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ABOUT VANDERBILT UNIVERSITY MEDICAL CENTER
Website: www.mc.vanderbilt.edu

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

The Vanderbilt Clinic accommodates over 573,000 outpatient visits, in addition to hospital admissions in excess of 31,000, with a substantial number of patients from outside Tennessee. A principal referral center for physicians and patients throughout the region, Vanderbilt University Medical Center ranks among the premier healthcare facilities in the United States. Many of the services offered by Vanderbilt University Medical Center have been ranked among the foremost programs in the nation by U.S. News & World Report's listing of "America's Best Hospitals". Vanderbilt's programs in cancer; cardiology and heart surgery; digestive tract; ear, nose and throat; hormonal disorders; gynecology; orthopedics; respiratory care; rheumatology; and urology were assessed among the top such programs in hospitals nationwide.

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

Among Vanderbilt's specialty clinics is the Vanderbilt-Ingram Cancer Center (VICC), a National Cancer Institute Clinical Cancer Center providing comprehensive care for cancer patients, along with basic and bench-to-bedside cancer research. The state-of-the-art research program provides the latest breakthroughs in treatment for patients. Additional specialty programs include VUMC's Level I trauma center, a comprehensive burn center, LifeFlight air emergency transport, the Vanderbilt Voice Center (part of the Vanderbilt Bill Wilkerson Center), and multiple specialty services of Monroe Carell Jr. Children's Hospital at Vanderbilt, including the Level IV neonatal intensive care unit.

VUMC HISTORY AND OWNERSHIP

Vanderbilt University Medical Center has been operating non-degree allied health programs since 1929 through Vanderbilt University, which 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 six 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 the Monroe Carell Jr. Children’s Hospital at Vanderbilt, and their associated clinics. Effective April 30, 2016, Vanderbilt University conveyed the clinical assets 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. However, it remains 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

VANDERBILT UNIVERSITY MEDICAL CENTER BOARD
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John F. Stein (Board Vice Chair)
Greg Allen
Jeffrey R. Balser
Michael M.E. Johns
Richard B. Johnston, Jr.
Samuel E. Lynch
Thomas J. Sherrard II
John F. Stein
David W. Patterson
Dr. Robert Schiff
Nicholas S. Zeppos
VUMC CENTER FOR PROGRAMS IN ALLIED HEALTH BOARD

Marilyn Dubree (Board Chair)
Executive Chief Nursing Officer, Vanderbilt University Medical Center
Senior Associate Dean for Clinical Practice, Vanderbilt University School of Nursing

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Director, Transformation Management & Innovation, Monroe Carell Jr. Children’s Hospital at Vanderbilt
Vanderbilt University Medical Center

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Administrative Officer, Office of Health Sciences Education, Vanderbilt University Medical Center

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

Bonnie Miller
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Donna Rosenstiel
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Consultant to Programs in Allied Health, Vanderbilt University Medical Center

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Chair of Pathology, Microbiology, and Immunology, Vanderbilt University Medical Center

Petrice Sprouse
Director, Center for Programs in Allied Health, Vanderbilt University Medical Center

Candace Tillquist
Associate Operating Officer, Neuroscience PCC/ Vanderbilt Spine Center
Vanderbilt University Medical Center
VUMC CENTER FOR PROGRAMS IN ALLIED HEALTH

ADMINISTRATIVE LEADERSHIP

Jeffrey R. Balser, M.D., Ph.D.
President and CEO, VUMC

Bonnie M. Miller, M.D., M.M.H.C.
Senior Associate Dean for Health Sciences Education / Executive Vice President for Educational Affairs

Petrice Sprouse, M.H.S.A.
Director, Center for Programs in Allied Health

(Vacant)
Assistant Director, Center for Programs in Allied Health

Kristen Smith
Lead Administrative Assistant

Kent Bliss
Administrative Officer

Brett Groenleer
Business Process Manager

Donna E. Rosenstiel, L.C.S.W.
Assistant Dean, Office of Health Sciences Education / Consultant to Programs in Allied Health

CENTER FOR PROGRAMS IN ALLIED HEALTH MISSION STATEMENT

The Center for Programs in Allied Health of Vanderbilt University Medical Center are 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.
PROGRAMMATIC ACCREDITATIONS AND APPROVALS

- DIETETIC INTERNSHIP
  - Accreditation Council for Education in Nutrition and Dietetics of the Academy of Nutrition and Dietetics, Division of Accreditation Approval
    ACEND@eatright.org, phone 1.800.877.1600 x5400
    120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995

- MEDICAL LABORATORY SCIENCE
  - National Accrediting Agency for Clinical Laboratory Sciences. 5600 N. River Road, Suite 720, Rosemont, IL 60018, 773.714.8880 F: 773.714.8886
  - Licensed to operate by State of Tennessee

- NUCLEAR MEDICINE TECHNOLOGY
  - Joint Review Committee on Educational Programs in Nuclear Medicine Technology
    2000 W. Danforth Road, Suite 130, #203 Edmond, OK 73003, 405.285.0546, F: 405.285.0579, mail@jrcnmt.org

- DIAGNOSTIC MEDICAL SONOGRAPHY
  - Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Joint Review Committee on Education in Diagnostic Medical Sonography
    Joint Review Committee on Education in Diagnostic Medical Sonography: 2025 Woodlane Drive; St Paul, MN 55125-2998; 651.731.1582; www.jrcdms.org

- PERFUSION
  - Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Accreditation Committee-Perfusion Education (AC-PE)
    25400 U.S. Highway 19 North, Suite 158, Clearwater, FL 33763
  - Accreditation Committee – Perfusion Education
    6663 South Sycamore Street
    Littleton, CO 80120, 303.794.6283, F: 303.738.3223

- NEURODIAGNOSTIC TECHNOLOGY
  - Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Committee on Accreditation for Neurodiagnostic Technology
    Committee on Accreditation for Neurodiagnostic Technology: 1449 Hill Street; Whitinsville, MA 01588; 978.338.6300; F: 978.832.2638; office@coa-ndt.org

APPROVALS

The Medical Laboratory Science Program is approved to operate by the Tennessee Department of Health, 312 Rosa L. Parks Ave. - Tennessee Tower, 2nd Floor Nashville, TN, 37243, (615) 532-0109.

Vanderbilt University Medical Center is not required to seek approval through the Division of Postsecondary State Authorization (Tennessee Higher Education Commission) based on the following exemption allowed by provisions of the Postsecondary Education Authorization Act of 1974: “training
VANDERBILT UNIVERSITY MEDICAL CENTER EDUCATIONAL FACILITIES

Vanderbilt University Medical Center (VUMC) is a tertiary care 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 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.

The 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

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

Shade Tree Clinic
Shade Tree Clinic is a free health clinic run by Vanderbilt University medical students. Students from multiple professions provide care as part of Interprofessional teams at the clinic, and that care is supervised by physicians and other licensed professionals. Shade Tree Clinic provides a medical home for many Nashville residents with limited resources by providing exemplary primary care, care for acute & chronic illnesses, social services, and patient health education. The clinic is located in East Nashville.
ACADEMIC YEAR 2017-2018 ADMINISTRATIVE CALENDAR – VUMC CENTER FOR PROGRAMS IN ALLIED HEALTH

Independence Day  Tuesday, July 4, 2017
Labor Day       Monday, September 4, 2017
Thanksgiving Day Thursday, November 23, 2017
Christmas Eve   Friday, December 22, 2017
Christmas Day   Monday, December 25, 2017
New Year's Day  Monday, January 1, 2018
Memorial Day    Monday, May 28, 2018

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.

VUMC CENTER FOR PROGRAMS IN ALLIED HEALTH ADMISSION POLICIES

Minimum Requirements for Admission
All applicants must have a high school diploma, GED, or recognized equivalent. 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 may 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.

**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 takes place during the personal interview with each candidate, and includes inquiries related to 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.

**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.

**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 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 7, 8, 10
- Mac OS X 10.8, 10.9, 10.10, 10.11, 10.12
- Note: Not supported: Linux, Virtual Machines

**Browsers:**
- Latest versions of Chrome and Firefox (recommended as default browsers)
- Windows: Internet Explorer 10 or higher
- Mac: Safari 6 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 OP 10-10.30, Social Media Policy and Guidelines, which is located in Appendix B of this catalog.

**Instructional Language**

At VUMC all instruction occurs in English. VUMC does not offer English as a Second Language (ESL) instruction. Programs may require demonstrated proficiency in English as a criterion for admission to the program. Program-specific requirements are provided in program sections 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. Students may seek out private health care insurance options or enroll via a government health care exchange. 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 1st 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, states and employers may require licensure, certification, registration, etc., before an individual may be employed in a given field. Licensure eligibility and other requirements vary from state to state. Students are advised to check licensure and certification guidelines for the states in which they plan to seek employment. Graduates seeking employment at VUMC will be required to complete background check requirements and otherwise meet job skill and education requirements, as may be applicable.

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.

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.

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/

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.

SATISFACTORY ACADEMIC PROGRESS (QUALITATIVE AND QUANTITATIVE ELEMENTS)

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.

The 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**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Grade</th>
<th>Definition</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>100–90%</td>
<td>A</td>
<td>Excellent</td>
<td>4.0</td>
</tr>
<tr>
<td>89-80%</td>
<td>B</td>
<td>Good</td>
<td>3.0</td>
</tr>
<tr>
<td>79-70%</td>
<td>C</td>
<td>Satisfactory</td>
<td>2.0</td>
</tr>
<tr>
<td>69–0%**</td>
<td>F</td>
<td>Inadequate**</td>
<td>0.0</td>
</tr>
<tr>
<td>P</td>
<td>Pass - Any course with a “P” grade is not calculated into the grade point average.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W±</td>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>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 the program section of this handbook or to the program’s student handbook for information about whether students are allowed to repeat courses in any given program.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*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.

± 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.

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
<th>Term 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dietetic Internship</td>
<td>70% average</td>
<td>80% average</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(rotations &amp; assignments)</td>
<td>(rotations &amp; assignments)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Laboratory Science</td>
<td>75% average</td>
<td>75% average</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnostic Medical Sonography</td>
<td>75% average</td>
<td>75% average</td>
<td>75% average</td>
<td>75% average</td>
</tr>
<tr>
<td>Nuclear Medicine Technology</td>
<td>70% Didactic / 75% Clinical</td>
<td>70% Didactic / 75% Clinical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perfusion</td>
<td>75% per course</td>
<td>75% per course</td>
<td>75% per course</td>
<td>75% per course</td>
</tr>
<tr>
<td>Neurodiagnostic Technology</td>
<td>70% average</td>
<td>70% average</td>
<td>70% average</td>
<td>70% average</td>
</tr>
</tbody>
</table>

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.

**Progress Evaluations and Reports**
Each student’s progress in completing the program is reviewed during a progress evaluation at least once
a term. 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.

**Quantitative Elements of SAP: 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 each program’s maximum time:
- 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 approved leaves-of-absence counts toward the maximum time to complete VUMC programs.

**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
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 a committee of individuals to include the Director of the Center for Programs in Allied Health, the Assistant Director of the Center for Programs in Allied Health and the VUMC Executive Vice President for Educational Affairs. The appeal will be 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.

**Temporary Student Suspension**

VUMC reserves the right to temporarily suspend a student for conduct disrupting or otherwise negatively affecting the learning environment, or other behaviors inconsistent with the mission and Credo, 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 coursework missed during the suspension.
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 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 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 Release and Waiver of Liability Assumption or Risk, and Indemnity Agreement 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 (Spark Learn)

Spark Learn is a full-fledged Learning Management System based on Moodle. Spark Learn provides easy ways to create advanced tools for dynamic online activities that support each course’s objectives.

Benefits of the flexible Moodle platform that underlies Spark Learn:

- Moodle has features that allow it to scale.
- The platform allows flexibility for different course styles, from conducting fully online courses, to face-to-face courses.
- Moodle provides with activity modules (such as forums, databases and wikis) to build richly collaborative communities of learning around their subject, also provides a way to deliver content to students and assess learning using assignments or quizzes.
- The Moodle Community, an open network of over one million registered users who interact through the Moodle community website to share ideas, code, information and free support. This community also includes a large number of non-core developers, with Moodle’s free source license and modular design allowing any developer to create additional modules and features that have allowed Moodle to become a truly global, collaborative project in scope.
Spark Learn has many features, including:

- Assignment submission
- Discussion forum
- Files download
- Grading
- Instant messages
- Online calendar
- Online news and announcement
- Online quiz
- Multimedia Integration
- Question Bank
- Data Analysis & Reports
- Payment solutions
- Device Compatibility

Technology Requirements for Spark Learn

- Hardware:
  - 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 7, 8, 10
  - Mac OS X 10.8, 10.9, 10.10, 10.11, 10.12
  - Note: Not supported: Linux, Virtual Machines
- Browsers:
  - Latest versions of Chrome and Firefox (recommended as default browsers)
  - Windows: Internet Explorer 10 or higher
  - Mac: Safari 6 or higher
  - Note: Cookies must be enabled
  - JavaScript must be enabled
- Latest versions of:
  - Acrobat Reader
  - Flash Player
  - Silverlight Player

Spark Learn and Blended Distance Education Orientation
Students attending in a blended format will receive training on the navigation of Spark Learn 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 Spark Learn Technical Support resources listed below.

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

- Knowledge Base of Spark Learn help articles: https://spark-help.app.vumc.org/
- Administrative Technical Support: (615)-343-6696
CANCELLATION, WITHDRAWAL AND REFUND POLICY

Student’s Right to Cancel / Cancellation Refund Policy

1. You have the right to cancel your program of instruction, without any penalty or obligations, through the third (3rd) business day after signing this enrollment agreement (“Cancellation Period”). Subsequent to this three-day cancellation period, but prior to the start of orientation/classes, you 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, you also have the right to withdraw from school at any time (please see Withdrawal Policy, below).

2. Cancellation is considered to have occurred when the student provides a 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.

3. The cancellation may be provided by mail or by hand delivery.

4. 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.

5. 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.

6. 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 to the VUMC Center for Programs in Allied Health, 1301 Medical Center Drive, B-802 TVC.

Student Withdrawal from the Program / Withdrawal Refund Policy

You 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 your behalf) if you have 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 you have completed more than 60% of the current payment period, the tuition is considered earned and you will receive only a refund of fees that have not been paid to a third party by VUMC on your 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:

- The student notifies the institution in writing of his or her 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.
- 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 students are 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 the 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. Students withdrawing from VUMC programs are required to return their student IDs immediately upon withdrawal.

**State of Tennessee Refund Policy**

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

<table>
<thead>
<tr>
<th>FOR A STUDENT WHO TERMINATES</th>
<th>VUMC WILL REFUND</th>
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<tr>
<td>within the first 10% of the program</td>
<td>90% of the program cost</td>
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<td>within the first 20% of the program</td>
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<td>after 60% of the program</td>
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**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 information in this catalog 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. Each program has policies regarding unexcused consecutive absences and consequences for such, up to and including dismissal from the program. See program-specific information in this catalog for further details.

**Leaves of Absence**

VUMC may allow 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 writing 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. 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 he/she 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 disenrolled and may be required to re-apply to the program. 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.

**STUDENT SERVICES**

**Academic Advising / Tutoring**

Advising for the purposes of guiding students in appropriate course selection 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 his or her own employment once completing the program.

**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 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.

Library

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:

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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.

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 VUnetID and password, at [http://www.library.vanderbilt.edu/biomedical/](http://www.library.vanderbilt.edu/biomedical/). The building that houses the Eskind Biomedical Library is closed due to construction from August 1, 2017, until September 1, 2018. 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 VUnetID 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.

**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 his or her job search.

**Professional Liability Insurance**

Students enrolled in VUMC programs are covered by the Vanderbilt University Medical Center liability insurance policy. In some cases this cost is included in the cost of tuition; in others the cost is paid by students as fees. Please refer to program-specific tuition and fees for more information. 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.

**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.

**Dining Facilities**

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

Vanderbilt University Hospital – Courtyard Café and Au Bon Pain
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. Stamps are available at the Human Resources Office at the entrance of Medical Center North.

**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.

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. Verification Please contact the Program Director for more information regarding this matter.
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.

Student Information Form
This form is included in student orientation materials. Students are required to complete the form and submit to the Program Director or other designated administrator. Students are required to provide a current address, social security number, and permanent address (for transcript purposes), as well as an individual to notify in case of emergency. During the year students are required to notify the Program Director of any change of address, telephone number or other information that appears on this form.

Parking
A parking decal may be obtained from Central Parking Garage. Hours are 7:30 AM to 5:30 PM, Monday through Friday. Payment may be made by cash or check. 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.

Emergency Preparedness and Emergency Numbers
Medical Emergency – 1-1111
Occupational Health – 6-0955
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)
VUPD/Security – 2-2745
Fire – activate the nearest fire alarm

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/about/medprecinct.php)

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. These resources are available online to students at all times (https://police.vanderbilt.edu/). 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.
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.

**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 Mead 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.

**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.

**STUDENT POLICIES/RULES AND REGULATIONS**

Students are expected to abide by rules related to professional standards of behavior at all times, including:

- Punctuality, attentiveness and courtesy are expected in class and all rotations.
- Any student who gives or receives help during an exam, uses notes or any other aids, causes undue disturbances of any kind, or removes exam materials from the room, 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 or in silence mode during class and clinical hours.
- Inappropriate, disruptive or profane behavior is not allowed. This includes actions which disrupt the learning environment for other students. Students engaging in this type of behavior will be counseled and disciplinary action may be imposed, up to and including dismissal from the program.
- Children, family or friends of students will not be permitted in VUMC teaching areas unless expressly authorized in advance by VUMC personnel.
- Animals are not allowed on VUMC premises, unless as a part of a plan for special needs accommodation developed in conjunction with VUMC administration. Students must follow all VUMC health and safety standards and guidelines as required.
- Each program outlines additional rules of conduct, and students are required to abide by these rules, in addition to those above.

**Student Rights and Responsibilities**
- 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 will be treated in a manner conducive to maintaining their worth and dignity. Students shall be free from any acts or threats of intimidation, harassment, mockery, insult, or physical aggression.
- Students will be 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 subjected to the disciplinary process.
- When confronted with injustices, students may seek redress through established grievance procedures. Such procedures will be available to those students who make their grievances in a timely manner.
- 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.
- Students have the responsibility to conduct themselves in a professional manner and to abide by the policies.
- Students are expected to conduct all relationships with the staff and faculty, their peers, and patients with honesty and respect.
- Students are to comply with directions by faculty and staff members who are 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. In these Standards of Conduct, the term “staff/faculty” includes a VUMC faculty or staff member and persons who provide services at VUMC, including health care professionals with privileges at VUMC. The same level of conduct is expected of students.
VUMC has created these Standards of Conduct to guide our staff in making good, ethical decisions. The Standards of Conduct provides a uniform set of guidelines that all VUMC faculty and staff should follow. When you have reviewed these standards, we will ask you to sign and acknowledge them. The full VUMC Code of Conduct is available at https://ww2.mc.vanderbilt.edu/dcci/23390.

**Academic Integrity/Honor Code**

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 Grievances**

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 his or her 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 confidence, 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.
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.

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

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

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.

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.mc.vanderbilt.edu/policies/anti-harassment.php):

A. In compliance with federal law, including the provisions of Title VI of the Civil Rights Act of 1964, Title VII of the Civil Rights Act of 1964, Sections 503 and 504 of the Rehabilitation Act of 1973, the Age Discrimination in Employment Act (ADEA) of 1967, the Americans with Disabilities Act (ADA) of 1990, the ADA Amendments Act of 2008, Executive Order 11246, the Uniformed Services Employment and Reemployment Rights Act, as amended, and the Genetic Information Nondiscrimination Act of 2008, VUMC does not discriminate against individuals on the basis of their race, sex, religion, color, national or ethnic origin, age, disability, military service, veteran status or genetic information in its employment. In addition, the University does not discriminate against individuals on the basis of their sexual orientation, gender identity, or gender expression consistent with the VUMC Anti-harassment, Non-Discrimination and Non-Retaliation policy.

B. In compliance with federal law, VUMC does not retaliate against individuals for 1) filing or encouraging one to file a complaint of unlawful discrimination, 2) participating in an
investigation of unlawful discrimination, or 3) opposing unlawful discrimination. In addition, 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 policy HR - Anti-Harassment, Non-Discrimination and Anti-Retaliation, 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.

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, 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:

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

b. 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.

c. All pertinent documents will be reviewed and appropriate witnesses will be interviewed.

d. 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.

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: 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 official transcripts (or verification statement, in the case of the Dietetic Internship) at graduation for certification purpose plus one additional copy for personal use. Additional
copies may be requested in writing, directed to the Office of the Center for Programs in Allied Health. Transcript requests should be directed to the Office of Center for Programs in Allied Health, Vanderbilt University Medical Center, B-802 TVC, 1301 Medical Center Drive, Nashville, TN 37232-5510. You may also contact the office at (615) 322-5259 or fax (615) 343-8810. The transcript fee is $5.00 and checks are to be made payable to VUMC.

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:

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 PAH 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.

4. 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 PAH 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 22nd Avenue, Nashville, TN 37232-5510. The complaint will be investigated by the Director of Allied Health Programs, 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 20202-5920.

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 Director 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.

**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 be 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 counseling are available at Occupational Health and the Vanderbilt University Hospital emergency room. Students should contact the VUMC Employee Assistance Program for referral to counseling and treatment services available to them. Additionally, many local community counseling and treatment services are available to provide appropriate rehabilitation programs. If you are interested in, or in need of, any of these services, contact Employee Assistance Program for details.

**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 [www.safety.vanderbilt.edu](http://www.safety.vanderbilt.edu) under the hospital link. Emergency preparedness policies and procedures are discussed during student orientation.
The following is a brief description of emergency codes that students 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

**Missing Person**
- **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.

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**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.

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 dismissals 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.

**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.

**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.

**Tuition and Fees**
Students are required to pay various fees to VUMC upon application, acceptance, and enrollment, and during the course of study. For example, all enrolling 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 are:

- 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 Center for Programs in Allied Health, 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.

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 – 1 (800) 234-0246
• Al-Anon – www.al-anon.org – 1 (888) 425-2666
• Drug and Alcohol Helpline – http://www.alcoholdrughelp.org.nz – 1 (800) 787 797 or text 8681
• Family and Children’s Services – www.acf.hhs.gov – 1 (800) 422-44535
• National Domestic Violence Hotline – www.thelifehotline.org – 1 (800) 799-7233
• Rape Crisis Center – www.therapecrisiscenter.org – 1 (888) 366-1640
• Suicide Hotline – www.suicidepreventionlifeline.org – 1 (800) 273-8255
• United Way – www.unitedway.org – Phone: 211

Program Directors and the Director of the Center for Programs in Allied Health are available to work individually and confidentially with students to provide additional information and resources as needed.
EDUCATIONAL PROGRAMS

DIAGNOSTIC MEDICAL SONOGRAPHY

Program Length: 2295 hours / 72 weeks
Graduation Document: Certificate
Delivery Method: Blended

Program Description
The VUMC Diagnostic Medical Sonography is an 18-months certificate program in general sonography. The curriculum provides 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.

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 the Medical Center, the 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://medschool.vanderbilt.edu/allied-health/dms](https://medschool.vanderbilt.edu/allied-health/dms).

**Staff and Faculty**

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

**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 and 2013.

Recognition by CAAHEP qualifies 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
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

Admission Policy

Admission Requirements (for Class Entering in 2017)
Candidates for admission must have a high school diploma, or the equivalent, and satisfy the following criteria by submission of official transcripts:
Graduation from a 2-year or 4-year accredited allied health program in direct patient care and possess the recognized credential in his/her specialty.* (Examples include, but are not limited to: Radiologic Technology, Nursing, Respiratory Therapy, Nuclear Medicine Technology)

OR

Bachelor's degree from an accredited college or university with a cumulative GPA of no less than 2.5.

OR

Demonstrate eligibility for degree completion through the 3 + 1 option with affiliated universities, which includes Austin Peay State University and Middle Tennessee State University.

All post-secondary coursework must have included the following prerequisite coursework, with a grade of "C" or better (all must be complete prior to the first day of class, if admitted):

- English Composition or Speech \( (MUST \ be \ completed \ at \ a \ college \ or \ university \ in \ the \ United \ States) \)
- 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 & Physiology
- Medical Terminology

Individuals may submit application with incomplete pre-requisite coursework by indicating a plan of action to satisfy this requirement prior to matriculation (see Application for Admission).

*Individuals who are enrolled in pre-requisite program at the time of application will be expected to fulfill this requirement immediately upon graduation to confirm eligibility.

Admission Requirements (for Class Entering in 2018)

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

1. High school diploma or the equivalent

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:
     - Austin Peay State University
     - Middle Tennessee State University
     \( (This \ option \ requires \ written \ recommendation \ from \ the \ affiliate \ institution’s \ faculty \ advisor.) \)

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 application with incomplete pre-requisite coursework by indicating a plan of action to satisfy this requirement prior to matriculation (see Application for Admission).

**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 $50 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
• Interview with program representatives

Applicants with pre-requisite coursework 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 applications received with a postmark after March 31 are processed only on an as-available basis. Interviews are scheduled with qualified applicants each year after the deadline listed.

