will be able to take this course through distant learning and maintain the same pace as student on site. Prerequisites: SIM502, CVPT502, RES502, SEM501, CR502, PATHO501
RES503	Research Lab III	16	This course provides the student the ability to identify and select a research topic, while reviewing current literature in the field of perfusion as well as participation in a review course for the preparation of perioperative blood management exam. Students will be exposed to the different platforms for presentation of scientific material. Students not on site will be able to take this course through distant learning and maintain the same pace as student on site. Prerequisites: SIM502, CVPT502, RES502, SEM501, PATHO501

CR503	Clinical Rotation III	16	This course is the third clinical rotation the student will have during their course of study. The student will continue to review the diagnostic work-up procedures and apply their knowledge to develop a management plan for the patient undergoing cardiac surgery. The course provides a clinical experience in which the student can consistently perform the primary role developing to a competent level in the management of cardiopulmonary bypass and extracorporeal circulation procedures under the direct supervision of a clinical instructor. The student will continue to be evaluated in their development of operative surgical management of cardiopulmonary bypass and other extracorporeal perfusion related management skills. The student will be rotating "on call" responsibilities during the week and weekend with their colleagues. Prerequisites: SIM502, CVPT502, RES502, CR502, SEM501, PATHO501
SIM503	Simulation III	16	This course is the third part in a four-part series and builds upon the skills acquired in SIM 502. The student is required to continue to demonstrate competency in the skills acquired in SIM 502 with the additional exposure to both common events and uncommon events as they relate to cardiopulmonary bypass management. Catastrophic management protocols. Students will be exposed to cardiopulmonary bypass management utilizing a centrifugal pump. Prerequisites: SIM502, CVPT502, RES502, SEM501, PATHO501
TERM: SPRING			
Course Code	**Course**	**Course Length (Weeks)**	**Course Description**
CVPT504	Cardiovascular Perfusion Technology IV	16	This course is the fourth part of a four part series and will focus on the professional development of entry level perfusion student. The student will be introduced the development of professional portfolio, interviewing for a job, medical ethics, emergency preparedness as it relates to being a medical professional, quality measures, management techniques, and an extensive review of pharmacology and pathophysiology. Students not on site will be able to take this course through distant learning and maintain the same pace as student on site. Prerequisites: SIM503, CVPT503, RES503, CR503
RES504	Research Lab IV	16	This course is the fourth part of a four part series and will focus on the completion of the research project that was selected by the student. The student will be required to meet manuscript deadlines to demonstrate progression towards completion of their project. Students not on site will be able to take this course through distant learning and maintain the same pace as student on site. Prerequisites: SIM503, CVPT503, RES503, CR503
CR504	Clinical Rotations IV	16	This course is the fourth clinical rotation the student will have during their course of study. The student will show proficiency levels in all areas of preparation and management of procedures in perfusion techniques are employed. Students not on site will be able to take this course through distant learning and maintain the same pace as student on site. This course provides the clinical experience in which the student can exhibit advanced management of cardiopulmonary bypass and extracorporeal circulation procedures. Although the student is always under the direct supervision, it is the expectation of this course that the student performs at a level as though unsupervised. Upon completion of this course the student will have completed their required clinical experiences. The student will be rotating "on call" responsibilities during the week and weekend with their colleagues. Prerequisites: SIM503, CVPT503, RES503, CR503
SIM504	Simulation IV	16	This course is the fourth part of a four part series and builds upon the skills acquired in SIM 503. The student is required to continue to demonstrate competency in the skills acquired in SIM 503 with the additional exposure to both common events and uncommon events as they relate to cardiopulmonary bypass management with the utilization of a centrifugal arterial pump. The student is introduced to catastrophic management protocols. The instructor is able to focus on the student's development of the psychomotor skills, clinical management skills, and the application of conceptual knowledge. Each student is able to develop their knowledge and clinical skills in environment that promotes confidence in their abilities. Prerequisites: SIM503, CVPT503, RES503, CR503

