

# **VANDERBILT UNIVERSITY MEDICAL CENTER**

## **CENTER FOR PROGRAMS IN ALLIED HEALTH**

**July 1, 2021 – June 30, 2022**

Vanderbilt University Medical Center  
1301 Medical Center Drive  
Nashville, Tennessee 37232  
(615) 875-3666  
<https://www.vumc.org/allied-health/center-programs-allied-health>

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## ABOUT VANDERBILT UNIVERSITY MEDICAL CENTER

Website: [www.vumc.org](http://www.vumc.org)

Managing more than 2 million patient visits each year, Vanderbilt University Medical Center (VUMC) is one of the largest academic medical centers in the Southeast and is the primary resource for specialty and primary care in hundreds of adult and pediatric specialties for patients throughout Tennessee and the Mid-South.

The School of Medicine's biomedical research program is among the nation's top 10 in terms of National Institutes of Health peer review funding, receiving more than \$500 million in public and private awards during 2016. The Medical Center is the region's locus of postgraduate medical education, with over 1,000 residents and fellows training in more than 100 specialty areas.

Vanderbilt University Adult Hospital and the Monroe Carell Jr. Children's Hospital at Vanderbilt are recognized each year by U.S. News & World Report's Best Hospitals rankings as national leaders, with 19 nationally ranked adult and pediatric specialties.

Through the Vanderbilt Health Affiliated Network, VUMC is working with over 60 hospitals and 5,000 clinicians across Tennessee and five neighboring states to share best practices and bring value-driven and cost-effective health care to the Mid-South.

Vanderbilt University Medical Center is authorized by the Tennessee Higher Education Commission. 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.

## 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.

### ***VUMC Mission***

Through the exceptional capabilities and caring spirit of its people, Vanderbilt will lead in improving the healthcare of individuals and communities regionally, nationally and internationally. We will combine our transformative learning programs and compelling discoveries to provide distinctive personalized care.

### ***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 Vision***

We value...

- Service to our patients and communities
- Education and research
- Respect for our patients and each other
- Quality, efficiency, and cost effectiveness
- Collaboration and
- Caring careful use of our resources

### ***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.



## **VANDERBILT UNIVERSITY MEDICAL CENTER BOARD**

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Gregory Scott Allen, JD

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Senior Associate Dean for Clinical Practice, Vanderbilt University School of Nursing

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Vanderbilt University Medical Center

Donald Brady, M.D.  
Executive Vice President for Educational Affairs, Vanderbilt University Medical Center  
Senior Associate Dean for Health Sciences Education, Vanderbilt University

Beverly Connor  
Chief Business Officer, Office of Health Science Education, Vanderbilt University Medical Center

Shon Dwyer  
President, Vanderbilt University Medical Center, Adult Hospital

Chad Fitzgerald  
Director, Quality, Safety, and Risk Prevention, Vanderbilt University Medical Center

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Senior Director, Employee & Labor Relations, Vanderbilt University Medical Center

Ebony McHaskell  
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Dean, Vanderbilt University School of Nursing

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Executive Vice President for Population Health, Vanderbilt University Medical Center

Donna Rosenstiel  
Assistant Dean, Health Sciences Education  
Course Director for Social Work, Vanderbilt Program in Interprofessional Learning

Margaret Rush  
President, Monroe Carell Jr. Children's Hospital at Vanderbilt, Vanderbilt University Medical Center

Adam Seegmiller  
Executive Medical Director, Vanderbilt University Medical Center Clinical Laboratories

Alfredo Sergio  
Division Counsel, Vanderbilt University Medical Center

## **VUMC CENTER FOR PROGRAMS IN ALLIED HEALTH ADMINISTRATIVE LEADERSHIP**

Jeffrey R. Balsler, M.D., Ph.D.  
President and CEO, Vanderbilt University Medical Center

Donald Brady, M.D.  
Executive Vice President for Educational Affairs, Vanderbilt University Medical Center  
Senior Associate Dean for Health Sciences Education, Vanderbilt University

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Annie Bernard  
Administrative Assistant, Center for Programs in Allied Health, Vanderbilt University Medical Center

Vacant  
Title IV Regulations Manager, Center for Programs in Allied Health, Vanderbilt University Medical Center

### **ACCREDITATIONS AND APPROVALS**

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.

Accreditations and approvals for each program in the VUMC Center for Programs in Allied Health may be found in the program-specific section of this catalog.

## VANDERBILT UNIVERSITY MEDICAL CENTER 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, Nashville, Tennessee 37232) is over 500,000 square feet in size. The Medical Center encompasses over 20 acres of land that house 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*

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

### *Rudolph A. Light Hall*

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

### *Medical Center North*

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 that time a number of connecting wings and buildings have been added.

### Vanderbilt Health One Hundred Oaks

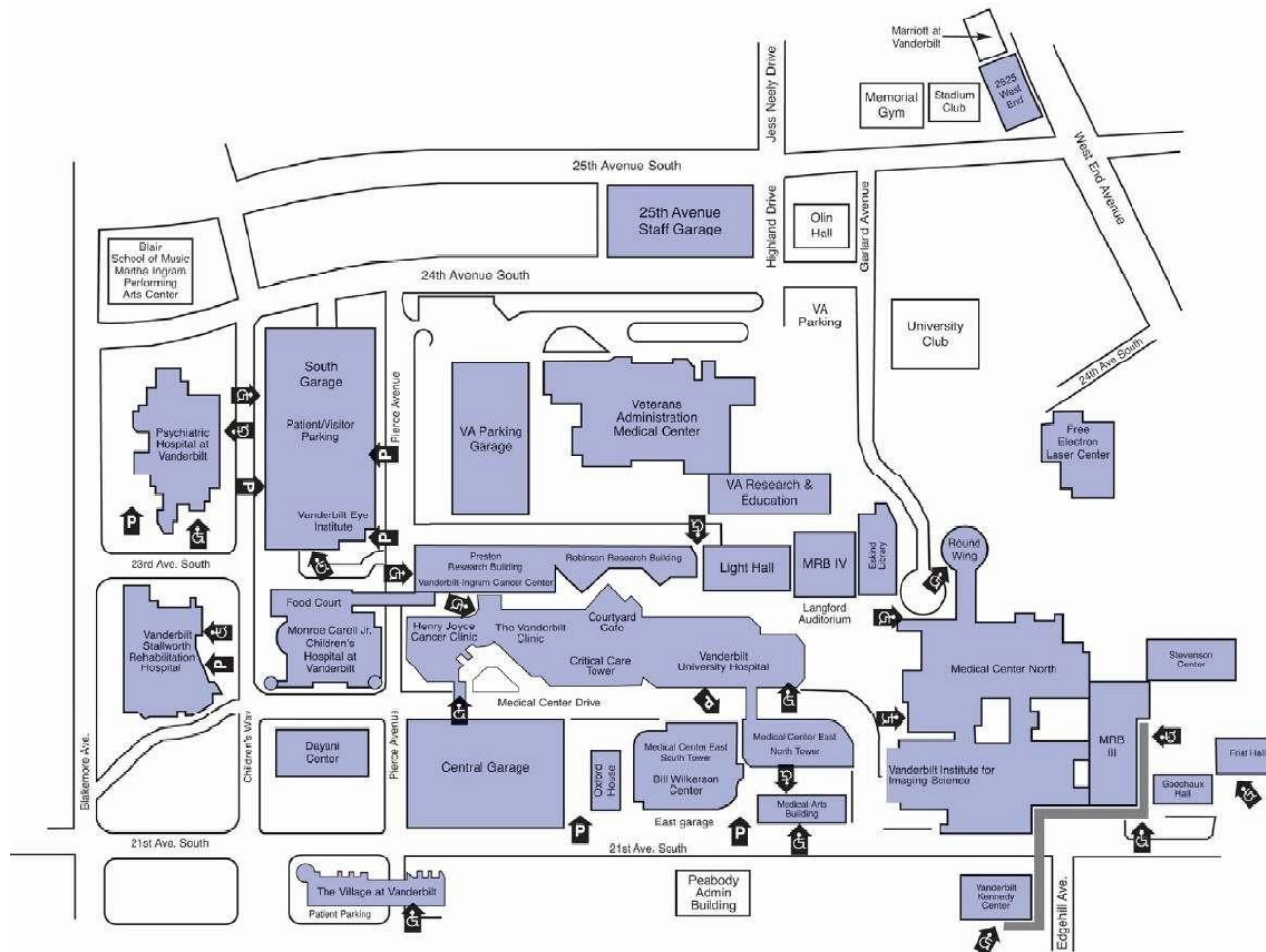
This 440,000-square-foot doctors' office suite opened for patient care in 2009 and is designed for easy access off the interstate highway system, abundant surface parking, automated check-in, and integrated services, labs, and radiology. It houses numerous specialty clinics, primary care services, and advanced imaging facilities. [vanderbilthealth.com/100oaks](http://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](http://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 located in the Melrose/Berry Hill area of Nashville.



**ACADEMIC YEAR 2020-2021 ADMINISTRATIVE CALENDAR VUMC CENTER FOR PROGRAMS IN ALLIED HEALTH**

New Year's Day 2021	Friday, January 1, 2021
Memorial Day 2021	Monday, May 31, 2021
Independence Day 2021*	Sunday, July 4, 2021
Independence Day 2021 (observed)*	Monday, July 5, 2021
Labor Day 2021	Monday, September 6, 2021
Thanksgiving 2021	Thursday, November 25, 2021 – Friday, November 24, 2021
Christmas Eve 2021	Friday, December 24, 2021
Christmas Day 2021 (observed)	Monday, December 27, 2021
New Year's Day 2022	Friday, December 31, 2021
Memorial Day 2022	Monday, May 31, 2021
Independence Day 2022	Monday, July 4, 2022
Labor Day 2022	Monday, September 5, 2022
Thanksgiving Day 2022	Thursday, November 24, 2022
Christmas Eve 2022	Friday, December 23, 2022
Christmas Day 2022	Monday, December 26, 2022

*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

### Libraries

VUMC students have access and privileges to the Vanderbilt University Jean and Alexander Heard Library System, including the Eskind Biomedical Library. Typical Central Library Hours:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
11am-6:00pm	7:30am-6:00pm	7:30am-6:00pm	7:30am-6:00pm	7:30am-6:00pm	7:30am-6:00pm	11am-6:00pm

Vanderbilt University's libraries are among the top research libraries in the nation, home to more than eight million items, including print publications, microfilm items, and digital collections. The libraries provide electronic access to tens of thousands of full-text journals and more than 800,000 e-books and other research resources accessible via the campus network, from workstations and circulating laptops in campus libraries, as well as authenticated access (VUNetID and e-password) from off campus. The libraries' website offers searches for articles, books, electronic resources, and more, as well as links to subject liaisons and research guides in many areas of interest. Library hours may vary, and updates can be found at <https://www.library.vanderbilt.edu/hours.php>.

The Eskind Biomedical Library (EBL) collects and provides access to materials to support the teaching, research, and service missions of Vanderbilt University Medical Center. 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/>. Students have access to the seven other on-VU campus library buildings that comprise the VU Heard Library while the EBL is under renovation.

Students with personal laptops may access free wifi capability in the libraries. Students may utilize wifi by logging in with their VUNet ID and password.

During each program's orientation students are provided training about how to access to library's physical and online resources. In addition, each year a librarian provides a training session for students and faculty, providing information about online research techniques to enable the fullest access to available 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 are provided during each program's orientation.

### Dining Facilities

There are several facilities in VUMC where food may be purchased.

Vanderbilt University Hospital – Courtyard Cafe

Vanderbilt Children's Hospital – Food Court

Snack Bars:

- Medical Center North
- Medical Center East
- Vanderbilt University Hospital
- Oxford House

### Post Office

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

### ***Parking***

A parking decal may be obtained from Central Parking Garage. Hours are 7:30 AM to 5:30 PM, Monday through Friday. A state vehicle registration slip must be presented in order to register. Reduced annual parking rates are available for students in VUMC allied health programs.

### ***VUMC Email Accounts***

All enrolled students are assigned an official VUMC e-mail account. 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 daily in order to be aware of important updates.

### ***VUMC Identification Badges***

During orientation, VUMC-issued photo identification badges are issued to students. The badges 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 photo identification badge.

### ***Orientation***

Orientation to VUMC and to each program 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. Students complete and sign Enrollment Agreements on the first day of orientation.

Occupational health screening also takes place during orientation. Students are required to provide specific health-related documentation during orientation in order to be a student at VUMC. Please contact the Program Director for more information regarding this matter.

### ***Intent to Enroll Form***

The Intent to Enroll form is included in student orientation materials. Students are required to complete the form and submit to the Center for Programs in Allied Health. During the year students are required to keep their current information up to date in Orbund of any change of address, telephone number or other information.

### ***Accessibility for Disabled Students***

VUMC uses the definition of disability set forth in Section 504 of the Rehabilitation Act of 1973, 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.

VUMC admissions decisions are made using criteria independent of an applicant's disability. Students with disabilities desiring to enroll in a program at Vanderbilt University Medical Center must be able to meet the admissions standards of VUMC.

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 student 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.

### ***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

### ***Campus Security and Crime Prevention***

Of primary concern to VUMC is the safety of students, faculty and staff members and the protection of assets of the Medical Center. VUMC partners with the Vanderbilt University Police Department (VUPD) for VUMC 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.

VUPD produces a number of information resources available to VUMC students online, including a daily crime log, crime statistics, and the Annual Security and Fire Safety Report, accessible online at any time. In addition, AlertVU is available to all members of the VUMC community and provides real-time emergency notifications by phone call, text and/or email, as specified by the user's preference.

Shuttle bus service between parking facilities and Vanderbilt University Medical Center 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.

### ***Occupational Health Center and Off-Campus Health Resources***

Students may access urgent care services at the VUMC Occupational Health Clinic (OHC). The OHC helps protect VUMC faculty, staff and students, through a variety of programs used to monitor exposure to workplace hazards and treat work-related illness and injury. The OHC is located on the VUMC campus, at

1211 21st Ave. South, Medical Arts Building, Suite 640, Nashville, TN 37212. OHC also offers Faculty/Staff Express Care, a separate walk-in clinic for minor illnesses such as colds and flu.

Off campus, many Vanderbilt Health Clinics (walk-in) serve the greater Nashville community and may be utilized for illness. The Vanderbilt Health Belle Meade and the Vanderbilt Health Franklin at Highway 96 are frequented, as needed, by student. Services at both walk-in clinics are not free of charge, however, insurance may be accepted, depending on network participation, <https://www.myhealthwalkin.com/>

### ***VUMC Employee Assistance Program (EAP)***

Vanderbilt University Medical Center offers an Employee Assistance Program known as Work/Life Connections-Employee Assistance Program (EAP):

Location: B018 Medical Arts Building (MAB)  
Hours: 8:00 a.m.-5:00 p.m., Monday through Friday  
Telephone: 615-936-1327

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 job performance and/or emotional health and well-being. The 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. The EAP offers assistance for alcohol/substance abuse problems; emotional/behavioral problems; family/marital problems; financial and legal concerns; and stress-related problems.

### ***Employment Assistance***

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. VUMC cannot and does not guarantee employment or salary, but it makes every effort to assist each graduate in their job search.

### ***Academic Advising / Tutoring***

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

### ***Career Assistance and Planning***

Upon completion of the programs, VUMC cannot guarantee employment in the field of designated completion; however, each Program Director and program faculty offer career planning within each designated 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. Each student is responsible for securing their own employment once completing the program.