**Admission Procedures**
All qualified applicants are granted a phone interview with the Program Director (under the direction of the Admissions Committee). Top candidates are offered an onsite interview with Faculty and Staff from the Admissions Committee. 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 that same year. *
## Tuition and Fees

<table>
<thead>
<tr>
<th></th>
<th>(1\textsuperscript{st} year) 9/25/17 - 6/30/18</th>
<th>(2\textsuperscript{nd} year) 7/1/18 - 3/28/19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tuition (includes textbooks)</strong></td>
<td>5,390.05</td>
<td>6,250.00</td>
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<tr>
<td><strong>Miscellaneous Fees</strong></td>
<td></td>
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<tr>
<td>Background Check Fee</td>
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<tr>
<td>Scrubs</td>
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<tr>
<td>Supplies</td>
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<tr>
<td>Professional Membership</td>
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<tr>
<td>Professional Credential(\ast\ast)</td>
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<tr>
<td>Computer</td>
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</tr>
<tr>
<td>Parking(\ast\ast)</td>
<td>180.00</td>
<td>180.00</td>
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<tr>
<td><strong>TOTAL PROGRAM COST</strong></td>
<td>6,820.05</td>
<td>7,130.00</td>
</tr>
</tbody>
</table>

\(\ast\ast\) ARDMS certification exams. Students have the option to take this examination prior to or after graduation.

\(\ast\ast\) All parking on VUMC campus must be registered through Central Parking System and requires monthly or annual payments. Parking rates will vary according to availability and student preference, but has an estimated cost of $220.00 for 12 months.

### Academic Calendar – 2017-2019 Program Calendar

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/25/2017</td>
<td>Start Date</td>
</tr>
<tr>
<td>11/20 - 11/24/2017</td>
<td>Thanksgiving Break</td>
</tr>
<tr>
<td>12/22/2017 - 01/05/2017</td>
<td>Christmas Break</td>
</tr>
<tr>
<td>05/28/2017</td>
<td>Memorial Day-No class or clinical</td>
</tr>
<tr>
<td>06/25 - 6/29/2017</td>
<td>Summer Break</td>
</tr>
<tr>
<td>07/04/2018</td>
<td>Independence Day – No class or clinical</td>
</tr>
<tr>
<td>09/03/2018</td>
<td>Labor Day – No class or clinical</td>
</tr>
<tr>
<td>11/19-11/23/2018</td>
<td>Thanksgiving Break</td>
</tr>
<tr>
<td>12/24/2018 – 01/04/2019</td>
<td>Christmas Break</td>
</tr>
<tr>
<td>03/28/2019</td>
<td>Graduation</td>
</tr>
</tbody>
</table>
## Course Descriptions

<table>
<thead>
<tr>
<th>Course</th>
<th>Lecture</th>
<th>Lab</th>
<th>Practicum / Clinical</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sonographic Patient Care</td>
<td>20.00</td>
<td></td>
<td></td>
<td>20.00</td>
</tr>
<tr>
<td>Foundations of Ultrasound and Healthcare*</td>
<td>22.00</td>
<td></td>
<td></td>
<td>22.00</td>
</tr>
<tr>
<td>Cross-Sectional Anatomy</td>
<td>22.00</td>
<td></td>
<td></td>
<td>22.00</td>
</tr>
<tr>
<td>Abdominal Sonography Techniques I</td>
<td>44.00</td>
<td></td>
<td></td>
<td>44.00</td>
</tr>
<tr>
<td>Gyneceological Sonography Techniques I</td>
<td>33.00</td>
<td></td>
<td></td>
<td>33.00</td>
</tr>
<tr>
<td>Clinical Practicum I</td>
<td></td>
<td></td>
<td>72.00</td>
<td>72.00</td>
</tr>
<tr>
<td>Clinical Lab I</td>
<td>66.00</td>
<td></td>
<td></td>
<td>66.00</td>
</tr>
<tr>
<td>Obstetrical Sonography Techniques I</td>
<td>36.00</td>
<td></td>
<td></td>
<td>36.00</td>
</tr>
<tr>
<td>Basic Physics and Instrumentation</td>
<td>48.00</td>
<td></td>
<td></td>
<td>48.00</td>
</tr>
<tr>
<td>Pathophysiology as Related to Sonography</td>
<td>12.00</td>
<td></td>
<td></td>
<td>12.00</td>
</tr>
<tr>
<td>Clinical Practicum II</td>
<td></td>
<td></td>
<td>192.00</td>
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<td>Clinical Lab II</td>
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<tr>
<td>Abdominal Sonography Techniques II</td>
<td>36.00</td>
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<td></td>
<td>36.00</td>
</tr>
<tr>
<td>Gynecological Sonography Techniques II</td>
<td>24.00</td>
<td></td>
<td></td>
<td>24.00</td>
</tr>
<tr>
<td>Advanced Physics and Instrumentation</td>
<td>24.00</td>
<td></td>
<td></td>
<td>24.00</td>
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<tr>
<td>Clinical Practicum III</td>
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<td>Clinical Lab III</td>
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<td></td>
<td></td>
<td>48.00</td>
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<tr>
<td>Obstetrical Sonography Techniques II</td>
<td>36.00</td>
<td></td>
<td></td>
<td>36.00</td>
</tr>
<tr>
<td>Superficial Structure Sonography Techniques</td>
<td>24.00</td>
<td></td>
<td></td>
<td>24.00</td>
</tr>
<tr>
<td>Advanced Abdominal Sonography Techniques</td>
<td>24.00</td>
<td></td>
<td></td>
<td>24.00</td>
</tr>
<tr>
<td>Medical Ethics and Law</td>
<td>12.00</td>
<td></td>
<td></td>
<td>12.00</td>
</tr>
<tr>
<td>Clinical Practicum IV</td>
<td></td>
<td></td>
<td>288.00</td>
<td>288.00</td>
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<tr>
<td>Clinical Lab IV</td>
<td>48.00</td>
<td></td>
<td></td>
<td>48.00</td>
</tr>
<tr>
<td>Certification Preparation*</td>
<td>24.00</td>
<td></td>
<td></td>
<td>24.00</td>
</tr>
<tr>
<td>Advanced Ob/Gyn Sonography Techniques</td>
<td>24.00</td>
<td></td>
<td></td>
<td>24.00</td>
</tr>
<tr>
<td>Introduction to Basic Vascular Sonography</td>
<td>12.00</td>
<td></td>
<td></td>
<td>12.00</td>
</tr>
<tr>
<td>Clinical Practicum V</td>
<td></td>
<td></td>
<td>336.00</td>
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<tr>
<td>Case Study Review</td>
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<tr>
<td>COURSE</td>
<td>Contact Hours</td>
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<tr>
<td>--------------------------------------------------</td>
<td>---------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Orientation (1 week September)</td>
<td>16</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>FIRST ROTATION</strong> (11 weeks September - December)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Sonographic Patient Care (5 weeks)</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundations of Ultrasound and Healthcare (Blended Distance Education)</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Designates course delivery in Blended Distance Education format.

**Curriculum Plan**

- **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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-Sectional Anatomy</td>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td>Abdominal Sonography Techniques I</td>
<td>4</td>
<td>44</td>
</tr>
</tbody>
</table>

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.

This course is designed to provide the student with the techniques and protocols required to perform sonographic examinations of the
<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
<th>Total Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gynecological Sonography Techniques I</td>
<td>3</td>
<td>33</td>
</tr>
<tr>
<td>Clinical Practicum I (6 weeks)</td>
<td>12</td>
<td>72</td>
</tr>
</tbody>
</table>

This course is designed to provide students with the techniques and protocols required to perform transabdominal and transvaginal sonographic examinations of the female pelvis organs. Sonographic examinations include imaging techniques and evaluation of normal anatomy and its appearance, the interpretation of pertinent lab values along with clinical indications and the transmission of all pertinent data to the interpreting physician to facilitate diagnosis.

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 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.
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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Lab I</td>
<td>6</td>
<td>66</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SECOND ROTATION** (12 weeks January - March)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obstetrical Sonography Techniques I</td>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic Physics and Instrumentation</td>
<td>4</td>
<td>48</td>
</tr>
<tr>
<td>This course is designed to provide the student with the fundamental</td>
<td></td>
<td></td>
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</tbody>
</table>
principles of ultrasound physics and instrumentation. The student will develop a correlation to the function of the ultrasound equipment and imaging techniques.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pathophysiology as Related to Sonography</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Practicum II</td>
<td>16</td>
<td>192</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Lab II</td>
<td>6</td>
<td>72</td>
</tr>
<tr>
<td>This lab is designed to further develop the student’s skill for abdominal and pelvis ultrasound examinations with direct supervision and</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The student will also be introduced to obstetrical sonographic techniques in a controlled and closely supervised environment.

<table>
<thead>
<tr>
<th>THIRD ROTATION (12 weeks March - June)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal Sonography Techniques II</td>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>Gynecological Sonography Techniques II</td>
<td>2</td>
<td>24</td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Physics and Instrumentation</td>
<td>2</td>
<td>24</td>
</tr>
</tbody>
</table>

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.

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.

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Practicum III</td>
<td>24</td>
<td>288</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Lab III</td>
<td>4</td>
<td>48</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course</td>
<td>Credits</td>
<td>Total Credits</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>---------</td>
<td>---------------</td>
</tr>
<tr>
<td>Obstetrical Sonography Techniques II</td>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>Superficial Structure Sonography Techniques</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>Advanced Abdominal Sonography Techniques</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>This course is designed to provide</td>
<td></td>
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<tr>
<td>Course</td>
<td>Units</td>
<td>Credits</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
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</tr>
<tr>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Ethics and Law</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Practicum IV</td>
<td>24</td>
<td>288</td>
</tr>
<tr>
<td>During this clinical course the student will perform clinical demonstration of competency in the performance of complete abdominal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Lab IV</td>
<td>4</td>
<td>48</td>
</tr>
</tbody>
</table>

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.

**FIFTH ROTATION** (12 weeks September - December)

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certification Preparation (Blended Distance Education)</td>
<td>2</td>
<td>24</td>
</tr>
</tbody>
</table>

This course is designed to promote and facilitate the student’s
<table>
<thead>
<tr>
<th>Course Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
<tr>
<td>Advanced Ob/Gyn Sonography Techniques</td>
</tr>
<tr>
<td>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</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Basic Vascular Sonography</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Clinical Practicum V</td>
<td>28</td>
<td>336</td>
</tr>
</tbody>
</table>

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.

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
### SIXTH ROTATION (12 weeks
December - March)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case Study Review</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>Registry Reviews</td>
<td>2</td>
<td>24</td>
</tr>
</tbody>
</table>

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.

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
<table>
<thead>
<tr>
<th>Course</th>
<th>Contact Hours</th>
<th>Total Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Vascular Sonography Lab</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Practicum VI</td>
<td>28</td>
<td>336</td>
</tr>
</tbody>
</table>

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.

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.

TOTAL OF CONTACT HOURS EXPECTED (Does NOT include Program Orientation) 2295

**Clinical Education Plan**

The Clinical Education Plan outlined below is divided into two (2) sections of required clinical performance evaluations:
1. Technical Competencies are defined as unique skill sets which must be performed in repetition with appropriately credentialed clinical staff (preceptors). Variable levels of assistance are permitted, but must meet the minimum requirements identified in the Technical Evaluation Criteria table. The Technical Competency list provides 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.

2. Technical Competency Challenges are defined as graded evaluations for satisfactory performance of entry level skills defined in the Technical Competencies. Technical Competency Challenges may only be completed with designated, appropriately credentialed clinical staff (Clinical Instructors). Minimal levels of assistance are permitted and are identified in the Technical Evaluation Criteria table. Technical Competency Challenges MUST be requested in advance of the patient’s arrival to the exam room and only after 70% of assigned Technical Competencies are satisfactorily completed. Entry level skills and competency are determined in the last Rotation of clinical coursework through the Final Competency Assessment with designated, appropriately credentialed Clinical Instructors.

The number of repetitions for each assigned competency that needs to be correctly performed is listed in parenthesis below. The student will assume responsibility for determining readiness and will arrange with the clinical preceptor to evaluate her/his technical performance.

Specific deadline dates for completing the required number of correct technical competencies are specified in each clinical syllabi.

<table>
<thead>
<tr>
<th>Technical Competencies</th>
<th>Number of Repetitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical I</td>
<td></td>
</tr>
<tr>
<td>Basic Competency</td>
<td></td>
</tr>
<tr>
<td>Basic Patient Care</td>
<td>(10)</td>
</tr>
<tr>
<td>Clinical II and III</td>
<td></td>
</tr>
<tr>
<td>Segmental Imaging</td>
<td></td>
</tr>
<tr>
<td>Aorta/IVC</td>
<td>(10)</td>
</tr>
<tr>
<td>Liver</td>
<td>(10)</td>
</tr>
<tr>
<td>Gallbladder</td>
<td>(10)</td>
</tr>
<tr>
<td>Pancreas</td>
<td>(10)</td>
</tr>
<tr>
<td>Renals</td>
<td>(10)</td>
</tr>
<tr>
<td>Spleen</td>
<td>(10)</td>
</tr>
<tr>
<td>Pelvis-UT</td>
<td>(10)</td>
</tr>
<tr>
<td>Pelvis-OV</td>
<td>(10)</td>
</tr>
<tr>
<td>Clinical III and IV</td>
<td></td>
</tr>
<tr>
<td>Segmental Imaging</td>
<td></td>
</tr>
<tr>
<td>Fetal head</td>
<td>(10)</td>
</tr>
<tr>
<td>Fetal extremities/spine</td>
<td>(10)</td>
</tr>
<tr>
<td>Fetal abdomen</td>
<td>(10)</td>
</tr>
<tr>
<td>Placenta, Cord, and</td>
<td></td>
</tr>
<tr>
<td>Amniotic Fluid</td>
<td>(10)</td>
</tr>
<tr>
<td>Fetal heart</td>
<td>(10)</td>
</tr>
<tr>
<td>Clinical IV, V and VI</td>
<td></td>
</tr>
<tr>
<td>Complete Ab/Gyn</td>
<td></td>
</tr>
<tr>
<td>Complete Abdomen</td>
<td>(25)</td>
</tr>
<tr>
<td>• Minimum of 3 technically difficult exams required</td>
<td></td>
</tr>
<tr>
<td>• Minimum of 5 patients with some form of pathology identified</td>
<td></td>
</tr>
<tr>
<td>RUQ (or additional</td>
<td></td>
</tr>
<tr>
<td>complete abdomens</td>
<td>(10)</td>
</tr>
<tr>
<td>Pelvis w/Transvaginal</td>
<td>(20)</td>
</tr>
</tbody>
</table>
- Minimum of 2 post-menopausal exams required
- Minimum of 5 patients with some form of pathology identified

### Clinical V and VI

**Complete Ob and Superficial Imaging**

- **1st Trimester OB** (10)
  - Fetal Size/Growth and Detailed Anatomy (10)
  - Fetal Anatomy (10)
  - Survey and Fetal Size/Growth (15)
  - Minimum of 3 exams >28 weeks gestation required
- **Thyroid** (10)
  - Minimum of 2 patients must have some form of pathology identified
- **Scrotum** (10)
  - Minimum of 2 patients must have some form of pathology identified
- **Breast** (5)
  - Minimum of 2 patients must have some form of pathology identified

### Clinical VI

**Advanced Imaging**

- Biophysical Profile (5)
- Multiple Gestation OB (2)
- Abdominal Doppler (3)
- U/S Guided Procedures (2)

**Vascular Imaging Progressions (Active Observation, Direct Assistance, and Direct Supervision)**

- Carotid (3)
- Lower Extremity Venous (3)
- Upper Extremity Venous (3)

In addition to achieving the required technical competencies listed previously, 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. Once the student has achieved a minimum of 70% of the required total number of repetitions for each technical competency, he/she may request to perform a competency challenge for the specified competency.

If the student is not successful during the challenge, he/she must complete additional repetitions of one or more competencies, and consult with the program director, before repeating the challenge. Two unsuccessful attempts to challenge a technical competency will result in academic probation and the implementation of a written plan of action required for the student to return to satisfactory academic status.

Technical Competency Challenges are required and will affect Clinical course grades if not completed by the date specified in each clinical syllabi.

The required Technical Competency Challenges are:

### Clinical I  Basic Competency

One (1) Basic Patient Care competency
Clinical II  Segmental Imaging
Any two (2) segmental abdominal and/or gynecological competencies

Clinical III  Segmental Imaging
Any five (5) remaining segmental abdominal/gynecological competencies
Any one (1) segmental obstetrical competency

Clinical IV  Segmental and Complete Exam Imaging
The remaining one (1) segmental abdominal/gynecological competency
The remaining four (4) segmental obstetrical competencies

Clinical V  Complete Exam Imaging
Any one (1) complete:
Abdomen
Pelvis with Transvaginal Obstetric (combined Fetal Anatomy with Survey and Fetal Size/Growth)

Clinical VI  Complete Exam Imaging
Final Competency Assessment (entry level proficiency in abdominal, gynecological, and obstetrical exam techniques)
One (1) Thyroid competency
(may be completed after study in Clinical IV)
One (1) Scrotum competency
(may be completed after study in Clinical IV)

NOTE: Each technical competency and technical competency challenge is a separate exam requirement. A successful technical competency challenge does not substitute for any of the assigned technical competencies.

Technical Competency and Challenge Evaluation Criteria

The student is required to demonstrate skill progress through repetitions of required technical competencies. The student’s performance will be evaluated on the basis of correct performance of the technique in a progressively independent manner. After completing 70% of the required competencies, the student will assume responsibility for determining readiness and will arrange with a designated Clinical Instructor to evaluate his/her technical performance through a Competency Challenge*. Deadlines for completing the required number of competencies and challenges are listed in the clinical syllabi and outlined in the Clinical Education Plan.

To receive a “Y” (Yes) on a technical competency the student must receive a minimum competency score of 3 for the degree of assistance needed on each technical competency.

To receive a “Pass” on a competency challenge, the student must receive a minimum score of 80 on each of the critical behaviors within the competency.*

Below is the key for scoring critical behaviors.

<table>
<thead>
<tr>
<th>Competency Score</th>
<th>Level of Assistance</th>
<th>Criteria</th>
<th>Level of Performance</th>
<th>Challenge Score</th>
</tr>
</thead>
</table>

* Academic Year 2017-2018 Catalog – Center for Programs in Allied Health
<table>
<thead>
<tr>
<th>Competency Score</th>
<th>Level of Assistance</th>
<th>Criteria</th>
<th>Level of Performance</th>
<th>Challenge Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>None</td>
<td>Independently performs optimal techniques; performs appropriate imaging per protocol with no errors in the demonstration of anatomy or pathology; displays professional interaction with the patient, patient’s family and the health care team</td>
<td>Superior</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Minimal</td>
<td>Performs optimal techniques with assistance only in technically difficult situations; performs appropriate imaging per protocol with no critical errors** in the demonstration of anatomy and pathology; displays professional interaction with the patient, patient’s family and the health care team</td>
<td>Above Average</td>
<td>90</td>
</tr>
<tr>
<td>3</td>
<td>Occasional</td>
<td>Performs adequate imaging techniques but needs to continue improvement of image optimization techniques; performs appropriate imaging per protocol with no critical errors** in the demonstration of anatomy and pathology; displays appropriate interaction with the patient, patient’s family and the health care team</td>
<td>Minimal</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Significant</td>
<td>Needs assistance to perform basic imaging technique; demonstrates a poor knowledge of imaging protocol and has difficulty recognizing normal anatomical structures and pathology; displays poor judgment in the interaction with the patient, patient’s family and/or the healthcare team</td>
<td>Below Average</td>
<td>70</td>
</tr>
<tr>
<td>5</td>
<td>Heavy</td>
<td>Performance of basic imaging technique is grossly inaccurate; does not demonstrate any knowledge of imaging protocol and is unable to recognize normal anatomy or pathology; displays inappropriate interaction with the patient, patient’s family and/or the healthcare team</td>
<td>Poor</td>
<td>60</td>
</tr>
</tbody>
</table>

*The Clinical Instructor has the authority to deem the selected exam too difficult for the stage in the student’s education or beyond entry level expectations.

**Critical errors include, but are not limited to,: 1) omission of findings previously identified in imaging studies; 2) findings easily visible within imaging techniques but not recognized or demonstrated by the student (i.e., > 1cm in size); 3) failure to correlate clinical/imaging to current exam.

Curriculum Integration

The curriculum for the VUMC DMS Program integrates the didactic and clinical education plans. Students are provided classroom and laboratory instruction prior to the assignment of clinical
requirements for the same material. Details which outline this integration are provided in a document titled *Curriculum Threads* which is located in the program Handbook.

**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 during each curriculum Rotation (12 weeks); 2) 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 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. Each course syllabus clearly delineates how the final grade is calculated. Letter grades are assigned and ‘contact hours’ recorded on final transcripts.

Because the certificate program does not grant credits, actual GPAs are not assigned. Letter grades are assigned by the following scale for all courses:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Grade</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>95% - 100%</td>
<td>A</td>
<td>Excellent</td>
</tr>
<tr>
<td>90% - 94%</td>
<td>A-</td>
<td>Very Good</td>
</tr>
<tr>
<td>85% - 89%</td>
<td>B</td>
<td>Good</td>
</tr>
<tr>
<td>80% - 84%</td>
<td>B-</td>
<td>Good</td>
</tr>
<tr>
<td>75% - 79%</td>
<td>C</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>74% or below</td>
<td>F</td>
<td>Inadequate</td>
</tr>
<tr>
<td></td>
<td>I</td>
<td>An Incomplete may be used at the discretion of the instructor in 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 program’s requirements. An “I” that is not replaced by a letter grade within the period of time specified by the relevant program’s requirements, will be changed to an F after the period specified by the program (a period not to exceed one month).</td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>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.</td>
</tr>
</tbody>
</table>

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

**Academic Performance/Adverse Actions/Probation**

If a student earns an overall score of <75% at the end of any rotation the student will be considered as not making Satisfactory Academic Progress (SAP). The student is required to meet with the Program Director, and together they prepare a written action plan for returning to SAP status within a specified time frame.

Failure to return to SAP status according to such a written action plan will result in the student being placed on academic probation. The student will meet again with the Program Director and prepare a second written action plan for improvement to return to SAP within a specified time frame. The second written action plan (developed at the time of probation) replaces the first one developed after the first rotation in which the student fell out of SAP, although it may include some of the same elements/learning objectives.
Academic Probation Appeal
A student who has been placed on academic probation may appeal the probation decision. To do so, the student must submit an appeal request to the Director of Allied Health Programs 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 for the student to be successful in the future.

The student may submit documentation along with the appeal request. The Director of Allied Health Programs will review the appeal and any documentation submitted by the student. The Director of Allied Health Programs will also speak with program faculty and staff involved. The student will be notified of the outcome of the appeal in writing within five (5) business days of its submission. The decision of the Director of Allied Health Programs 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 status, or 2) the student fails to meet the requirements of the academic plan and is dismissed from the program.

Dismissal Related to Academic Performance
DMS students may be dismissed from the program for failure to return to Satisfactory Academic Progress status within the time required by the student’s written action plan for improvement after being placed on academic probation.

Dismissal Appeal
The student may appeal the dismissal decision. Please refer to the Dismissal Appeal Process section of this catalog for further information.

Students who are dismissed are not eligible for re-enrollment. Students who withdraw voluntarily are eligible to reapply for program admission, as long as they were in Satisfactory Academic Progress status when they withdrew. In these instances of re-admission, however, no credit will be awarded for coursework completed during prior period(s) of attendance.

Graduation Requirements
Students of the VUMC Diagnostic Medical Sonography Program will be required to demonstrate 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 Progression Policy.
2. Complete all assigned technical competencies as outlined in the Clinical Competency Plan. Demonstrate competency in technical ability by successfully completing all assigned competency challenges as outlined in the Clinical Competency Plan, including the Final Competency Assessment.
3. Complete all assigned hours in accordance with the Attendance Policy.
4. Successfully 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.)
5. Submission of 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.
Attendance Policy
Required didactic and clinical clock hours will not exceed more than 40 hours per week. Student participation in the classroom and clinical settings are vital to the learning process. Student attendance will be recorded for official program records and maintained in each student’s record. Attendance is recorded daily, monitored regularly, and calculated at the end of each Rotation. Calculation of attendance hours is in increments of one-tenth (1/10) of an hour, and the student MUST be present for the full increment of time to receive credit.

It is understood unforeseen and unavoidable absences can, and will, occur. If a student is absent for an entire session of class, clinical or lab, an Absence Form (provided at Orientation) must be submitted to the Program Director no later than one week after the absence occurs. Any absence does not reduce the satisfactory progress requirements for any didactic, lab, or clinical course (refer to the Make-Up Policy).

Attendance requirements are as follows:
- A minimum of 95% of all didactic and lab clock hours
- A minimum of 98% of all clinical clock hours
Any absences exceeding these amounts will prompt disciplinary action and creation of an action plan to bring the student’s hours of attendance back to a satisfactory level. Any failure of the student to comply with the action plan will result in dismissal.

Course Grading and Attendance
Course grading may be reduced by absences, per each course syllabus. Punctuality is equally as important as attendance and may affect course grades, per each course syllabus. A late arrival of >6 minutes will be recorded as an episode of tardiness. Excessive tardiness will warrant discussion between the Program Director and the student and may result in an adverse effect on students’ grades or other aspects of satisfactory academic progress.

Program Factors and Attendance
Each year the curriculum plan designates the amount of time dedicated to all components of the sonography program. Students are advised that schedule changes may occur due to:
- Inclement weather (determined by the Program Director and the Director of Programs in Allied Health)
- Holidays outside of designated breaks (Memorial Day, July 4th, and Labor Day)
The Program takes full responsibility for ensuring that any change in schedule does not reduce total clock hours, and does NOT restrict curriculum content in any manner. For this reason, students are advised that clock hours missed for the above reasons may require additional sessions to be scheduled. Students will be notified of any class adjustments due to the reasons above.