Grading and Assessment

Didactic Evaluation System

Scale	Grade	GPA
95-100%	A	4.0
90-94%	A-	3.5
85-89%	B	3.0
80-84%	B-	2.5
75-79%	C	2.0
<75%	F - FAILURE	0
P	Pass - Any course with a "P" grade is not calculated into the grade point average.	
F	Fail - Any course with an "F" grade is not calculated into the grade point average. However, the course must be repeated and passed to graduate.	
I	Incomplete - May be used at the discretion of the instructor in those cases in which the student is not able to complete work in the normal time. In those instances, the student and instructor develop a written plan for an extension to provide work by a specific date that falls within the period of time specified by the relevant program's requirements (but in no circumstances greater than one month). An "I" that is not replaced by a letter grade within the period of time specified by the relevant program's requirements, due to unsatisfactory completion of the student's plan, will be changed to an F after the period specified by the program (a period not to exceed one month). Any course with an "I" grade is not calculated into the grade point average. Once a grade is assigned to the course (when conditions are met that allow for the removal of the "I" and assignment of a final grade), that grade will factor into the student's GPA.	
W±	Withdrawal – Utilized when a student leaves the course due to an approved leave-of-absence or withdraws from the school prior to the scheduled completion of a course. Any course with a "W" grade is not calculated into the grade point average.	

Successful completion of a course requires a student to receive a 75% or greater for the final grade for the course. Scores are calculated according to the derivation chart in each syllabus. Students who do not complete required work or hours in a course will be assigned a failing grade for the course.

Final grades for each course are computed on the following bases:

- Students must attain a final grade of 75% in each course in order to maintain Satisfactory Academic Progress.

- Non-academic evaluations (behavior and conduct evaluations) will be completed by instructors for academic advising and/or remediation purposes. While these evaluations are calculated into the grade, behavior/professionalism concerns (e.g., missing of examinations or classes, tardiness, etc.) will have negative consequences for the student's ability to maintain Satisfactory Academic Progress, putting the student at risk of SAP Warning, probation and/or dismissal from the program.

Clinical Evaluation

Student clinical competency is measured by means of a clinical evaluation form. The clinical evaluation form has been designed to address the cognitive, affective, and psychomotor learning domains of the program as well and the interpersonal domain. The form is reviewed by the student and the instructor immediately following each case. If the evaluation consistently shows lack of competency in a particular area of a student's performance, the student will receive increased instruction and practice. Extra simulation sessions facilitated and supervised by the Program Director may be required.

In addition the student will be evaluated on a mid-term evaluation and/or end of rotation evaluation by clinical instructors as outlined in the syllabus of each clinical course. The clinical evaluation scale is as following:

1. Dependent: > 90% of the time the student almost REQUIRES direction, guidance, monitoring, and support, while < 10% of the time the student EXHIBITS assertiveness, efficiency, focus, and eagerness to learn.
2. Novice: 75% of the time the student REQUIRES direction, guidance, monitoring, and support, while 25% of the time the student EXHIBITS assertiveness, efficiency, focus, and eagerness to learn.
3. Assisted: 50% of the time the student REQUIRES direction, guidance, monitoring, and support, while 50% of the times the student EXHIBITS assertiveness, efficiency, focus, and eagerness to learn.
4. Supervised: 25% of the time the student REQUIRES direction, guidance, monitoring, and support, while 75% of the times the student EXHIBITS assertiveness, efficiency, focus, and eagerness to learn.
5. Self-Directed: < 10% of the time the student REQUIRES direction, guidance, monitoring, and support, while >90% of the time the student EXHIBITS assertiveness, efficiency, focus, and eagerness to learn.

Students are expected to make appropriate clinical progress over time, as outlined in each of the clinical courses' syllabus.

Clinical Competence
At the completion of the case requirements for each clinical level – or at any time by the request of the Program Director – the student's clinical performance is evaluated by the members of the Clinical Competency Committee. The student advances to the next clinical level by passing the preceding clinical course.

Satisfactory Academic Progress (SAP)
In order to maintain Satisfactory Academic Progress through the curriculum plan, the student must achieve a grade of "75%" or better at all times in each course including simulation, research lab courses and clinical rotations. It is recommended that each student monitor his/her own progress according to the course syllabus. Students who do not meet these requirements during the semester will be placed on an academic monitoring with a remedial action plan.

Progression in the Program
The program and all related courses must be completed in their entirety for a transcript to be created and given. Advanced placement is not allowed. All grades of Incomplete must be replaced by a final grade before a transcript can be created. Students are required to complete all components of the program within the 22 months of program matriculation, and in the sequential order as presented in this catalog.

The Program Advisory Committee reserves the right to extend a student's training to make up for a deficit in a single course, but this remediation is not to extend training more than five (5) months from the end of the program year.

Code of Conduct
In addition to the VUMC Code of Conduct, students in the VUMC Perfusion Program are bound by standards of conduct specific to their profession. Adherence to the VUMC Code of Conduct, the American Board of Cardiovascular Perfusion (ABCP) Code of Ethics, and the American Society of Extracorporeal Technology (AmSECT) Code of Ethics is required of students at all times.