### ***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. This coverage is limited only to the care participated in by students at the direction of the Program Director or designee, whether at VUMC or an official clinical education affiliate

## **ADMISSIONS**

### ***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), a copy of it may be submitted in lieu of a copy of the high school diploma. A physical copy of the original diploma (or its equivalent) or degree must be verified and on file 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 that the institution or program was approved by the applicable governing or state authority. VUMC periodically verifies that the institution or program was approved by the applicable governing or state authority. A signed, VUMC-approved attestation will be accepted in lieu of a copy of the high school diploma. Applicants should speak with the director of the program 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. For programs requiring college degree, a physical copy of the original college or university diploma or its equivalent must be provided, including the name of the institution, city, state and graduation year. For programs requiring a college degree, the college diploma satisfies documentation requirements of a high school education (copy of high school diploma does not need to be submitted).

All students admitted into VUMC programs are required to undergo a criminal background check report prior to matriculation. Applicants are made aware on the application signature page that their VUMC enrollment is conditional upon passing a criminal background check, and instructions regarding the process of obtaining the background check are included in the student's letter of admission. VUMC requires that criminal background check reports be delivered by the screening provider directly to VUMC. VUMC will not accept background check reports from students. Programs may require additional screening, such as fingerprinting and drug screening. Information for any additional required screenings is provided by programs to students at the time of admission.

A criminal record will jeopardize a graduate's eligibility for employment; therefore, students are advised to review any criminal record concerns with the relevant Program Director 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 VUMC Executive Vice President for Academic Affairs may also be consulted. Decisions regarding non-admission of students deemed unfit due to the information in criminal background reports are final.

### ***Late Enrollment***

Vanderbilt University Medical Center does not allow late enrollment.

***Admission/Application Procedures***

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

***Program Requirements for Admission***

Specific requirements for admission are listed under each program offered. Please refer to program-specific admissions requirements in this Catalog.

***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 experience with online learning management systems, in general, as well as 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, and training in the VUMC Learning Management System is provided early in the student's educational program.

## **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 very 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.

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Signature of Student

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Date

### ***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/>

### ***Student Technology Requirements (All Students)***

Students must have a computer (desktop or laptop) with the minimum system requirements, below. The Perfusion and Diagnostic Medical Sonography Programs require students to have laptops (with the same minimum requirements). Please see program-specific information in this catalog for additional program requirements.

Hardware:

- 1.4 Ghz Processor
- 13-inch or larger display, with minimum 1024×768 resolution
- Wireless-g, -n, or -ac capability
- Note: Not supported: Chromebooks, Netbooks

Operating System:

- Windows 8, 10
- Mac OS X 10.9 or higher
- Note: Not supported: Linux, Virtual Machines

Browsers:

- Latest versions of Chrome and Firefox (recommended as default browsers)
- Windows: Internet Explorer 11 or higher
- Mac: Safari 11.0.3 or higher
- Note:
- Cookies must be enabled
- JavaScript must be enabled

Latest versions of:

- Acrobat Reader
- Flash Player
- Silverlight Player.

All students are required to adhere to VUMC computer use requirements as established under Policy OP10-10.30, Social Media Policy and Guidelines, which is located in Appendix B of this catalog.

### ***Health Insurance***

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

### ***Immunization and Health Records***

Upon acceptance, students must provide written documentation of the following:

- Two (2) negative TB skin tests within the past twelve (12) months with the most recent being within the past three (3) months. If history of a positive skin test is present, a chest x-ray within the past six (6) months will be necessary.
- If born on or after January 1, 1957: Two (2) live measles vaccinations after the first birthday at least one month apart OR MMR vaccination since 1989 OR laboratory evidence of immunity to rubeola.
- Those born in 1957 or later need two immunizations for measles, like the MMR (at least one month apart, given after first birthday). Alternatively, documentation of a positive IgG blood test for measles will satisfy this requirement.
- Laboratory evidence of MMR vaccination or immunity to mumps.
- Laboratory evidence of immunity to varicella (chickenpox) or immunization series.
- Hepatitis B immunization (series of 3 injections), immunization series in progress or informed refusal of immunization.
- Tetanus/Diphtheria booster within the past 10 years is recommended, but not required.
- Any student with clinical activities in the Children's Hospital (including MCJCHV clinics), Women's Health, and Emergency (including LifeFlight) is required to have documentation of one booster dose of pertussis vaccine in the form of Tdap. Routine adult Td boosters and the childhood DTP/DTaP vaccines do not satisfy this requirement.

All students are required to receive the influenza vaccine by December 1<sup>st</sup> of each year. Students may apply for exemption from the influenza vaccine for religious or health reasons.

### ***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 mastery of knowledge previously covered in courses. No credit for prior clinical courses, internships, labs or practica 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 guideline specific to their program of study s 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. It is the responsibility of prospective students to 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. It is the responsibility of the student to ensure that VUMC receives all official transcripts. An official transcript must be provided from each institution from 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 in order 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.



## 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, the standards for which are outlined in 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 on a regular basis 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. In order to maintain Satisfactory Academic Progress, a student must meet at all times 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. In order 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).

### **Qualitative Elements of SAP**

**Qualitative Elements of SAP – General Information** – Qualitative measurement consists of a student’s grades, whether expressed numerically or with letter grades (see Grading Scale chart below). Some programs may calculate these grades into a cumulative Grade Point Average (GPA). Some courses may be graded according to the pass/fail system. Some programs use competency-based assessment as a qualitative measure in addition to a grading scale. In these cases student performance of competency- related tasks is assessed in order to determine whether or not a student has obtained competency (pass) or not (fail). Each program-specific section of this catalog provides additional details regarding each program’s qualitative measurement.

Qualitative Elements of SAP -- Grading Scale\*

Qualitative Elements of SAP -- Grading Scale\*

Scale	Grade	Definition	GPA
100–90%	A	Excellent	4.0
89-80%	B	Good	3.0
79-70%	C	Satisfactory	2.0
69–0%**	F	Inadequate**	0.0
	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 <sup>±</sup>	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.
	R	Repeat - Some programs allow students to repeat courses. In those programs, for any course that is repeated, a Repeat will be provided as the grade for the first attempt at the course. Any course with an "R" grade is not calculated into the grade point average. However, courses will be considered hours / credit hours attempted for the purpose of determining maximum time frame. Please refer to each program's student handbook for information about whether students are allowed to repeat courses in any given program.

\*Programs may, at their discretion, subdivide each grade into categories indicating plus (+) or minus (-) performance for a given grade level on the grading scale (e.g., A-, B+, C+, etc.). Individual program sections of this catalog contain information on program-specific grading systems.

\*\*Programs may, at their discretion, establish a failing grade threshold higher than the institutional minimum failing grade as indicated above (69 and lower). Individual program grading sections in this catalog provide program-specific information on failing grade thresholds. Under no circumstances may a program establish a failing grade threshold lower than the institutional threshold grade (69 and lower). All programs must apply and enforce their failing grade thresholds uniformly among students enrolled in the program.

<sup>±</sup> 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.

**Qualitative Elements of SAP -- Minimum Average Required for Satisfactory Academic Progress –**

All students must maintain a minimum qualitative average (expressed as percentage points, grades, GPA and/or competencies passed) as defined by each program in order 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
Dietetic Internship	70% average (rotations & assignments)	80% average (rotations & assignments)		
Medical Laboratory Science	75% average	75% average		
Diagnostic Medical Sonography	75% average	75% average	75% average	75% average
Nuclear Medicine Technology	70% Didactic / 75% Clinical	70% Didactic / 75% Clinical		
Perfusion	75% per course	75% per course	75% per course	75% per course

*Students not completing required coursework or hours will be assigned a failing grade for the course. Additional adverse actions may also arise from not completing required coursework or hours.*

**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 the grade and in no case later than one (1) week after the grade 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.

### **Quantitative Elements of SAP**

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 in order 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.

Students' progress against quantitative SAP requirements is measured at least once a term. There are two institutional terms per academic year. The first term is defined as the period between July 1 and December 31. The second term is defined as the period between January 1 and June 30. Schedules for each program's rotations and other program elements may have different starting and ending dates from the institutional term dates.

### **Transfer and Readmitted Students/Students Changing Majors**

If a student transfers to VUMC from another postsecondary institution, the transfer credits that were accepted by VUMC will count as credits attempted and credits completed for purposes of 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 receiving federal financial aid 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. Students may receive financial aid for each repeated course provided that a student may not repeat a passed course more than once.

### ***Progress Evaluations and Reports***

Each student's progress in completing the program is reviewed during a progress evaluation monthly. During these reviews the student's Cumulative Grade (or Point) Average and rate of progress in completing program hours are discussed with the student, and the student receives academic, attendance and/or financial aid advising from the school, as the school deems necessary. Students will receive a written progress report containing a summary of the student's grades and successfully completed hours.

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 Satisfactory Academic Progress 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 Program 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, at the discretion of the program, 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 in the Academic Plan. The student's Academic Plan and progress toward its completion will be reviewed with the student during the period of Probation according to the details of the Plan.

Students are not allowed to have more than one period of probation while enrolled in their program. Students on probation who do not successfully complete the terms of their Academic Plan will be provided 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 has 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 the appeal and any documentation submitted by the student. The Director will also speak with involved faculty and staff. The student will be notified of the outcome of the appeal in writing within five (5) business days of the appeal 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 in order to return to Satisfactory Academic Progress.

### **Student Dismissal Policy**

Students who have been placed on probation and do not return to Satisfactory Academic Progress 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. Students dismissed from VUMC programs are required to immediately return to VUMC their student IDs and any books, equipment or other materials issued to them 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 and 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 one month 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 is allowed to re-enroll, the Program Director may place conditions that the student must meet in order to be reinstated. The Program Director may also reinstate the student on a probationary basis. Reinstatement is based on class and space availability.
- If students who are reinstated are required to repeat coursework, that coursework must be satisfactorily completed in order to continue in the program.
- Reinstated students must maintain VUMC student 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; however, until SAP status is re-established, the student will not be eligible for any form of federal financial aid. A student making 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 conditions of the temporary suspension. 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.

## 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 lecture, 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.

### ***Off-Site Learning Activities***

Students who will be participating in a mandatory, class-wide offsite learning activity, must complete the Field Trip Acknowledgement Form prior to participation. 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 activity 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.

### ***Learning Management System (Canvas)***

Canvas is a full-fledged Learning Management System. Canvas provides user- friendly ways to create advanced tools for dynamic online activities that support each course's objectives. 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.
- 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 if using the App
- All students will receive basic Canvas training during Program Orientation.

### ***Canvas and Blended Distance Education Orientation***

Students attending in a blended format will receive training on the navigation of 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:

#### **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: [Student Guide - Instructure Community \(canvaslms.com\)](https://canvaslms.com)
- VUMC Canvas Support: email Jordan Sims; [Jordan.sims@vumc.org](mailto:Jordan.sims@vumc.org)
- Canvas Browser/Computer Requirements: [What are the browser and computer requirements for... - Instructure Community \(canvaslms.com\)](https://canvaslms.com)

### ***Surveys of Enrolled Students and Graduates***

Vanderbilt University Medical Center conducts surveys of enrolled students, graduates, and others in order to continuously learn about its effectiveness and to 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 programs following conclusion of courses)
- Student satisfaction survey (administered by VUMC at least once a year)
- Graduate satisfaction survey (administered by VUMC at least once a year)
- Program-specific surveys of students (details are available in each program's Program Handbook)

### ***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.

It is the student's responsibility to address any issues related to his/her attendance. A student has the option to determine with the course instructor (in consultation with the Program Director, if needed) whether and under what conditions make-up work will be permitted or required.

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 Program 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 to exceed a total of 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 in order 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.

## ADMINISTRATIVE POLICIES, RULES AND REGULATIONS

### ***Enrollment Agreement***

Students are required to sign an Enrollment Agreement with VUMC at the beginning of orientation. A review copy of the Enrollment Agreement is provided to students prior to their arrival on campus.

### ***Financial Responsibilities / Estimated Cost of Attendance***

Each 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):

\*Please note that fees may vary by program. Students are required to sign an Enrollment Agreement with VUMC at the beginning of orientation. A review copy of the Enrollment Agreement is provided to students prior to their arrival on campus.

<b>2021-2022 Estimated Cost of Attendance</b>						
PROGRAM	CREDIT/CLOCK HOURS	APPLICATION FEE	TUITION	FEES	BOOKS	TOTAL COST
Diagnostic Medical Sonography	2295 clock hours	\$50	\$14,000	\$3,773	\$905	\$18,728
Dietetic Internship	1286 clock hours	\$75	\$12,500	\$2,933	\$480	\$15,988
Medical Laboratory Science	1951 clock hours	\$50	\$7,500	\$2,687	\$700	\$10,937
Nuclear Medicine Technology	1350 clock hours	\$50	\$4,500	\$3,510	\$716	\$8,776
Perfusion	96 credit hours	\$100	\$39,000	\$7,195	\$1,965	\$48,160

Students are required to pay the tuition and fees for each term prior to the beginning of classes for that term. Students with an unpaid tuition balance may be ineligible to sit in 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, acceptance, and enrollment, and during the course of study. For example, all accepted students must submit to a criminal background check at the time of acceptance into the school. In some cases, this fee is the responsibility of the student.

In addition, all parking on the Vanderbilt University Medical Center campus must be registered through VUMC Parking & Transportation Services and requires monthly or annual payments. Parking rates will vary according to availability and student preference.

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

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.

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

### ***Federal Student Financial Aid Funds***

Title IV federal financial aid is not available through Vanderbilt University Medical Center at this time. Students will be notified of any plans to change this in the future.

### ***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.

### ***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 (3<sup>rd</sup>) 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. 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).

Cancellation is considered to have occurred when the student provides written notice of cancellation at the following address: Vanderbilt University Medical Center, Center for Programs in Allied Health, 1301 Medical Center Drive, B-802 TVC, Nashville, Tennessee 37232-5510.

- The cancellation may be provided by mail or by hand delivery.
- The written notice of cancellation, if sent by U.S. Mail, is effective when the notice is postmarked, or as of the date of mailing, if proof of registered delivery is provided. If the written notice of cancellation is hand-delivered, it is effective when it is received by the Center for Programs in Allied Health.

If the Enrollment Agreement is cancelled the school will refund the student monies paid as described above, less deductions for any books, equipment or supplies provided to the student by VUMC and not returned in new condition, within five (5) business days after the notice of cancellation takes effect.

Students who cancel according to the terms described above will be refunded within three (3) business days after notification of cancellation occurs. Students cancelling enrollment in VUMC programs are required to return their student IDs immediately upon cancellation.

### ***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 (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:

1. The student notifies the institution in writing of their desire to withdraw. Withdrawal notification must be provided in writing to the following address: Vanderbilt University Medical Center, Center for Programs in Allied Health, 1301 Medical Center Drive, B-802 TVC, Nashville, Tennessee 37232- 5510.
  - The withdrawal may be provided by mail or by hand delivery.

- The written notice of withdrawal, if sent by U.S. Mail, is effective when the notice is postmarked, or as of the date of mailing, if proof of registered delivery is provided. If the written notice of withdrawal is hand-delivered, it is effective when it is received by the Center for Programs in Allied Health.
2. 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.

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 is considered half of one academic year.

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.

If a student is owed a refund, all monies due will be refunded within 45 calendar days after the date of VUMC's determination that the student has withdrawn. Students withdrawing from VUMC programs are required to return their student IDs immediately.