Extended Absence
An extended absence is defined as three (3) or more consecutive school days. The student is required to notify the Program Director as soon as possible regarding the need for extended absence. The student must provide a completed Absence Form along with the appropriate written documentation to the Program Director to clearly support the necessity for any extended absence. If the absence is due to an illness, documentation must include a written release to return to work/school by the care provider. While extended absences are sometimes unforeseen and unavoidable, repeated extended absences will be reviewed with the student and the Program Director and may result in student withdrawal or disciplinary action. Any extended absence that remains undocumented after a period of one week is in violation of program policies and will be referred for review under the program’s disciplinary action policy.

Any absence of more than three (3) days without notification to the Program Director may result in the student being considered withdrawn from the Program. Please refer to Student Withdrawal Policy for more information.
Compassionate Leave
Three (3) school days of compassionate leave may be provided with proper documentation of the death of an immediate family member, including:
- Spouse
- Child, grandchild, or other dependent
- Parent or Parent-In-Law
- Grandparent
- Sibling

The Program Director will work with the student to determine a feasible plan to make up content missed while on Compassionate Leave.

DMS Program Clinical Education Sites
The following sites are utilized for primary clinical assignments (for purposes of technical competency and challenge completion):
- VUH- Vanderbilt University Hospital, Ultrasound Section in the Department of Radiology, 1st Floor, VUH 1145
- TVC- The Vanderbilt Clinic, Ultrasound Section in the Outpatient Radiology Department, 1st Floor, TVC 1630
- CWI- Center for Women’s Imaging at Vanderbilt
  - Crystal Terrace, Suite 650
  - One Hundred Oaks, Suite 25300
- VCH- Vanderbilt Children’s Hospital, Ultrasound Section in the Department of Radiology, 1st Floor, 1003

The following sites are utilized in a limited manner for specialty assignments:
- VVL- Vanderbilt Vascular Lab in the Vanderbilt Heart and Vascular Institute, MCE, 5th floor (5209)
- VBC- Vanderbilt Breast Center at One Hundred Oaks, Suite 25000
- MFM- Center for Women’s Health at One Hundred Oaks, Suite 27100
- Pedi Echo- Pediatric Cardiology Imaging at Vanderbilt Children’s Hospital, Doctors’ Office Tower, 5th Floor

Required Textbooks

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>ISBN/Publisher</th>
<th>Year</th>
<th>Retail Price*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essentials of Sonography and Patient Care, 3rd Edition</td>
<td>M. Craig</td>
<td>978-1-4377-3545-1/Elsevier</td>
<td>2012</td>
<td>$73.95</td>
</tr>
</tbody>
</table>
Program Library Resources

In addition to the resources available through the Eskind Biomedical Library, students are provided a list of numerous resources available to them through the DMS Program. This list includes texts, journals, CDs, DVDs, and other forms of educational tools. Any of the listed resources may be borrowed from the Program Director. A request to borrow from this resource list may be made verbally or in writing (email is acceptable). Upon release of the resource, the student will provide a signature of acknowledgement for returning it to the Program Director on or before a mutually agreeable date.

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

Program Length: 1286 hours / 44 weeks
Graduation Document: Certificate
Delivery Method: Residential

Program Description
The Vanderbilt University Medical Center Dietetic Internship program is a 10 month (August-June) full time post-baccalaureate supervised practice certificate program. The program provides comprehensive supervised practice experiences for 16 interns as a route to eligibility for the national credentialing examination for Registered Dietitian Nutritionists. The DI provides a pre-eminent supervised practice program that is an excellent model for the preparation of 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. Complete information about the program curriculum may be found on its website, at https://medschool.vanderbilt.edu/allied-health/di.

Goals and Objectives
- 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.
- 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.

Staff and Faculty
Elizabeth W. Robinson, M.Ed., R.D., L.D.N., Program Director (Full-time)
MEd, 1988, Vanderbilt University, Nashville, TN; Certificate, Dietetic Internship, 1984, Vanderbilt University Medical Center, Nashville, TN; BS, Foods and Nutrition, 1980, University of Utah, Salt Lake City, UT

Dianne Killebrew, M.Ed. R.D., L.D.N., Educational Coordinator (Full-time)
MEd, 1982, Vanderbilt University, Nashville, TN; Certificate, Dietetic Internship, 1982, Vanderbilt University Medical Center, Nashville, TN; BS, Dietetics, 1980, Lipscomb University, Nashville, TN

Programmatic Accreditation/Approvals
The Vanderbilt University Medical Center Dietetic Internship program is currently 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 Dietitians 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.

Admission Requirements
The admission requirements for the Dietetic Internship program stipulates the following:
- A baccalaureate degree from a regionally accredited college or university is required. (There is not a minimum grade point average (GPA) for application consideration).
- We DO NOT require a personal interview for acceptance into the Vanderbilt University Medical Center Dietetic Internship.
- Applicants must successfully complete the knowledge requirements and a didactic program in dietetics as stated in the requirements for membership by The Academy of Nutrition and Dietetics.
- Degrees granted more than five years prior to application must be updated through completion of additional course work in MNT/the Nutrition Care Process and food systems management.
- The degree and all course work must be completed before the internship begins. Courses in progress must be successfully completed.
- An official transcript verifying degree was conferred and a verification statement from the didactic Program Director must be received prior to beginning the internship.
- The Graduate Record Examination (GRE) is not required for admission or application.

Application Procedures
- The Dietetic Internship Program at VUMC uses the online centralized internship application, referred to as DICAS.
- Applicants may write to or call the Director to discuss any conditions that might involve special accommodations.
- Applicants are encouraged to visit the facility or call the internship staff to discuss the program.

There are three steps to complete the application process:
1. DICAS Online
2. Supplemental VUMC Application
3. D & D Digital Computer Matching

Step 1: DICAS
DICAS can be accessed at the https://portal.dicas.org
E-mail DICASinfo@DICAS.org. The online application MUST be completed by 11:59 pm (CDT) on February 15th (date is the same each year, regardless of day of the week).

The fee to DICAS is $45 for the 1st application submitted and $20 for each additional application.

On the DICAS application – applicants will be asked to complete a personal statement in 1,000 words or less. Questions to be addressed in the personal statement include:
- Why do you want to enter the profession of dietetics?
- What are some experiences that have helped to prepare you for your career?
- What are your short-term and long-term goals?
- What are your strengths and weaknesses or areas needing improvement?
- Why are you a good fit for the VUMC dietetic internship?
- What contribution will you make to VUMC and the community at large, during your internship?

Official transcripts from all colleges and universities attended should be sent to:

DICAS – Transcript Department
PO Box 9118
Watertown, MA 02472
When completing the application form, you must include the name and contact information (specifically an e-mail address) for each reference. This will trigger an e-mail message requesting completion of a reference form. The form will be completed online.

Students submitting more than one application will need to use the same individuals as references for each application.

Step 2: Supplemental Application
Complete the Supplemental Application form and mail along with a $50 check made payable to the VUMC Dietetic Internship. This fee is non-refundable.
Mail the form to:
Vanderbilt University Medical Center
Elizabeth W. Robinson, MEd, RD, LDN
Dietetic Internship Director
1301 Medical Center Drive, B-802 TVC
Nashville, TN 37232-5510
Postmark date on the Supplemental Application Form must be on or before February 15th (date is the same each year, regardless of day of the week).

Step 3: D&D Digital
Register online for computer matching and select your dietetic internship priority choices by 11:59 pm Central Time on February 15th (date is the same each year, regardless of day of the week).
There is a $55 computer matching fee to D & D Digital payable when your priority choices are identified.
http://www.dnddigital.com
D & D Digital Systems
Suite 301
304 Main Street
Ames, IA 500100
(515) 292-0490 or dnd@sigler.com

Admission Procedures

- Applications are reviewed by a selection committee that includes internship faculty, preceptors, and current interns. Each member of the committee reviews all assigned internship applications. The application review process is done without discussion. Each committee member ranks each applicant. The collective ranking by committee members determines the ranking submitted to D & D Digital.
- Sixteen interns are selected for the 44 week program – which typically runs from August to June.
- Information from applicant visits to the facility (or from calls to the internship staff to discuss the program) is not used to select applicants, nor is preference given to candidates who choose to visit.
- Discussions with the director regarding special accommodations are not required for admission and will not be considered in the selection process.
- Appointments are awarded without regard to race, sex, religion, color, national or ethnic origin, age, disability, military service, or genetic information. Marital status, age and geographic area of the applicant are not considered.
Tuition and Fees

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dietetic Internship</strong></td>
<td></td>
</tr>
<tr>
<td>Tuition (includes $250 deposit)</td>
<td>12,825</td>
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<tr>
<td>Application Fees</td>
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<tr>
<td>DICAS Application Fee (payable to third party)</td>
<td>45</td>
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<tr>
<td>VUMC Supplemental Application Fee (payable to VUMC)</td>
<td>50</td>
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<tr>
<td>D&amp;D Digital Computer Matching Fee (payable to third party)</td>
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<tr>
<td>Miscellaneous Fees</td>
<td></td>
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<tr>
<td>Background Check</td>
<td>30</td>
</tr>
<tr>
<td>Drug Screen</td>
<td>60</td>
</tr>
<tr>
<td>Professional Conferences/Memberships</td>
<td>800</td>
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<tr>
<td>Review Course</td>
<td>400</td>
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<td>Professional Credential</td>
<td>200</td>
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<tr>
<td>Textbooks</td>
<td>325</td>
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<tr>
<td>Computer</td>
<td>1000</td>
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<tr>
<td>Parking</td>
<td>200</td>
</tr>
<tr>
<td><strong>Total Program Cost</strong></td>
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</table>

$15,990

Academic/Program Calendar 2017 - 2018
This 44-week program typically runs from August to June of each year.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/14/2017</td>
<td>Start Date</td>
</tr>
<tr>
<td>09/04/2017</td>
<td>Labor Day - No Rotations</td>
</tr>
<tr>
<td>11/20 - 11/24/2017</td>
<td>Thanksgiving Break</td>
</tr>
<tr>
<td>12/22/2017 - 01/07/2018</td>
<td>Christmas Break</td>
</tr>
<tr>
<td>03/30/2018</td>
<td>Good Friday - No Rotations</td>
</tr>
<tr>
<td>05/28/2018</td>
<td>Memorial Day - No Rotations</td>
</tr>
<tr>
<td>06/25/2018</td>
<td>Graduation</td>
</tr>
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</table>

Curriculum Description

<table>
<thead>
<tr>
<th>Course</th>
<th>Lecture</th>
<th>Lab</th>
<th>Practicum / Clinical</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dietetic Internship</td>
<td>0</td>
<td>0</td>
<td>1286.00</td>
<td>1286.00</td>
</tr>
<tr>
<td><strong>Program Totals</strong></td>
<td>0</td>
<td>0</td>
<td>1286.00</td>
<td>1286.00</td>
</tr>
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</table>

Dietetic Internship Program Syllabus
The Dietetic Internship Program Syllabus provides essential information about the learning activities that take place during the internship, as well as the grading and evaluation criteria against which student performance will be assessed. Students are expected to review and be responsible for Syllabus content as much as they are for content in this Intern Handbook.
Requirements for Completion of the Dietetic Internship and Eligibility for Registration Examination

Learning activities (in rotations, community events, professional development days and special projects) are planned to enable the dietetic intern to attain competence in the 41 Core Competencies for Dietitians and 3 Concentration Competencies in the areas of disease management / health promotion as outlined in the Standards of Education. The planned activities for each rotation, community event, professional development day and special project are minimum requirements for every intern. Experience and initiative of the intern will determine the objectives accomplished beyond the minimum. Additionally, interns must comply with the Standards of Responsibility, the Standards of Practice of The Academy of Nutrition and Dietetics and the Vanderbilt University Medical Center Dietetic Internship Honor Code. The minimum number of hours required to complete the Vanderbilt University Medical Center Dietetic Internship Program is 1,286.

An exit interview is scheduled during summary week to summarize performance. A minimum overall average score of 80 and a score of 80 in each of the four core competency categories, case studies, entry level practice rotations, and concentration area rotation must be achieved to meet requirements for receipt of a Verification Statement. Clinical and management entry-level practice rotations, concentration area rotation and case studies may not be repeated. Conferences may also be scheduled at any time by the staff or at the request of the dietetic intern.

Evaluation of Student Performance

Student performance is assessed through the use of competencies. A detailed list of Core Competencies for Dietitians is provided in the Syllabus for the VUMC Dietetic Internship Program. Students should refer to these regularly and be familiar with them.

The competencies used to assess student performance vary by activity and assignment, given that each activity requires different skills and abilities. As a result the competency/objective/evaluation form used to assess students is unique to each rotation, but in all cases the form contains rotation-specific core competencies each intern is expected to achieve throughout individual rotations.

Interns in the Vanderbilt University Medical Center Dietetic Internship Program are evaluated on a numerical rating scale (based on 100 points) by the rotation site preceptor. The student is considered as maintaining satisfactory academic performance if he/she maintains a minimum average score of 70 in rotations, and 80 on assignments (as indicated below), to be evaluated at the end of each rotation.

<table>
<thead>
<tr>
<th>Rotations: Disease Management and Health Promotion (mbc)</th>
<th>&gt;=70%</th>
<th>Required for each rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four Core Competency Categories, Case Studies, Entry Level Practice Rotation, and Concentration Area Rotation</td>
<td>&gt;=80%</td>
<td>Work assignments other than rotations</td>
</tr>
<tr>
<td>Required Midyear Grade</td>
<td>&gt;=70%</td>
<td>Overall grade required at Midyear for continuance in the program</td>
</tr>
<tr>
<td>Total Overall Average</td>
<td>&gt;=80%</td>
<td>Required at completion of Internship as overall composite percentage out of 100 points total</td>
</tr>
</tbody>
</table>

An overall average score of 70 is required at mid-term for continuance in the program. Additionally, an intern may not continue in the program if an overall score of less than 70 is earned in three rotations.
Competency/Objective/Evaluation Form

1. The competency/objective/evaluation form is used to evaluate the intern’s performance. After completing the rotation, the intern contacts the preceptor to schedule an evaluation conference. Typically, the conference is held within 14 days of intern’s completion of the rotation. The intern must sign this form after reviewing the written evaluation. During a rotation, periodic oral conferences between interns and preceptors are also useful in determining the intern’s progress.

2. The intern uses a copy of the same competency/objective/evaluation form for self-evaluation and to evaluate the learning experiences offered during the rotation.

3. The intern brings his/her completed competency/objective form to the evaluation conference.

4. After discussion, the intern and preceptor set goals for competencies or areas that need additional experience. These should then be recorded by the intern on the professional development form for upcoming rotation(s).

5. If necessary, the Educational Coordinator or Internship Director is consulted to make necessary arrangements for additional or altered learning experiences.

6. The Internship staff then calculate overall scores for each rotation, utilizing scores from core competencies (60%) and overall performance rating (40%). These are recorded on the summative evaluation form by the Internship staff and discussed at conferences throughout the semester and at mid-term and exit conferences.

The Internship staff assimilate the evaluations to determine whether the intern has attained the competence required for entry-level practice. A numerical rating scale is used to rate minimum performance. Conferences with the Internship staff are scheduled throughout the semester and at mid-year to review each intern's progress and discuss educational experiences during the remainder of the program.

Academic Remediation/Adverse Actions

If an intern is evaluated to need improvement in a competency, rotation or project, the Internship staff will consult with the intern to set written goals for meeting the competency within a specified time period and within the 44-week program. If indicated, the intern will be referred to the EAP for evaluation and assistance with personal or social problems impeding the intern’s ability to meet performance requirements.

If an intern earns an overall rotation score of less than 70 in one rotation, the intern will meet with the educational coordinator and Internship Director and prepare a written action plan for improvement to meet competency in a specified time period and within the 44-week program. Failure to achieve a minimum score of 70 in a second rotation will also require written action plan for improvement to meet competency within a specified time period and within the 44-week program, and the intern will be placed on academic probation. Failure to achieve a minimum score of 70 in three rotations will result in dismissal from the program. Failure to meet requirements within the specified time period set at the consultation and within the current 44-week program will result in dismissal.

Attendance Policies

Attendance is required and punctuality is expected for each rotation day, as well as for all class days, community events and conferences. The mid-year and final internship scores will have a 5% deduction for each unexcused absence or excessive tardiness. Rotation scores will be reduced 5% for excessive tardiness to that rotation. Excessive tardiness is defined as two or more late arrivals to class, community event or rotation. Three tardies results in academic probation and five tardies results in dismissal from the program.

Make up time must be scheduled for all absences. Time off will not be scheduled for personal reasons (social occasions/job interviews, family outings). Interns are expected to work all assigned hours in rotations and community events and be present for the entirety of each class day, community event or
conference, including professional meetings. In the event of illness, the Internship Director and rotation preceptor must be contacted via phone before the time you are assigned to report.

**Leave Policies**

**Bereavement**
Interns may be granted up to three working days of leave in cases of death in the immediate family. "Immediate Family" is defined as parents, grandparents, spouse, child, sister, brother, father-in-law or mother-in-law. Requests for leave and/or exceptions must be made with the Internship Director. Adjustments in schedules, assignments may need to be made. These will be determined on an individual basis.

**Holidays**
If an intern is scheduled for a rotation on a day a facility observes as a holiday, the intern will not be required to report to the facility. All written work will be required. Learning experiences that occur only on the holiday may be changed. Interns will not be allowed to accumulate time to take before or after a holiday. In addition, leave days will not be granted on the last assigned work day before the beginning of scheduled vacation/holiday.

**Emergency Leave Days**
Emergency leave may be granted only in cases of extenuating circumstances. These determinations will be made by the Internship Director on an individual basis. Interns will be responsible for making up all work time missed. Make up work will be scheduled according to availability of experiences and preceptors.

**Sick Leave**
If you are unable to report to your assigned area because of illness, you must speak with the internship staff (voice mails are not acceptable) and the preceptor to whom you are responsible each day of your absence. Contact must be made prior to your scheduled time to report. If you have assigned responsibility for a dietitian or other specific positions, you must also inform the dietitian who can make arrangements for coverage of the area. You may be asked to provide a doctor’s statement to substantiate illness and/or readiness to return to work. You need to be afebrile for 24 hours before returning to work.

If an intern is absent during the program because of illness, the internship staff will schedule additional time to make up learning activities that have been missed and may alter completion date of the program. However, opportunities to make up learning activities may not always be available and similar learning experiences may be substituted. Excessive sick leave may impact the intern’s ability to complete objectives of rotations and achieve competency in a particular practice area therefore, sick leave should be used only when necessary and should not be considered a “free day off”.

If an intern misses
- 50% of a rotation
- One or more days during entry level practice rotation or concentration rotation
he or she will receive an incomplete for the rotation. The intern will be scheduled to make up the missed time. **The maximum time frame for completing the Vanderbilt University Medical Center Dietetic Internship is 15 months (150% of the 10-month program).**

Sick leave should be recorded on the timesheet and productivity form and turned in to the Internship Director at the end of each month. Internship staff may elect to send the student to Occupational Health if there is a pattern of illness. Ten sick days (one per month) are allotted for the duration of the program.
Medical Leave of Absence
A request for a medical leave of absence by an intern must be approved by the Internship Director. Proper documentation of the medical condition will be required. If a medical leave of absence is taken, the intern must agree to re-enter the program at a time when the Internship Director can schedule the intern for remaining rotations. Dependent on the length of the requested medical leave, the intern may be required to repeat rotations to ensure competence has been established. Depending on the length of time of the approved medical leave of absence the intern may have a different completion date than his/her classmates. However, the program must be completed within 15 months of starting the program.

Vacation
During 2017-2018, the dietetic intern receives a total of 19 leave days. These days have been planned in the rotation schedule and are not subject to change by the intern. If unforeseen circumstances make it necessary for you to be absent beyond, or in addition to, the allowed leave time, you must confer with the Internship Director and make arrangements to make up the time. The internship may alter leave schedules, as needed, to ensure interns meet competence for entry level practice. Leave time should be accurately recorded on the timesheet form and the productivity form and turned in to Elizabeth Robinson at the end of each month.

Severe Weather Absences
During severe weather conditions, such as snow, ice, tornado warnings, etc., dietetic interns are expected to report to the assigned learning activities as scheduled. Only internship staff may excuse interns. You should consider walking or using public transportation if you are uncomfortable driving during inclement weather. If you are uncertain of what to do, please call the internship staff. If rotations are cancelled due to inclement weather you may be asked to complete rotations during leave days to make up the missed time.

The use of vacation/leave time or sick days will not be granted during weather emergencies if interns are deemed to be “essential staff.” **No staff or interns may leave the premises during yellow or orange alerts (for weather or other emergency drills or events).** If absence from the assignment is necessary, the intern will need to make up the time. No learning experiences will be altered or deleted because of severe weather.

Program Library / Reference Materials
Personal reference materials in the VUMC Dietetic Internship office may be borrowed by checking with the Internship Director or Educational Coordinator.

To borrow reference materials located in the various dietitian offices or affiliated institutions, check with the supervising dietitian before removing the material. Return books and references promptly to the office and location where they are kept. Others should have the same opportunity to use the resources that you have had. You will be held financially responsible for any Internship references you lose or that are checked out in your name and not returned.

Copying materials for personal use is the intern's responsibility. The copy machine in the B802 TVC Nutrition Services office suite is not to be used by interns’ for personal use. Printing materials for personal use by using Vanderbilt computers and printers is prohibited. **Requests for copies of material to be used for presentations, in-service, rotations or nutrition classes must be approved by the Internship Director.** If copies printed in the interns’ study room exceed the printer allowance an additional fee will be charged to all 16 interns during spring semester to cover the excess printing cost.
Dietetic Internship Facilities
VUMC is vitally involved in the education of healthcare professionals, and 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 Dietetic Internship also has a dedicated classroom and program offices in the Vanderbilt University Hospital on the VUMC campus.

**Required Textbooks – Clinically Focused**

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>ISBN/Publisher</th>
<th>Year</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ASPEN Nutrition Support Core Curriculum: A Case Based Approach—The Adult Patient. 2nd Edition</td>
<td>Charles Mueller; Stephen A. McClave; Denise Baird Schwartz; Debra S. Kovacevich; Sarah J. Miller</td>
<td>978-1-8896-2207-1, American Society for Parenteral &amp; Enteral Nutrition</td>
<td>2012</td>
<td>$118.50</td>
</tr>
<tr>
<td>NFPE Pediatric Pocket Guide</td>
<td>Beth Mordarski and Jodi Wolff</td>
<td>978-0-88091-497-0, Academy of Nutrition and Dietetics</td>
<td>2016</td>
<td>$10.00</td>
</tr>
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</table>

**Required Textbooks – Management, Business, Community Focused**

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>ISBN/Publisher</th>
<th>Year</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pocket Resource for Management, 4th Edition.</td>
<td>Mary Rybicki and Dana Filmore</td>
<td>SKU 5016, Dietetics in Health Care Communities practice group of the Academy of</td>
<td>2015</td>
<td>$30.00</td>
</tr>
</tbody>
</table>
This catalog contains only a summary of Dietetic Internship program policies and procedures. Students should refer to the Dietetic Internship Intern Handbook and Syllabus for more detailed information.
MEDICAL LABORATORY SCIENCE

Program Length: 1951 hours / 56 weeks
Graduation Document: Certificate
Delivery Method: Residential

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. Medical technologists, also known as medical laboratory scientists, are trained in all major clinical pathology areas including Clinical Chemistry, Hematology, Hemostasis and Thrombosis, Immunopathology, Immunohematology, Microbiology, Urinalysis & Body Fluids, Molecular Diagnostics and Management/Supervisory skills. Training includes both didactic and practical experiences.

Laboratory and classroom space is located in the School of Medicine, 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 Supervisor, and faculty from each area of the laboratory who are experts in their respective fields.

Goals and Objectives

- The 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

Staff and Faculty

Holly Covas, MPH, MLS (ASCP)
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

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
Annette Billings, MLS (ASCP)  
Instructor (Part-time)  
Certificate, MLS, 2011, Vanderbilt University Medical Center, Nashville, TN; BS, Biology, 2009, David Lipscomb University, Nashville, 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

Jerri DeMarco, MT (ASCP)  
Instructor (Part-time)  
BS, Secondary Education, 1977, University of Tennessee, Martin, Martin, TN

Darla Emberton, MLS (ASCP)CM  
Instructor (Part-time)  
Certificate, MLS, 2013, Vanderbilt University Medical Center, Nashville, TN; BS, Psychology, 2009, Middle Tennessee State University, Murfreesboro, TN

Micky Ezell, MT (ASCP)  
Instructor (Part-time)  
AAS, Med Tech, 1980, Columbia State Community College, Columbia, 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

Kimberly Klocek, MLS (ASCP)  
Instructor (Part-time)  
BS, 2007, Medical Technology, Austin Peay State University, Clarksville, TN

Tonya Snyder, MT (ASCP)  
Instructor (Part-time)  
BS, Medical Technology, 1981, University of Cincinnati, Cincinnati, OH

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
Destiny Whitfield, MLS (ASCP)CM
Instructor (Part-time)
MS, Clinical Laboratory Sciences, 2011, University of Alabama, Birmingham, Birmingham, AL

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@naacls.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

Physical Activity Standards
To ensure they are able to perform essential job functions, candidates for admission must also possess the following:

• The physical capability and manual dexterity required to perform phlebotomy and routine laboratory procedures. These include, but are not limited to, repetitive hand motions, differentiation of colors for interpretation of color reactions and cellular morphology.
• The physical ability to work with laboratory computers and communicate effectively with medical technologists, patients, physicians and other health care professionals. This ability is assessed from references and the interview process

Admission Policy
Candidates for admission must have a high school diploma, or the equivalent, and satisfy the following criteria by submission of official transcripts:

• Bachelor’s degree from an accredited college or university
OR

- Eligibility to receive the bachelor’s degree from one of the program’s academic affiliated schools upon successful completion of the clinical year in the Medical Laboratory Science program. Individuals who are considered eligible are required to have a minimum of three years (90 semester or 136 quarter hours) of college credits. The three-year applicant must submit verification that all academic requirements for graduation have been met at an accredited college or university. After successful completion of the clinical year, the student will be awarded a baccalaureate degree from the accredited college or university and receive a certificate of completion from Vanderbilt University Medical Center Programs in Allied Health.