Ethical Standards of The American Board of Cardiovascular Perfusion

The American Board of Cardiovascular Perfusion (ABCP) is dedicated to the provision of safe, competent medical care for any and all patients. To that end, the ABCP administers certification examinations and monitors recertification, and therefore requires those participating in these credentialing processes to ascribe to the following ethical standards.

I. Each Certified Clinical Perfusionist (CCP) and applicant (or candidate for certification), (hereinafter, referred to as "individual,") shall comply with all existing and future rules, regulations and standards of the ABCP and will bear responsibility for demonstrating compliance with same. An individual is eligible to apply for and maintain certification/recertification only when in compliance with all the ABCP rules, regulations and standards.

If an individual is not in compliance with the ABCP rules, regulations or standards, the ABCP may impose one or more of the following sanctions: deny or suspend eligibility; deny, revoke, refuse to renew, or suspend certification; issue a reprimand; or take other corrective action regarding certification or recertification.

II. The individual shall not willfully fail to promote the safety and welfare of the public, whether through negligent acts, acts of omission or through misrepresentation. Failure to promote public safety and welfare or the provision of safe, competent medical care includes (but is not limited to):
    a. impairment of professional performance because of habitual use of alcohol, drugs, or other substance, or any physical or mental condition;
    b. gross or repeated negligence or malpractice in professional work;
    c. noncompliance with laws related to the profession;
    d. failure to maintain a current professional credential as required by the jurisdiction in which the individual practices (this may include a license, certificate, or registration);
    e. the conviction of, plea of guilty to, or plea of nolo contendere to a felony related to public health and safety or the profession; and
    f. disciplinary action by a licensing board or professional organization other than the ABCP.

III. The individual convicted of, or pleading guilty or nolo contendere to, a felony directly related to public health and safety or the provision of safe, competent medical care shall be considered ineligible to apply for certification/recertification for a period of one year from the exhaustion of the appeals, proceeds or final release from confinement (if any), or the end of probation, whichever is later. An individual who is incarcerated, or for whom incarceration is pending, as of the application deadline date is ineligible for certification or recertification to the end of incarceration.

Felony convictions considered for this standard include, but are not limited to, fraud, actual or threatened use of a weapon or violence, rape, sexual abuse of a patient or child, or prohibited sale, distribution, possession, or misuse of controlled substances.

IV. The individual shall not engage in unauthorized possession or misuse of the ABCP's credential, examinations, and other intellectual property. The individual shall respect the ABCP's intellectual property rights and comply with the ABCP use of Credential Trademark Policy.

V. The individual shall not misrepresent his/her certification status or misuse any title or membership in any professional organization or community.

VI. The individual shall abide by the ABCP's reasonable test administration rules. The individual shall have had no unauthorized possession of, use of, or access to any examination documents or materials, nor shall the individual receive any unauthorized assistance, copy examination materials, or cause a disruption in the testing area during a test administration or the conduction

of any portion of the certification examination. The individual shall not subsequently use or divulge information gained from his/her examination experience for any reason.

VII. The individual must truthfully complete and sign an application in the form provided by the ABCP, pay the required fees, and provide additional information as requested. The individual shall not make any material misrepresentation of fact during application for certification/recertification. Ineligibility for certification, regardless of when the ineligibility is discovered, is grounds for disciplinary action.

VIII. The individual shall report possible violations of these Ethical Standards and any other development bearing on certification in writing to the Executive Director of the ABCP.

Other persons concerned with possible violation of the ABCP rules are encouraged to contact the ABCP. The person making the complaint should identify him-/herself by name, address, email address, and telephone number. However, the ABCP may consider anonymous complaints.

This report should include information regarding the identity of the person(s) involved in the alleged misconduct with as much specific detail and documentation as possible. The identity of the person making the report must be made known as well as others with knowledge of the facts and circumstances surrounding the alleged misconduct. https://abcp.org/pd/ethics.pdf

AmSECT Practice Guidelines - Code of Ethics

Preamble
The purpose of a code of ethics is to acknowledge a profession's acceptance of the responsibility and trust conferred upon it by society and to recognize the internal obligations inherent in that trust. The following paragraphs delineate the standards governing the conduct of members in their professional interactions with patients, colleagues, other health professionals and the general public. Realizing that no code can encompass all ethical responsibilities of the members, this enumeration of obligations in the code of ethics is not comprehensive and does not constitute a denial of the existence of other obligations, equally imperative, and not specifically mentioned herein. This code of ethics shall be binding on the members of this Society.