If a student has received federal student financial aid funds, the student is entitled to a refund of monies not paid from federal student financial aid program funds. If any portion of the tuition was paid from the proceeds of a loan or third party, the refund shall be sent to the lender, or other third party if appropriate.

**Refund Policy**

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

**FOR A STUDENT WHO TERMINATES**

within the first 10% of the program  
 within the first 20% of the program  
 within the first 30% of the program  
 within the first 40% of the program  
 within the first 50% of the program  
 within the first 60% of the program  
 after 60% of the program

**VUMC WILL REFUND**

90% of the program cost  
 80% of the program cost  
 70% of the program cost  
 60% of the program cost  
 50% of the program cost  
 50% of the program cost  
 0% of the program cost

## STUDENT RIGHTS & 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 and staff 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.

### ***Student Grievance Policy and Procedures***

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 at 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, 404 James Robertson Parkway, Suite 1900 Nashville, TN 37243”

### ***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). Each program’s policies and procedures related to student employment are published in each program’s Program Handbook. For additional information on working while enrolled at VUMC, prospective and current students should refer to the Program Handbook for the appropriate program(s).

## OTHER ADMINISTRATIVE POLICIES

### ***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>)

#### **I. POLICY**

It is important that Vanderbilt University Medical Center ("VUMC") faculty, and staff 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<sup>i</sup> 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 on the basis of their sexual orientation<sup>ii</sup>, gender identity<sup>iii</sup>, or gender expression<sup>iv</sup>.

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

#### **II. GENERAL PROVISIONS**

**A. 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.



**B. Racial and Other Harassment in the Work Environment:** Harassment against individuals on the basis of 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 on the basis of 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 on the basis of an individual's sexual orientation, gender identity, and gender 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.

**C. Discrimination:** 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 state laws. Discrimination against individuals on the basis of their sexual orientation, gender identity, or gender expression is also unacceptable.

**D. 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 ([HR - VUMC Equal Opportunity and Affirmative Action](#)), 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.

### III. COMPLAINT PROCEDURE

Any member of the VUMC community who experiences harassment or discrimination on the basis of 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 immediately seek assistance from their supervisor or manager or through VUMC Employee & Labor Relations. In addition, any member of the VUMC community who experiences retaliation after filing or encouraging one to file a complaint of discrimination, participating in an investigation of discrimination, or opposing discrimination should immediately seek assistance through their supervisor or manager. If an issue is raised to your supervisor or manager, they will reach out to VUMC Employee & Labor Relations to consult and receive advice. If the issue warrants further investigation, Employee & Labor Relations will then commence the following procedure:

1. Employee & Labor Relations will document the details of the complaint and conduct a prompt and thorough investigation of the allegations.

2. Employee & Labor Relations will explain the process to all parties involved and notify them of the need for confidentiality to be maintained throughout. Where appropriate, Employee & Labor Relations will facilitate remedial action to protect the parties involved in the process.
3. All pertinent documents will be reviewed and appropriate witnesses will be interviewed.
4. Following an objective evaluation of the information gathered, Employee & Labor Relations will notify the parties of the outcome of the investigation. Where appropriate, Employee & Labor Relations will facilitate a resolution.

This policy is intended as a guideline to assist in the consistent application of VUMC policies and programs for staff. The policy does not create a contract implied or expressed, with any VUMC staff members, who are employees at will. VUMC reserves the right to modify this policy in whole or in part, at any time, at the discretion of VUMC.

### ***Services for Students with Disabilities***

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. Students seeking accommodation for any type of disability are encouraged to contact their Program Director or the Director of the Center for Programs in Allied Health to request assistance. 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.

### ***Student Records***

VUMC allied health student records are maintained for a minimum of five years from the end of the VUMC fiscal year during which a student was last enrolled, with transcripts being maintained permanently. The student has the right to inspect academic and financial records, by appointment.

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. A student may review his/her own student record through appointment with the administrative office of the Center for Programs in Allied Health. Student files may not be removed from the administrative office of the Center for Programs in Allied Health.

### ***Transcripts/Verification Statements***

Permanent transcripts of student performance 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 transcripts (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](mailto:medverify@vanderbilt.edu)

### ***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 for 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 ceases 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, B-802 TVC, 1301 22<sup>nd</sup> Avenue, Nashville, TN 37232-5510. 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 a 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 proceeding 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))

### ***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 on VUMC's computers, networks and copiers. Unauthorized use of copyrighted material is illegal, regardless of whether that use is by a faculty or staff member or a student. All faculty, staff, and students are expected to be aware of and follow laws around use of copyrighted materials. Any member of the campus community practicing unauthorized use or distribution of copyrighted material is subject to sanctions by VUMC Center for Programs in Allied Health, 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>

The following web link provides information on legal sources of online content, and is made available to VUMC students in this catalog as a requirement of the Higher Education Opportunity Act:  
<https://www.educause.edu/focus-areas-and-initiatives/policy-and-security/educause-policy/issues-and-positions/intellectual-property/legal-sources-onli>

## **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 notifying the office of the Center for Programs in Allied Health immediately of any change of mailing address, email address, telephone number or emergency contact.

### ***Course Syllabus Policy***

Each didactic and clinical course director is required to 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, as well as grading information. The instructor will provide a review and explanation of 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 that the instructor has violated content provided in the syllabus, he or she may file a complaint under the Grievance Policy outlined in this catalog.

### ***Uniforms/Dress Code***

Students are required to dress in an appropriate professional manner, in keeping with VUMC institutional dress code (Appendix D of this catalog). Uniforms or scrubs may be required for some programs. Please refer to information from programs regarding specific dress requirements based on particular settings of learning.

\* The Center for Programs in Allied Health (CPiAH) requires all students to purchase and wear Wonder Wink scrubs that are grey in color. The Center for Programs in Allied Health will supply patches that must be adhered to the left shoulder of the scrub tops. Please note that the patch cost is included with tuition and fees and it is the responsibility of the student to have the patches stitched onto the scrub tops.

### ***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 assures 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 but is not limited to 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, electronic cigarettes, and use of tobacco are prohibited in VUMC facilities and on the grounds of the Medical Center campus bounded by 21st Avenue, Blakemore Avenue, 24th Avenue, Garland Avenue, Stephenson Center Lane extending beyond and behind Medical Center North. VUMC has designated smoking areas on the boundaries of the Medical Center campus. (Refer to the attached map for the locations.)

Additionally, smoking, electronic cigarettes, and use of tobacco are banned in all property owned by the Medical Center including vehicles and on property leased by the Medical Center. 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.) For property leased by the Medical Center, efforts are made with landlords to institute no smoking/tobacco policies and to direct smokers/tobacco users no less than 50 feet from any entrance used by patients or staff. No medical exceptions are allowed for outpatients or inpatients. 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 (full policy appears in Appendix E of this catalog):

Unauthorized use or possession of alcohol, controlled substances or the use or possession of illegal drugs is prohibited on Vanderbilt University Medical Center (VUMC) premises or during VUMC-sponsored activities. In addition, this policy prohibits the unlawful manufacture, dispensing, or distribution of illicit drugs and alcohol by staff on VUMC premises, while conducting VUMC business off the premises, or as part of any VUMC-sponsored activities, including any activity with a federal grant. (VUMC Policy Number OP 30-10.04, April 2013)

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):

Location: B018 Medical Arts Building (MAB)

Hours: 8:00a.m.-5:00 p.m., Monday through Friday

Telephone: 615-936-1327

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 job performance and/or emotional health and well-being. The 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. The EAP offers assistance for

alcohol/substance abuse problems; emotional/behavioral problems; family/marital problems; financial and legal concerns; and stress-related problems.

### ***Weapons Policy***

Vanderbilt University Medical Center prohibits student possession of firearms or other dangerous weapons while on Vanderbilt University Medical Center Campus or at clinical affiliations. The full policy is available in Appendix F of this catalog. Any student found to be 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.

### ***Computer Use Policy***

Students are required to adhere to all VUMC policies relating to the use of computer systems, both while on campus and remotely. Students are required to adhere to the following Medical Center policies provided to all students through this catalog in the following Appendices to this catalog:

- VUMC Acceptable Use Policy (computer policy) (Appendix A)
- VUMC Social Media Policy (Appendix B)
- VUMC Authentication to Electronic Systems and Applications Policy (Appendix C)

Students are required to refrain from sharing information about their clinical experiences on social media. Patient information is confidential and should never be shared. Any breach in forms of confidentiality will result in disciplinary action, up to and including dismissal from the program.

### ***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 may 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 the use of infection control and standard precautions, as well as safety in the workplace. 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 to Risk Management within 48 hours.

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 high 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 suspects 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 absolutely essential in order 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 OSHA requirements
- B. Standards of Conduct (AIDET)

## C. HIPAA Regulations (Health Insurance Portability and Accountability Act)

### ***Maintenance of Program-Issued Equipment***

All equipment – e.g., beepers, parking cards, ID badges, 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 being allowed to enroll for the next term or, for students in their final term, prior to 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 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.

### ***Community Resources***

Information about national community resources is listed below: Organization /Website / Phone Number

- Alcohol Abuse and Crisis Intervention – [www.aa.org](http://www.aa.org) – 1 (615) 831-1050
- Al-Anon – [www.al-anon.org](http://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](http://www.acf.hhs.gov) – 1 (800) 422-4453
- National Domestic Violence Hotline – [www.thehotline.org](http://www.thehotline.org) – 1 (800) 799-7233
- Rape Crisis Center – [www.therapeccrisiscenter.org](http://www.therapeccrisiscenter.org) – 1 (888) 366-1640
- Suicide Hotline – [www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org) – 1 (800) 273-8255
- United Way – [www.unitedway.org](http://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.

# DIAGNOSTIC MEDICAL SONOGRAPHY (DMS)

## ***Program Description***

The VUMC Diagnostic Medical Sonography 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 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 (see program accreditation below), 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 \$50.00 + Tuition \$14,000.00 + Books \$905 Fees \$3,773.00 = Total Cost \$18,728.00

## **Length of Program**

The program consists of 2,295 clock/contact hours in 72 weeks, typically beginning in mid- to late-September and ending 18 months later in mid- to late-March.

## **Program Delivery**

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 VUMC Diagnostic Medical Sonography program's goal is to prepare competent entry-level general sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. 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. Initial accreditation for a general sonography concentration was achieved in 2004. Continuing accreditation for the program was achieved in 2007, 2013 and 2019.

Recognition by CAAHEP qualified the Program's graduates for eligibility 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

#### **CAAHEP:**

Commission on Accreditation of Allied Health Education Programs  
9355- 113th St. N, #7709  
Seminole, FL 33775  
P: 727-210-2350 F: 727-210-2354  
[www.caahep.org](http://www.caahep.org)

#### **JRC-DMS:**

Joint Review Committee on Education in Diagnostic Medical Sonography  
6021 University Boulevard, Suite 500  
Ellicott City, MD 21043  
443-973-3251 F: 866-738-3444  
[www.jrcdms.org](http://www.jrcdms.org)

## Program Academic Calendar

<b>2021-2022</b>	
<b>Fourth Rotation (Class of 2022)</b>	<b>June 28, 2021 - September 17, 2021</b>
<i>Independence Day Holiday</i>	<i>July 4, 2021</i>
<i>Labor Day Holiday</i>	<i>September 6, 2021</i>
<b>Program Orientation (Class of 2023)</b>	<b>September 20-24, 2021</b>
<b>Fifth Rotation (Class of 2022)</b>	<b>September 20, 2021 – December 17, 2021</b>
<b>First Rotation (Class of 2023)</b>	<b>September 27, 2021 – December 17, 2021</b>
<i>Thanksgiving Break</i>	<i>November 22-26, 2021</i>
<i>Christmas Break</i>	<i>December 20, 2021 – December 31, 2021</i>
<b>Sixth Rotation (Class of 2022)</b> <b>Second Rotation (Class of 2023)</b>	<b>January 3, 2022 - March 25, 2022</b>
<b>Graduation</b>	<b>Week of March 28, 2022 (Date/Time TBD)</b>
<b>Third Rotation (Class of 2023)</b>	<b>March 28, 2022 – June 17, 2022</b>
<i>Memorial Day Holiday</i>	<i>May 30, 2022</i>
<i>Summer Break</i>	<i>June 20-24, 2022</i>
<b>2022-2023</b>	
<b>Fourth Rotation (Class of 2023)</b>	<b>June 27, 2022 - September 16, 2022</b>
<i>Independence Day Holiday</i>	<i>July 4, 2022</i>
<i>Labor Day Holiday</i>	<i>September 5, 2022</i>
<b>Program Orientation (Class of 2024)</b>	<b>September 19-23, 2022</b>
<b>Fifth Rotation (Class of 2023)</b>	<b>September 19, 2022 – December 16, 2022</b>
<b>First Rotation (Class of 2024)</b>	<b>September 26, 2022 – December 16, 2022</b>
<i>Thanksgiving Break</i>	<i>November 21-25, 2022</i>
<i>Christmas Break</i>	<i>December 19, 2022 – December 30, 2022</i>
<b>Sixth Rotation (Class of 2023)</b> <b>Second Rotation (Class of 2024)</b>	<b>January 2, 2023 - March 24, 2023</b>
<b>Graduation</b>	<b>Week of March 27, 2023 (Date/Time TBD)</b>
<b>Third Rotation (Class of 2024)</b>	<b>March 27, 2023 – June 16, 2023</b>
<i>Memorial Day Holiday</i>	<i>May 29, 2023</i>
<i>Summer Break</i>	<i>June 19-23, 2023</i>

### **Program Staff, Faculty, and Advisory Boards**

Arthur C. Fleischer, MD, Medical Director (Full-time)

Residency and Fellowship, Diagnostic Radiology, 1980, Vanderbilt University School of Medicine, Nashville, TN; MD, 1976, Medical College of Georgia, Augusta, GA; BS, Biology, Emory University, Augusta, GA

Jill D. Webb, BS, RT(R), 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

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

Andrea L. Berkey, RDMS, RVT, Clinical Coordinator (part-time)

Associates Degree, Diagnostic Medical Sonography, 2012  
Mountain State University, Beckley, WV

### **DMS Program Advisory Committee**

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.

### **DMS Program Advisory Committee Members**

<b>Member Name</b>	<b>Title</b>
Jill Webb	Program Director
Arthur Fleischer, MD	Medical Director
Rochelle Andreotti, MD	Professor, Radiology- Guest Speaker
Glynis Sacks, MD	Professor, Clinical Radiology- Guest Speaker
Karen Tisdale	Clinical Site Supervisor, Clinical Instructor
Melissa Tomlin	Clinical Site Manager
Rachel Campbell	Clinical Instructor
Stephanie Smith	Clinical Instructor
Ebony McHaskell	Director, VUMC Programs in Allied Health
Kristen Smith	Assistant Director, VUMC Progs. in Allied Health
Donna Rosenstiel	Assistant Dean, Office of Health Sciences Education
Kelley Ernst	Student
Michelle Lynch	Public Member
Kelly Barrett	Public Member- former student and clinical instructor
D'Arcy Craig	Public Member- former student
Tracy Wrye	Public Member
Kevin Gregory	Public Member
Tamra Roberts	Public Member-Distance Education

## Admission

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 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 one of 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 with incomplete pre-requisite coursework by indicating a plan of action to satisfy this requirement prior to matriculation (please refer to Application for Admission on the DMS Program website).