The content of courses must be applicable towards a major in that area or in medical laboratory science. Survey courses are not accepted toward the requirements. All prerequisite courses must successfully be completed prior to the beginning of the MLS program in order to be considered. Out of the 90 total semester hours (136 quarter hours) required for acceptance into the program, a minimum number of classes and hours* is required in the following concentrations:

- A minimum of 16 semester hours or 24 quarter hours of Chemistry
  1. Required: Organic or Biochemistry
  2. Recommended: Quantitative Analytical Chemistry, Clinical Instrumentation
- A minimum of 16 semester or 24 quarter hours of Biological Sciences
  1. Required: Microbiology, Immunology (these are separate courses)
  2. Recommended: Genetics, Anatomy & Physiology
- A minimum of 3 semester hours or 4.5 quarter hour of College Mathematics (at College Algebra level or higher)
  1. Recommended: Statistics, Physics, and Computer courses
- A minimum overall and science academic average of 2.5 (4.0 scale)

*Individuals who meet the minimum requirements seven years or more prior to application are requested to update their coursework in Immunology. Other areas suggested for updating include Microbiology, Genetics and Organic and or Biochemistry

**Application Procedures**

Individuals from any accredited college or University who meet the minimum academic requirements are eligible for admission into the program. Applications should be submitted prior to November 1 to ensure sufficient time for processing information and scheduling of an interview. If you have missed the deadline and you are still interested, please send your application in as quickly as possible. Late applications will be handled on a case-by-case basis.

Applicants must submit the following:

- Completed program application (which may be downloaded from the VUMC website).
- 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 a minimum of 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 enclosed evaluation form, but may include a personalized letter of reference as well.

Completed applications and reference evaluation letters should be mailed to the program to:

*Program of Medical Laboratory Science*
*Vanderbilt University Medical Center*
*4605 TVC*
*1301 Medical Center Drive*
*Nashville, TN 37232-5310*

Individuals who have any questions during the application process may contact the program director,
Application Deadline for All Required Documents is November 1.

Foreign Credentials
Applicants with a baccalaureate degree or equivalent from a foreign college or University are required to submit the following additional information:

- An official detailed transcript evaluation from an approved agency indicating the courses taken, credit hours and grades. A list of approved agencies is available upon request.
- Submit scores from the Test of English as a Foreign Language (TOEFL) exam

Admission Procedures
The Program Advisory Committee offers appointments 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)
- Science Grade Point Average
- Letters of Recommendation or Pre-professional Evaluation
- Interview Evaluation

The Interview Evaluation 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 an ability to make decisions based on sound knowledge, strong ethical and moral attitudes, and a commitment to quality patient care.

Tuition and Fees

<table>
<thead>
<tr>
<th>MEDICAL LABORATORY SCIENCE</th>
<th>6/05/17 - 6/25/18</th>
</tr>
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<tr>
<td>Tuition</td>
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<tr>
<td>Miscellaneous Fees</td>
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<td>Scrubs</td>
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<td>Supplies</td>
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<td>Books</td>
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<tr>
<td>Computer</td>
<td>1,000.00</td>
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<tr>
<td>Parking</td>
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</tr>
<tr>
<td>TOTAL PROGRAM COST</td>
<td>8,405.00</td>
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</table>
Curriculum and Calendar
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.

Students are required to be present on a full time basis throughout the year of training. Classes in the first six months run from 8:30 a.m. to 4:30 p.m. Monday through Friday. Clinical rotation hours will vary according to the individual laboratory sections and include some rotation time on evening and night shifts.

Academic Calendar – 2017-2018 Program Calendar

<table>
<thead>
<tr>
<th>Start Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>06/05/2017</td>
<td>Start Date</td>
</tr>
<tr>
<td>09/18 - 09/22/2017</td>
<td>Fall Break</td>
</tr>
<tr>
<td>11/23 - 11/24/2017</td>
<td>Thanksgiving Break</td>
</tr>
<tr>
<td>12/22 - 01/08/2017</td>
<td>Christmas Break</td>
</tr>
<tr>
<td>Variable 5 day period*</td>
<td>Spring Break</td>
</tr>
<tr>
<td>05/29/2018</td>
<td>Memorial Day - No Rotations</td>
</tr>
<tr>
<td>06/30/2018</td>
<td>Graduation</td>
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</table>

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

Course Descriptions

<table>
<thead>
<tr>
<th>Course</th>
<th>Lecture</th>
<th>Lab</th>
<th>Practicum / Clinical</th>
<th>Total Hours</th>
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<td>Chemistry</td>
<td>262.5</td>
<td>0</td>
<td>200.00</td>
<td>462.5</td>
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<td>Urinalysis/Body Fluids</td>
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<tr>
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<td>200.00</td>
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<tr>
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<td>12.0</td>
<td>8.0</td>
<td>29.0</td>
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<tr>
<td>Parasitology</td>
<td>10.00</td>
<td>25.0</td>
<td></td>
<td>35.00</td>
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<tr>
<td>Orientation</td>
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<td>32.0</td>
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<tr>
<td>Seminar</td>
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<td>75.00</td>
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<td>Phlebotomy</td>
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<td>34.5</td>
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<tr>
<td>Molecular Diagnostics</td>
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<td></td>
<td>817.00</td>
<td>206.5</td>
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<td>1951.0</td>
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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.

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

Successful completion of the program includes the following academic requirements:

- **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 segments:
  - Technical/Performance
  - Theory
  - 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. A grade of less than 75% on the behavioral evaluation will require the student to pursue academic counseling with the program director.

- **Exit Exam:** Students must pass a final comprehensive exam at the end of the program year. Students will have three attempts to pass the exam with a minimum 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.

**Satisfactory Academic Progress**

Students are expected to perform at a certain level of competency 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 subject to academic probation as outlined below.

**Definitions**

- **Semester:** The academic year is divided into two halves, or semesters. The lecture/student laboratory begins in June and is completed in mid-December. Coursework completed during this portion of the program is similar to an academic classroom setting, in which students attend lectures and complete student laboratory assignments. The second half of the program, the clinical practicum, is from January through the end of June and includes clinical rotations in each department of the clinical laboratory.

- **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 and in the program handbook.

- **Transcript grade:** 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 weights 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 to this general weight 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. 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, course grades are considered independently of the final transcript grade.

- **Lecture/student laboratory:** This half of the program includes lectures provided by instructors as well as guest speakers. Guest speakers may include other medical laboratory scientists, supervisors, managers, administrative directors, residents, fellows, and medical directors. Students will listen to lectures in the classroom and engage in discussion of the material. Students will 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 will also give presentations based on review material and case studies. The weight of all of these assignments will be provided to the students in the course syllabus, and course length varies based on the amount of material that must be covered in each course. See sample lecture schedule in the MLS student handbook for information concerning the length of each lecture course.

- **Clinical Practicum:** Also called clinical rotations. This portion of the program involves time spent in the diagnostic laboratories. During this time, students will work alongside medical laboratory scientists to learn how to operate the instrumentation and interpret patient results. Students will complete case studies, checklists, study questions, unknown patient samples, research papers, and written assessments. Students will receive information and an overview on the first day of each practicum. The time spent in each clinical practicum will vary based on the amount of material that must be covered in each practicum. See sample practicum schedule in the MLS student handbook for information concerning the length of each practicum.

**Policy**

- **Lecture/Student Laboratory Component:** Any student that does not achieve a minimum grade of 75% in any lecture/student laboratory course will be placed on academic probation until the student has completed the corresponding rotation with a grade that brings the overall transcript grade to 75% or greater. When courses do not have a clinical rotation (e.g., Parasitology), a minimum of 75% is required for that lecture/student laboratory section in order to progress in the program. Students that do not achieve a minimum of 75% in a second course during the Lecture/Student Laboratory portion of the program will be dismissed from the program.

- **Clinical Practicum Component:** When a student achieves a final grade below 75% in any section of the laboratory practicum and has not previously failed to meet the standard in any other component of the program, remedial work will be provided to the student as an opportunity to meet the standard. If the student fails to meet the academic standard following remedial work, his/her coursework and other performance materials from the program will be reviewed by the Program Advisory Committee to determine an appropriate consequence, including dismissal from the program.

**Progression in the Program**

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.
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.

Attendance Policy

Students are expected to be present on a full-time basis throughout the Medical Laboratory Science program. Students are expected to present in the assigned site (classroom or laboratory section) at the scheduled start time and remain in the area for the entire scheduled time except when taking appropriate breaks. Attendance for the first half of the program will be taken daily by the lecture instructor.

Students are required to arrive on time for class and for the clinical practicum. During the clinical practicum portion of the program, students must maintain a daily time sheet. These time sheets must be signed by the clinical instructor and the student, and submitted to the program director at the completion of each rotation. Documentation of any absences and/or tardies is to be noted on these forms.

In addition to scheduled breaks and holidays throughout the program, students will be allowed five days during the program to miss due to personal reasons. “Personal reasons” include, but are not limited to, routine doctor appointments, vacations, etc., in which the student has knowledge of the absence beforehand and/or the absence is not due to an illness, emergency, or military obligation of the student. These days must be approved in writing by the course instructor and program director prior to the absence. Students will be responsible for completing all assignments prior to the planned absence unless the instructor deems it necessary that the assignments must be completed after the student returns. If such is the case, the student must complete the assignment at the convenience of the instructor upon returning. If a student is only absent from one class instead of both classes on a particular day, the missed time will be calculated as a ½ day.

In the case of illness or emergency, in which a student must be absent without prior notice, the student must report the situation immediately by:

- Call the appropriate department for the lecture or practicum instructor. If the instructor is not available, the student will leave a message with the laboratory professional who answered the call and email the instructor to follow up.
- Email (holly.covas@vanderbilt.edu) or call the program director at 615-322-8681, with pertinent information, including how long the student anticipates the absence to be and how the information was communicated to the instructor (i.e., phone call or email).
- If the absence extends beyond one day, the student must keep the instructor and program director current on the duration of time away.
- Any absence greater than one day will require a doctor’s excuse before make-up work can be scheduled.

Please do not attend a lecture/student laboratory or clinical practicum if any of the following apply:

- Vomiting/diarrhea
- Fever greater than 101 F
- Diagnosis of a communicable illness
Any assignments missed during the illness or emergency must be completed upon the student’s return, and, in the case of assignments that require supervision (e.g., exam, laboratory exercise), will be scheduled at the convenience of the instructor. This may require the student to arrive early, stay late, or come in on a weekend shift. All make-up work must be scheduled with the instructor within one week of the student’s return. Failure to schedule make-up work or failure to complete make-up work as assigned will result in an automatic zero (0).

**Program Library Resources**
Library resources are available to the students in the Light Hall classroom and the program director's office in The Vanderbilt Clinic. Resources may be checked out for the duration of the program. Students also have access to the library resources at the Eskind Biomedical Library and receive information on what materials are available and how to access them during their orientation week.

**Required Textbooks:**

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<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>ISBN/Publisher</th>
<th>Year</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Clinical Hematology and Fundamentals of Hemostasis, 5th Edition</td>
<td>Denise M. Harmening</td>
<td>978-0-8036-1732-2 / FA Davis</td>
<td>2008</td>
<td>$134.00</td>
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<tr>
<td>Textbook of Diagnostic Microbiology, 5th ed.</td>
<td>C. Mahon, D. Lehman, G. Manuselis</td>
<td>978-0-323-08989-0 / Elsevier</td>
<td>2015</td>
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<tr>
<td>Urinalysis and Body Fluids, 6th Edition</td>
<td>S.K. Strasinger &amp; M.S.DiLorenzo</td>
<td>978-0-8036-3920 / FA Davis</td>
<td>2014</td>
<td>$64.95</td>
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*This catalog contains only a summary of program policies and procedures. Students should refer to the program/student handbook for additional information.*
NEURODIAGNOSTIC TECHNOLOGY

Program Length: 2028 hours / 71 weeks
Graduation Document: Certificate
Delivery Method: Residential

Program Description
The Neurodiagnostic Technology program includes 71 Weeks of clinical and didactic training leading to a certificate in Neurodiagnostic Technology. The program officials include a Medical Director, Program Director, and Clinical Coordinators, all of whom are experts in the field.

Neurodiagnostics is the allied health care profession that records, monitor, and analyzes nervous system function to promote the effective treatment of pathologic conditions. Technologists record electrical activity arising from the brain, spinal cord, peripheral nerves, somatosensory or motor nerve systems using a variety of techniques and instruments. Technologists prepare data and documentation for interpretation by a physician. Considerable individual initiative, reasoning skill, and sound judgment are all expected of the neurodiagnostic professional. The most common neurodiagnostic procedures are the Electroencephalogram (EEG), Intraoperative Neuromonitoring (IONM), Long Term Monitoring (LTM), Polysomnogram (PSG), Evoked Potentials (EP), and Nerve Conduction Studies (NCS).

The mission of VUMC’s Neurodiagnostic Technology Program is to contribute its part to the maintenance of Vanderbilt University Medical Center’s established reputation of excellence in the roles of patient care and education by educating students who will develop excellent skills, develop a sense of ownership and become lifelong learners.

As an Allied Health Education Program at Vanderbilt, the NDT program has the resources to offer a wide range of educational opportunities in both didactic and clinical experience. These opportunities include lectures by the medical faculty, a diverse and collaborative group, from the Department of Neurology; lectures by experts from related fields, and courses developed by ASET-The Neurodiagnostic Society. This variety is necessary due to the rapid changes and technological advances that occur in the field.

The program is dedicated to producing competent technologists who will exemplify the Credo Behaviors of Vanderbilt University Medical Center by making those we serve our highest priority, respecting privacy and confidentiality, communicating effectively, acting professionally, having a sense of ownership and being committed to colleagues.

The foundation of the Neurodiagnostic Technology curriculum is based on the courses developed by ASET, the national society representing the neurodiagnostic technology profession. Complete information about the program curriculum may be found on its website, at https://medschool.vanderbilt.edu/allied-health/ndt.

Staff and Faculty

Riki Rager, R. EEG T., B.S., FASET
Program Director (Full-time)
Bachelor of Science, Allied Health Administration, 1992, University of Alabama Birmingham, Birmingham, AL
Programmatic Accreditation/Approvals
The Vanderbilt University Medical Center Neurodiagnostic Technology program is programmatically accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Committee on Accreditation for Neurodiagnostic Technology based on a programmatic review and site visit. Recognition by CAAHEP qualifies the program's graduates for eligibility to apply for and take the EEG Examination administered by the ABRET Neurodiagnostic Credentialing and Accreditation.

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

ABRET:
ABRET Executive Office
2908 Greenbriar Drive, Suite A
Springfield, IL 62704
Phone: 217.726.7980
Fax: 217.726.7989

Goals and Objectives
The goals of the Neurodiagnostic Technology program at Vanderbilt University Medical Center are in keeping with the requirements of the profession:

1. To provide learning opportunities that will stimulate individual initiative in the pursuit of quality
2. To prepare students for entry level positions as electroencephalographic technologists who are able to meet the required competencies of the profession as published by ASET including minimum competencies in evoked potentials, nerve conductions, polysomnography and intraoperative monitoring by providing.
3. To prepare the student to pass the national registry exam in EEG technology given by ABRET-Neurodiagnostic Credentialing and Accreditation Board.
4. To promote professional growth by providing exposure to activities in state and national NDT societies.
5. To provide students with a broad range of resources by involving both medical and nonmedical professionals in our lecture series.
6. To engage students in a variety of activities serving the public, employers and physicians.

Upon graduation, students will have demonstrated and completed all clinical and academic competencies required for eligibility to take the EEG Examination administered by ABRET Neurodiagnostic Credentialing and Accreditation.

Graduation Requirements
In order to graduate from the VUMC Neurodiagnostic Technology Program, students must do the following:

- Pass all courses in the curriculum
- Score 70% or higher on all final exams
- Complete 100 EEGs
- Successfully complete all clinical rotations.
Admission Policy
For the Neurodiagnostic Technology program, the admissions process screens and evaluates each applicant’s credentials before a decision for acceptance or rejection is made. As stated in the catalog, the Admission Policy of the Neurodiagnostic Technology program stipulates the following:

For the entering class of 2017, applicants must have a high school diploma, but are encouraged to complete one year of college with a concentration in the sciences.

For the class entering in 2018, applicants will be required to have an Associate’s degree with some courses in biology and chemistry as the minimum educational background requirement.

The Neurodiagnostic Technology program is open to all qualified persons, without discrimination with respect to race, color, age, sex, religion, national origin, disability, sexual orientation or veteran status.

To help ensure the likelihood of student success, the Admissions Committee has developed the following admission procedure to determine if the applicant’s qualifications and background are compatible with institutional and curricular objectives.

The Program Advisory Committee will offer appointments to the program once a year. All participants are evaluated on an individual basis with selection based on the following criteria:

- Transcripts
- Letters of Recommendation
- Interview with Program Director
- Panel Interview

After acceptance into the program, applicants must submit:

- Up-to-date immunization record (see below)
- Evidence of health insurance
- Background check

Applicants to the Neurodiagnostic Technology program are beyond the age of compulsory institution attendance in Tennessee and can be reasonably expected to benefit from the training offered by the institution. Vanderbilt University Medical Center does not admit Ability-to-Benefit students.

Physical Activity Standards
To meet the technical standards, applicants for the program must have adequate sight to read computer and analog recordings, adequate hearing to be able to communicate with patients and healthcare staff, and sufficient manual dexterity to perform procedures safely with accuracy and precision

The Neurodiagnostic Technology program is open to all qualified persons, without discrimination with respect to race, color, age, sex, religion, national origin, disability, sexual orientation or veteran status.

Application Procedures
Individuals who meet the minimum academic requirements are eligible for admission into the program. Applications should be submitted to ensure sufficient time for processing information and scheduling of an interview.

Applicants must submit the following:

- Completed application
- $35 application fee
- Official transcripts from institutions of higher learning
- Three letters of recommendation from employers or instructors
• Interview with the Program Director to discuss eligibility
• Interview with a panel that will include the Program Director, Medical Director, one of the Allied Health Program Directors, and one of the Neurodiagnostic Supervisors

Completed applications, transcripts, and letters of recommendation should be mailed to the program at:
Allied Health, NDT Program Attn: Kristen Smith
1301 Medical Center Drive
B-802 The Vanderbilt Clinic
Nashville, TN 37232-5510

**Admission Procedures**
The Program Advisory Committee will offer appointments to the program once a year. All participants are evaluated on an individual basis with selection based on the following criteria:

- Transcripts
- Letters of Recommendation
- Interview with Program Director
- Panel Interview

**Tuition and Fees**

<table>
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<th>NEURODIAGNOSTIC TECHNOLOGY</th>
<th>(1st year) 9/05/17 – 6/30/18</th>
<th>(2nd year) 7/01/18 - 3/25/19</th>
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<tr>
<td>Tuition</td>
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<td>Miscellaneous Fees</td>
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<td>Application Fee</td>
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<td>Scrubs (2 sets)</td>
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<td>Supplies</td>
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<tr>
<td>Professional Membership</td>
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<td>Books</td>
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<tr>
<td>Computer</td>
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<td>0</td>
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<tr>
<td>Parking**</td>
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<tr>
<td>TOTAL PROGRAM COST:</td>
<td>4,265</td>
<td>3,430</td>
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</table>

*ABRET certification board exam. Students have the option to take this examination upon graduation. **Estimated amount.

**Academic Calendar – 2017-2019 Program Calendar**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>09/05/2017</td>
<td>Start Date</td>
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<tr>
<td>11/23-11/24/2017</td>
<td>Thanksgiving Break</td>
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<tr>
<td>12/20/2017-1/02/2018</td>
<td>Winter Break</td>
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<tr>
<td>05/28/2018</td>
<td>Memorial Day Holiday</td>
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<tr>
<td>07/04/2018</td>
<td>Independence Day Holiday</td>
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</table>
Curriculum and Calendar
Class days are Monday through Friday from 8 a.m. until 3p.m, for this 71-week program.

Course Descriptions

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course</th>
<th>Lecture Hours</th>
<th>Lab Hours</th>
<th>Clinical Hours</th>
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<tbody>
<tr>
<td>EEG 200</td>
<td>Fundamentals of Neuroanatomy</td>
<td>48</td>
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<tr>
<td>EEG 201</td>
<td>Testing Procedures and Terminology</td>
<td>30</td>
<td></td>
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<tr>
<td>EEG 202</td>
<td>Electrode Placement and Application Methods</td>
<td>30</td>
<td></td>
<td></td>
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<tr>
<td>EEG 203</td>
<td>Fundamentals of EEG and Patient Care</td>
<td>30</td>
<td></td>
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<tr>
<td>EEG 204</td>
<td>Digital EEG Concepts and Electrical Safety</td>
<td>30</td>
<td></td>
<td></td>
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<tr>
<td>EEG 205</td>
<td>Normal Adult EEG, Normal Variants and Drug Effects</td>
<td>30</td>
<td></td>
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<tr>
<td>EEG 206</td>
<td>Instrumentation Part I-Differential Amplifiers, Montage Design and Filters</td>
<td>30</td>
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<tr>
<td>EEG 207</td>
<td>Instrumentation Part 2-Guidelines, Polarity, Technical Impressions</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEG 208</td>
<td>Artifacts Identification and Troubleshooting</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEG 209</td>
<td>EEG in Epilepsy</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEG 210</td>
<td>EEG in Neurological Disorders</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEG 211</td>
<td>EEG in Pediatric Patients and Neonates</td>
<td>30</td>
<td></td>
<td></td>
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<tr>
<td>Clinic I</td>
<td>EEG Lab</td>
<td>360</td>
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<tr>
<td>Clinic II</td>
<td>EEG Clinical Practicum</td>
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<td>1050</td>
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<tr>
<td>Introductory I</td>
<td>Introduction to Modalities: Evoked Potentials, Nerve Conduction Studies, Long Term Monitoring, Intraoperative Monitoring and Polysomnography</td>
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<tr>
<td>Totals:</td>
<td></td>
<td>378.00</td>
<td>600.00</td>
<td>1,050.00</td>
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The EEG courses listed above are contained in the ASET online education portal and are licensed for the exclusive use of registered participants. Students in the VUMC NDT program are registered participants but are not authorized to resale, rebroadcast, duplicate, or share distribution of the handouts, presentation support materials, recordings, or any other content contained herein. For additional information, please contact the ASET office via email at: info@aset.org

Course descriptions are provided by ASET and are the intellectual property of ASET-The Neurodiagnostic Society.

EEG 200 Fundamentals of Neuroanatomy
This course is an introduction to the structures and functions of the Nervous System. Course content includes basic terms related to the anatomical position, direction, body regions and body planes. The bony structures of the skull are presented as well as specific structures and functions of the Nervous System including the brain, brainstem, spinal cord, cranial nerves and blood supply. An introduction to the neurological exam is also included. Topics are meant to provide basic knowledge needed to carry out EEG procedures and will create a solid foundation for advancing to more in-depth Neuroanatomy courses.

EEG 201 Testing Procedures and Terminology
This course introduces learners to the field of Neurodiagnostic Technology by providing descriptions of Neurodiagnostic testing procedures and describing the profession’s Scope of Practice. The Scope of Practice specifies the role of ND technologists as members of the health care team and outlines core responsibilities. The terminology presented in this course is meant to provide a solid foundation for building a medical vocabulary and includes assignments and handouts for general terms plus those related to patient charting, signs, symptoms, accepted abbreviations, infection control, neurological diseases, and other types of diagnostic testing. Specific terms used to describe EEG waveforms and patterns will also be a major focus.

EEG 202 Electrodes, Electrode Placement and Application Methods
This course provides information on how to accurately measure and apply electrodes according to the International 10-20 System of Electrode Placement. It introduces learners to electrode nomenclature, electrode types, and their composition, as well as appropriate electrode disinfection methods. Steps for electrode application are described and illustrated with consideration to skin preparation, impedances, skin safety, and placement modification needs. Proven techniques to achieve secure and accurate electrode placement are presented using collodion and paste application methods. Pointers on how to avoid common errors are addressed along with steps to achieve success with pediatric and neonatal populations.

EEG 203 Fundamentals of EEG and Patient Care
This course explores the important discoveries and historical contributions that led to the development and use of EEG as an important diagnostic tool. Other topics relate to fundamental patient care for the purpose of promoting patient safety and professional competence. Professional competence is addressed using the ASET National Competency Skill Standards for Performing an Electroencephalogram. Learners are also presented with ways to establish professional rapport, maintain patient privacy standards, and use appropriate steps to identify and address the physical needs of the patient. This patient-centered focus includes understanding the Neurodiagnostic professional’s role in the healthcare delivery system, as well as responsibilities relating to patient safety practices, such as like infection prevention, seizure precautions, /first aid, and emergency preparedness. Vital signs are discussed in order to aid the learner in identifying a patient in distress or in need of medical attention.