Canon 1
Members must uphold the dignity and honor of the profession, accept its disciplines and expose without hesitation illegal, unethical and incompetent conduct.

Interpretive Statements

a. Members are part of a collaborative effort to deliver proper health care to the patient under the members' care.
b. The member has a personal, as well as a professional, obligation to protect and safeguard the patients from illegal and/or unethical actions or the incompetence of any person.
c. The member must maintain personal integrity and establish the appropriate means to fully protect his freedom of conscience for the delivery of services to the patient.
d. A member who demonstrates incompetence or illegal conduct as it pertains to this Code of Ethics shall be exposed to the proper authorities.

Canon 2
Members shall respect the patients' rights and dignity and shall uphold the doctrine of confidentiality regarding privileged patient information.

Interpretive Statements

a. Information about the patient's clinical situation will be kept confidential, unless otherwise required by law, in order to protect the welfare of an individual or community. Written guidelines or protocols of an institution or department may be instrumental in deciding the manner in which confidential information is handled for release.

Canon 3
Members shall provide only those services for which they are qualified. Members shall not misrepresent in any manner, either directly or indirectly, their skills, training, professional credentials, identity or services.

Interpretive Statements

a. Members will accept responsibility for the exercise of sound judgment in the delivery of services to the patient and shall be accountable for the quality of the service provided.
b. Members will provide accurate information about the profession, and the services they provide, as well as the members' own qualifications.
c. The members shall not engage in practices beyond their competence or training.
d. Members shall not delegate to a less qualified person any activity which requires the unique skill, knowledge, and judgment of a formally educated perfusionist. Services rendered by supportive personnel will be under the supervision of a formally educated perfusionist.

Canon 4
Members shall strive to improve their medical knowledge and skills on a continuing basis.

Interpretive Statements

a. Members shall support quality didactic and clinical education.
b. Professional conduct will be maintained toward members' peers, students, medical staff, and patients.
c. Members shall participate in educational activities, either by individual study or through continuing education, which will enhance their basic knowledge in order to continue to provide quality healthcare to the patient.

Canon 5
Members shall maintain and promote high standards for perfusion practice which may include education, research, and scientific presentations and/or publications.

Interpretive Statements

a. Members shall protect the rights of patients and animals involved in research and conduct research in accordance with accepted ethical and reporting standards.
b. All members who participate or contribute as an author or investigator will receive proper recognition and responsibility for the data being presented and/or published.
c. The members shall maintain and promote high standards for research, including:
    0. Full public disclosure and/or acknowledgments of support for research.
    1. Avoidance of fraud and plagiarism.
    2. Scientific articles will not be published in more than one journal without referencing the primary publishing journal, and the consent of the editors of all publications must be obtained.
d. Representation of the Society by members should be in writing and/or at the direction of or by the Board of Directors and/or Executive Committee.

Canon 6
A member shall at all times hold the well-being of the patient to be paramount and shall not act in such a way

as to bring the member's interests into conflict with the patient's interests. A member shall deliver health care services without regard to race, color, creed, national origin, sex, age, religion, sexual preference or physical and/or mental condition.

Interpretive Statements

a. A member's professional practice and adherence to ethical principles shall take preference over business practices. Members shall place service before material gain.
b. A member should fully disclose to clientele other business practices that may appear as a conflict of interest to clientele and/or the public. These may include but are not limited to:
    - Consultant for fee
    - Clinical instructor (support staff from industry)
    - Sales representative
    - Technical advisor
    - Lecturer for fee
    - Acceptance of fees, gratuities, funding from industry
c. The American Society of ExtraCorporeal Technology (AmSECT) is the professional society for the cardiopulmonary perfusionist. Its membership encompasses the vast majority of practicing perfusionists. The purpose of the Society is defined in its mission statement: "The mission of AmSECT is to foster improved patient care and safety by providing for the continuing education and professional needs of the ExtraCorporeal technology community."In that the ultimate concern of the Society is to improve patient care, it is our position that clinicians engaged in the practice of cardiopulmonary bypass are required to and must be allowed to periodically evaluate the equipment which is utilized in cardiopulmonary bypass in the effort of continuously improving patient care which should include not only patient outcomes but safety as well. To this end, AmSECT holds that each perfusionist has the following ethical and professional responsibilities:
    - The perfusionist is the most qualified individual, by training, education, experience, and based on the job description have the responsibility to evaluate, recommend, select, and implement the components of the ExtraCorporeal circuit so that patient safety and care are optimized.
    - The perfusionist will always attempt to fairly evaluate all competing products and services, with the principal selection criteria being that of regard for patient safety and well-being.
    - The perfusionist shall always base any decision on product and service selection on clinical evaluations and documented clinical and scientific data.
    - The perfusionist will not allow the opportunity to arise whereby objective evaluations of products and services are compromised by gratuities, gifts, entertainment, consulting engagements, employment status, or any other material or personal gain.