### 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*

Applications are accepted by the Allied Health Programs Office with postmarks 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

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 sent to the program from the World Education Services (WES). International applicants who do not provide official documentation of acceptable US course and degree equivalency will not be considered during the application process.

The application AND all supporting documentation must be delivered to the Allied Health Programs Office in one mailing envelope.

Any application received with a postmark after March 31 is processed only on an as-available basis. Interviews are scheduled with qualified applicants each year after the deadline listed.

### *Interview*

Qualified applicants are granted a phone interview with the Program Director (under the direction of the Admissions Committee). Top candidates are offered an on-site interview with Faculty and Staff from the Admissions Committee.

### *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. Selection: The



top five (5) applicants are offered admission status and the next five (5) applicants are offered an alternate position for the same 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*

<b>COURSE</b>	<b>LECTURE</b>	<b>LAB</b>	<b>PRACTICUM / CLINICAL</b>	<b>TOTAL HOURS</b>
Sonographic Patient Care	20			<b>20</b>
Foundations of Ultrasound and Healthcare*	22			<b>22</b>
Cross-Sectional Anatomy	22			<b>22</b>
Abdominal Sonography Techniques I	44			<b>44</b>
Gynecological Sonography Techniques I	33			<b>33</b>
Clinical Practicum I			72	<b>72</b>
Clinical Lab I		66		<b>66</b>
Obstetrical Sonography Techniques I	36			<b>36</b>
Basic Physics and Instrumentation	48			<b>48</b>
Pathophysiology as Related to Sonography	12			<b>12</b>
Clinical Practicum II			192	<b>192</b>
Clinical Lab II		72		<b>72</b>
Abdominal Sonography Techniques II	36			<b>36</b>
Gynecological Sonography Techniques II	24			<b>24</b>
Advanced Physics and Instrumentation	24			<b>24</b>
Clinical Practicum III			288	<b>288</b>
Clinical Lab III		48		<b>48</b>
Obstetrical Sonography Techniques II	36			<b>36</b>
Superficial Structure Sonography Techniques	24			<b>24</b>
Advanced Abdominal Sonography	24			<b>24</b>
Medical Ethics and Law	12			<b>12</b>
Clinical Practicum IV			288	<b>288</b>
Clinical Lab IV		48		<b>48</b>
Certification Preparation*	24			<b>24</b>
Advanced Ob/Gyn Sonography Techniques	24			<b>24</b>
Introduction to Basic Vascular Sonography	12			<b>12</b>
Clinical Practicum V			336	<b>336</b>

Case Study Review	24			<b>24</b>
Registry Review	24			<b>24</b>
Basic Vascular Sonography Lab		24		<b>24</b>
Clinical Practicum VI			336	<b>336</b>
<b>Program Totals</b>	<b>525</b>	<b>258</b>	<b>1512</b>	<b>2295</b>

\* Designates course delivery in Blended Distance Education format.

### Didactic Education Plan

Course Number	Course Name	Clock Hours		
		Per Wk	Total	Grade Points
	Program Orientation (1 week September)		16	
<b>FIRST ROTATION (11 weeks September - December)</b>				
DMS 100	Foundations of Ultrasound and Healthcare (2 weeks Distance Ed)	2	4	0.3
DMS 105	Sonographic Patient Care (5 weeks)	4	20	1.6
DMS 110	Cross-Sectional Anatomy	2	22	1.8
DMSA 101	Abdominal Sonography Techniques I	4	44	3.6
DMSG 101	Gynecological Sonography Techniques I	3	33	2.8
DMSC 101	Clinical Practicum I (6 weeks)	12	72	2
DMSL 101	Clinical Lab I	6	66	2.8
<b>SECOND ROTATION (12 weeks January - March)</b>				
DMS 100	Foundations of Ultrasound and Healthcare (2 weeks Distance Ed)	2	4	0.3
DMSO 201	Obstetrical Sonography Techniques I	3	36	3
DMSP 201	Basic Physics and Instrumentation	4	48	4
DMS 200	Pathophysiology as Related to Sonography	1	12	1
DMSC 202	Clinical Practicum II	16	192	5.3
DMSL 202	Clinical Lab II	6	72	3
<b>THIRD ROTATION (12 weeks March - June)</b>				
DMS 100	Foundations of Ultrasound and Healthcare (2 weeks Distance Ed)	2	4	0.3
DMSA 302	Abdominal Sonography Techniques II	3	36	3
DMSG 302	Gynecological Sonography Techniques II	2	24	2
DMSP 302	Advanced Physics and Instrumentation	2	24	2
DMSC 303	Clinical Practicum III	24	288	8
DMSL 303	Clinical Lab III	4	48	2
<b>FOURTH ROTATION (12 weeks July - September)</b>				
DMS 100	Foundations of Ultrasound and Healthcare (2 weeks Distance Ed)	2	4	0.3
DMSO 402	Obstetrical Sonography Techniques II	3	36	3
DMSA 401	Superficial Structure Sonography Techniques	2	24	2
DMSA 403	Advanced Abdominal Sonography Techniques	2	24	2
DMS 400	Medical Ethics and Law	1	12	1

DMSC 404	Clinical Practicum IV	24	288	8
DMSL 404	Clinical Lab IV	4	48	2
<b>FIFTH ROTATION (12 weeks September - December)</b>				
DMS 100	Foundations of Ultrasound and Healthcare (2 weeks Distance Ed)	2	4	0.3
DMS 500	Certification Preparation (Distance Education)	2	24	2
DMSO 503	Advanced Ob/Gyn Sonography Techniques	2	24	2
DMSV 501	Introduction to Basic Vascular Sonography	1	12	1
DMSC 505	Clinical Practicum V	28	336	9.3
<b>SIXTH ROTATION (12 weeks December - March)</b>				
DMS 100	Foundations of Ultrasound and Healthcare (1 weeks Distance Ed)	2	2	0.17
DMS 600	Case Study Review	2	24	2
DMS 610	Registry Reviews	2	24	2
DMSV 602	Basic Vascular Sonography Lab	2	24	1
DMSC 606	Clinical Practicum VI	28	336	9.3
<b>TOTAL OF CLOCK HOURS EXPECTED</b>			<b>2311</b>	

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

### Course Descriptions

<b>FIRST ROTATION (11 weeks; September – December)</b>	
Sonographic Patient Care (5 weeks)	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. Communication techniques, both verbal and written, will be demonstrated and practiced throughout the course delivery
Foundations of Ultrasound and Healthcare  (BLENDED - Distance Education)	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, 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.
Cross-Sectional Anatomy	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.

Abdominal Sonography Techniques I	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.
Gynecological Sonography Techniques I	This course is designed to provide student 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.
Clinical Practicum I (6 weeks)	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.
Clinical Lab I	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. The use of abbreviations in the medical setting will be exercised and evaluated.
<b>SECOND ROTATION (12 weeks; January - March)</b>	
Obstetrical Sonography Techniques I	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.
Basic Physics and Instrumentation	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
Pathophysiology as Related to Sonography	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.
Clinical Practicum II	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.

Clinical Lab II	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.
<b>THIRD ROTATION (12 weeks; March - June)</b>	
Abdominal Sonography Techniques II	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.
Gynecological Sonography Techniques II	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
Advanced Physics and Instrumentation	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. Methods of quality assurance and the bioeffects of ultrasound are presented to develop equipment maintenance knowledge.
Clinical Practicum III	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.
Clinical Lab III	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.
<b>FOURTH ROTATION (12 weeks; July - September)</b>	
Obstetrical Sonography Techniques II	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.

Superficial Structure Sonography Techniques	This course is designed to provide the student with techniques and protocols to perform sonographic examinations of superficial structures, including the musculoskeletal system, breast, neck, male pelvis and non-cardiac chest. 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 along with clinical indications and the transmission of all pertinent data to the interpreting physician to facilitate diagnosis.
Advanced Abdominal Sonography Techniques	This course is designed to provide the techniques and protocols for advanced imaging techniques of the abdomen, including the retroperitoneum, abdominal vascular evaluation, GI tract and ultrasound guided procedures. 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.
Medical Ethics and Law	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
Clinical Practicum IV	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.
Clinical Lab IV	This lab will promote the student's competence in all sonographic procedures for abdominal, gynecological and obstetrical examinations, including superficial structures and advanced procedures/techniques. Direct supervision and instruction will provide opportunity for the student to develop critical thinking skills required in the clinical setting to problem-solve and respond in routine and emergent situations.
<b>FIFTH ROTATION (12 weeks; September - December)</b>	
Certification Preparation (Blended Distance Education)	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.

Advanced Ob/Gyn Sonography Techniques	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 well-being, 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.
Introduction to Basic Vascular Sonography	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.
Clinical Practicum V	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.
<b>SIXTH ROTATION (12 weeks; December - March)</b>	
Case Study Review	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.
Registry Reviews	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.
Basic Vascular Sonography Lab	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.

Clinical Practicum VI	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.
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### Student Assessment and Grading

Letter grades are assigned and ‘clock hours’ recorded on final transcripts. Overall grade point average is calculated using the following scale and clock hours to grade points ratio:

Grade	Quality Points
A	4.0
A-	3.5
B	3.0
B-	2.5
C	2.0
F	0.0
Clock Hours to Grade Points	
12 didactic hours = 1 grade point	
24 lab hours = 1 grade point	
36 clinical hours = 1 grade point	

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.

Letter grades are assigned and ‘clock hours’ recorded on final transcripts. Because the certificate program does not grant credits, Grade Point Averages (GPAs) are not calculated.

### 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 one or more competencies and consult with the program director 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***

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 18, 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 recertification.
- 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:

- A. Be truthful and promote appropriate communications with patients and colleagues.
- B. Respect the rights of patients, colleagues and yourself.
- C. Avoid conflicts of interest and situations that exploit others or misrepresent information.
- D. Accurately represent his/her experience, education and credentialing.
- E. Promote equitable access to care.
- F. Collaborate with professional colleagues to create an environment that promotes communication and respect.
- G. Communicate and collaborate with others to promote ethical practice.
- H. Engage in ethical billing practices.

- I. Engage only in legal arrangements in the medical industry.
- J. 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.

Source: © Copyright 1999-2010. Society of Diagnostic Medical Sonography, Plano, Texas.

<https://www.sdms.org/about/who-we-are/code-of-ethics>

### **Graduation 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 is the primary source 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. Other Center for Programs in Allied Health staff members are also available by appointment to assist students as necessary. All official academic advising conducted by program faculty and staff, and 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 their 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 a General 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](http://www.ardms.org)

**Society of Diagnostic Medical Sonography** (Student membership is welcome and encouraged)

[www.sdms.org](http://www.sdms.org)

**American Institute of Ultrasound in Medicine** (Student membership is welcome and encouraged)

[www.aium.org](http://www.aium.org)

**Commission for Accreditation of Allied Health Education Programs (CAAHEP)**

[www.caahep.org](http://www.caahep.org)

**Joint Review Commission for Education in Diagnostic Medical Sonography (JRC-DMS)**

[www.jrcdms.org](http://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 (DI)**

### ***Program Description***

The Vanderbilt University Medical Center (VUMC) Dietetic Internship Program is a post-baccalaureate certificate program within a comprehensive medical center and healthcare organization. VUMC is dedicated to innovative research, high-impact training and personalized patient care. VUMC's mission is to be a leader in health and wellness through preeminent programs in patient care, professional training and research.

The VUMC Dietetic Internship Program's principal focus is to provide comprehensive supervised practice experiences which meet the competencies for entry level practice and to prepare students for the credentialing examination for Registered Dietitian Nutritionists.

The program participates in both national application and computer matching processes. Sixteen students are accepted for the 44-week full-time internship program; which runs from August to June. The Internship Director and Education Coordinators 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 15 weeks of disease management and 15 weeks of health promotion rotations. Training sites are primarily on the Vanderbilt campus and within the Nashville community. Professional development class days are scheduled on most Fridays for workshops, simulations, case studies, and interprofessional meetings. Students complete 4 weeks of entry level and 2 weeks of concentration practice experiences to demonstrate their readiness to competently 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,
- emphasis on critical care nutrition and
- development of a blended counseling/coaching style of practice.

The dietetic interns contribute to the overall excellence of food and nutrition by providing patient care and education, stimulation to the staff and by engaging in projects that are beneficial to the institutions. With an emphasis on education, the Dietetic Internship Program benefits the community by training future Registered Dietitian Nutritionists to translate evidence- based food and nutrition science for the public.

Complete information about the program curriculum may be found on its website, at <https://ww2.mc.vanderbilt.edu/DieteticInternship/>.

### **Graduation Document**

The Vanderbilt Dietetic Internship program provides comprehensive supervised-practice experiences leading to a certification of completion that affords the graduate eligibility for the national credentialing examination for Registered Dietitians, as well as for licensure in Tennessee. Upon successful completion of the internship, each intern participates in a graduation ceremony held in mid-June. At this ceremony, interns receive a Verification Statement. Following graduation, the Internship Director completes each

graduate's Candidate Eligibility Application using the Registration Eligibility Processing System (REPS) On-Line System.

### **Program Costs**

Application Fee \$75.00 + Tuition \$12,500.00 + Books & Fees \$3,331.00 = Total Cost \$15,906.00

### **Program Length**

The Vanderbilt University Medical Center Dietetic Internship program is a 10-month (August-June), post-baccalaureate, supervised-practice certificate program. Students complete 1,286 hours during this full-time, 44-week program.

### **Delivery Method: Residential**

### **Mission, Credo and Goals**

#### *Dietetic Internship Mission Statement*

The Vanderbilt Dietetic Internship will provide a **pre-eminent** supervised practice **program** that is an excellent model for preparing **knowledgeable, talented** and **compassionate** entry level dietitians delivering high quality nutrition therapy in the hospital and innovative nutrition programming within community based systems and networks.

#### *Philosophy and Goals of the Dietetic Internship Program*

VUMC is vitally involved in the education of healthcare professionals. The Medical Center provides the facilities and resources to serve as a teaching laboratory through which the dietetic intern can progress toward becoming a competent entry-level dietitian.

The 44-week Dietetic Internship, beginning in August each year, provides an opportunity for dietetic interns to gain a variety of clinical experiences at Vanderbilt University Medical Center, its affiliations and through field observations in the areas of food systems management, clinical dietetics and community nutrition. Such experiences are planned, guided and evaluated by the Internship Director, Educational Coordinator, dietitians and other professionals practicing in many areas of dietetics and healthcare who serve as both teachers and role models.

The dietetic interns contribute to the overall excellence of nutrition care at Vanderbilt University Medical Center and the affiliates by providing patient care and education, by providing stimulation to the staff and by engaging in projects that are beneficial to the institutions. With emphasis on education, the program benefits the community by providing sound information on nutrition and health to the public.

**GOAL#1:** To prepare entry level dietitians in core competencies and concentration competencies in disease management/ health promotion as a route to eligibility for credentialing by the Commission on Dietetic Registration.

#### **Program Objectives for Goal #1**

- At least 80% of program interns complete program requirements within 15 months (150% of program length).
- 88% of program graduates take the CDR credentialing exam for dietitian nutritionist within 12 months of program completion.

- At completion of program, 80% of interns will be “satisfied” with core and concentration areas of practice provided
- At completion of program, 100% of interns will have achieved an overall score of 85; (based on an average of scores from core, concentration and professional development areas).
- At 12 months post program completion, 80% of employed graduate respondents will be working in the area of disease management-health promotion.

**GOAL#2:** To provide a supply of competent entry-level dietitians to influence the supply and distribution of dietitians for Vanderbilt University Medical Center and the nation.