EEG 204 Digital EEG Concepts and Electrical Safety
The primary purpose of this course is to familiarize Neurodiagnostic professionals with the basic principles of electricity and electrical safety. Information is presented with an emphasis on profession-specific risks related to current flow, grounding, and factors contributing to electrical injury. This course will also introduce the learner to key concepts of digital technology and how digital EEG instruments record and display EEG and other physiological signals. The learner will become familiar with common computer terminology, as well as features and settings specific to Neurodiagnostic equipment.

EEG 205 Normal Adult EEG, Normal Variants and Drug Effects
This course explores the neurophysiological basis of the EEG. Learners are presented with information about neurons and how these specialized cells generate brain waves. Normal EEG patterns found in the
waking and sleep states are identified. Assignments focus on descriptive EEG terms, waveform descriptions, and features that promote the visual analysis of EEG. Information related to medication effects on the EEG is also provided. Normal EEG variants are a key component to this course, such as POSTS, Mu, Lambda, Phantom Spike & Wave, etc. Learners will be assigned work that will enhance their pattern recognition skills.

**EEG 206 Instrumentation Part I-Differential amplifiers, Montage Design and Filters**
This course provides a comprehensive foundation in subjects related to the EEG instrument. Lessons include topics on basic electronic components of the electroencephalograph. Learners will gain an understanding about the appropriate use of amplifier settings, such as filters, sensitivity, and chart speeds, to refine the EEG recording. Various types of montages are described, as well as calibration methods, system and other reference selections, and permissible post acquisition setting changes. A brief introduction to polarity is provided.

**EEG 207 Instrumentation Part 2- Guidelines, Polarity, Activation Procedures, Waveform Analysis**
This course will familiarize the technologist with technical skills related to waveform analysis and polarity. Instrumentation topics will be further explored to include techniques related to improving recording quality, such as recording annotations, considerations for performing activation procedures (hyperventilation & photic stimulation), as well as challenges to bedside and Electrocerebral Inactivity (ECI) recordings. Topics related to daily lab management are also introduced.

**EEG 208 Artifacts Identification and Troubleshooting**
This course is designed to provide skills in recognizing physiological and nonphysiological artifacts. Samples of both common and unusual artifacts seen in EEG recordings are provided. There is a focus on troubleshooting ways to eliminate the source artifact or place monitors to help decipher artifacts from cerebral activity. A brief review on impedance and common mode rejection (CMR) is provided, as well as on the role of these factors in the presence and elimination of artifacts is included.

**EEG 209 EEG in Epilepsy**
This course is designed to provide the skills in recognizing epileptiform EEG patterns associated with clinical and subclinical seizures. The resources will provide learners with a thorough understanding of the International Classification of Seizures and information about clinical manifestations and drug and other treatments.

**EEG 210 EEG in Neurological Disorders**
The goal of this course is to familiarize Neurodiagnostic professionals with the diagnostic process used by physicians to evaluate patients with neurological disorders. This includes common signs and symptoms and EEG patterns associated with neurological disorders. Other types of diagnostic procedures will also be presented.

**EEG 211 EEG in Pediatric Patients and Neonates**
The goal of this course is to familiarize the Neurodiagnostic technologist with best methods for performing neonatal and pediatric EEG procedures. Topics include electrode placement (EEG and other physiological variables) and age-appropriate recording methods. Terms used to describe the EEG of children and neonates, as well as ways to recognize specific normal and abnormal pediatric EEG patterns, is a major focus.

**CLINIC I EEG Lab**
In this course the program director demonstrates the 10/20 system and students then practice the system on mannequin heads. Students progress to practicing head measurement on each other. Students then learn how to apply electrodes and how to record EEG data.

**CLINIC II EEG Clinical Practicum**
During the clinical practicum course, students are ready to begin performing EEGs on patients. They are introduced to the Neurodiagnostic Department’s protocols and allowed to shadow an EEG tech during the first two weeks. Students then may start measuring patient heads, applying electrodes and collecting the EEG data under the supervision of a tech preceptor.

**INTRODUCTORY I Introductory Courses in EP, NCS, LTM, IOM and PSG**

The introductory courses are designed to provide the basic understanding of additional NDT modalities. Students gain an introductory level of competence but will not have the knowledge and skills needed to perform Evoked Potentials, Polysomnography, Nerve Conduction Studies, Intraoperative Monitoring or Long Term Monitoring. Graduates of the program will need to pursue additional study in order to become competent to perform on an advanced level. Students who complete the EEG competencies early may request additional time in any of the other modalities to gain additional knowledge.

**Satisfactory Academic Progress**

Students in the Neurodiagnostic Technology program at Vanderbilt University Medical Center are apprised of their academic status throughout each course through continuous evaluation and review of examination results with the instructor.

In the didactic courses, students complete exams online, which are scored automatically by the computer software (students receive certificates for successfully completing courses with a score of 70% or higher). The exam results show all questions answered correctly and provide the correct answers for missed exam questions. Exams are reviewed with the instructor during the next scheduled class time, and students are asked to come with a list of questions to review what was missed.

Students are expected to complete a total of 100 EEGs during their clinical rotation and are evaluated on their ability to give technical interpretations and their professional behavior by the preceptors. Student clinical performance is evaluated by clinical preceptors using the clinical evaluation worksheet and professional behavior evaluation form. Preceptors are asked to complete at least two evaluations on each student per week. Both the preceptor and physician evaluations are scored on an acceptable/needs improvement basis.

A final examination (proctored EEG 212 exam) is required after the student completes the clinical practicum.

The foundation of the program is the EEG curriculum developed by ASET-The Neurodiagnostic Society. ASET sets the pass/fail rate for each EEG course (200-211) and awards a certificate when the course is passed. The calculation method is published on the ASET website (www.aset.org). In addition, students must also meet criteria for attendance and class participation as published in the curriculum on the program’s website (www.mc.vanderbilt.edu/ndt).

The head measurement section is evaluated on a pass/fail basis utilizing the scoring system developed by ABRET-American Board of Registration of EEG and Evoked Potential Technologists. The student is expected to completely measure a mannequin head and apply all required electrodes within one hour with no differences greater than 1.0 centimeters. The student may appeal any grade(s) received from the automatic ASET scoring system to the Program Director. The Program Director will consult with the ASET Online Education Coordinator to verify the accuracy of the grade given. The appeal process for ABRET Part I exam is published in the ABRET candidate handbook.

Additional modalities considered as *introductory only* courses are evaluated by final exams developed by preceptors in these areas. The exam for each modality must be passed with a score of 70%.
The student may appeal any grade from the introductory course finals to the Program Director.

Any student placed on academic probation may appeal to the Program Director and submit a grievance in writing within seven (7) days to the Program Advisory Committee. A plan of action will be developed by the Program Director and representatives from the Advisory Committee. Failure to successfully complete the action plan within the specified time frame will result in dismissal from the program. The Program Director will notify the financial aid office when a student is placed on probationary status, removed from probationary status or terminated from the program.

**Attendance**
Students are expected to be present during all scheduled classroom hours, assigned medical lectures and assigned clinical rotations. Hours of classes are 8:00am-3:00 pm, Monday through Friday. Times and locations vary based on classroom availability.

Medical lectures are scheduled September through May. They take place at the following days and times:
- 8:00 am Monday (every other Monday)
- 8:00 am Tuesday (every other Tuesday)
- 12:00 pm (noon) Wednesdays

In addition, Epilepsy Surgery Conferences are held on Thursday at noon and Friday afternoons starting at 12:30 pm. Additional lectures are sometimes added at noon. Students are notified by email in advance of the additions.

**Absence**
Students are considered absent when they are not in the assigned place according to schedule regardless of the reason. Students are required to notify the Program Director (or designee) by email as early as possible if they expect to be absent. Failure to notify the Program Director in advance of an absence will result in the student receiving an unscheduled absence.

Documentation may be requested to determine whether to excuse an absence. Excused absences will not have a negative effect on the student’s recorded hours. However, the student is responsible for completing any assignments missed during the absence.

Excessive unscheduled absences (including those that do not occur on consecutive days) or unexcused absences may result in the student being placed on probation. The following factors are considered in determining if unscheduled absences are excessive:

- **Pattern of Absence**: A pattern of absence demonstrates a predictable routine. For example, if the student consistently absent the day before or after a particular day e.g. Monday/Friday, or always on the day before or after a holiday, etc.

- **Frequency of absence**: How often the student has an unscheduled absence is taken into account, including call-ins.

**Required Textbooks**

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<th>Title</th>
<th>Author</th>
<th>ISBN/Publisher</th>
<th>Year</th>
<th>Cost</th>
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<tr>
<td>Anatomy and Physiology Text</td>
<td>Open Stax</td>
<td>Creative Commons Attribution</td>
<td>2013</td>
<td>Free</td>
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<tr>
<td>Medical Terminology: The Language of Health Care, 2nd Ed</td>
<td>M.C. Willis</td>
<td>978-1-4511-7676-6 10:1451176767; Lippincott, Williams and Wilkins</td>
<td>2012</td>
<td>$55.00</td>
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<tr>
<td>Practical Approach to Electroencephalography</td>
<td>M.H. Libenson</td>
<td>978-0-7506-7478-2 10:0750674784; Elsevier, Inc.</td>
<td>2010</td>
<td>$89.00</td>
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</table>

**Program Library Resources**

In addition to library resources provided institutionally to Allied Health students, the program has a small library of reference books and DVDs. Students may check out any of the resources through the Program Director. Students also have access to a NDT department specific computer drive (Drive S) which has hundreds of lectures and case presentations which physicians have uploaded for educational resources.

**Program-Specific Technology Requirements**

Students are required to have a laptop computer that meets the technology standards established institutionally.

**Program Educational Facilities**

Classrooms may be located in any of the following buildings: Light Hall, Medical Center North or Medical Center East. The simulated lab training space is located in The Vanderbilt Clinic, Room B841.

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

Program Length: 1,350 Hours / 52 Weeks
Graduation Document: Certificate
Delivery Method: Residential

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, as well as 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. 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 Medical Director, Program 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; Belmont University in Nashville, 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.

Mission 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.

Staff and Faculty
James A. Patton, Ph.D.
Program Director
Diplomate of the American Board of Radiology (Nuclear Physics), 1996, Ph.D., 1972, Physics, Vanderbilt University, Nashville, TN; B.S., 1966 (Summa Cum Laude) Physics & Math, Western Kentucky University, Bowling Green, KY

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
Dawn Shone, B.S., CNMT  
Clinical Coordinator/Supervisor  
Certificate, Nuclear Medicine Technology, 1988, Vanderbilt University Medical Center Allied Health, Nashville, TN; B.S., Chemistry/Biology, 1987, Austin Peay State University, Clarksville, TN

Terri Bartek, RN  
Instructor  
AS, Nursing, Columbia State Comm College, Franklin, TN; BS, 1996, Microbiology, MTSU, Murfreesboro, TN

Marques Bradshaw, MD  
Instructor  
MD, 2004, Diplomate, 2010, American Board of Radiology; Diplomate, 2007, American Board of Nuclear Medicine; B.S., Biology, 2000, Morehouse College, Atlanta, GA

Cassie Bollin, B.S., CNMT, ARRT (N)(BD)  
Instructor  
Certificate, Nuclear Medicine Technology, 2012, Vanderbilt University Medical Center Allied Health, Nashville, TN; B.S., Medical Imaging, 2012, Belmont University, Nashville, TN

Jordan Christian, B.S., CNMT  
Instructor  
Certificate, Nuclear Medicine Technology, 2013, Vanderbilt University Medical Center Allied Health, Nashville, TN; B.S., General Science, 2012, Middle Tennessee State University, Murfreesboro, TN

Dominque Delbeke, M.D., Ph.D.  
Instructor  
Diplomate, 1988, American Board of Nuclear Medicine; Diplomate, 1989, American Board of Pathology; M.D., 1978, Free University of Brussels, Brussels, Belgium; Ph.D., Physiology, 1985, Free University of Brussels, Brussels, Belgium

Jared Driskill, PharmD  
Instructor  
PharmD, 1998, University of Tennessee-Memphis, Memphis, TN; BS, Pre-Pharmacy, 2001, East TN State Univ, Johnson City, TN

Mark Fisher, MBA, CNMT  
Instructor  
MBA, 2017, Healthcare Administration, Trevecca Nazarene University, Nashville, TN; Certificate, Nuclear Medicine Technology, 2014, Vanderbilt University Medical Center Allied Health, Nashville, TN; B.S., Biology, 2001, Middle Tennessee State University TSU, Murfreesboro, 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, Nashville, TN; B.S., Physics, 2012, University of MO – Columbia, Columbia, MO

Belinda Heffner, RN  
Instructor  
AS, Nursing, 1991, Lake Sumter Comm College, Leesburg, FL
Pam Hodges, B.S., CNMT
Instructor
Certificate, Nuclear Medicine Technology, 1983, Vanderbilt University Medical Center Allied Health, Nashville, TN; B.S., Nuclear Medicine, 1983, Austin Peay State University, Clarksville, TN

Aaron Jessop, MD
Instructor
Diplomate, 2010, American Board of Nuclear Medicine; MD, 2006, University of Nebraska Medical Center, Omaha, NE; MBA, 2014, Cornell Univ., Ithaca, NY

Elizabeth Lio, MD
Instructor

Jennifer Matteucci, B.S., CNMT, ARRT(N)
Instructor
Certificate, Nuclear Medicine Technology, 2015, Vanderbilt University Medical Center Allied Health, Nashville, TN; B.S., Nuclear Medicine, 2015, Austin Peay State University, Clarksville, TN

Brooklyn Milliken, B.S., CNMT
Instructor
Certificate, Nuclear Medicine Technology, 2010, Vanderbilt University Medical Center Allied Health, Nashville, TN; B.S, Nuclear Medicine Technology, 2010, Austin Peay State University, Clarksville, TN

Brian Murphy, B.S., CNMT
Instructor
Certificate, Nuclear Medicine Technology, 2016, Vanderbilt University Medical Center Allied Health, Nashville, TN; B.S, Nuclear Medicine Technology, 2016, Austin Peay State University, Clarksville, TN

Grace Newman, MD
Instructor
Diplomate, 2017, American Board of Radiology; MD, 2012, LSU Health Sciences Center, Shreveport, LA; B.S., Biological Sciences, 2008, LSU, Baton Rouge, LA

Jenny Pafford, M.S., CNMT
Instructor
M.S., Health Physics, 2012, Vanderbilt University, Nashville, TN; B.S., Medical Imaging Technology, 2009, Belmont University, Nashville, TN, Certificate, Nuclear Medicine Technology, 2009, Vanderbilt University Medical Center Allied Health, Nashville, TN

David R Pickens III, PhD
Instructor
PhD, Mechanical Engineering, 1981, Vanderbilt University, Nashville, TN; MS, Mechanical Engineering, 1977, Vanderbilt University, Nashville, TN; BE, Biomedical Engineering, 1971, Vanderbilt University, Nashville, TN; BA, Biology, 1969, The University of the South, Sewanee, TN

Rebekah Smith, B.S., CNMT, NCT
Instructor
B.S., Nuclear Medicine, 2000, Old Dominion University, Norfolk, VA
Martin P Sandler, MD  
Instructor  
Diplomate, 1983, American Board of Nuclear Medicine, MD, 1972, University of Cape Town Medical School, Cape Town, South Africa,

Jill Saunders, B.S., CNMT  
Instructor  
Certificate, Nuclear Medicine Technology, 2003, Vanderbilt University Medical Center Allied Health, Nashville, TN; B.S., Nuclear Medicine Radiology, 2003, Austin Peay State University, Clarksville, TN

Paul Searfoss, B.S., CNMT, ARRT(N)(CT)  
Instructor  
Certificate, Nuclear Medicine Technology, 2011, Vanderbilt University Medical Center Allied Health, Nashville, TN; B.S., Radiologic Technology, 2011, Austin Peay State University, Clarksville, TN

Chirayu Shah, MD  
Instructor  

Burney Skates, B.S., CNMT  
Instructor  
Certificate, Nuclear Medicine Technology, Vanderbilt University Medical Center Allied Health, Nashville, TN; B.S., Medical Imaging Technology, 2007, Belmont University, Nashville, TN; A.S., Medical Technology, 2005, Nashville State Community College, Nashville, TN

Kerri Wyatt, B.S., CNMT  
Instructor  
Certificate, Nuclear Medicine Technology, 1999, Vanderbilt University Medical Center Allied Health, Nashville, TN; B.S., Nuclear Medicine Radiology, 1999, Austin Peay State University, Clarksville, TN

**Programmatic Accreditation/Approvals**

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

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

NMTCB:  
Nuclear Medicine Technology Certification Board  
3558 Habersham at Northlake, Building I
Program Educational Facilities
There are numerous conference rooms available in the Radiology Department that are of sufficient size to serve as classrooms. The NMT Program has priority for a classroom in Medical Center North (MCN) and a classroom adjacent to the PET facility is also available for classes. In addition, one of two large conference rooms in MCN are usually available for exams and other special functions.

Admission Policy
Candidates for admission to the program must meet the following requirements:

- Satisfactory completion of three years of college credit at an accredited college or University.
- Prerequisites:
  1. Chemistry with Lab
  2. College Algebra
  3. General Physics
  4. Human A&P with Lab
  5. Humanities Course
  6. Medical Terminology Content
  7. Oral and Written Communications Courses
  8. Social Sciences Course
  9. Introduction to Computers
- A minimum overall grade point average of 3.0 is highly recommended, but averages above 2.5 may be considered in some cases.
- Students must have a baccalaureate degree or be eligible for that degree at the completion of the program at one of the affiliate universities.
- Applicants should be of good moral character, personable, and able to relate to patients.

Application Procedures
As part of the preparation for application to the Vanderbilt University Medical Center's Nuclear Medicine Technology program, applicants are required to spend at least 16 hours of observation at VUMC. Qualified applicants should have an overall grade point average of 3.0 and must have a baccalaureate degree or be eligible for that degree at the completion of the clinical training. Applicants should receive the recommendation of the program director at the school in which they are enrolled.

Selection is based on scholastic background, references, interview and motivation. Please mail the following documents to the address below prior to the interview process:

- Application & Verification Form
- Certificate of Observation
- Three (3) reference letters
- Official transcript(s) from all Universities attended
A completed application will include:

1. Application form
2. Three references
3. Official transcripts
4. 16 hours of clinical observation at VUMC
5. Recommendation of the program director at the school in which the applicant is enrolled.

**Admission Procedures**

Student selections are made by a committee consisting of the Program Director, Medical Director, Technical Coordinators, and Degree Advisors. Applicants selected for appointment to the program must successfully complete a background check before final acceptance into the program. Qualified applicants with a bachelor’s degree from any accredited college or Vanderbilt University are eligible for appointment. Students who have not received a bachelor’s degree must be enrolled at Austin Peay, Belmont, or Middle Tennessee State University and must have the recommendation of the program director at their school in order to be considered for appointment. Applicants from these three schools will receive preference in the selection process.

**Tuition & Fees**

<table>
<thead>
<tr>
<th>NUCLEAR MEDICINE TECHNOLOGY</th>
<th>8/28/17 - 8/27/18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>2,000.00</td>
</tr>
<tr>
<td>Miscellaneous Fees</td>
<td></td>
</tr>
<tr>
<td>Professional Conferences</td>
<td>250.00</td>
</tr>
<tr>
<td>Professional Credentialing Exam*</td>
<td>175.00</td>
</tr>
<tr>
<td>Scrubs</td>
<td>120.00</td>
</tr>
<tr>
<td>Parking</td>
<td>220.00</td>
</tr>
<tr>
<td>Computer</td>
<td>1,000.00</td>
</tr>
<tr>
<td><strong>TOTAL PROGRAM COST:</strong></td>
<td><strong>3,765.00</strong></td>
</tr>
</tbody>
</table>

*Nuclear Medicine Technology Certification Board exam.
Academic Calendar – 2017-2018 Program Calendar

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/28/2017</td>
<td>Start Date</td>
</tr>
<tr>
<td>09/04/2017</td>
<td>Labor Day - No Rotations</td>
</tr>
<tr>
<td>11/23 - 11/26/2017</td>
<td>Thanksgiving Break</td>
</tr>
<tr>
<td>12/20/2017 - 01/02/2018</td>
<td>Christmas Break</td>
</tr>
<tr>
<td>03/31/2018 – 04/08/2018</td>
<td>Spring Break</td>
</tr>
<tr>
<td>05/28/2018</td>
<td>Memorial Day - No Rotations</td>
</tr>
<tr>
<td>07/04/2018</td>
<td>4th of July – No Rotations</td>
</tr>
<tr>
<td>08/27/2018</td>
<td>Graduation</td>
</tr>
</tbody>
</table>

Curriculum
A series of topics in a classroom setting will be taught with emphasis on the following topics:

1. Patient Care
2. Cross-Sectional Anatomy
3. Nuclear Medicine Statistics
4. Nuclear Medicine & Radiation Physics
5. Radiation Biology
6. Radiation Safety and Protection
7. Nuclear Medicine Instrumentation
8. Quality Assurance & Quality Control
9. Computer Applications in Nuclear Medicine
10. Diagnostic Nuclear Medicine Procedures
11. Immunology
12. Radiation Therapy
13. Positron Emission Tomography (PET)
14. Computed Tomography (CT)
15. Radiochemistry & Radiopharmacy
16. Medical Ethics and Law
17. Healthcare Administration
18. Research Methods
19. Medical Informatics
20. Pharmacology

Passing grades in all courses are required for completion of the program. Students will also participate in the State Technologist Meeting with Poster and/or Oral Presentations.

Students will also complete 16 rotations in nursing, radiopharmacy, nuclear medicine imaging, and PET with CT in Vanderbilt Adult and Children’s Hospitals and the VA Hospital under the supervision of certified technologists, radiopharmacists, and nurses. A completed set of competencies in the areas documenting acquired nuclear medicine skills are required for completion of the program. Laboratory rotations and lectures may be supplemented by special programs and seminars in the Department of Radiology in an effort to ensure a well-rounded educational experience in Nuclear Medicine Technology.

Students are expected to be in lecture and/or laboratory Monday through Thursday (8:00 a.m. to 3:00 p.m.) and Friday (8:00 a.m. to 12:00 noon) during the 52 weeks training period. Two weeks of holiday break and one week of spring break are included in the program. On completion of the program, students receive credit for 1,350 contact hours which are converted to semester hours of credit that are awarded by
their school completing their bachelor’s degree requirements. In addition, they receive a certificate from Vanderbilt University Medical Center that qualifies them to sit for national certification board exams.

Course Descriptions

<table>
<thead>
<tr>
<th>Course</th>
<th>Lecture</th>
<th>Lab</th>
<th>Practicum/ Clinical</th>
<th>Total In class Hours</th>
<th>*Additional Outside clock hours</th>
<th>Total Clock Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NM Physics and Instrumentation</td>
<td>76.00</td>
<td></td>
<td></td>
<td>76.00</td>
<td>0</td>
<td>113.50</td>
</tr>
<tr>
<td>Nuclear Math</td>
<td>22.00</td>
<td></td>
<td></td>
<td>22.00</td>
<td>0</td>
<td>29.50</td>
</tr>
<tr>
<td>Clinical Nuclear Medicine</td>
<td>115.00</td>
<td></td>
<td></td>
<td>115.00</td>
<td>0</td>
<td>171.25</td>
</tr>
<tr>
<td>Radiochemistry and Radiopharmacy</td>
<td>78.00</td>
<td></td>
<td></td>
<td>78.00</td>
<td>0</td>
<td>115.50</td>
</tr>
<tr>
<td>Patient Care</td>
<td>19.00</td>
<td></td>
<td></td>
<td>19.00</td>
<td>0</td>
<td>26.50</td>
</tr>
<tr>
<td>Radiation Safety</td>
<td>32.00</td>
<td></td>
<td></td>
<td>32.00</td>
<td>0</td>
<td>47.00</td>
</tr>
<tr>
<td>Imaging Informatics: NM Computer Applications</td>
<td>22.00</td>
<td></td>
<td></td>
<td>22.00</td>
<td>0</td>
<td>29.50</td>
</tr>
<tr>
<td>Clinical Nuclear Medicine Laboratory</td>
<td></td>
<td>986.00</td>
<td></td>
<td>986.00</td>
<td>0</td>
<td>956.00</td>
</tr>
<tr>
<td>Program Totals</td>
<td>364.00</td>
<td>986.00</td>
<td>0.00</td>
<td>1,350.00</td>
<td>0</td>
<td>1,538.75</td>
</tr>
</tbody>
</table>

NMT Radiation Safety
This course covers the various topics related to Radiation Safety in Nuclear Medicine including protection from external and internal sources of radiation, biological effects of radiation exposure, identifying and controlling contamination, patient therapy dose considerations, response to radiation related emergencies, and federal and state regulations.

Clinical Nuclear Medicine
This course begins with a course overview and a discussion of medical ethics and terminology. The course is divided into sections by organ systems. Each section includes a review of organ anatomy and physiology, diseases and disorders common to the organ system and detailed discussions of the imaging and functional procedures that are performed to evaluate that system. Interpretation of the data obtained from each procedure is discussed. In addition, a separate section is devoted to cross-sectional anatomy using CT as the primary instruction modality with fused image correlations using PET/CT and SPECT/CT. These topics are covered by the physician faculty. Simultaneously with these lectures, the imaging techniques associated with each organ system are taught by the Technical Staff. Also included are discussions of the techniques and applications of radionuclides for radiotherapy procedures. Finally, a separate section is devoted to In Vitro procedures.