    In conclusion, it is the responsibility of the perfusionist to make decisions regarding the selection of clinical products with the patient as the primary concern.

http://www.amsect.org/page/code-of-ethics

Graduation/Completion Requirements

Students in the VUMC Perfusion Program are required to do the following in order to graduate with a Certificate in Cardiovascular Perfusion Technology:

1. Complete all courses in the Curriculum Plan with a "C" ($\geq$ 75%) or better
2. Complete an independent research paper.
3. Not be on probation at the time of completing the program for any reason (including unprofessional conduct).
4. Pass a comprehensive final examination.

5. Participate in exit interview with the Program Director.

National Examination/State Licensure

After successful completion of the course of study, graduates of the VUMC Perfusion Program are eligible to take the national certification examination administered by the American Board of Cardiovascular Perfusion. The certification exam is a two exam process. The first exam is the Perfusion Basic Science Exam (PBSE) and requires the student to have graduated from an accredited perfusion program, completed 75 clinical cases, and be given clinical competency clearance by the program director. The second exam is the Clinical Application in Perfusion Exam (CAPE) in addition to the requirements for the PBSE the applicant must also have completed 40 independent clinical cases after graduation.

It is entirely the students' responsibility to seek guidance from the American Board of Cardiovascular Perfusion regarding the certification process, and it is likewise entirely the students' responsibility to seek guidance from any and all licensing bodies that may impact their practice, either as students prior to graduation, or as practicing perfusionists following graduation.

Certification by the ABCP is a pre-requisite for licensure in all states that currently offer licensure to perfusion care providers. Students graduating from an accredited program will be eligible for a provisional license in those states requiring a license. The permanent license will be granted upon satisfying the certification process.

Equipment List

- 2 Sarns S1 Heart Lung Machines
- Maquet Rota flow pump
- Heamonectics Cell Saver 5
- Quest myocardial protection system
- Biomedicus Centrifugal pump

Other Program Policies

Professional Dues

Students are expected to join the national perfusion associations: the American Society of Extracorporeal Technology (Am SECT) and the American Academy of Cardiovascular Perfusion (AACP). Membership in the AmSECT requires completions of a student application and a one-time fee of $15.00. Membership in the AACP requires completion of a student application and an annual fee of $25.00. Students are required to maintain their student memberships during the tenure of the program. These costs are included in the VUMC Center for Programs in Allied Health Estimated Cost of Attendance Table, which appears in this catalog.

Perioperative Blood Management Exam

Students are expected to sit for the Perioperative Blood Management Exam administered by the International Board of Blood Management (IBBM) in the Fall of the Senior Year. The application fee for the exam is $200. The cost associated with this exam as well as the ABCP certification exams to be taken following graduation are included in the VUMC Center for Programs in Allied Health Estimated Cost of Attendance Table, which appears in this catalog.

Professional Conferences

Students are encouraged to submit papers and posters for presentation, participate in student functions, and attend profession conferences. Students will be allowed six (6) days to be used throughout the twenty-two (22) months of the program to attend professional conferences. Students are required to sign the VUMC Perfusion Program Conference Attendance Code of Conduct prior to gaining approval from the Program Director to attend a conference.

Conference Attendance Code of Conduct

- Attend all the scientific sessions and be on time in the morning for the meetings.
- Refuse any dinner or bar tab paid by vendors unless it is a conference sponsored event.
- Dress professional when attending all meetings – business professional.
- Treat all perfusion students from other programs with the utmost respect.
- Know that violation of any of the above rules may result in probation and/or dismissal from the program.
- Be a proud professional representative of the VUMC Perfusion Program in the Center for Programs of Allied Health.

The costs associated with attendance of a professional conference are included in the VUMC Center for Programs in Allied Health Estimated Cost of Attendance Table, which appears in this catalog

This catalog contains only a summary of program policies and procedures. Students should refer to the program handbook for additional information.