### Program Objectives for Goal #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%.
- Of graduates who seek employment, 80% are employed in nutrition and dietetics or related fields within 12 months of graduation.
- 12 months post program completion, 80% of surveyed employer respondents **outside of VUMC** will be “satisfied” with the Vanderbilt internship graduate’s preparation for entry level practice.
- 12 months post program completion, 80% of surveyed employer respondents **inside of VUMC** will be “satisfied” with the Vanderbilt internship graduate’s preparation for entry level practice.
- 12 months post program completion, 75% of surveyed employer respondents will respond “yes” when asked if they would hire another VUMC internship program graduate.
- 12 months post program completion, no more than 50% of program graduates will be employed at VUMC.

### 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** (*the accrediting agency of AND, Academy of Nutrition and Dietetics*) Accreditation Council for Education in Nutrition and Dietetics

120 South Riverside Plaza, Suite 2000

Chicago, IL 60606-6995

Phone: 312.899.0040 ext. 5400

The Vanderbilt Dietetic Internship program provides comprehensive supervised practice experiences as a route to eligibility for the national credentialing examination for Registered Dietitian Nutritionists as well as for licensure in Tennessee. Many states require licensure before an individual is able to practice as a Registered Dietitian. Please check licensure guidelines for the state in which you plan to seek employment.



## ***Program Academic Calendar***

This 44-week program typically runs from August to June of each year.

### **2021-2022 Academic Calendar**

August 16, 2021	Internship Begins
September 6, 2021	Labor Day – No Rotations
November 22-26, 2021	Thanksgiving Break
December 21, 2021 -January 2, 2022	Holiday Break
May 30, 2022	Memorial Day
June 20, 2022	Graduation

### **2022-2023 Academic Calendar**

August 15, 2022	Internship Begins
September 5, 2022	Labor Day – No Rotations
November 21-25, 2022	Thanksgiving Break
December 19, 2022 -January 2, 2023	Holiday Break
May 29, 2023	Memorial Day
June 19, 2023	Graduation

## ***Program Staff, Faculty, and Advisory Board***

### **Program Director**

Dianne Killebrew, MEd, RDN, LDN

### **Educational Coordinator: Disease Management**

Kerri Baxter, MS, RDN, LDN, CNSC

### **Educational Coordinator: Health Promotion**

Sarah Ferguson, MPH, RDN, LDN

### **Program Advisory Board:**

#### **\* External Member**

<b>NAME</b>	<b>Title/Employer</b>
Kerri Baxter, MS, RDN, LDN, CNSC	Education Coordinator, VUMC
*Eve Callahan, RDN, CNSC, LDN	Consultant
Cynthia Facemire, MHA, MS, RDN, LDN, FADN	VUMC Administrative Director,
Sarah Ferguson, MPH, RDN, LDN	VUMC, Education Coordinator
*Ronlanda Foley, BS, RN	Nurse, State of TN
Becky Gregory, MS, RD, CDE, LDN	Dietitian, VUMC
*Marilyn Holmes, MS, RDN, LDN	VU Associate Director
*Brandon Huelette, MBA	VU Associate Professor, Military Science
Dianne Killebrew, MEd, RDN, LDN	VUMC Dietetic Internship Director
*Sarah Martin, MPH, RDN, LDN	Nutritionist, Cracker Barrel
*Leslie Meehan, MPA, AICP	Primary Prevention, State of TN
*Kim Molnar, BS	COO Second Harvest Food Bank
*Jamie Pope, MS, RDN, LDN	VU Assoc. Professor

*Nicholas Rush, RDN, CDN	CEO, Halcyon Health
*Sharon Ream, MS	Advisor, Program Mgmt
*Elizabeth Robinson, MEd, RDN, LDN	Advisor, Program Accreditation
Heidi Silver, PhD, RDN, LDN	VUMC Research Professor of Medicine
Jordan Sims,	VUMC CPiAH, Faculty/Design Manager
Kristen Smith	VUMC CPiAH Asst Director
*Heather Smith, PhD, RDN, LDN	VU Assistant Professor
*Elizabeth Smith, PhD, RDN, LDN	MTSU Assoc Professor
Ebony McHaskell, MS	VUMC CPiAH Director
Chris Wilson, MSN-RN, BC	VUMC Director of Nursing Education
Myrtis Walker, RDN, LDN	VUMC Outpatient Clinical Dietitian

## **Admission**

VUMC requires that all applicants to the allied health certificate programs must have a high school diploma, GED, or recognized equivalent. 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:

- Verification statement from an approved undergraduate or certificate program in dietetics
- Three excellent reference/recommendations (DPD director, academic professor and work/volunteer supervisor)
- Preferred DPD GPA of 3.0 on a 4.0 scale
- Applicable DPD nutrition courses must have been completed within the past 3 years
- Completed DICAS application
- Completed VUMC Dietetic Internship supplemental application and application fee postmarked and received on designated date (which is established by DICAS)

### *Application Procedures*

The Dietetic Internship Program uses the online centralized internship application, referred to as DICAS (Dietetic Internship Centralized Application System). There are 3 steps to the complete application process:

- 1) Complete and submit the online application located in the DICAS portal (<https://portal.docas.org>) between 12/2021 and 2/15/2022
- 2) Complete a VUMC supplemental application (using a link provided on the VUMC Dietetic Internship website) and an application fee of \$75 payable to VUMC by 2/15/2022

Rank dietetic internship choices by 2/15/2022 using the national D & D Digital computer matching service; <https://www.dnddigital.com/>

### *Student Selection and Acceptance*

A selection committee, consisting of preceptors, internship faculty, and current interns, reviews online applications. Each committee member individually considers GPA, extracurricular activities, work/volunteer experience, personal statement and references. Applicants must participate in computer matching that is managed by D & D Digital Systems. The online matching process aligns applicant internship preferences with internship selection of candidates.

VUMC will not notify students of acceptance. D & D Digital Systems will notify each applicant about the dietetic internship program to which he or she has been “matched.” On match or appointment day, the applicant must confirm acceptance of the internship assignment with the VUMC Dietetic Internship Program Director via email, phone or fax on the designated date (which is established by D & D Digital Systems).

## **Academic Program and Assessment**

### *Program Sequence and Delivery*

Course	Lecture	Lab	Practicum / Clinical	Total Hours
Dietetic Internship	0	0	1286.00	1286.00
Program Totals	0	0	1286.00	1286.00

The 44-week, full-time VUMC dietetic internship begins in August with a three-week orientation and concludes in June. Following the three- week orientation for 16 interns:

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

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

- 8 interns previously in disease management rotations, transition into 15 weeks of health promotion rotations + 2 weeks of entry level practice in health promotion and
- 8 interns 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, 16 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 typically scheduled on most Fridays 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

### *Grading Scale & Policies*

Grading scale information includes the following:

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	Inadequate

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

Scale	Definition
Needs much improvement	Needs assistance on many projects; requires guidance to achieve pre-determined objectives
Approaching entry level	Performs all activities with some assistance; generally, achieves pre-determined objectives
Entry level	Performs all activities correctly; works w/minimum assistance once guidelines are established; meets pre-determined objectives
Beyond entry level	Performs all activities w/great accuracy; works independently once guidelines are established; exceeds pre-determined objectives

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

Scale	Grade
Needs much improvement	60 = F
Approaching entry level	75 = C
Entry level	85 = B
Beyond entry level	100 = A

**Professional development experiences** are evaluated by Internship Faculty. These experiences enrich job ready skills development in disease management-health promotion practice settings. Competency based experiences include:

- Professional Development Day (classes include simulations, case studies, role playing)
- Seminar Presentation
- Research & Development of a Clinical Case Study and Online Business Model
- Interprofessional Case Collaborations
- Interprofessional Community Service Collaborations
- Qualitative Research and Poster Presentations
- 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%). The grading scales detailed above apply to rotation and professional development programming.

At program completion, a minimum overall score of 85 must be achieved to meet requirements for receipt of a Verification Statement. The score of 85 indicates "entry level - performs all activities correctly; works w/minimum assistance once guidelines are established; meets pre-determined objectives"

**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. The rotation grade is 60% objective (i.e. based on written projects) and 40% subjective (i.e. based on professional performance behavior and readiness to 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 an intern earns an overall rotation score of less than 75 in one rotation, the intern 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 intern, and within the 44-week program.
- Failure to achieve a minimum score of 75 in a second rotation will result in the intern being placed on academic probation.

**Mid-internship** (January) students are required to have an overall average score of 75; which translates to “approaching entry level.” The mid-internship overall score for rotations is determined utilizing rubrics and objective scores from core competencies (60%) and subjective performance ratings (40%).

**Professional development experiences** are evaluated by Internship Faculty and reviewed individually with interns. Competency based experiences include: seminars, clinical case study/online business model, interprofessional case collaborations, community service, qualitative research/poster presentations and co-chair leadership.

Overall scores for professional development experiences are determined utilizing rubrics and objective scores from core competencies (60%) and subjective performance ratings (40%).

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.

**At program completion**, a minimum overall score of 85 must be achieved to meet requirements for receipt of a Verification Statement. Internship Faculty meet with each student during summary week to summarize performance in the 44-week 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 Interns are required to maintain established program standards of competence and knowledge. Students are evaluated on a numerical rating scale (based on 100 points) by the rotation site preceptor. Additionally, Internship Faculty evaluate student professional development experiences using the same numerical rating scale (based on 100 points). The student is considered as maintaining satisfactory academic progress if he/she maintains a minimum average score of 75% in rotations and as indicated below in these additional categories:

Rotations in disease management-health promotion	>=75%	Required for each rotation
Required mid-year grade	>=75%	Overall grade required at mid-year for continuance in the program
Program completion – average in each domain	>=75%	Overall average grade required at program completion in practice domain categories I-IV
Program completion –domain V	>=85%	Overall average grade required at program completion in practice domain category V.
Program completion – total overall average	>=85%	Required at completion of internship; overall composite percentage out of 100 points.

If an intern earns an overall rotation score of less than 75 in one rotation, the intern 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 intern, and within the 44-week program. Failure to achieve a minimum score of 75 in a second rotation will result in the intern 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 intern’s written action plan for improvement may result in dismissal from the program.

## ***Codes of Conduct and Ethics***

In addition to the VUMC Code of Conduct, Dietetic Interns 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 of the patient/client and community, in combination with the practitioner's expertise and judgment.
- f. Recognize and exercise professional judgment within the limits of individual qualifications and collaborate with others, seek counsel, and make referrals as appropriate.
- g. Act in a caring and respectful manner, mindful of individual differences, cultural, and ethnic diversity.
- h. 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's 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.

### **3. 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.

c. Contribute time and expertise to activities that promote respect, integrity, and competence of the profession.

d. Promote the unique role of nutrition and dietetics practitioners.

e. Engage in service that benefits the community and to enhance the public's trust in the profession.

f. 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).

#### *Vanderbilt Dietetic Internship Honor Code*

Interns are required at all times to follow the VUMC Center for Programs in Allied Health Academic Integrity/Honor Code (see institutional policies section of this catalog for more details). Similarly, the VUMC Dietetic Internship has established a program-specific Honor Code to highlight the importance of academic and personal integrity.

As professional students, it is expected that the Vanderbilt Dietetic Internship Honor Code is followed at all times. All projects submitted are presumed to be the intern's own work unless credit is given using the proper format. The following are considered violations of the Honor Code and will result in dismissal from the Internship.

1. Cheating on an examination, test or written project
2. Plagiarizing (incorporating into one's own work the work of another without identifying the source) in an assigned paper, report or project
3. 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)
4. Submitting work prepared for another rotation without the specific prior authorization of the supervising dietitian
5. Falsely reporting personal illness or work hours on monthly time sheets



## 6. Falsification of results of study and research

The grievance procedure shall be available to the dietetic intern when disciplinary action is recommended as a result of an alleged Honor Code violation.

### *Student Grievance Procedure*

The institutional section of this catalog provides information about the VUMC Center for Programs in Allied Health Student Grievance Policy and Procedures. In addition, Dietetic Interns have the opportunity to file complaints to the program accreditor related to the VUMC Dietetic Internship's compliance with accreditation and approval standards. Information about this is provided below. Interns are protected from retaliation as a result of filing a complaint related to the Vanderbilt Dietetic Internship program.

### NOTICE OF OPPORTUNITY TO FILE COMPLAINTS WITH THE ACCREDITATION COUNCIL FOR EDUCATION IN NUTRITION AND DIETETICS

The Accreditation Council for Education in Nutrition and Dietetics will review complaints that relate to a program's compliance with the accreditation/approval standards. The Council is interested in the sustained quality and continued improvement of dietetics education programs but does not intervene on behalf of individuals or act as a court of appeal for individuals in matters of admission, appointment, promotion or dismissal of faculty, staff, or students.

A copy of the accreditation/approval standards and/or the Council's policy and procedure for submission of complaints may be obtained by contacting the Education and Accreditation staff at The Academy of Nutrition and Dietetics at 120 South Riverside Plaza Suite 2000, Chicago, Illinois 60606 or by calling 1-800-877-1600 extension 4872.

Written complaints should be mailed to the Chair, Accreditation Council for Education in Nutrition and Dietetics at the above address.

**Adopted: July 1994**

## ***Graduation Requirements***

Program completion occurs when the dietetic intern completes the following requirements:

- A minimum of 1286 hours of supervised practice experience in disease management- health promotion rotations and professional development programming (i.e. seminar presentations, clinical case study, online business model, interprofessional case and service collaborations, qualitative research poster presentations, leadership co-chair roles)
- Demonstrate ethical and professional performance competence as an entry level practitioner in professional practice and disease management -health promotion settings.
- Achieve 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%)
- Complete program requirements in a minimum of 44-weeks. However, the maximum time frame for completing the VUMC Dietetic Internship is 15 months (150% of the 10 month or 44-week program)
- Meet all financial obligations as confirmed by the VUMC Center for Programs in Allied Health

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 CDRREPS portal

## Equipment List

A personal, laptop computer is required. The following information is provided to assist students in deciding what type of computer to use.

### Windows-based (PC) System

Hardware Component	Minimum	Recommended
Processor	Intel Core i5 or AMD Ryzen R5	Intel Core i& or AMD Ryzen R7
Style	Laptop (Windows 10 Home or Pro Edition) Not Sufficient: Linux Distros, Chrome books, iPad, Android tablet)	Laptop (Windows 10 Home Edition or higher) Microsoft Surface Pro or Surface Book
Protective Case	N/A	Device compatible case or backpack
RAM	8GB	16GB
Hard Disk	256 GB or higher	512 GB or higher
Display	1920x1080 (HD)	1920x1080 (HD)
Networking	Wireless 802.11 b/g/n	Wireless 802.11 b/g/n; Wired ethernet port
Warranty	1 year warranty	2-4 year warranty
Operating System	Windows 10 Home Edition	Windows 10 Home Edition or higher
Data Backup	OneDrive (Microsoft Cloud Storage)	OneDrive (Microsoft Cloud Storage) included in Microsoft 365
Remote Video	Microphone and Camera	Microphone and Camera

### Apple/Mac Hardware

Hardware Component	Minimum	Recommended
Processor	Intel Core i5	Intel Core i7
Style	Laptop	Laptop
Protective Case	Carrying case or backpack	Carrying case or backpack
RAM	8GB	16GB
Hard Disk	256GB or higher	512 GB or higher
Display	Non-Retina/Retina	Non-Retina/Retina
Networking	Wireless 802.11 b/g/n	Wireless 802.11 b/g/n and Wired ethernet port adapter
Warranty	1 year warranty	2-4 year warranty
Operating System	Mac OS (OSX 10.13 or higher)	Mac OS (OSX 10.13 or higher)
Data Backup	OneDrive (Microsoft Cloud Storage)	OneDrive (Microsoft Cloud Storage) included in Microsoft 365
Remote Video	Microphone and Camera	Microphone and Camera

### Software

Type	Product	Availability
Office	Microsoft Office 365	
Security	Antivirus	Free options: Windows 10 has one built in Avast for Windows and Avast for Mac
	Firewall	Free, windows built-in firewall (enable if disabled)

Browsers	Various	Chrome, Microsoft Edge
Media Players	General	Free: Windows media player Free: Adobe Flash Player Free: videoland.org Free: iMovie

Dietetic Interns do have access to a shared computer lab with computers, workstations for patient charting and printers.