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.
Mathematics of Nuclear Medicine
This course provides an introduction to the units used in nuclear medicine and a basic review of mathematics including algebra, scientific notation, logarithms, and exponentials. Special emphasis is placed on calculations involving inverse square law, attenuation equations, and dose calculation equations. Also covered is an introduction to statistics including the statistical treatment of sample counting data and the randomness of radioactive decay with emphasis on mean, standard deviation, percent error, acceptability of duplicate samples, and Chi-square calculations.

Patient Care in Nuclear Medicine
The Patient Care in Nuclear Medicine course provides the student with the basics of patient care including basic nuclear medicine terminology, aseptic techniques, injections, blood drawing, catheters, moving and lifting patients, ECG monitoring and gating, and the handling of emergencies. This course also covers the aspects of medical ethics involving patient relationships and professional conduct. In addition, legal aspects of the profession are discussed including certification/licensure, employee liability, patient confidentiality, and the legal entities that have oversight for the practice of nuclear medicine.

Nuclear Medicine 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.

Clinical Nuclear Medicine Laboratory
This clinical nuclear medicine experience/training consists of eight clinical rotations, each of three weeks duration, using the clinical nuclear medicine facilities at Vanderbilt Adult and Children’s Hospitals and the VA Medical Center. Rotations include radiopharmacy and in vitro lab, patient care, cardiac stress testing, general nuclear medicine and positron tomography imaging procedures in adults and children, and quality assurance. Every student rotates through each of eight rotations, and then the sequence is repeated, for a total of sixteen rotations. 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) for three weeks. 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 (73 check-offs) is accomplished during the second set of rotations and students may move from their assigned rotation to another, with permission, in order to perform a study and receive a check-off in that area.

Nuclear Medicine Physics, Instrumentation, and Quality Assurance
This course begins with an overview of the basics of nuclear medicine physics, including the structure of the atom, radioactive decay processes and laws, and interactions of radiation with matter. This is followed by a discussion of the topics related to radiation exposure and absorbed dose. The next sections discuss the concepts of radiation detection including gas-filled ionization detectors and scintillation detectors. The remaining sections are devoted to in-depth discussions of imaging instrumentation including scintillation cameras, single photon emission computed tomography (SPECT), positron emission tomography (PET), and x-ray computed tomography (CT) systems. The final section is covers the theory and performance of quality assurance of dose calibrators, scintillation counting systems, and planar, SPECT, PET, and CT systems with emphasis on identifying and solving problems.
**Attendance**

Students are expected to be on time to all required learning experiences, including clinical rotations and classes. Students are required to use the time clock to document their attendance. One time card is to be used for each month. **Under no circumstances will a student be allowed to log time for another student.** If such behavior is found to be taking place, both students will be subject to disciplinary action related to unprofessional behavior/rules violations as outlined in this handbook.

In some circumstances it may be necessary for the times to be written by hand on the time card. In these cases, the technologist responsible for the clinical rotation must sign his or her full name attesting that the student arrived and/or departed at that time indicated. **Leave time cards in the rack for Dawn Shone or Jenny Pafford to pick up, except for VAMC and VCH rotations. VAMC and VCH time cards are to be turned into Dawn Shone or be put back in the rack on Friday afternoon before leaving for the weekend. Cards are not to be held by the student for any reason.**

Excessive absences are defined as more than 9 absences during the academic year. Excessive absences are grounds for academic probation and may result in termination from the program. Students are required to complete 1,350 clock hours in order to complete the program. This number includes 364 hours of class time and 986 hours in clinical rotations. (This does not include lunch time and time between classes.) This number may be reduced by the program in limited circumstances (due to snow days and other approved absences). Hours during which school exit exams, graduation and required NMTT meeting days take place are hours counted toward program completion.

If a student is going to be absent from a clinical assignment, he/she must call the assigned clinical rotation setting no later than one-half hour before the beginning of his/her shift. The student is to speak directly to one of the designated clinical instructors or the clinical coordinator and obtain the name of the person taking the message. It is the responsibility of the student to make these calls – not parents, friends, classmates or relatives. Students not following this policy will be subject to disciplinary action related to unprofessional behavior/rules violations as outlined in program policies.

**Graduation Requirements**

In order to graduate, students must receive a passing grade of 70 or better in all courses, obtain a grade of 75 or better in the clinical rotations, and complete a list of 72 competency evaluations (“check-offs”). Students must also complete 1,350 clock hours during the 12-month program.

**Satisfactory Academic Progress**

**Grading System**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Grade</th>
<th>Definition</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>100–95%</td>
<td>A</td>
<td>Excellent</td>
<td>4.0</td>
</tr>
<tr>
<td>94–90%</td>
<td>A-</td>
<td></td>
<td>3.7</td>
</tr>
<tr>
<td>89-87</td>
<td>B+</td>
<td>Good</td>
<td>3.3</td>
</tr>
<tr>
<td>86-83%</td>
<td>B</td>
<td>Good</td>
<td>3.0</td>
</tr>
<tr>
<td>82-80%</td>
<td>B-</td>
<td>Good</td>
<td>2.7</td>
</tr>
<tr>
<td>79-75%</td>
<td>C+</td>
<td>Satisfactory</td>
<td>2.3</td>
</tr>
<tr>
<td>Grade</td>
<td>Grade</td>
<td>Description</td>
<td>Points</td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
<td>-------------</td>
<td>--------</td>
</tr>
<tr>
<td>74–70%</td>
<td>C</td>
<td>Satisfactory</td>
<td>2.0</td>
</tr>
<tr>
<td>69–0%</td>
<td>F</td>
<td>Inadequate</td>
<td>0.0</td>
</tr>
<tr>
<td>P</td>
<td>Pass</td>
<td>Any course with a “P” grade is not calculated into the grade point average.</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Any course with an “F” grade is not calculated into the grade point average. However, the course must be repeated and passed to graduate.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>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), that grade will factor into the student’s GPA.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>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.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**Assessment of Academic Progress**

Each students’ academic progress is evaluated quarterly. A student is considered to be maintaining satisfactory academic progress (SAP) if he/she maintains a 70 percent academic average in didactic coursework and a 75 percent academic average in clinical rotations, to be evaluated on a quarterly basis. In addition, students must have satisfactory attendance in order to maintain satisfactory academic progress. Prior to the quarterly 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 in clinical rotations, radiation exposure reports, absences, contact hours, 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 make a determination of Satisfactory Academic Progress.

Students receive a clinical evaluation at the end of each week. 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 the quarterly review of Satisfactory Academic Progress.

If, at the end of any quarter, a student has not maintained the minimum required academic average and/or has an unacceptable number of absences, he/she will be given a formal warning. The student will be notified in writing of the concern (SAP warning), and a discussion will take place to establish a remediation plan to correct the deficiencies. The plan will outline specific steps the student is to take and the amount of time the student has to complete each step (no longer than by the end of the next quarter). The remediation plan must be completed according to the timeline in the remediation plan in order for the student to return to SAP.

**Academic Probation** – If a student fails to successfully complete a remediation plan created as a result of an SAP warning, the student will be placed on probation. The student will be notified in writing. The notification will outline a specific series of steps the student is to take and the amount of time the student has to complete each step (no longer than by the end of the next quarter). The remediation plan must be completed according to the timeline in the remediation plan in order for the student to return to SAP.

**Academic Probation Appeal** – A student who has been placed on academic probation may appeal the probation decision. To do so, the student must submit an appeal request to the Director of Allied Health Programs 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 for the student to be successful in the future.

The student may submit documentation along with the appeal request. The Director of Allied Health Programs will review the appeal and any documentation submitted by the student. The Director of Allied Health Programs will also speak with program faculty and staff involved. The student will be notified of the outcome of the appeal in writing within five (5) business days of its submission. The decision of the Director of Allied Health Programs 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 status, or 2) the student fails to meet the requirements of the academic plan and is dismissed from the program.

**Dismissal Due to Poor Academic Performance** – If the student fails to successfully complete the probation remediation plan, the student will be dismissed from the program. A transcript indicating completed and incomplete coursework will be provided to the student’s affiliated academic institution, along with information about successfully completed hours of attendance. Students dismissed for poor academic performance will not be eligible for readmission to the program. Dismissal due to poor academic performance may be appealed (see section, “Appeals and Student Grievances” in this handbook).
## Required Textbooks

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>ISBN/Publisher</th>
<th>Year</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiopharmaceuticals in Nuclear Pharmacy and Nuclear Medicine, Third Edition</td>
<td>Richard Kowalsky &amp; Steven Falen,</td>
<td>978-1-58212-118-5 American Pharmacy Association</td>
<td>2011</td>
<td>203.95</td>
</tr>
<tr>
<td>Practical Mathematics in Nuclear Medicine Technology</td>
<td>Patricia Wells</td>
<td>978-0-932004-67-3 Society of Nuclear Medicine</td>
<td>1999</td>
<td>132.49</td>
</tr>
</tbody>
</table>

The first three textbooks may be provided by the program for student use during the program year.

## Program Library Resources

An excellent selection of textbooks and journals is maintained in a Program Library in the Director’s office and are available for use by the students. These may be checked out from the Program Director or his assistant at any time.

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

Program Length: 96 Semester credits / 3484 Clock Hours / 92 weeks
Graduation Document: Certificate
Delivery Method: Blended

Program Description
The Perfusion Program includes 92 weeks of clinical and didactic training leading to a certificate in Perfusion. The program officials include a Medical Director, Assistant Medical Director, Program Director, and Clinical Coordinator, as well as clinical instructors who are experts in the field.

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.

While most perfusionists are employed by medical centers, they may also be hired by individual surgeons or perfusion companies. Clinical perfusionists are required to participate in on-call responsibilities at night, on weekends, and during holidays. Perfusionists can also work in educational institutions as didactic or clinical instructors and/or researchers. Further, some perfusionists are hired by the industry that manufactures various perfusion related supplies and equipment.

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:

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

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

CAAHEP's web site is located at: http://www.caahep.org/, and a listing of all perfusion education programs, as well as all accredited allied health programs can be found on that site.

The AC-PE's web site is located at http://www.ac-pe.org/, and a current version of the Standards and Guidelines for an Accredited Educational Program for the Perfusionist can be found on that site, including minimal admission requirements.

Complete information about the program curriculum may be found on its website, at:

https://ww2.mc.vanderbilt.edu/perfusion/
Staff and Faculty

Nicole Michaud, MS, CCP, LP, CPBMT
Program Director (Part-time)
Master of Science, Perfusion, 1996, Milwaukee School of Engineering, Milwaukee, WI; Bachelor of Science, Biomedical Engineering, 1994, Milwaukee School of Engineering, Milwaukee, WI; Tennessee Licensed Clinical Perfusionist; Wisconsin Licensed Clinical Perfusionist; Certified Clinical Perfusionist; Certified Perioperative Blood Management Technologist

Courtney Schwimer, BS, CCP, LP, FPP, CLS-MT,
Clinical Coordinator (Part-time)
Bachelor of Science in Cardiovascular Perfusion, 2010, Medical University of South Carolina, Charleston, SC; Certificate Program: Clinical Laboratory Scientist (CLS) 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

Mary Peters, CRNA, MSN
Instructor
Graduate Program in Nurse Anesthesia, 2009, University of Miami, Coral Gables, FL; Bachelor of Science Degree in Nursing, Bachelor of Science Degree in Psychology, 1995, University of Florida, Gainesville, Florida
Certified Registered Nurse Anesthesia

Programmatic Accreditation/Approvals
The 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

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

1. Complete all courses in the Curriculum Plan with a “C” (≥75%) or better as outlined in Progression Policy.
2. Complete an independent research paper.
3. Not be on probation for any reason including professional conduct at the completion of the program.
4. Pass a comprehensive final examination.
5. Pass an oral examination.
6. Pass a final practical examination.
7. Attend graduation ceremony.
8. Receive clearance from the clinical competency committee.

Admission Policy
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 for the Class of 2019 include:
- Bachelor’s degree from an accredited college or university
- 3 credit hours of the following courses from an accredited college:
  - Anatomy and/or Physiology
  - General Biology
  - General Chemistry
  - Mathematics (College Algebra or Higher)
  - Physics
  - Biochemistry or Microbiology or Organic Chemistry or Inorganic Chemistry
  - One credit hour or more of Medical Terminology is REQUIRED (this requirement cannot be waived or satisfied using work experience).

Academic Requirements for admission for Class of 2020:
- Baccalaureate Degree from an accredited college or university
- A cumulative and science grade point average (GPA) of at least 3.0 on a 4.0 scale.
- Six (6) credit hours of Anatomy and/or Physiology
- Four (4) credit hours of the following courses:
  - General Biology
  - General Chemistry
  - Another applied science such as Biochemistry or Microbiology or Organic Chemistry or Inorganic Chemistry
- Three (3) credit hours in each of the following courses:
  - Mathematics (College Algebra or Higher)
  - Physics
- A minimum of (1) one credit hour in Medical Terminology (REQUIRED, regardless of previous work experience)
- A cumulative and science grade point average (GPA) of at least 3.0 on a 4.0 scale.
- Graduate Record Examination (GRE) is not required for entry.
- Previous healthcare experience is strongly preferred but is not required to apply for this program.
- The Test of English as a Foreign Language test (TOEFL) is required for non-native English-speaking students. A total TOEFL score of at least 88, on the Internet-based version, 570 on the paper-based version, or 230 on the computer-based version must be achieved.
• Applicants with prerequisite course work from an institution that does not have English as its primary language of instruction, must have an official, detailed evaluation of their coursework sent to the program from the World Education Services (WES). International applicants who do not provide official documentation of acceptable U.S. or Canadian course, and degree equivalency will not be considered during the application process.

• The Perfusion Program is able to accept only US citizens or eligible non-citizens that hold a permanent resident card for the 2017-2019 academic year. The Allied Health programs as a whole are working to achieve institutional accreditation which will allow us to become a SEVP (Student and Exchange Visitor Program) certified school that can enroll F-1 and M-1 visa immigrants as students.

  o The program considers applicants as an international student if the applicant is a citizen of any nation other than the United States of America. Applicants will not be considered as an international student if you are a dual U.S. citizen, U.S. Permanent Resident, refugee/asylee, or a U.S. citizen living abroad.

Application Procedures
Prospective students of the Perfusion Program may apply by submitting a completed application form and required documentation. The application for students wishing to be accepted for the fall 2018 term will be posted on the VUMC website in the summer of 2017.

The following materials must be submitted with the application in a single mailing envelope:

1. Three (3) professional references from individuals familiar with the applicant’s academic and/or professional experience (include with submission of application).
2. Official transcripts from all institutions of higher learning attended (in sealed envelopes).
3. A non-refundable application fee, made payable to Vanderbilt University Medical Center. The submission application fee (November 1) is $100.

Admission Procedures
After submission of a complete application package, qualified candidates will be notified of an invitation to attend a required interview with the admissions committee and a tour of our facilities. Interviews require a minimum of 2 hours of the applicant’s time and are conducted in January of each year.

The admissions committee reviews all applications for assurance that each candidate meets the minimum requirements for entrance. In addition, our committee finds value in:

• Personal Ambition
• Commitment to Learning
• Attention to Detail
• Passion for Professional Excellence

Interviews are a required component of our acceptance process. Applicants should be prepared to discuss their understanding of a cardiovascular perfusion and the qualities they possess to be a clinical perfusionist.

The Application Process
1. Applications are accepted throughout the calendar year with a final deadline of November 1st of each year. Applications postmarked after November 1st will not be accepted and the application fee will be returned.
2. Once all application materials and transcripts are received, the program director will review all applicants and score each of the following areas:
   a. Overall GPA – points awarded is equivalent to the applicants GPA
   b. Science GPA – points awarded is equivalent to the applicants science GPA
      i. Science GPA will be calculated to include all science pre-requisites at a minimum
      ii. If an applicant retook a science pre-requisite, the applicants science GPA will be calculated using the highest grade achieved for the required pre-requisite
3. The Admission Committee reviews all applicants and the applicant evaluation scoring form is provided to them with the items as listed in part 2 of the application process automatically scored with the cell locked.

   a. Each committee member will be given the application materials at the same time and will be given 3 weeks to review the applicants.
      i. Applicant information will be released to committee members by November 16th
      ii. Applicant scoring form will be required to be returned to the program director on or before December 8th
   b. The committee is asked to score the following items based on the key provided.
      i. Personal Statement - scored based on the following:
         1. 1-2 points: Weak Candidate
         2. 2-3 points: Average Candidate
         3. 3-4 points: Good Candidate
         4. 5: Exceptional Candidate
      ii. Case Log (required to observe one case)-scored based on the following
         1. 0 points: Did not complete Log
         2. 1 point: Met Requirement (observed 1-2 cases)
         3. 2 points: Met Requirement and provided an average summary of the observational experience (observed 3-6 cases)
         4. 3 points: Exceeded Requirement and provided an exceptional summary of the observational experience (observed > 7 cases)
      iii. Recommendation Letters/Forms - scored based on the following:
         1. 1-2 points: Weak Candidate
         2. 2-3 points: Average Candidate
         3. 3-4 points: Good Candidate
         4. 5 points: Exceptional Candidate

4. Each admission committee member’s final score for the applicant is taken and no admission committee member is given more weight, including the program director.

5. Each applicant score from the members of the admission committee is averaged based on the number of members that evaluated that applicant.

6. The top 16-20 applicants are invited for an in person interview to occur the second Saturday in January.
7. Applicants getting an interview will receive a phone call from the program director no later than December 16th.
8. Applicants not being awarded an interview will receive communication through conventional mail.
   a. The program director may elect to personally call applicants that are denied an interview based on their review of the applicant.

Interview Process
An interview schedule is provided to each applicant no later than December 23rd. Interviews include the following:
1. Each applicant will be given two (2) 20 minutes in person interviews with a panel of admission committee members.
2. Each applicant will be given 45 minutes to write an in person essay.
3. Each applicant will be given a dexterity test.
4. A tour of the simulation lab, classroom facilities, and VUMC campus
5. An opportunity to speak with current students in the program.
6. During the interview, applicants are given an overview of the program, the selection process, and asked about their level of competency with regard to computer skills and learning management systems.
7. Interview score will be based on the following:
   a. Average of admission committee in person evaluation and applicant essay
   b. Dexterity score

Final selection of the applicant is based on the following:
   o (.30*average of application score)+ (.10*dexterity score)+(.60*average of interview evaluations by the committee)

Notification of Applicants
- Each applicant that interviewed for a spot in the program is personally called by the program director.
  - In the personal phone call, those applicants that are chosen for the program are notified.
  - In the personal phone call, those applicants that are alternates are notified during this discussion.
  - In the personal phone call, those applicants not selected for the alternate list are notified of not be selected for the program
- Formal letters and denial letters are sent to all applicants.

The general academic requirements for all perfusion education programs are established by the Accreditation Committee for Perfusion Education (AC-PE), the organization responsible for the initial and continuing evaluation of all perfusion education programs. The AC-PE is accredited to so operate pursuant authority granted by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).
CAAHEP’s web site is located at: http://www.caahep.org/, and a listing of all perfusion education programs, as well as all accredited allied health programs, can be found on that site.
The AC-PE's web site is located at http://www.ac-pe.org/, and a current version of the Standards and Guidelines for an Accredited Educational Program for the Perfusionist can be found on that site, including minimal admission requirements.
Tuition & Fees

<table>
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<tr>
<th>PERfusion</th>
<th>(1st year) 8/7/17 - 6/30/18</th>
<th>(2nd year) 7/1/18 - 5/18/19</th>
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<tr>
<td>Tuition (includes $350 deposit)</td>
<td>19,450</td>
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<td>Miscellaneous Fees</td>
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<td>Application Fee</td>
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<td>Background Check</td>
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<td>Drug Screen</td>
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<tr>
<td>Parking</td>
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TOTAL PROGRAM COST:

*Estimated amount.
**Student required to attend one Perfusion-approved professional meeting in either first or second year of program.
±±The student will incur costs for the application for the Perioperative Blood Management Exam taken in the Spring of their second year, which is a required exam for all students in the program. The student will incur costs to apply for Part I and Part II of the certification exam. In addition, to these three costs the student may or may not incur expenses to apply for state licensure. This cost will be dependent on if the student accepts a professional position in a state for which the perfusionists are required to be licensed by the state.

2017-2018 Perfusion Program Academic Calendar

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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</thead>
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<tr>
<td>Program Start Date</td>
<td>August 4, 2017</td>
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<tr>
<td>Thanksgiving Break</td>
<td>November 22, 2017 @ Noon</td>
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<tr>
<td>Return from Thanksgiving Break*</td>
<td>November 27, 2017</td>
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<tr>
<td>Final Exam(s) for Fall Semester</td>
<td>December 18-21, 2017</td>
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<tr>
<td>Christmas Break Start</td>
<td>December 21, 2017 @ 1700</td>
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<tr>
<td>Return for Spring Semester*</td>
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<tr>
<td>Final Exam(s) for Spring Semester</td>
<td>May 9, 2018</td>
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<td>Last Day of Clinic for Spring Semester</td>
<td>May 8, 2018</td>
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<tr>
<td>Spring Break</td>
<td>May 10-13, 2018</td>
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<tr>
<td>Summer Semester Begins*</td>
<td>May 14, 2018</td>
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Curriculum and Calendar

Students in the Perfusion Program at Vanderbilt University Medical Center experience 92 weeks of clinical and didactic training leading to a certificate in Perfusion from the Division of Allied Health at Vanderbilt University Medical Center. The program starts at the beginning of August each year and ends in mid-May.
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

Definition of Credit Hour
Credit hours are determined based on the following equivalencies:
- 15 lecture semester clock hours is equivalent to 1 credit
- 30 laboratory semester clock hours is equivalent to 1 credit
- 45 practicum semester clock hours is equivalent to 1 credit

Course Descriptions

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<th>Course</th>
<th>Lecture</th>
<th>Lab</th>
<th>Practicum / Clinical</th>
<th>Total In class Hours</th>
<th>*Additional Outside clock hours</th>
<th>Total Clock Hours</th>
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<td>68.00</td>
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<td>Technology II</td>
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<td>720</td>
<td>4,201</td>
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* Designates course delivery in Blended Distance Education format.

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, 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

**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, 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

**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

**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 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 circuit components and basic laboratory 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
Research Lab III (RES 503)
This course provides the student with the ability to continue to work to identify research topics, well reviewing current literature in the field of perfusion. 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 students on site. Offered in the Fall Semester. Prerequisites: SIM 502, CVPT 502, RES 502

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 students 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 an 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 an 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

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 an environment that promotes confidence in their abilities. Students will be exposed to cardiopulmonary bypass management utilizing a centrifugal pump. Offered in the Fall Semester. Prerequisites: SIM 502, CVPT 502, RES 502

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

Satisfactory Academic Progress
A student is considered to be maintaining satisfactory academic progress if he/she maintains a 75% academic average in each course including clinical rotations, to be evaluated on a semester basis. If, at the end of any semester, a student has achieved below 75% in any course, he/she will be placed on academic probation and financial aid will not be disbursed, if applicable. The student shall be allowed to make up this deficiency within a reasonable time (not to exceed 2 weeks), and upon satisfactory completion of the deficiency, will be reinstated as attaining satisfactory academic progress and financial aid will be disbursed, if applicable. Below is a list of items which may be considered to NOT maintaining satisfactory academic progress:
- Failure to demonstrate a progression of skills or retention of material.
- Failure to submit required documentation of the clinical rotation or didactic coursework.
- Failure to demonstrate the required techniques satisfactory in the simulation lab or clinical setting on a progressive basis.
- Poor performance (failure to maintain 75% average in each academic course) in the classroom or clinical area.
- Failure to conduct oneself in a professional manner when representing the program.

If the student fails to make up the deficiency, the student will be dismissed from the program and financial aid award will be canceled, if applicable. The student may appeal to the Director of the Programs in Allied Health. The Financial Aid Office will be notified of the appeal decision, if applicable. A student will be allowed to be placed on academic probation only once during the program. If a student were to receive below a 75% in any additional course after the first occurrence, the student will NOT be granted a remediation period and will be immediately dismissed from the program.

Progression in the Program
Advanced placement are not allowed. The program and all related courses must be completed in their entirety for a transcript to be created and given. Incompletes transcript grades are not given. Students are required to complete all components of the program within the 22 months of the program admission 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.

Course
The Perfusion Program considers each course to have its own syllabus with grading criteria and is assigned semester credit hours and delivered as outlined in the program curriculum (see curriculum in the student handbook).

Final Grades
Final grades for each section will be computed on the following bases:
- Students must attain a final grade of 75% in each course. A final grade below 75% in one course will result in probation and a loss of financial aid eligibility, if applicable. A final grade below
75% in any course, including Clinical Rotations, will result in immediate dismissal. A student may, at the discretion of the didactic instructor or program director, may be given an opportunity to remedy the grade, so long as the remediation occurs within two (2) weeks of the time that the grade drops below the 75% threshold. No exceptions will be made in this regard.

- Non-academic evaluations (behavior and conduct evaluations) will be completed for counseling purposes; however, they will not be computed into the grade, though certain behavior and conduct actions (missing of examinations, classes, etc.) will be reflected in assigned grades.