***Other Program Policies***

*Professional Meetings*

Professional meetings are an important part of professional development. Meetings of the Nashville Academy of Nutrition and Dietetics (NAND) are held quarterly, September through May. Meetings for the Middle Tennessee Society for Parenteral and Enteral Nutrition (MTSPEN) are held several times throughout the year as well. Intern dues for NAND are \$20.00. Intern dues for the Academy of Nutrition and Dietetics are \$58.00. Costs related to these activities are included in the VUMC Center for Programs in Allied Health Cost of Attendance Table in this catalog.

Interns are expected, at a minimum, to attend the fall 2020 NAND Interns’ Welcome Reception and the spring NAND membership, unless told otherwise by the Internship Director. At times, it may be appropriate for the Internship staff or preceptor to modify the learning objectives in order for an intern to attend a special meeting.

Please see comment.

**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 (MLS)**

### ***Program Description***

The Vanderbilt University Medical Center sponsors the Medical Laboratory Science program, which operates within the Department of Pathology, Microbiology, and Immunology and the VUMC Diagnostic Laboratories. The VUMC Medical Laboratory Science Program was originally sponsored by the Veterans Administration Hospital and graduated its first class in 1954. Sponsorship was transferred to Vanderbilt University Hospital in 1968, and the program has been in continuous operation since that time.

Medical laboratory scientists, are trained in all major clinical pathology areas including Clinical Chemistry, Hematology, Hemostasis and Thrombosis, Immunopathology, Immunochemistry, Microbiology, Urinalysis & Body Fluids, Molecular Diagnostics and Management/Supervisory skills.

Training includes both didactic and practical experiences. Laboratory and classroom space is located in Light Hall on the VUMC campus, and additional space is assigned throughout the Diagnostic Labs for student use. There is also space within the Vanderbilt Clinic that is designated as the Medical Laboratory Science program office and library. The program officials include a Medical Director, Program Director, Education Coordinator, and faculty from each area of the laboratory who are experts in their respective fields.

### **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.

### **Program Costs**

Application Fee \$50.00 + Tuition \$7,500.00 + Books \$716 & Fees \$2,687.00 = Total Cost \$10,937.00

### **Length of Program**

Students complete 1,951 clock 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**

Residential

### **Program Mission, Credo and Goals**

#### ***Program Philosophy and Mission Statement***

The Medical Laboratory Science Program strives to maintain a quality education program in order to accomplish the following outcomes.

#### **To provide well-trained, competent employees for the laboratories.**

Since the students have been trained in our facilities, they are oriented to the policies and procedures and are ready to begin employment upon graduation. This saves the institution money in terms of recruitment and employee selection. Students who choose to work at other facilities following graduation are able to bring with them the ability to work in a fast-paced environment and an understanding of many testing procedures with varying complexities.

**To provide a stimulating atmosphere for the laboratory staff.**

Being involved in laboratory education supports providing an up-to-date atmosphere and ensuring that laboratory professionals maintain current knowledge of theory and testing procedures. Employees are challenged to investigate new trends in the field, which can positively impact patient care.

**To maintain a source of professionals who can constantly bring new knowledge into the laboratory system.**

In this way stagnation and job dissatisfaction are reduced in the laboratory. Laboratory professionals are able to engage and share knowledge with students, which also ensures that the students will have current, practical knowledge upon entering the workforce.

**To supply the region with medical laboratory scientists who possess advanced skills.**

The Medical Center encompasses a variety of services with a wide range of testing. As former students move out into the community, they carry with them skills and knowledge, which will enhance less diverse institutions.

**To advance the profession of Medical Laboratory Science by training enterprising and adaptable individuals who will take the forefront in the changing environment of health care.**

The field of Medical Laboratory Science is at a significant point in its evolution due to the impact of Federal legislation and accelerated technological advances. This will require laboratory scientists with vision who are willing to influence the direction that their chosen career will be taking. Students learn in a comprehensive, progressive environment to promote and foster innovation and advancement.

*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 in each student:

- The knowledge, skills and professional attitude necessary to accurately and proficiently perform and evaluate clinical laboratory analyses.
- The concern for others which carries with it the responsibility of good patient care and cooperation with fellow employees.
- The desire to strive for new knowledge and progress and to accept changing trends in the profession.
- The capacity to accept leadership roles whether in management or education.
- Interest in the growth and development of medical laboratory science as a profession.

These goals are accomplished through students' ability to do the following by the end of the program:

- Perform and interpret medical laboratory tests.
- Troubleshoot testing and instrument issues.
- Participate in laboratory assessment and improvement.
- Demonstrate professional behavior.
- Discuss physiological processes in normal and disease states.
- Identify limitations to testing and interpretation.
- Communicate and assist patients and other health care professionals.

**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.

**NAACLS:**

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

**ASCP BOC:**

American Society of Clinical Pathologist Board of Certification  
 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***

06/01/2021	Start Date
07/05/2021	Independence Day
08/30/2021 - 09/03/2021	Fall Break
09/06/2021	Labor Day
11/25/2021 - 11/26/2021	Thanksgiving Break
12/20/2021 - 01/03/2022	Winter Break
Variable 5-day period*	Spring Break
05/30/2022	Memorial Day
06/24/2022	End Date

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

### ***Program Staff, Faculty, and Advisory Board***

Holly Covas, MPH, MLS (ASCP)<sup>CM</sup>, Program Director (Full-time)  
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)<sup>CM</sup>, MLS Program Education Coordinator  
Certificate, Medical Laboratory Science, Vanderbilt University, Nashville, TN, 2014  
BS, Biology, University of Alabama, Tuscaloosa, AL, 2010

Garrett Booth, M.D., 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

Gail Baxter, MHA, MT (ASCP), Instructor (Part-time)  
BA, Biology, 1971, University of Tennessee, Chattanooga, TN; MT, Medical Technology, 1972, Georgia State University, Atlanta, GA; Certificate, Medical Technology, 1972, Saint Joseph Infirmary, Atlanta, GA; MMHC, Health Care Management, 2009, Vanderbilt University, Nashville, TN

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

Jennifer Blackburn, MLS (ASCP), Instructor (Part-time)  
Certificate, MLS, 2004, Vanderbilt University Medical Center, Nashville, TN; BS, Biology, 1999, Middle Tennessee State University, Murfreesboro, TN

Amanda Fultz, MLS (ASCP) CM, Instructor (Part-time)  
Certificate, MLS, 2014, Vanderbilt University Medical Center, Nashville, TN; BS, Pre-Medical Technology, 2014, Middle Tennessee State University, Murfreesboro, TN; AS, Biology, 2012, Volunteer State Community College, Hendersonville, 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

Mary Laramie, MLS (ASCP)<sup>CM</sup>, Instructor (Part-time)  
Certificate, MLS, 2016, Vanderbilt University; BS, Medical Laboratory Science, 2016, Middle Tennessee State University, Murfreesboro, TN

Carly Marcum, MLS (ASCP)<sup>CM</sup>, Instructor (Part-time)

BS, MLS, 2010, Purdue University, West Lafayette, IN;

Perceus Mody, MLS (ASCP)CM Instructor (Part-time)

Certificate, MLS, 2015, Vanderbilt University, Nashville, TN; BS, Medical Laboratory Science, 2015, Mississippi State University, Starkville, MS

Doris Ortez, MLS (ASCP), Instructor (Part-time)

Certificate, MLS, 2012, Vanderbilt University, Nashville, TN; BS, 2008, Middle Tennessee State University, Murfreesboro, TN

Nick Rivera, MLS (ASCP)CM, Instructor (Part-time)

Certificate, MLS, 2017, Vanderbilt University BS, Biology with Chemistry minor, 2016, Union University

Carmella Russo, MLS (ASCP)CM, Instructor (Part-time)

Certificate, MLS, 2016, Vanderbilt University BS, Biochemistry, 2014, Middle Tennessee State University

Jessie Smith, MLS (ASCP)CM, Instructor (Part-time)

Certificate, MLS, 2016, Vanderbilt University BS, Biochemistry, 2014, Middle Tennessee State University

Jill White-Abell, MLS (ASCP), Instructor (Part-time)

Certificate in Medical Technology, Lourdes Hospital, Paducah, KY, 1983; BS, Biology, Murray State University, Murray, KY, 1981; Assoc. Degree, Medical Technology, Murray State University, Murray, KY, 1980

### **Program Advisory Committee**

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 selections or dismissals.
- 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:

#### VUMC Representatives

Mary Ann Thompson Arildsen, M.D., Ph.D.  
Laboratory Section Medical Director  
Hematology

Jennifer Blackburn, MT (ASCP)  
Clinical Instructor Representative and Staff Laboratory Scientist  
Clinical Instructor, Blood Bank



Bruce Greig, MT (ASCP) Laboratory  
Supervisor Supervisor,  
Hematopathology

Robert D. Hoffman II, M.D., PhD  
Associate Professor of Pathology, Microbiology & Immunology  
Vice Chair for Graduate Medical Education  
Director, Autopsy Pathology  
Director, Residency Training Program

Susan Sefers, MT (ASCP) Laboratory  
Director /Manager  
Manager, Molecular, Infectious Diseases, and Genetics

Jessie Smith, MLS (ASCP)<sup>CM</sup>  
Clinical Preceptor, Microbiology

Jill White-Abell, MT  
Virology/Immunopathology Team Leader  
Instructor, Virology

#### Representatives from Other Organizations

Martha Dagen  
Assistant Laboratory Director, Williamson Medical Center

Ashley Davis  
Medical Laboratory Scientist, St. Thomas Rutherford

Dr. Pamala Fair, PhD  
Medical Laboratory Technology Program Director, Fortis Institute

Kimberly Hammers  
Medical Laboratory Technology Education Coordinator, Volunteer State Community College

Diamondie Wilson  
Medical Laboratory Scientist, Alvin C. York Medical Center

#### Ad Hoc Advisory Board Members

Judy Davis, VUMC Diagnostic Laboratories, Interim Executive Administrative Co-Director  
Martha Miers, MS, MBA, MT (ASCP), VUMC Dept. of Pathology Administrative Director  
Amy Montgomery, MT, VUMC Clinical Instructor, Microbiology; Staff Technologist/Clinical Instructor  
Sam Santoro, M.D., PhD, Chair, VUMC Department of Pathology, Micro & Immunology

### **Admission**

#### *Admission Requirements*

VUMC requires that all applicants to the allied health certificate programs must have a high school diploma, GED, or recognized equivalent. 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.

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 clinical year in the VUMC Medical Laboratory Science program.

Eligible are required to have a minimum of three years (90 semester or 136 quarter hours) of college credits at an affiliated 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 or College Chemistry I, General or 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 (these are separate courses)
  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 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*

Students must possess, and maintain throughout their time in the program, the ability to perform and interpret routine laboratory procedures. The actions required to do so include, but are not limited to:

- Physical capability and manual dexterity required to perform laboratory procedures, including repetitive hand motions, such as pipetting and typing, and lifting of materials up to 25 pounds
- Differentiation of colors and images for interpretation of colorimetric reactions and cellular morphology
- Effective communication through written and verbal language with instructors, classmates, medical laboratory personnel, patients, physicians, and other health care professionals
- Utilize critical thinking and deductive reasoning through application of previously-learned information and assimilation of new information
- Perform tasks without outside guidance or assistance within given time constraints and within changing environments

#### *Application Requirements and 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. All application materials must be postmarked by November 1 to meet the priority deadline. 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. All application materials are postmarked by the priority deadline of November 1.
2. The applicant meets all minimum requirements, including the completion of all prerequisite courses before the program begins in June.
3. The applicant completes his/her interview.
4. The applicant has a total ranked score of 3.75 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
- Official transcripts from all universities and colleges attended.
- 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. These should be submitted on the evaluation form (available with the application), but a personalized letter of reference may be included as well.

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

### *Admission Interviews*

All applicants 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.
- A 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 on the basis of 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 and faculty members. Course work during this 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, and students attend lectures and complete student laboratory assignments. Students complete out-of-class assignments such as study questions, case studies, and other types of homework, as well as in-class assessments of quizzes, exams, and laboratory practicals. Students also give presentations based on review material and case studies.
2. Second semester/term: The second semester runs from January through the end of June, and includes the clinical practica (a.k.a., 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 are required to be present on a full time basis throughout the year of training. Classes in the first term run from 8:30 a.m. to 4:30 p.m. Monday through Friday. Clinical rotation hours (during the second term) vary according to individual laboratory sections and include some rotation time during evening and night shifts.

<b>Course</b>	<b>Lecture</b>	<b>Lab</b>	<b>Practicum / Clinical</b>	<b>Total Hours</b>
Chemistry	262.5	0	200	462.5
Urinalysis/Body	22.5	30	80	132.5
Hematology	105.5	52	120	277.5
Hemostasis &	35	0	40	75
Blood Bank	70	35	160	265
Immunology	35	0	40	75
Bacteriology/Virol	143	32	200	375
Mycology	9	12	8	29
Parasitology	10	25		35
Orientation	24	8		32
Seminar	67	8		75
Phlebotomy	2	4.5	28	34.5

Molecular	31.5	0	51.5	83
<b>Totals</b>	<b>8</b>	<b>20</b>	<b>92</b>	<b>19</b>

### *Course Descriptions*

#### **Orientation**

This course is an introduction to the theory and basic skills that contribute to the student's ability to perform effectively and efficiently within the laboratory environment. Sessions are diverse and include topics on lab math, quality assurance, quality control, and laboratory safety. Orientation continues with the clinical practicum.

#### **Blood Bank (Immunohematology)**

This course is the study of blood group antigens and antibodies and their significance in transfusion therapy. It 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.

#### **Clinical Chemistry**

This course is a study of the biochemical constituents of body fluids, their physiological functions and alterations in disease states. Emphasis is placed on the analytical methods of the laboratory. This includes the study of the principles, operation and maintenance of laboratory instrumentation, the use of computer technology, quality control and quality assurance tools. Primary areas of instruction include routine clinical chemistry testing, endocrinology, nutrition testing and toxicology.

#### **Hematology**

This course 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.

#### **Hemostasis and Thrombosis (Coagulation)**

This course is a study of 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.

#### **Immunology**

This course is a study of the immunological response in infections and autoimmune diseases, the characterization of lymphocyte populations in neoplasms, and abnormal immunologic responses.

#### **Microbiology (including Bacteriology, Mycology and Virology)**

This course is the study of bacteria, fungi, and viruses causing disease in man. The course includes the laboratory identification of bacteria, fungi and viruses using conventional methods as well as rapid systems, antimicrobial susceptibility testing and evaluation of clinical specimens for evidence of infection.