Attendance Policy
Clinical training within a post-graduate medical technical program most closely resembles a residency program or fellowship in advanced medical/surgical training. Students are expected to be present on a full-time basis through their time in the Perfusion Program. The students in the Perfusion Program will be exposed to the widest variety of clinical situations and cases, many of which occur during emergency situations, after hours, and on weekends. Therefore, in order to maximize student exposure to these clinical situations, students are required to sometimes spend long hours in the operating room, either participating in, observing, or available for and anticipating in the unusual or emergency case.

Attendance for all didactic lectures will be taken during each meeting of the course. During the clinical rotation courses, students will be required to maintain a daily time sheet. These timesheets must be signed by a clinical instructor and submitted to the program director on a monthly basis. Documentation of any absences and/or tardiness is to be noted.

As a general rule (the exception being on-call assignments made during Clinical Rotations I, II, III, and IV), perfusion students are required to sign in to their clinical assignments in a timely manner, generally at 6:00 a.m. depending on the assigned daily responsibilities. Students will have didactic lectures, simulation sessions, medical conferences and clinical rotations. Tardiness is not tolerated, since the clinical team, including perfusion staff and students, nurses, anesthesiology and surgery, and (most importantly) the patient rely upon each member of the team to be ready to perform their particular care prior to the time the patient arrives in the operating room. Furthermore, each time a student is unavailable to participate clinically, they are depriving themselves of the opportunity to receive the maximum benefit of their training within the allotted time. It is therefore appropriate to require students to participate in clinical training beyond the date of their anticipated graduation, should any student fail to adhere to attendance or other policies.

Failure to attend a mandatory assigned event within the program will addressed by the Program Director and the student will be given an assigned requirement to be completed on the topic presented with a specific deadline of submission for the assignment.

Failure to attend an assigned clinical case will be addressed by the Program Director and could result in addition clinical participation or clinical probation up to dismissal from the program.

Each student of the program is entitled to the equivalent of eighty hours (80) of personal hours off based on an eight (8) hour clinical/didactic day of absence from didactics or clinical assignments without having an effect on his/her attendance record. These personal hours are used for any absence of the following nature: sick day, doctor appointment, personal matters, job interview or inclement weather not severe enough for the Program Director to cancel class/clinical assignments. The personal hours are for the students to use, but the student is encouraged to use them wisely. Students may earn additional personal hours off to add to their bank through the following activities: taking call or participating clinical on day for which all other students in the program have been excused (during the holiday breaks). Students taking call for Memorial Day, Labor Day, and the 4th of July with earn additional hours of personal hours off. Students can earn an additional 16 hours per day dependent on their level of activity. Taking call
will give a student an additional 8 hours and being called in to participate in a clinical case will earn the student an additional 8 hours.

Students must complete the request for personal time off from two (2) weeks prior to the requested time in accordance with the following. The only exception to this is an emergency or for a job interview. The Request for Personal Time Off form can be obtained from the student site on the program website or in the student room. Requested time off form must be completed with approval from the chief perfusionist of the rotation the student is participating in at the time of the requested time off and the program director and received in the program directors office two (2) weeks prior to the requested time off. The program director will only approve the request upon submission of the request form.

- Requested time off for interviews will not require the two (2) weeks’ notice.
- The chief perfusionist of the rotation site for which the student is/will be participating in at the time of the interview needs to be given communication of this absence by both the program director and the student.
- Time off taken for an illness will not require the two (2) week notice, but will require immediate communication with both the program director and the chief perfusionist of the rotation site.
- If the student is out due to an illness for more than two (2) days due to illness, written notification/medical excuse from a physician must be given to the program director.
- The student must speak with the program director and the chief perfusionist of the clinic rotation EACH day of their absence.
- The request form must be completed with final approval granted by the program director.
- Students will not be able to use their personal hours in the last three (3) weeks of the program. Exceptions will be allowed for the following reasons:
  - Interviews
  - Bereavement
  - Jury Duty
  - Illness with a written medical excuse
- Only one student per rotation will allowed to be off at a time. Exceptions will be allowed for the following reasons:
  - Attendance to a professional conference
  - Interviews
  - Bereavement
  - Jury Duty
  - Illness
- Time off taken for jury duty or bereavement will not require the two (2) week notice.

Bereavement
The request form must be completed and approval only needs to be granted by the program director.
- A student may take up to three (3) days of leave without loss of personal hours off for a death in the family.
  - Family is defined as a spouse, son, daughter, mother, father, mother-in-law, father-in-law, sister, brother, grandparent or grandchild. The policy also includes domestic partner, stepparent, step-sibling, or stepchild.

Jury Duty
The request form must be completed and approval only needs to be granted by the program director.
- Time spent on jury duty will not result in loss of personal hours off.
- If the jury obligation is less than three (3) hours in a day, the student must report to clinic/classroom for the rest of his/her daily responsibilities.
A student who appears in court on their own behalf must use their personal hours off. If a student has no personal hours off remaining, he/she will be required to participate in additional clinical days prior to completion of the program or during scheduled breaks.

**Communication for Illness or Emergency**

In the case of illness or emergency, in which a student must be absent without prior notice, the student must report the situation immediately by:

- Call the clinical coordinator at the clinical site or the instructor for the lecture. If the clinical coordinator is not available, the student will leave a message with perfusionist in the perfusion department who answered the call and email the instructor to follow up.
- Email the program director at nicole.m.michaud.1@vanderbilt.edu with pertinent information, including how long the student anticipates the absence to be and how the information was communicated to the instructor (i.e., phone call or email).
- If the absence extends beyond one day, the student must keep the instructor and program director current on the duration of time away.
- Any absences greater than two day as result of an illness/injury will require a doctor’s excuse before make-up work can be scheduled.

If a student is experiencing any of the following, they should follow the above communication policy.

- Fever > 101 F
- Diagnosis of a communicable illness (medical documentation should be submitted)
- Vomiting/Diarrhea

**Medical or Other Absence:**

In the event that a student is not able to attend a regularly scheduled training day, the student shall notify the Program Director (or designee) as soon as possible. Medical and other absences shall be documented on the weekly time sheet (student site of the program website), and absence forms, requests for leave, etc. shall be promptly completed. Medical absences in the excess of two (2) days will require a doctor’s excuse. Following such absence, a student shall not be allowed to return to class or clinical rotation until such paperwork is completed. Absences based on a student’s inability or unwillingness to complete the required paperwork or exhaustion of the allotted personal time will require the student to make up day for day following the date of graduation of their class or could result in being withdrawn from the program.

**REQUIRED TEXTBOOKS**

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<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>ISBN/Publisher</th>
<th>Year</th>
<th>Cost</th>
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<tr>
<td>Cardiac Surgery: Perioperative Patient Care</td>
<td>Siefert, Patricia</td>
<td>032-3-0142-67 978-0-3230-1426-7 / Mosby</td>
<td>-</td>
<td>2002</td>
</tr>
<tr>
<td>Hemodynamic Monitoring: Invasive and Noninvasive Clinical Application, 3rd Edition</td>
<td>Gloria Oblouk Darovic, RN, CCRN</td>
<td>978-0-7216-9293-7 / Elsevier Health Sciences</td>
<td>-</td>
<td>2002</td>
</tr>
<tr>
<td>Pathophysiology of the Heart Disease, 5th Edition</td>
<td>Leonard S. Lilly, MD</td>
<td>978-1-6054-7723-7 / Wolters Kluwer</td>
<td>-</td>
<td>2010</td>
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**Program Library Resources**

The Jean and Alexander Heard Library on campus and the Peabody Library on Peabody Campus are available to the students for research and study space. The Eskind Biomedical Library resources are currently available electronically. Library materials can be accessed with the following link: [http://www.library.vanderbilt.edu/](http://www.library.vanderbilt.edu/)

Students in the program receive an orientation from the library staff during the first week of the program with a demonstration on the on-line resources, how to access material, how to use the various search engines, and how to inquiry about resources outside of the facilities. Students have access to the following items:

- Computers
- Printers
- Journals
- Electronics Books
- Assistance with Search Engines for Research
- Assistance with EndNote
- Assistance with Identification of Evidence Based Literature
- Study Rooms for Group Work
- Space to Study

Each student has access to numerous professional text resources and journals through the libraries on campus. The office for the program contains several texts that may be checked out for student use. In addition, the program offers additional journals and textbooks in the student workroom located in Medical Center North D-2212.

**Program-Specific Technology Requirements**

Students in the Perfusion Program must have a laptop computer with the minimum system requirements, as outlined in the institutional section of this catalog.

**Program Educational Facilities**

**Classroom Space**

Didactic lectures held each semester are delivered in classrooms located on the VUMC campus. Classroom spaces is reserved and secured by the program director prior to each semester. Lectures are given in classrooms located in Medical Center North, Medical Center East, and Light Hall. The program does make every effort to utilize CC-2312 in Medical Center North for the majority of the didactic lectures. All classrooms used are equipped with audio visual equipment to allow for the delivery of lectures, ample chairs and tables for the students to sit and take notes during lectures, and chalkboards/dry erase boards to promote impromptu discussions. Classrooms have ample lighting and are climate controlled.

**Simulation Laboratory**

Simulation Lab is located in Medical Center North CC-2314. The hours for simulation lab instruction will be given at the beginning of each semester. The program director will also have open simulation lab hours available throughout the semester. The wet lab experience will begin introducing students to
various types of perfusion equipment. Laboratory experience will begin early in the year, allowing hands-on training to support the didactic classes. The simulation lab is equipped with disposable circuits and equipment to all the student to practice cardiopulmonary bypass management techniques in a low stake environment.

Support of ongoing research projects allows the perfusion student the unique and valuable opportunity to begin functioning independently as a perfusionist. This experience is designed to increase student autonomy and will allow the student the opportunity to practice perfusion technique in a less stressful environment.

**Student Workroom**
The perfusion students have their own perfusion work room located in Medical Center North D-2219. This space is located in professional office space. While in the work room, students are required to act and speak in both a professional manner. The space has textbooks, printer, computers, cabinet space, office supplies, refrigerator, and microwave. Student can sign out books from the student library for two weeks at time. The student must fill out the book sign out form. This space is student space only and should be kept clean. The student workroom is located on the 2nd floor of Medical Center North room D-2219. Please turn lights off when leaving the room. This space is where students should spend their time between cases at Vanderbilt University Medical Center (VUMC). The pump room at the VUMC is the clinical instructor’s space and students should respect their need for privacy.

*This catalog contains only a summary of program policies and procedures. Students should refer to the program handbook for additional information.*
Appendix A – Acceptable Use Policy (Computer Policy)

Appendix B – Social Media Policy

Appendix C – VUMC Authentication to Electronic Systems and Applications Policy

Appendix D – VUMC Dress Code and Personal Appearance Policy

Appendix E – Alcohol and Drug Use Policy

Appendix F – Policy on Possession of Firearms & Weapons
I. Purpose:

To achieve its mission, VUMC applies substantial financial and personnel assets toward operating a reliable, available and secure network-computing infrastructure. The mass adoption of digital technologies in the everyday lives of members of our community requires VUMC to establish clear policies that guide how community members may use VUMC’s information technology resources. This Acceptable Use Policy (AUP) communicates the respective policies associated with our role in the VUMC community as students, faculty, staff or other authorized users.

II. Scope:

This policy applies to all Vanderbilt University Medical Center Workforce Members (See References, IM SOP - Defined Terms Used in Information Management Policies) using VUMC computing resources whether individually controlled or shared, stand-alone or networked. It applies to all computer and communication facilities owned, leased, operated, or contracted for by VUMC. Information technology resources include but are not limited to VUMC’s Internet 1, Internet 2, private networks, telephone, fax, voice mail, electronic mail, instant messaging, electronic collaboration, content management, or other applications that attach, utilize, or otherwise interface with VUMC’s data and voice network.
computing infrastructure. Electronic communications include but are not limited to any information—data, text, graphics, audio, video, or other artifact—that can be sent or received via an electronic system or manipulated or transferred via the network computing infrastructure or an attached device or peripheral.

III. Policy:

VUMC’s information technology resources are used to promote the core mission of VUMC in patient care, education, research and scholarship, and service, either directly or through the various administrative entities and services that enable VUMC’s core mission. To that end, the policy has the following goals:

A. That the integrity, reliability, availability and performance of information technology resources are protected;

B. That information technology resources are used for their intended purposes; and

C. That the use of information technology resources is consistent with the principles, values, legal and regulatory obligations that govern use of other VUMC facilities and services.

IV. Requirements and Responsibilities:

A. Privacy, Integrity, and Operational Security

The privacy of all users and the integrity and operational security of VUMC’s information technology system must be respected by all. VUMC’s IT resources must not be used by anyone to gain or attempt to gain unauthorized access to private information, even if that information is not securely protected or is otherwise available. The fact that an individual account and its data may be unprotected does not confer either an ethical or legal right to access it.

1. Investigations of misuse, unauthorized use, or illegal activity, compliance with federal, state or local laws or regulations, as well as routine or emergency maintenance of the IT system, may require observation of electronic information by appropriate and authorized VUMC officials, employees, or their authorized agents. Such activities are not in violation of this principle so long as these activities are conducted by authorized individuals on behalf of VUMC and are governed by professional IT forensic protocols. VUMC uses automated systems to monitor data transmissions entering and leaving VUMC’s networks to detect the presence of viruses, malicious software, or privileged information.
2. Unauthorized access to private information constitutes a violation of this policy, and may result in disciplinary actions under the Faculty Manual, House Staff Manual, HR policies, or other applicable policy statements. Violation of this principle may also constitute a violation of state or federal law.

B. Use

Use of VUMC’s network computing and electronic communications infrastructure comes with certain responsibilities and obligations.

1. Unlawful Use

Tennessee and federal laws provide for civil and criminal penalties for violations of the law of systems use. Examples of unlawful actions include, but are not limited to, defamatory remarks, destruction of VUMC data or equipment, unauthorized copying of copyrighted material and the transportation of obscene materials across state lines. Any use of VUMC network computing assets by anyone in the organization that violates state, federal, or local laws is prohibited.

2. Violation of Institutional Policies

VUMC’s academic departments, clinical operations, and administrative areas maintain policies that govern and inform our day-to-day lives in the conduct of our VUMC experience. Any use of VUMC network computing assets that violates applicable institutional policies is prohibited.

C. Fiduciary Responsibilities

1. VUMC Workforce Members

VUMC Workforce Members possess a great personal responsibility to themselves and to other community members to utilize technology while maintaining their fiduciary responsibilities. These responsibilities include, but are not limited to:

a. Being responsible for the security of one’s personal information;
b. Protecting personal and private information of others; and
c. Taking care to minimize risks of various undesirable events, such as disclosure of sensitive personal information,
identity theft, and even threats to personal safety when using VUMC information technology assets.

2. Individuals in Trusted Roles

a. Some VUMC Workforce Members are granted elevated or privileged access to VUMC’s information and information systems. These Workforce Members’ job duties require access to VUMC Confidential Information in order to:

i. Provide legal or risk management advice to the institution;

ii. Perform internal audits, investigations, or compliance reviews;

iii. Perform leadership duties; or

iv. Design, build, implement, support, or maintain information systems and/or information technology.

b. This privileged access places the VUMC Workforce Member into a Trusted Role, which indicates a higher level of institutional trust and responsibility. To maintain this level of trust, VUMC Workforce Members in a Trusted Role must develop, maintain, and continually enhance their skills and abilities on behalf of those they serve. These VUMC Workforce Members in a Trusted Role must strive to be trusted and highly skilled custodians through:

i. Preserving confidentiality;

ii. Protecting data and information integrity;

iii. Establishing and maintaining availability of information systems;

iv. Educating those around them about IT and social risks related to information systems;

v. Enhancing and maintaining technical skills; and

vi. Demonstrating an understanding of the areas they serve.

D. Intellectual Property

At the heart of any academic or research endeavor resides the concept of intellectual property. All copyrighted information (text, images, icons, programs, video, audio, etc.) retrieved from computer or network resources must be used in compliance with applicable copyright and other law. Copied material must be properly attributed. Plagiarism of digital information is subject to the same sanctions as apply to plagiarism in any
other media. Acquiring or sharing copyrighted materials without obtaining the appropriate licenses or permissions may be unlawful.

E. Publication or Distribution of Unauthorized Recordings, Photos, Images, Text or Video

With the availability of low cost cameras, smart phones, and consumer electronics, it is possible for someone to acquire voice, video images, still images, multimedia, or text in non-public situations without the knowledge or consent of all parties. VUMC network computing assets must not be used by anyone in the organization to publish or distribute this type of material without the expressed consent of all involved parties.

F. Right to Copy and Inspect for Legal, Regulatory, and VUMC Purposes

VUMC is committed to protecting the privacy of faculty, students, staff, patients, and other users of its IT resources, and their electronic communications. However, because VUMC operates subject to compliance with various federal and state laws and regulations and must be able to enforce its own policies, VUMC must occasionally inspect, preserve and produce records to fulfill legal obligations and to carry out internal investigations. VUMC reserves the right to obtain, copy, and convey to outside persons any records or electronic transactions completed using VUMC information systems in the event it is required by law or institutional policy to do so. VUMC may also in its reasonable discretion, when circumstances require, obtain and review any records relevant to an internal investigation concerning compliance with VUMC rules or policies applicable to faculty, staff, or to all others granted use of VUMC’s information technology resources. Users therefore should not expect that records created, stored or communicated with VUMC information technology or in the conduct of VUMC’s business will necessarily be private. VUMC reserves its right to any work product generated in the conduct of its business.

G. Locally Specific Policies

Individual units within VUMC may create additional policies for information resources under their control. These policies may include additional detail, guidelines and further restrictions but must be consistent with principles stated in this policy document. Individual units adopting more specific policies are responsible for establishing, publicizing and enforcing such policies, as well as any rules governing the authorized and appropriate use of equipment for which those units are responsible.
V. Disclosures:

A. All members of the VUMC Workforce Members are given notice of this policy by virtue of its publication and are subject to it on the same basis. Ignorance of this policy does not relieve any user of his or her responsibilities under the policy. All Workforce Members are expected to familiarize themselves with the contents of this policy and act in conformance with these principles regarding any use of VUMC’s IT resources.

B. Due to the rapid nature of change in both information technologies and their applications, VUMC may amend this policy whenever deemed necessary or appropriate. Users are encouraged to periodically review this policy in order to understand their rights and responsibilities under it.

VI. Endorsement:

Information Privacy and Security Executive Committee April 2017

Compliance and Corporate Integrity Committee May 2017

VII. Approval:

John Manning 5/15/2017
Chief Operating Officer of Vanderbilt University Medical Center

Wright Pinson, MD 5/15/2017
Deputy CEO, Vanderbilt University Medical Center

VIII. References:


Information Management Category
IM SOP - Defined Terms Used in Information Management Policies
### Social Media Policy and Guidelines

**Policy Title/Number:** Social Media Policy and Guidelines  
**Manual:** Operations Policy Manual  
**Categories:** Information Management

**Contributors:**  
- Jill Austin, Chief Marketing Officer  
- Cynthia Manley, Associate Director  
- Betsy Brandes, Dir of Creative Services & Web Development  
- Lynne Hutchison, Dir of Communications  
- Donna Arkins, Web Manager  
- Melanie Moran, Associate Dir, News Service  
- Ryan Huber, Web Designer/Developer  
- Shana Hartman, Marketing Specialist  
- Wayne Wood, Executive Dir of New Media Productions  
- Susie Lyons, Manager, Employee Programs  
- John Howser, Deputy Dir, Med Ctr News and Public Affairs  
- Michele Toungette, Chief Business Development Officer  
- Anna Belle Leiserson, Web Coordinator, VICC

**Review Responsibility:** Operations Policy Committee

**Effective Date:** NEW – January 2010

**Team Members Performing:**  
- **X** All faculty and staff  
- All faculty and staff providing direct patient care or contact  
- MD  
- RN  
- LPN  
- VUSN/VUSM students  
- Other licensed staff (specify):  
- Other non-licensed staff (specify):  
- Not Applicable

**Guidelines Applicable to:**  
- **X** VUH  
- **X** VMG*  
- Children’s Hospital  
- **X** VPH  
- **X** VUSM  
- **X** VUSN  
- Other (specify):  
- Exceptions (specify):  
- Not Applicable  

* Includes satellite sites unless otherwise specified.

**Specific Education Requirements:**  
- Yes  
- No  
- **X**  
- Not Applicable

**Physician Order Requirements:**  
- Yes  
- No  
- **X**  
- Not Applicable
SOCIAL MEDIA POLICY AND GUIDELINES

I. Outcome Goal:

To provide guidelines outlining how Vanderbilt University Medical Center (VUMC) supports institutional communication goals.

II. Policy:

VUMC offers support of institutional communication goals, as well as provides social computing guidelines for VUMC faculty and staff engaging in online discourse and identifying themselves with VUMC.

This policy is not intended for internet activities that do not associate or identify a faculty or staff member with VUMC, do not use Vanderbilt email addresses, do not discuss VUMC and are purely about personal matters.

III. Definitions:

Content owners, for the purpose of this policy, are those assigned the responsibility of maintaining, monitoring, and moderating a VUMC social media platform. Official communications refer to those done in VUMC’s name, (e.g. a Vanderbilt Diabetes Facebook page).

A. Content Owner – Assigned by department as the individual responsible for monitoring and maintaining web content.

B. Moderator – Assigned by Content Owner and/or department as the individual for moderating comments and postings by internal and external users, including deleting comments and posting that do not meet the criteria set forth in this policy.

C. Social Media Platforms – Technology tools and online spaces for integrating and sharing user-generated content in order to engage constituencies in conversations and allow them to participate in content and community creation. Examples are Facebook, Twitter, LinkedIn and YouTube.

IV. Specific Information:

A. Official Institutional Web 2.0 Communications:

1. Because of the emerging nature of social media platforms these guidelines do not attempt to name every current and emerging platform. Rather, they apply to those cited and any other online
platform available and emerging including social networking sites and sites with user-generated content. Examples include but are not limited to the following:

a. You Tube
b. Facebook
c. iTunes
d. LinkedIn
e. Twitter
f. Blogs
g. Social media content that is hosted internally and protected by VUNet ID/Password

2. Institutional representation via online social media platforms can only be initiated and authorized through the efforts of the VUMC Marketing, News & Public Affairs (NPA), Vanderbilt University School of Medicine (VUSM), and/or Vanderbilt University School of Nursing (VUSN) Communications departments. There can be no official VUMC sites or pages on You Tube, Facebook, Twitter, etc. unless they are developed or authorized by the VUMC Marketing, NPA, VUSM and/or VUSN Communications departments. Any sites or pages existing without prior authorization as required above will be subject to review when discovered and may be amended or removed.

3. VUMC official sites on social media platforms can have pages or content areas that are assigned to departments, divisions or programs at VUMC. These policies apply to such pages, as well as content maintained by VUMC Marketing, NPA, VUSM and/or VUSN.

4. Content Owners, as named by their departments or department’s leadership, are responsible for posting and using content and maintaining compliance with VUMC Credo behavior, HIPAA (Health Insurance Portability and Accountability Act) and policies related to Conflict of Interest, Privacy, Security, Safety and Human Resources, and FERPA (Federal Education Records Protection Act).

5. Content Owners are responsible for monitoring and maintaining web content as follows:

a. Content is current and accurate.
b. Content Owners engage in communications that are acceptable in the VUMC workplace and respect copyrights
and disclosures. Proprietary financial, intellectual property, patient care or similar sensitive or private content may not be revealed.

c. Content Owners are responsible for gaining the expressed consent of all involved parties for the right to distribution or publication of recordings, photos, images, video, text, slideshow presentations, artwork and advertisements whether those rights are purchased or obtained without compensation.

d. Content Owners are responsible for constantly monitoring postings and comments to social media sites, and for deleting postings that do not adhere to our policies.

6. Content Owners and/or Moderators sign a Content Owner/Moderator Terms and Agreement Form. This form is renewable annually and will be monitored by the VUMC Marketing, News & Public Affairs (NPA), Vanderbilt University School of Medicine (VUSM) and/or Vanderbilt University School of Nursing (VUSN) Communication departments (see Appendix A).

7. My Health at Vanderbilt is a secure communications portal that is the authorized channel to support email and dialogue with patients and their clinical care providers.

B. Guidelines for Online Professional or Personal Activity:

Online social media allow VUMC faculty or staff to engage in professional and personal conversations. These guidelines apply to faculty and staff who identify themselves with VUMC and/or use their Vanderbilt email address in social media venues such as professional society blogs, LinkedIn, Facebook, etc. for deliberate professional engagement or casual conversation.

1. Follow the same VUMC Credo behavior, HIPAA, Conflict of Interest Policy, Privacy and general civil behavior guidelines cited above including respecting copyrights and disclosures, and not revealing proprietary financial, intellectual property, patient care or similar sensitive or private content.

2. If faculty/staff identify themselves as a member of the VUMC faculty or staff in any online forum and/or use their Vanderbilt email address, faculty/staff make it clear that they are not speaking for VUMC, and what they say is representative of their individual
personal views and opinions and not necessarily the views and opinions of VUMC.

3. Faculty and staff are thoughtful about how they present themselves as a VUMC faculty or staff member in online networks. By virtue of self identifying as part of VUMC in such a network, faculty/staff connect themselves to, and reflect upon, VUMC colleagues, managers and even VUMC patients and donors.

4. Remember that all content contributed on all platforms becomes immediately searchable and can be immediately shared. This content immediately leaves the contributing individual faculty/staff members’ control forever.

5. If someone or some group offers to pay faculty/staff for participating in an online forum in their VUMC role, offers advertising for pay and/or for endorsement, this could constitute conflict of interest and VUMC policies and guidelines apply.

6. If someone from the media or press contacts faculty or staff about posts made in online forums that relate to VUMC in any way, faculty/staff alert their manager/leadership and contact News & Public Affairs before responding.

7. Job postings follow Vanderbilt’s Human Resources (HR) established processes. Social Media may not be used in place of HR processes.

8. Marketing, News & Public Affairs, VUSM and VUSN provides some official VUMC and/or VUSM and VUSN information that can be appended to social media sites. (See Appendix B).

V. Web References:

OP 30-10.02 Conflict of Interest – Conflict of Commitment
OP 10-40.01 Confidentiality of Protected Patient Information
OP 10-40.32 Sanctions for Privacy and Information Security

HR-025 Electronic Communication Policy

Social Media Toolkit for VUMC. Retrieved October 28, 2009 from http://www.mc.vanderbilt.edu/socialmediatools
VI. **Endorsements:**

Operations Policy Committee

Medical Center Medical Board

Kevin Churchwell, MD  
Executive Director & CEO, VCH

Larry Goldberg  
Executive Director & CEO, VUH

David Posch  
CEO, The Vanderbilt Clinic

VII. **Approvals:**

Colleen Conway-Welch, Dean  
School of Nursing

Marilyn Dubree, RN, MSN  
Executive Chief Nursing Officer

C. Wright Pinson, MBA, MD  
Deputy Vice Chancellor for Health Affairs  
CEO of the Hospitals and Clinics for VUMC

David S. Raiford, MD  
Associate Vice Chancellor for Health Affairs  
Senior Associate Dean for Faculty Affairs
Appendix A

Vanderbilt University Medical Center
Social Media Content Owner/Moderator Terms and Agreement

1. Each Content Owner/Moderator is familiar with, and agrees to comply with Vanderbilt University Medical Center’s Social Media Policies and the guidelines listed in the Vanderbilt University Medical Center Content Owner/Moderator Terms and Agreement Form.

2. To prevent stagnant conversation, social media content is refreshed at least weekly.

3. To utilize social media efficiently, all social media platforms should have a specific purpose and topics should be relevant to the mission of VUMC.

4. All comments are moderated. Comments that are obscene, defamatory, profane, libelous, threatening, harassing, abusive, hateful or embarrassing to another person or any other person or entity are not approved. Owner/Moderator agrees to take all reasonably possible steps to prevent and eliminate non-approved comments and understand that it may be necessary to discontinue the use of the social media if such comments cannot be eliminated or prevented.

5. The following disclaimer is posted on all internal sites:

a. Please remember that all laws and Vanderbilt University Medical Center policies apply, including but not limited to Privacy, HIPAA, Security and Safety, and VERITAS. We suggest that you take time to review these polices. Please consult your manager if you have questions about the appropriateness of your comment.

6. The following Tips section is posted on all internal blog sites:

a. A few tips:
   i. Be brief.
   ii. Feel free to disagree in a respectful manner.
   iii. Please sign your comments (remember, in many cases your VUnet ID will show up automatically.

7. The social media participation guidelines in appendix B are posted or linked to on all external VUMC sites.

8. Any threats to harm a person or one’s self are immediately addressed by notifying the Vanderbilt Chief of Police (contact information below).
a. If a comment violates any law or Vanderbilt University Medical Center policy, it is forwarded to the appropriate contact from the following list:

<table>
<thead>
<tr>
<th>Issue/Topic</th>
<th>Reviewer</th>
<th>E-Mail</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privacy/HIPAA</td>
<td>Privacy Office</td>
<td><a href="mailto:Gaye.smith@vanderbilt.edu">Gaye.smith@vanderbilt.edu</a></td>
<td>Privacy Office</td>
</tr>
<tr>
<td>Security</td>
<td>August Washington</td>
<td><a href="mailto:august.washington@vanderbilt.edu">august.washington@vanderbilt.edu</a></td>
<td>Chief of Police</td>
</tr>
<tr>
<td>Risk Management</td>
<td>Sandy Bledsoe</td>
<td><a href="mailto:sandy.bledsoe@vanderbilt.edu">sandy.bledsoe@vanderbilt.edu</a></td>
<td>Executive Dir Risk &amp; Insurance Mgmt</td>
</tr>
<tr>
<td>Ethics</td>
<td>Dr. Robert Ossoff</td>
<td><a href="mailto:robert.ossoff@vanderbilt.edu">robert.ossoff@vanderbilt.edu</a></td>
<td>Compliance Officer</td>
</tr>
<tr>
<td>Employee Issue</td>
<td>Veronica Burns</td>
<td><a href="mailto:veronica.w.burns@vanderbilt.edu">veronica.w.burns@vanderbilt.edu</a></td>
<td>Senior Director, Human Resources</td>
</tr>
<tr>
<td>Legal</td>
<td>Julia Morris</td>
<td><a href="mailto:julia.c.morris@vanderbilt.edu">julia.c.morris@vanderbilt.edu</a></td>
<td>Deputy General Counsel</td>
</tr>
<tr>
<td></td>
<td>Kevin Davis</td>
<td><a href="mailto:kevin.davis@vanderbilt.edu">kevin.davis@vanderbilt.edu</a></td>
<td>University Counsel</td>
</tr>
<tr>
<td>Information Security</td>
<td>Monroe Wesley</td>
<td><a href="mailto:monroe.wesley@Vanderbilt.Edu">monroe.wesley@Vanderbilt.Edu</a></td>
<td>Director, Regional Informatics Security</td>
</tr>
</tbody>
</table>

As the content owner/ moderator of the ________________________ Vanderbilt University Medical Center _________________, I, __________________________________, agree to maintain compliance with the above terms and agreements. I understand that my position as the content owner/ moderator of said social media platform can be terminated or suspended at any time.

Name______________________________ Signature ________________________________

Date ______________________________
Appendix B

Social Media Participation Guidelines

Thank you for participating with Vanderbilt University Medical Center in social networking communities such as Twitter, YouTube and Facebook. We ask that you treat others with respect, even if disagreements occur. Please do not post material that could be considered an infringement on the rights of others. Vanderbilt reserves the right to delete postings, or block users, that it deems to be slanderous, obscene, soliciting, or threatening.

Remember that these are public forums and whatever information you share will be viewed by others. Consider this carefully before posting detailed personal medical information. Vanderbilt has no control over the policies and practices of these third party sites. Once you leave www.VanderbiltHealth.com, www.mc.Vanderbilt.edu, or any of its related sites you are subject to the policies of those sites. The information provided by Vanderbilt University Medical Center on these platforms is intended for educational purposes only. It is not intended as an endorsement, or a substitute for professional medical advice, diagnosis, or treatment.

If you are an employee of Vanderbilt University Medical Center, please remember that all laws and Vanderbilt policies apply, including but not limited to Privacy, HIPAA, Security and Safety. We suggest that you take time to review these polices. Please consult your manager if you have questions about the appropriateness of your comment.

By participating with Vanderbilt University Medical Center in social networking communities, you agree to indemnify Vanderbilt University Medical Center against any damages, losses, liabilities, judgments, costs or expenses arising out of a claim by a third party relating to any posts you have made.
I. **Purpose:**

To define the requirements and methods for authentication to confirm the identity of an individual requesting access to Vanderbilt University Medical Center (VUMC) electronic systems and/or applications.

II. **Policy:**

Vanderbilt University Medical Center (VUMC) requires an assigned digital representation for individuals through a unique username. Authentication of individuals to electronic systems and applications require, at a minimum, a password. Access to certain electronic systems and applications (such as applications containing identifiable patient information) may require a stronger form of authentication.
III. Definitions:

A. Authentication: The process of confirming the identity (assigned digital representation) of an individual or software program. (VUMC Glossary - Authentication)

B. Biometric Factor: Unique personal data (such as a fingerprint, iris scan, or facial recognition) used in an authentication protocol to confirm identification. (VUMC Glossary - Biometric Factor)

C. Card Reader: USB proximity readers physically attached to a computer required to provide necessary power to activate the transponder embedded in the Vanderbilt Card. (VUMC Glossary - Card Reader)

D. Lockout: Occurs when the screensaver is activated and hides the applications running on a workstation. The Lockout is initiated by affirmative action by the user or after a specified period with no keyboard action or mouse movement. (VUMC Glossary - Lockout)

E. Security Token: An electronic device that generates dynamic unique sequencing digits (password) used with an individual’s PIN for authentication. VUMC uses SecurID Token manufactured by RSA Security. (VUMC Glossary - Security Token)

F. Strong Authentication: A procedure based on the use of two or more of the following elements categorized as knowledge, ownership, and inherence: (i) something only the user knows, e.g. static password, personal identification number (PIN) or response to a challenge question; (ii) something only the user possesses, e.g., an assigned device or token or smart card; (iii) something the user is, e.g., biometric characteristic, such as a fingerprint or iris scan. In addition, the elements selected must be mutually independent, i.e., the breach of one does not compromise the other(s). (VUMC Glossary - Strong Authentication)

G. Vanderbilt Card with Reader Capabilities: A VUMC identification badge embedded with a passive proximity transponder configured to provide individual computer user names to electronic systems and/or applications. (VUMC Glossary - Vanderbilt Card with Reader Capabilities)

IV. Specific Information:

Authentication factors are separated into categories of something one knows, something one has, and something one is.

A. User name and password (something the user knows):
1. Each individual granted access to VUMC systems and/or applications is assigned one or more unique user name(s) and password(s) and/or PIN(s).

2. Each individual is accountable for the confidentiality and integrity of the password or PIN associated with each assigned user name.

3. Sharing a password (or PIN) or working under another user’s identification is prohibited.

B. Vanderbilt Card with Card Reader (something the user has):

1. VUMC employs the use of the Vanderbilt Card used in conjunction with a Card Reader and an individual’s PIN as the preferred method of two-factor authentication.

2. Only one Vanderbilt Card is issued to any authorized individual. Temporary or duplicate badges are not issued.

3. Each individual is accountable for the security of the issued Vanderbilt Card, and the badge is not to be loaned, shared or given to anyone else to use.

4. Each individual issued a Vanderbilt Card creates a four-digit PIN to be used in conjunction with the badge. Use of four identical or four consecutive digits (e.g., 1234 or 1111) as a PIN is not permitted. Do not use the last four digits of your social security number or your date of birth (e.g., 0410 for April 10th) as a PIN.

5. The user is expected to tap their Vanderbilt Card to the Card Reader as he or she leaves a device to initiate the Lockout.

6. A lost or stolen Vanderbilt Card is reported by the assigned user to the VUMC Help Desk as soon as the loss is discovered.

C. Security token (something the user has):

1. When strong authentication is required and the Vanderbilt Card and Card Reader solution is not a suitable solution, VUMC employs the use of a SecurID Token from RSA Security.

2. Each individual is accountable for the security of the issued SecurID Token and the Token is not loaned, shared or given to anyone else to use.
3. Each individual issued a Token creates a four-digit PIN associated with the individual’s user name and used in conjunction with the password generated by the Token.

4. A lost or stolen Security Token is reported by the assigned user to the VUMC Help Desk as soon as the loss is discovered.

D. Biometric factor (something the user is):

1. Certain applications require an authentication protocol that utilizes a biometric factor (e.g., AccuDose-Rx® dispensing cabinets).

2. A unique user name and password or PIN is used in conjunction with the biometric factor.

V. **Endorsement:**

Information Privacy and Security Executive Committee  
June 2014

Medical Center Medical Board  
September 2014

Luke Gregory  
Executive Director and CEO  
Monroe Carell Jr. Children’s Hospital at Vanderbilt  
9/9/2014

David Posch  
CEO, Vanderbilt University Hospital and Clinics  
Executive Director, Vanderbilt Medical Group  
President, Vanderbilt Integrated Providers  
9/9/2014

VI. **Approval:**

Marilyn Dubree RN, MSN, NE-BC  
Executive Chief Nursing Officer  
9/16/2014

Linda D. Norman RN, DSN, FAAN  
Valere Potter Menefee Professor of Nursing  
Dean, Vanderbilt University School of Nursing  
9/9/2014

C. Wright Pinson MBA, MD  
Deputy Vice Chancellor for Health Affairs  
Senior Associate Dean for Clinical Affairs  
CEO of the Vanderbilt Health System  
9/9/2014

David Raiford MD  
Associate Vice Chancellor for Health Affairs  
9/16/2014
Senior Associate Dean for Faculty Affairs
VII. References:


Vanderbilt Card PIN Use


Clinical Category:
Automated Medication Dispensing Cabinets

Information Management Chapter:
Authorization and Access to Electronic Systems and Applications
Vanderbilt University Medical Center  
Policy: Dress Code and Personal Appearance

I. Outcome Goal: To convey a professional appearance to patients, visitors, and co-workers.

II. Policy: All staff working with patients or patients’ families or in public areas are expected to dress in a professional manner. The department director determines the appropriate dress for staff, taking into considerations safety and business function of the department.

III. Specific Information:
A. Identification badges are worn in clear sight above the waist with name, title, and picture clearly visible (excluding Department of Security Police).
B. Apparel must be clean, neat and in good condition.
C. Hair should be clean, neatly trimmed and contained in such a manner that it does not come in contact with the patient or visitors.
D. As specified by Occupational, Safety, and Health Administration (OSHA) standards, personnel providing direct patient care wear socks or stockings and shoes with impermeable enclosed toes. Shoes are constructed of an impervious, non-absorbent material, clean and in good repair.
E. When staff’s clothing or uniform becomes contaminated while on duty with blood, body fluids or hazardous chemicals, staff exchange their soiled clothing for scrubs per Safety policy SA 60-10.02 Handling Contaminated Clothing.
F. Lab coats or white uniforms may be worn by nursing and allied health personnel only. Colored jackets may be worn by reception staff.
G. No perfume/cologne/scents are worn in clinical care areas and areas that patient congregate.
H. Fingernails are kept clean, well-cared for, and no longer than ¼ inch from fingertip in length. Artificial and long natural fingernails are not permitted for those providing direct patient care. The definition of artificial fingernails includes, but is not limited to, acrylic nails, all overlays, tips, bondings, extensions, tapes, inlays, and wraps. Nail jewelry is not permitted. Nail polish, if worn, is well maintained. Chipped nail polish is not allowed.
I. The following are not allowed:
   a. Faded, torn, ripped, or frayed clothing;
   b. Midriff or off-the-shoulder blouses, sweaters, or dresses;
   c. Tight, sheer, or revealing clothing;
   d. Clothing with advertisement, sayings, or logos, with the exception of unit-approved VUMC apparel when worn as part of the uniform;
   e. Spaghetti strap or strapless shirts or dresses;
   f. Denim jeans;
   g. Shorts or sports attire, unless part of unit-approved VUMC uniform;
   h. Hats, caps, bandanas, plastic hair bags/shower caps (particularly worn within buildings), unless for medical condition or safety purposes, or established religious customs; 9. Visible body piercing/jewelry except for ears;
   i. Visible or gross tattooing on face, neck, arms, or hands; tattoos 1” in size – graphic/disturbing, e.g., displaying violence, drugs, sex, alcohol, tobacco products.

IV. Note: More restrictive unit/departmental-specific dress code and appearance policies may supersede this policy.
Vanderbilt University Medical Center
Policy: Alcohol and Drug Use

Purpose: To provide a safe and productive workplace free of substance abuse.

Policy: 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.

Faculty, staff, or house staff whose work performance or behavior suggests the influence of such drugs or intoxicants may be required to submit to drug or alcohol testing.

Definitions:
A. EAP: Employee Assistance Program.
B. FPWP: Faculty and Physician Wellness Program.
C. Faculty: All those who have faculty appointments in the School of Medicine or the School of Nursing and/or practicing at Vanderbilt, regardless of compensation from Vanderbilt.
D. House Staff: All interns, residents, and fellows.
E. House Staff Supervisor: Director, Graduate Medical Education or designee.
F. NWP: Nurse Wellness Program.
G. Supervisor of Faculty: Dean or Departmental Chair.
H. Supervisor of Staff: Division Head or Department Chair or their designee.

Specific Information:
A. The unauthorized use or possession of alcohol, controlled substances or the use or possession of illegal drugs is governed by Human Resources policy, HR - Drugs and Alcohol. Faculty are governed by the Faculty Manual and Medical Staff Bylaws. House staff are governed by the House Staff Manual (see References).
B. Some situations that may require drug and/or alcohol testing are:
   1. Unusual behavior such as slurred speech or unusual energy levels for which an explanation is not apparent;
   2. Unusual drug administration procedures or documentation, including those as noted by a review from the Pharmacy staff; and/or
   3. Reports by coworkers of unauthorized drug and/or alcohol use or being under the influence on the job.
C. When in the judgment of the supervisor, counseling is not an appropriate immediate intervention and the behavior or work performance of faculty house staff or staff member gives rise to performance-related concerns that indicate a need for drug and/or alcohol testing, the supervisor follows these procedures:
   1. Immediately relieves the employee of assigned responsibilities; and advises the employee of the performance-related concern.
   2. If a staff member is involved, the supervisor consults with their HR business partner regarding appropriate action to be taken.
   3. If testing is done, the supervisor or designee escorts the faculty, house staff, or staff member to Occupational Health Clinic (OHC) between the hours of 7:30 a.m. and 5:30 p.m.
4. If testing is needed after regular work hours, the supervisor contacts the Emergency Department (ED) triage nurse or attending physician prior to escorting the individual to the ED; and
5. Provides the ED triage nurse background information regarding the individual’s behavior as well as a telephone number for locating the supervisor, if necessary. The individual is examined by an ED attending physician who orders the appropriate screening tests according to ED protocol. Every effort is made to maintain the confidentiality of the individual’s test results and status.
6. The impact of the problem on job performance, including interpersonal relationships affecting the workplace, is documented.
7. Refusal to be Tested: If faculty, house staff, or staff member refuses to be escorted or tested, the supervisor acts on the actions and evidence available (based on behavior and/or performance and all available information), and the individual is placed on administrative leave or summary suspension, as appropriate. After consultation with the appropriate department, the supervisor initiates the appropriate step(s) of disciplinary action, including termination, if warranted.
8. The supervisor arranges safe transportation from the University/Medical Center for the faculty, house staff, or staff member.

D. Post-Test:
1. Pending the test results, the faculty, house staff, or staff member is placed on administrative leave/summary suspension by their supervisor.
2. OHC reports final test results to the HR business partner for staff members, or to the appropriate supervisor of faculty or house staff.
   a. Staff: The HR business partner notifies the supervisor of the test results. The HR business partner meets with the staff member and supervisor to discuss test results and disciplinary action, including termination, to be taken, if any, and/or expected performance changes.
   b. Faculty/House Staff: If faculty or house staff are involved, the appropriate Clinical Service Chief, Program Director, or designee discusses the test results with the OHC and others, as indicated. Upon receiving this information, the Chair, Program Director, or designee determines what action should be taken (e.g., initiation of disciplinary action, up to and including termination and/or referral to FPWP for evaluation and treatment recommendations).

E. Bills for drug and alcohol test collection are sent to Vanderbilt OHC for verification and payment. Laboratory fees are billed directly to OHC as directed on the Custody and Control Form. Any other charges for medical evaluations are billed to the employee’s home department.

F. Peer Assistance Programs/EAP/Counseling:
1. VUMC faculty, staff, and house staff also comply with any peer assistance program, licensing board, program, or agency that requires disclosure. Requests for information from licensing boards, peer assistance groups, or other referral sources are referred to EAP/FPWP/NWP.
   a. VUMC faculty, house staff, or staff members may be referred or seek assistance for substance abuse counseling through the EAP/FPWP/NWP. It is the supervisor’s responsibility to refer a faculty, house staff, or staff member to EAP/FPWP/NWP for follow-up when:
      1. Supervisor has knowledge of any faculty, house staff, or staff member who has or has had an alcohol or drug problem; or
2. Faculty, house staff, or staff member has been through alcohol/drug treatment, but is not currently being followed by EAP.
   a. In addition, if a supervisor learns that a staff member has had an alcohol or drug problem or has completed a treatment program, the supervisor consults with the HR business partner to determine what actions, if any, are taken.
   b. VUMC faculty, house staff, or staff members who enroll in and successfully complete a treatment program approved by EAP/FPWP/NWP and who agree to a written set of standards developed by EAP/FPWP/NWP, may be eligible for continued employment or re-employment. Those who are required to enroll, but fail to enroll in such a program, or who fail to follow the treatment prescribed, or who fail to successfully complete the program, or who do not maintain the agreement standards developed by EAP/FPWP/NWP, may be terminated.

2. Credentialed and/or privileged members of the Medical Staff, Professional Staff with Privileges and Allied Health Practitioners, house staff, or staff member convicted of any crime involving drugs or alcohol are required to notify their supervisor in writing within 5 calendar days of conviction. The supervisor, in turn, notifies the Clinical Service Chief, Program Director, or Employee Relations representative. Any individual so convicted or who fails to report the conviction may be subject to disciplinary action, up to and including termination.
Vanderbilt University Medical Center
Policy: Possession of Firearms/Weapons

Purpose: To reduce the likelihood of injury to faculty/staff, patients, and visitors from firearms and other weapons inside the Medical Center.

Policy: Firearms and other weapons are prohibited at Vanderbilt University Medical Center (VUMC), except by commissioned law enforcement, or corrections officers in performance of their duties. Primary exterior entry doors have signage posted with the school property weapons law.

Prohibited Weapons per State Law:
Per the Tennessee Code Annotated 39-17-1309, it is an offense for any person to possess or carry, whether openly or concealed, with the intent to go armed, any firearm, explosive, explosive weapon, bowie knife, hawk bill knife, ice pick, dagger, slingshot, leaded cane, switchblade knife, blackjack, knuckles or any other weapon of like kind, not used solely for instructional or school-sanctioned ceremonial purposes, in any public or private school building or bus, on any public or private school campus, grounds, recreation area, athletic field or any other property owned, used, or operated by any board of education, school, college or university board of trustees, regents or directors for the administration of any public or private educational institution.

“Weapons of like kind” also includes razors and razor blades, except those used solely for personal shaving, and any sharp pointed or edged instrument, except unaltered nail files and clips and tools used solely for preparation of food, instruction, and maintenance.

Specific Information:
A. Adult and Pediatric Emergency Departments - In accordance with Emergency Department procedures, ambulatory patients and visitors are required to pass through a metal detector or other metal scanning process prior to entrance into the Emergency Department. Persons entering the Emergency Department from entrances that are not monitored by metal detectors are directed by staff to reenter the area through a metal detector unless clinically contraindicated.

B. VUMC Inpatient Areas - If faculty/staff receive information that a firearm or other dangerous weapon may be present in VUMC inpatient areas, the following steps are taken:
   1. Faculty/staff role
      a. Contact Vanderbilt University Police Department (VUPD) at 2-2745 or 911 from a house phone or 421-1911 from a cell phone (for emergencies), and arrange to meet with an officer away from the person suspected of having a weapon.
      b. Provide the responding officer with the following information:
         1. Circumstances that led to the belief that a firearm or other weapon may be present;
         2. Description of person involved; and
         3. Description and location of possible weapon.
   2. VUPD’s role
      a. Investigate and respond appropriately based upon the circumstances of each incident.
      b. Document appropriately, coordinate efforts, and communicate actions and outcomes with affected managers and administrators.

C. Vanderbilt Medical Group (VMG) Clinics
1. If faculty/staff receive information that a firearm or other dangerous weapon may be present in the VMG clinics within the VUMC campus or One Hundred Oaks (OHO), the following steps are taken:
   a. Contact VUPD at 2-2745 or 911 from a house phone, or 421-1911 from a cell phone (for emergencies), and arrange to meet with an officer away from the person suspected of having a weapon.
   b. Provide the responding officer with the following information:
      1. Circumstances that led to the belief that a firearm or other weapon may be present;
      2. Description of person involved; and
      3. Description and location of possible weapon.

2. VUPD’s role
   a. Investigate and respond appropriately based upon the circumstances of each incident.
   b. Document appropriately and coordinate and communicate actions and outcomes with affected managers and administrators.
   c. Offsite VMG Outpatient Practice Areas If faculty/staff receive information that a firearm or other dangerous weapon may be present at a VUMC outpatient practice area/physician office outside of the confines of the Vanderbilt Campus or One Hundred Oaks, contact the local police department and provide information to the responding officer as described below:
      1. Circumstances that led to the belief that a firearm or other weapon may be present;
      2. Description of person involved; and
      3. Description and location of possible weapon.
      4. Following the steps above, faculty/staff complete a VERITAS report.

Locations of weapon prohibition signage at VUMC
VCH
- ED Ambulatory Entrance
- ED Ambulance Entrance
- Main Lobby Entrance
- Crosswalk Entrance from South Garage, 2nd Floor
- 2nd Floor Entrance Pierce Avenue side, both sets of double door entrances

PRB
- Revolving Doors on Pierce Avenue (or on glass near door)
- On Handicapped Entrance near revolving door, Pierce Avenue side

TVC
- Main Entrance doors on Medical Center Drive side (#184157)
- Crosswalk Entrance from TVC Garage, 2nd and 3rd levels

MCE/North/South Towers - Main Entrance, 21st Avenue side (#027-711)

VUH
- Main Lobby Entrance, Medical Center Drive Side, (#184152, #184153)
- 2nd Floor SICU Waiting Entrance from the East Garage
- Emergency Department Ambulatory Entrance (#028-421)
- Emergency Department Ambulance Entrance (#054-660)

MCN Round Wing
- Main Lobby Entrance Doors facing circle drive
- Patient Drop Off, 22nd Avenue “B Corridor” Canopy Entrance

VPH - Main entrance

One Hundred Oaks - Public entrances