#### **Molecular Diagnostics**

This course is the study of human and infectious agents' DNA, RNA, and chromosomes as they relate to disease. Emphasis is placed on basic molecular theory, laboratory procedures including PCR, sequencing, capillary electrophoresis, gel electrophoresis, FISH, Southern blotting and other methods and the correlation of test results to disease states.

**Parasitology**

This course is the study of life cycles and diagnostic stages of clinically significant parasites. Laboratory procedures for detecting and differentiating parasites are emphasized.

**Phlebotomy**

This course is the study of specimen collection, focusing mainly on blood collection from veins. Following classroom instruction as part of clinical orientation, students will participate in a three week phlebotomy rotation. A full week of phlebotomy training is at out-patient drawing stations. Following this week, students do two weeks of early morning draws with experienced phlebotomists before reporting to their lab rotation. The Phlebotomy rotation will also include several afternoons in the Specimen Receiving area.

**Seminar**

A variety of topics are covered in this course, including management and supervisory skills, laboratory operations, educational methodologies, research skills, regulatory issues, quality assurance tools, special topics and reviews of technical material.

**Urinalysis & Body Fluids** This course is the study of physical, chemical, and microscopic properties of body fluids other than blood or serum. Emphasis is placed on laboratory procedures, morphological findings, and the correlation of test results to disease states.

**Student Didactic and Laboratory: June to December**

Didactic and Laboratory consists of two class periods each day including lectures and laboratory work. Courses are taught on a rotational schedule and include:

- Blood Banking (Immunohematology)
- Clinical Chemistry and Instrumentation
- Hematology
- Hemostasis and Thrombosis
- Immunopathology
- Bacteriology
- Virology
- Mycology
- Parasitology
- Seminar
- Urinalysis and Body Fluids
- Molecular Diagnostics

**Clinical Laboratory Rotations: January to June**

- Rotations consist of eight hour days spent in specific clinical laboratory areas
- Students are evaluated on their abilities in a clinical setting and on correlation of laboratory results with disease states
- Rotations include: Orientation, Core Lab (Chemistry, Hematology, Hemostasis & Thrombosis, Urinalysis & Body Fluids), Microbiology (including Mycology and Virology), Blood Bank, Immunopathology, Toxicology and Esoteric Chemistry, Molecular Infectious Diseases, Molecular Genetics, Phlebotomy
- In addition, a seminar course will introduce students to supervisory and management skills as well as special interest topics such as molecular diagnostics, Point-of-Care Technology, and regulatory compliance requirements.

**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:

90 - 100%	=	A
80 - 89%	=	B
75 -79%	=	C
Below 75%	=	F

- Lecture/Student Laboratory (June -December): Students must attain a minimum final grade of 75% in each course. Courses that include both a lecture and student laboratory are typically weighted as follows: Lecture 70% / Laboratory 30%; Parasitology does not have a clinical practicum component so the student lab grade constitutes the transcript grade.
- Patient Laboratory/ Clinical Practicum (January -June): The clinical practicum grade consists of three components:
  - o Technical/Performance
  - o Theory
  - o Behavioral Evaluation (minimum of 10% of total grade)

A minimum grade of 75% is required for both the technical and theory portions of the practicum. A minimum grade of 75% is required for the behavioral evaluation.

- Exit Exam: Students must pass a final comprehensive exam at the end of the program year. Students have three attempts to pass the exam with a minimum passing score of at least 75%.

### Transcript Grades

Upon completion of the year of training, an official transcript is sent to the State of Tennessee Medical Laboratory 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. The following breakdown groups the courses, but may be altered upon request by the academic affiliate. Final transcript grades are calculated using the co-requisite course grades. The most common co-requisite course weighting is Student Lecture/Laboratory course grade (50%) and the Clinical Practicum course grade (50%). However, alternative co-requisite course weightings may occur and are given in related course syllabi.

### Grading

Transcript grades include the final grade received during the lecture/student laboratory and the corresponding clinical practicum for the particular course. Generally, the lecture/student laboratory and clinical practicum share equal weight for the final transcript grade (i.e., each portion is weighted at 50% so the average of the two portions is the final transcript grade). Deviations from this general weighting occasionally occur if there is a large discrepancy in the length of time between the course lecture and practicum portions. Such a deviation will be noted in the course syllabus and is designed to evenly

distribute the weight, based on the time commitment required of the student in each portion. Individual courses are co-requisites for the final transcript grade. When evaluating Satisfactory Academic Progress, course grades are considered independently of the final transcript grade.

### ***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, 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 the 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 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 (see p. 20). 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***

Agglutination viewers  
Arkray Aution Max AX-4280  
Bacti-Cinerators  
Beckman Table-top Centrifuge  
Differential counters  
Helena Laboratories Cascade M  
Hemocytometers  
Iris IQ200 Elite  
Marsters Tube Incubator  
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  
Volumetric and serological pipets  
VWR Scientific B acteriology incubator and cabinet

**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 (NMT)**

### ***Program Description***

The Nuclear Medicine Technology Program is a 52-week clinical training program established in 1979 as an allied health program. It is designed primarily for students who have completed a minimum of three years of pre-radiologic technology work at universities affiliated with VUMC. Students with a bachelor's degree in a related field who meet the prerequisites will also be considered. The training program prepares graduates for certification as nuclear medicine technologists. Students receive training in atomic and nuclear physics; radio-chemistry and radiopharmacy; patient care and nursing; health physics and radiation safety; radiobiology; instrumentation and computer applications; and clinical nuclear medicine procedures.

Students must successfully complete the academic course work and clinical laboratory rotations that are scheduled Monday through Friday. The clinical rotations are scheduled at Vanderbilt University Medical Center, Vanderbilt Children's Hospital, and the Veterans' Administration Hospital in Nashville. Rotations include general and pediatric nuclear medicine, PET, nuclear cardiology and nursing—as well as radiopharmacy and in vitro procedures. The program officials include a Program Director, Medical Director and Clinical Coordinator.

The program is approved as the fourth year externship in a baccalaureate degree program at Austin Peay State University in Clarksville, TN, and Middle Tennessee State University in Murfreesboro, TN. Upon graduation from the program, students are awarded a certificate from the Division of Allied Health at Vanderbilt University Medical Center, and are eligible to sit for national board certification exams.

### **Program Costs**

Application Fee \$50.00 + Tuition \$4,500.00 + Books \$716.00 & Fees \$3,510.00 = Total Cost \$8,776.00

### **Program Length**

The VUMC NMT provides a total of 1,626 contact 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 to sit for the national board certification exams. Verification of hours completed 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 Objectives Include:

- Equip students with the knowledge, skills and attitude they need to effectively and safely perform clinical nuclear medicine procedures.
- 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](mailto: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](mailto:board@nmtcb.org)

#### **ARRT:**

American Registry of Radiologic Technologists  
 1255 Northland Drive  
 St. Paul, MN 55120  
 Phone: [651-687-4048](tel:651-687-4048)  
 Email: [www.arrt.org](http://www.arrt.org)

### **Program Academic Calendar**

Aug. 23, 2021	Start Date
Aug. 23 – 27, 2021	Orientation
Sep. 6, 2021	Labor Day
Nov. 25 – 26, 2021	Thanksgiving Break
Dec. 20 – 31, 2021	Winter Break (New Year's Day Observed Dec 31)
Apr. 25 – 29, 2022	Spring Break
May 30, 2022	Memorial Day
Jul. 4, 2022	Independence Day
Aug. 19, 2022	Projected Graduation Date

#### **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 early spring.

### **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

#### **Brad Collins, MBA, CNMT, NMTCB(CT)**

##### *Clinical Coordinator*

M.B.A., Business Administration, 2011, Union University, Germantown, TN; B.S., Nuclear Medicine Technology, Baptist College of Health Sciences, Memphis, TN; B.B.A, 2007, Mississippi State University, Starkville, MS

#### **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

#### **Marni Gardner, DPh**

##### *Instructor*

B.S., Pharmacy, 1992, Samford University, Birmingham, AL

#### **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

#### **Joe Harper, Pharm.D.**

##### *Instructor*

Pharm.D., Pharmacy, 2018, Belmont University; B.S., Biology, 2013, University of West Georgia

**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

**David Pickens, PhD**

*Instructor*

PhD, Mechanical Engineering, 1981, Vanderbilt University; MS, Mechanical Engineering, 1977, Vanderbilt University; BE, Biomedical Engineering, 1971, Vanderbilt University; BA, Biology, 1969, The University of the South, Sewanee, TN

**Admission**

Qualified applicants must have a bachelor's degree 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 to the allied health certificate programs must have a high school diploma, GED, or recognized equivalent. 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 affiliated universities (Austin Peay State University or Middle Tennessee State 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
  - Humanities course
  - Social Sciences course
  - Speech/Oral Communications
  - English Composition 1 and 2

- Medical Terminology
- Computer Science/Applications
- 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 (form available on NMT Program Website)
3. Official transcripts from all higher education institutions attended
4. 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 required to spend 16 hours engaged in observation at a clinical nuclear medicine department. The purpose of the observation 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, contact the Program Director.

Clinical observation experiences must be completed by March 15th of the application year, and a Clinical Observation form must be completed by the observation supervisor or appropriate departmental administrator. This form must be submitted with other required application materials.

#### *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:

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

Students complete clinical rotations in nuclear pharmacy, 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 VA Hospital 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 early spring. 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*

<i>Course</i>	<i>Lecture Hours</i>	<i>Lab Hours</i>	<i>Clinical Hours</i>	<i>Total Contact Hours</i>	<i>Additional Outside Clock Hours</i>	<i>Total Clock Hours</i>
Patient Care	20			20	0	20
Radiation Safety	35			35	0	35
Imaging Informatics	18			18	0	18
Physics & Instrumentation	84			84	0	84
Basic Sciences	46			46	0	46
Clinical Procedures	30			30	0	30
Radiochem. & Radiopharmacy	75			75	0	75
Professional Development	30			30	0	30
Clinical Practice	15			15	0	15
Research Methods	30			30	0	30

Board Review	30			30	0	30
Clinical Rotations (1-3)			1,213	1,213	0	1,213
Program Totals	413		1,213	1,626	0	1,626

### *Course Descriptions*

#### 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.

#### 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.

#### Clinical Nuclear Medicine Rotations

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.

#### 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.

#### Clinical Procedures

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.



### Imaging Informatics: Nuclear Medicine Computer Applications

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.

### Patient Care

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.

### Physics & Instrumentation

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 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.

### Professional Development

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.

### Radiation Safety

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.

### Radiochemistry and Radiopharmacy

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.

## Research Methods

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 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.

### *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. However, the VUMC Nuclear Medicine Technology Program does not assign academic credit for the work completed in its program. 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	Definition	GPA
100–95%	A	Excellent	4
94–90%	A-	Excellent	3.7
89-87	B+	Good	3.3
86-83%	B	Good	3
82-80%	B-	Good	2.7
79-75%	C	Satisfactory	2.3
74-0%	F	Inadequate	<

<b>P</b>	<i>Pass</i> Any course with a "P" grade is not calculated into the grade point average.
<b>F</b>	<i>Fail</i> Any course with an "F" grade is not calculated into the grade point average. However, the course must be repeated and passed to graduate
<b>I</b>	<i>Incomplete</i> An 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
<b>W</b>	<i>Withdrawal</i>

	A Withdrawal is provided when a student leaves the course due to an approved leave-of-absence or is withdrawn 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.
<b>R</b>	<i>Repeat</i> Some programs allow students to repeat courses. In those programs, for any course that is repeated, a Repeat will be provided as the grade for the first attempt at the course. Any course with an “R” grade is not calculated into the grade point average. However, courses will be considered hours / credit hours attempted for the purpose of determining maximum time frame. Please refer to each program’s student handbook for information about whether students are allowed to repeat courses in any given

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. These 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 evaluated quarterly. 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 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.

#### ***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 Ventri-VCT dual -head cardiac scintillation camera with GE 32 slice CT scanner
- 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
- Philips Skylight dual-head scintillation camera GE Advance PET scanner with 8 slice CT scanner
- GE Advance mobile PET scanner with 16 slice CT scanner
- GE Lunar DEXA Bone Densitometry scanning system
- GE PET Trace 16 MeV Cyclotron
- GE Discovery MI PET Scanner
- Capintec dose calibrators with drawing stations (x4)
- Captus 3000 Thyroid uptake probe with well counter
- Packard Cobra automated sample well counting system
- Capintec CRC-25w single-well counter
- Ludlum Model 3 GM with pancake probe
- Ludlum Model 23 with integrated frisker
- 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 - Veteran’s Administration Hospital**

- GE Infinia dual-head scintillation camera with Hawkeye-4 CT scanner
- 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 work station
- 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

**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.

### **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 and the Clinical Application in Perfusion Exam administered by the American Board of Cardiovascular Perfusion (ABCP).

### **Program Costs**

Application Fee \$100.00 + Tuition \$39,000.00 + Books & Fees \$9,955.00 = Total Cost \$49,055.00

### **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.

### **Delivery Method**

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

### **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 evolution. 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).

CAAHEP:

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

AC-PE:

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

**Program Academic Calendar**

	<b>Seniors (Class of 2022)</b>	<b>Juniors (Class of 2023)</b>
Program Start Date	xxx	August 5, 2021 (Orientation)
Classes Start Date	Monday, August 9, 2021	Monday, August 9, 2021
Thanksgiving Break	Wed, Nov. 24, (noon)	Wed, Nov. 24, (noon)
Return from Thanksgiving Break*	Monday, November 29, 2021	Monday, November 29, 2021
Final Exam(s) for Fall Semester	December 15-17, 2021	December 15-17, 2021
Christmas Break Start	Monday, December 20, 2021	Monday, December 20, 2021
Return for Spring Semester*	Monday, January 3, 2022	Monday, January 3, 2022
Last day of Clinic for Spring Semester	Friday, April 29, 2022	Friday, April 22, 2022
Spring Break	---	April 25 – 29, 2022
Summer Semester Begins*	---	May 2, 2022 *
Comprehensive Final	March 7, 2022	TBA
Review Course	May 2 – 6, 2022	TBA
Graduation	May 14, 2022	May 13, 2023
<b>*On these dates, students are required to return to program responsibilities at 06:00 am.</b>		
*Students need to be ready to report to their clinical rotations early in the morning.		
**Tentative		
Notes: Students are not required to cover call Thanksgiving or Christmas breaks.		

**Program Staff, Faculty, and Advisory Committee**

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

**Dawn M. Oles, MHPE, CCP, LP**

Program Director

Masters Health Professions Education, 2010, Midwestern University, Glendale, AZ  
 Bachelor of Science in Cardiovascular Technology, 1995, Rush University, Chicago, IL  
 Certified Clinical Perfusionist, On-Line Education Specialist



**Courtney Schwimer, BS, CCP, LP, FPP, MT**

Clinical Coordinator

Bachelor of Science in Cardiovascular Perfusion, 2010, Medical University of South Carolina, Charleston, SC; Certificate Program: Medical Technology(MT) Certificate, 2006, Methodist Hospital, Indianapolis, IN; Bachelor of Science in Health Sciences, 2005, Purdue University, West Lafayette, IN  
North Carolina Licensed Clinical Perfusionist, Certified Clinical Perfusionist, Fellow of Pediatric Perfusion, Clinical Laboratory Scientist\\

**Christopher Yann, BSN, BS, LP**

Bachelor of Science in Nursing; Ohio State University, 1982

Bachelors of Science in Perfusion Technology; Ohio State University, 1992

*Program Advisory Committee*

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.

Perfusion Program Advisory Committee	
Cannon, Kim	Public Member
Christopher Yann	Simulation Coordinator VUMC Perfusion Program; Clinical Perfusionist
Anthony, Johnson	Clinical Perfusionist
Smith, Chad	Clinical Perfusionist and Graduate
Rodgers, Berkeley	Clinical Perfusionist
Roberts, Tamra	Distance Education Member
Michaud, Nicole	Director, Perfusion Program
Schwimer, Courtney	Clinical Coordinator, Perfusion Program
Shah, Ashish Suresh	Medical Director -Cardiac Surgeon
Petracek, Michael	Assistant Medical Director -Cardiac Surgeon
Kaiser, Clayton	Assistant Medical Director -Cardiac Surgeon
Fornero, Dane	Chief Perfusionist - Adult-Clinical Perfusionist

Sprouse, Petrice	Director – VUMC Center for Programs in Allied Health
Woods, Sarah	Student Class of 2021
Smith, Kristen	Assistant Director- Program in Allied Health
Merrill, Walter	Chief of Staff
McHaskell, Ebony	Director, Center for Programs in Allied Health, Vanderbilt University Medical Center
Fair, Kerry	Clinical Chief Perfusionist- Pediatric-Clinical Perfusion

#### *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.

### **Admission**

#### *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:

- Bachelor’s degree from an accredited college or university
- 6 credit hours of the following courses from an accredited college:
  - o Anatomy and/or Physiology
- 4 credit hours of each of the following courses from an accredited college:
  - o General Biology
  - o General Chemistry
  - o Biochemistry or Microbiology or Organic Chemistry or Inorganic Chemistry
- 3 credit hours of the following courses from an accredited college:

- o Mathematics (College Algebra or Higher)
- o Physics (Algebra Based)
- One credit hour or more of Medical Terminology is required. This requirement cannot be waived or satisfied using work or other experience.

#### *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 for admission is posted on the VUMC Perfusion Program website each summer. The following materials must be submitted with the application in a single mailing envelope:

1. Completed application.
2. Three (3) professional references from individuals familiar with the applicant's academic and/or professional experience.
3. Official transcripts from all institutions of higher learning the applicant has attended (in sealed envelopes).
4. A non-refundable application fee, made payable to Vanderbilt University Medical Center. The submission application fee is \$100.
5. Applications are accepted from the August 15th (when the application is made available to applicants) through the fall, with a final deadline of October 15<sup>th</sup> of each year. Applications postmarked after October 15<sup>th</sup> will not be accepted, and the application fee will be returned.

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 and a tour of VUMC and program facilities. Interviews require 2-3 hours of the applicant's time and are conducted in January of each year. Interviews are a required for admission to the program. An interview schedule is provided to each invited applicant no later than December 23<sup>rd</sup> each year. Interviews include the following components:

1. Four (4) 15-minute, in-person interviews with a panel of Admission Committee members.
2. Written essay (30 minutes to write)
3. Dexterity test
4. Basic Science Exam
5. Tour of program facilities (including the simulation lab and classroom facilities), as well as the VUMC campus
6. An opportunity to speak with current students in the program.

During the interview, applicants are provided an overview of the program and the selection process, and they are asked about their level of competency with computer skills and learning management systems. Also, applicants should be prepared to discuss during the interview their understanding of a cardiovascular perfusion and the qualities they possess to be a clinical perfusionist.

### *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 ambition
- Commitment to earning
- 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: application score, dexterity score, interview evaluation, interview written essay and basic science exam.

### **Academic Program**

#### *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

#### FIRST YEAR - FALL SEMESTER (August through December)

- A and P 501: Anatomy and Physiology
- PHARM 501: Pharmacology
- PATHO 501: Pathophysiology
- CVPT 501: Cardiovascular Perfusion Technology I
- RES 501: Research Lab I
- SIM 501: Simulation I

#### FIRST YEAR - SPRING SEMESTER (January through May)

- CVPT 502: Cardiovascular Perfusion Technology II
- RES 502: Research Lab II
- CR 501: Clinical Rotation I
- SIM 502: Simulation II

#### SECOND YEAR - SUMMER SEMESTER (May through August)

- CR 502: Clinical Rotation II
- SEM 501: Seminars in Perfusion

#### SECOND YEAR - FALL SEMESTER (August through December)

- CVPT 503: Cardiovascular Perfusion Technology III
- RES 503: Research Lab III

- CR 503: Clinical Rotation III
- SIM 503: Simulation III

SECOND YEAR - SPRING SEMESTER (January through May)

- CVPT 504: Cardiovascular Perfusion Technology IV
- RES 504: Research Lab IV
- CR 504: Clinical Rotations IV
- SIM 504: Simulation IV

Course	Lecture	Lab	Practicum / Clinical	Semester Credit Hours
Human Anatomy and Physiology	4.5			4.5
Pharmacology	3.0			3.0
Pathophysiology	4.0			4.0
Cardiovascular Perfusion Technology I	4.5		2	6.5
Cardiovascular Perfusion Technology II	2.0			2.0
Cardiovascular Perfusion Technology III*	2.0			2.0
Cardiovascular Perfusion Technology IV*	2.5			2.5
Clinical Rotation I			15	15.0
Clinical Rotation II			12	12.0
Clinical Rotation III			16	16.0
Clinical Rotation IV			16	16.0
Research I	1.0	1.0		2.0
Research II	1.0			1.0
Research III*	1.0			1.0
Research IV*		1.0		1.0
Simulation I	1.0	2.0		3.0
Simulation II		1.0		1.0
Simulation III		1.0		1.0
Simulation IV		1.0		1.0
Seminars in Perfusion*	1.5			1.5
Program Totals	28	7	61	96

\* Designates course delivery in Blended Distance Education format.

*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*

#### **Anatomy and Physiology (A and P 501)**

This course provides the entry-level perfusion student with a detailed 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 be provided with a basis for understanding the complex interaction of the patient with the mechanisms of extracorporeal circulation or applications of techniques 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, as well as on the patient cardiovascular intensive care units. Offered in the Fall Semester.

#### **Cardiovascular Perfusion Technology I (CVPT 501)**

This course introduces the entry-level perfusion student to fundamental development perfusion techniques through theoretical and practical applications. Students will examine the relationship between blood flow within and outside the body and the cardiovascular devices utilized to facilitate extracorporeal circulation. 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 rotate through different areas of the Vanderbilt University Hospital to gain an understanding of the therapies and diagnostic testing a cardiac patient is exposed to during the treatment of their disease state.

Offered in Fall Semester.

#### **Cardiovascular Perfusion Technology II (CVPT 502)**

This course will build upon the fundamental principles taught in CVPT I. The course will expand upon a few of the fundamental principles and introduce new areas where perfusion techniques are utilized. Students will demonstrate the understanding of perfusion policies and procedures and the ability to complete a perfusion plan based on specific patients. The student will be introduced to transplantation techniques for the heart, heart-lung, lung, and liver, cerebral perfusion techniques, embryology of the cardiac and vascular system, cardiac assist devices and extracorporeal membrane oxygenation. Offered in the Spring Semester.

Prerequisites: SIM 501, PATHO 501, CVPT 501, PHARM 501, RES 501, A and P 501

#### **Cardiovascular Perfusion Technology III (CVPT 503)**

This course will continue to build upon the fundamental principles taught in CVPT I and II. 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 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. Offered in Fall Semester. Prerequisites: SIM 502, CVPT 502, RES 502, SEM 501, CR

502

#### **Cardiovascular Perfusion Technology IV (CVPT 504)**

This course will focus on the professional development of entry level perfusion student. The student will be introduced the development of professional portfolio (CV and cover letter), 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. Offered in the Spring Semester. Prerequisites: SIM 503, CVPT 503, RES 503

### **Clinical Rotation I (CR 501)**

This course is the first clinical rotation the student will have during their course of study. The student will be introduced to the policies and procedures of the perfusion departments of Vanderbilt University Medical Center and Monroe Carell Children's Hospital at Vanderbilt University and Centennial Medical Center. The course provides the student with an introduction 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 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 will be rotating "on call" responsibilities during the week and weekend with their colleagues. Offered in the Spring Semester. Prerequisites: SIM 501, PATHO 501, CVPT 501, PHARM 501, RES 501, A and P 501

### **Clinical Rotation II (CR 502)**

This course is the second clinical rotation the student will have during their course of study. The student will be introduced to the policies and procedures of the perfusion departments of outside of the clinical affiliations in Nashville. The student will be introduced to policies and procedures of outside rotations. 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 to establish the ability to function in the primary role. The student will be rotating "on call" responsibilities during the week and weekend with their colleagues. Offered in the Summer Semester. Prerequisites: SIM 502, CVPT 502, RES 502, CR501

### **Clinical Rotation III (CR 503)**

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. Students will continue to be introduced to policies and procedures of clinical affiliations outside of Nashville. The course provides a clinical experience in which the student can consistently perform the primary role 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. This course will provide the additional experience needed to move the student from level of experienced to competent in the management of cardiopulmonary bypass. The student will be rotating "on call" responsibilities during the week and weekend with their colleagues. Offered in the Fall Semester. Prerequisites: SIM 502, CVPT 502, RES 502, CR502, SEM 501

### **Clinical Rotation IV (CR 504)**

This course is the fourth clinical rotation the student will have during their course of study. The student will show at a minimum competency 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 perform 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. Offered in the Spring Semester. Prerequisites: SIM 503, CVPT 503, RES 503, CR503

### **Pathophysiology (PATHO 501)**

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. Offered in the Fall Semester.

### **Pharmacology (PHARM 501)**

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. Offered in the Fall Semester.

### **Research Lab I (RES 501)**

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. Offered in the Fall Semester.

### **Research Lab II (RES 502)**

This course provides the student with the fundamental knowledge required to develop and publish scientific articles within the field of perfusion. The students will 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. Offered in the Spring Semester. Prerequisites: SIM 501, PATHO 501, CVPT 501, PHARM 501, RES 501, A and P 501

### **Research Lab III (RES 503)**

This course provides the student with ability continue to work to identify research topic, well 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. Offered in the Fall Semester. Prerequisites: SIM 502, CVPT 502, RES 502, SEM 501



**Research Lab IV (RES 504)**

This course will focus on the completion of the required manuscript for satisfaction of the program. The student will be required to meet manuscript deadlines to demonstrate progression towards completion of their manuscript. Students not on site will be able to take this course through distant learning and maintain the same pace as student on site. Offered in the Spring Semester. Prerequisites: SIM 503, CVPT 503, RES 503

**Simulation I (SIM 501)**

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. Offered in the Fall Semester.

**Simulation II (SIM 502)**

This course builds upon the skills acquired in SIM 501 and prepares the perfusion student for clinical experience as it relates to the preparation of the circuit for a specific patient, pre-pump procedures (sterile procedure, retrograde autologous priming, and anticoagulation management), initiation of cardiopulmonary bypass, management of cardiopulmonary bypass (anticoagulation, volume management, myocardial preservation, acid base management, and hemodynamic management), venous return and arterial line low occurrence events, and termination of cardiopulmonary bypass. 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. Students will be exposed to pediatric simulation with the focus on circuit design, set-up, and priming. Students will have two simulation practicals, one focusing on the pediatric component and the second focusing on adult CPB case management, and two written exams. Offered in the Spring Semester.

Prerequisites: SIM 501, PAHTO 501, CVPT 501, PHARM 501, RES 501, A and P 501

**Simulation III (SIM 503)**

This course 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. 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. Student will be exposed to cardiopulmonary bypass management utilizing a centrifugal pump. Offered in the Fall Semester. Prerequisites: SIM 502, CVPT 502, RES 502, SEM 501

**Simulation IV (SIM 504)**

This course 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. Offered in the Spring Semester. Prerequisites: SIM 503, CVPT 503, RES 503

**Seminar in Perfusion (SEM 503)**

Students will be exposed to discussions on current practices and techniques utilized in cardiopulmonary bypass. Students will prepare seminar presentations on specific topics in relationship to extracorporeal perfusion. Students will discuss and present cases and problems arising during their clinical experiences in the form of case presentations. Students not on site will be able to take this course through distant learning and maintain the same pace as student on site. Offered in the Summer Semester Prerequisites: SIM 502, CR 501, RES 502, CVPT 502

**Grading and Assessment**

*Didactic Evaluation System*

The grading scale for the VUMC Perfusion Program is as follows:

Scale	Grade	Definition	GPA
100–95%	A	Excellent	4.0
94–90%	A-	Excellent	3.7
89-87 %	B+	Good	3.3
86-83%	B	Good	3.0
82-80%	B-	Good	2.7
79-77 %	C+	Satisfactory	2.3
76-75%	C	Satisfactory	2.0
74–0%	F	Inadequate	0.0
	P	Pass -Any course with a “P” grade is not calculated into the grade point average.	
	F	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	An 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),	
	W	A Withdrawal is provided when a student leaves the course due to an approved leave-of-absence or is withdrawn 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 as 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.

#### *ABCP Code of Ethics*

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.

-- Information obtained from the following website: <https://abcp.org/pd/ethics.pdf>

*AMSECT 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 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 health care 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:
  - 1. Full public disclosure and/or acknowledgments of support for research.
  - 2. Avoidance of fraud and plagiarism.
  - 3. 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 conflict of interest to clientele and/or public. These may include but are not limited to:
  - o Consultant for fee
  - o Clinical instructor (support staff from industry)
  - o Sales representative
  - o Technical advisor
  - o Lecturer for fee
  - o 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:
  - o The perfusionist being the most qualified individual, by training, education, experience, and job description has the responsibility to evaluate, recommend, select, and implement the components of the ExtraCorporeal circuit so that patient safety and care are optimized.

- o 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.
- o The perfusionist shall always base any decision on product and service selection on clinical evaluations and documented clinical and scientific data.
- o 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.

-- Information obtained from the following website: <http://www.amsect.org/page/code-of-ethics>

### **Graduation 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 as outlined in Progression Policy.
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. Pass an oral examination.
6. Pass a final practical examination.
7. Receive clearance from the clinical competency committee (Note: No student will be given clinical clearance from the program earlier than two weeks prior to graduation independent of the number of clinical cases completed by the student).
8. 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**

Sarns 8000 Heart Lung Machine  
Stockert Heart Lung Machine  
Maquet Rotaflow pump  
Heamonectics Cell Saver 5 (autotransfusion device)  
Cincinnati Sub-Zero Hemotherm Heater/Cooler Complete  
set of cardiac surgery surgical instrumentation Datascope  
98XT Intra-aortic balloon pump with trainer Quest  
myocardial protection system  
Sechrist Blender  
Califia Perfusion Simulator with beating heart module and anesthesia module  
Biomedicus Centrifugal pump x2  
Perfusion pump disposals packs

- o Oxygenators (neonatal, pediatric, and adult)
- o Tubing
- o Filters (arterial, blood, pre-bypass, leukocyte depleting)
- o Stopcocks

Various different cannulae (aortic, venous (dual and single stage),  
Various disposal oxygenators  
Vacuum Regulators  
Pressure transducers  
DLP Pressure Monitor and disposables  
Patient chest cavity

## **Other Program Policies**

### *Professional Dues*

Students are expected to join the national perfusion associations: the American Society of Extracorporeal Technology (AmSECT) and the American Academy of Cardiovascular Perfusion (AACP). Membership in the AmSECT requires completion 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 professional 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.**