Master of Science in Cardiovascular Perfusion

Purpose

The Master of Science in Cardiovascular Perfusion Program is an allied health science program that educates and prepares students in the knowledge and skills necessary to conduct cardiopulmonary bypass and associated cardiovascular procedures including cardiac life support. Perfusionists work under the supervision of the cardiac surgeon and in accordance with the cardiac anesthesiologist. Students who graduate from this program will be eligible to sit for the two-part national certification examination through the American Board of Cardiovascular Perfusion (ABCP). Successful completion of the ABCP examinations awards the certification and title of Certified Clinical Perfusionist (CCP).

Mission

Our mission is to prepare students to become a proficient entry level cardiovascular perfusionist through the dissemination of evidence-based knowledge, scholarly activities, and diverse clinical experiences. Additionally, it is the mission of this program to elicit independent systematic thought processes through new scientific discovery and historical knowledge. Graduates form this program will be able to effectively integrate perfusion theory to clinical practice.

Application Deadline

The application cycle begins September 15th. To be considered for admission, the completed application and all admission requirements must be submitted by February 15th. Applications that are not completed and submitted by this deadline will automatically be considered/reviewed for the following fall academic year. The application review and interview process are conducted in March and April. Final decisions are made by the end of April.

Admission Requirements

1. Application for graduate admission and $40 non-refundable application fee.
2. Completed a bachelor’s or master’s degree at a regionally accredited institution with a minimum cumulative GPA of 3.0 on a 4.0 scale. Please submit all official transcripts from undergraduate and graduate schools attended.

3. Successful completion of the following prerequisites, or equivalent courses, with a GPA of at least a 3.0 on a 4.0 scale in each course. Prerequisites should be completed within ten years of application.
   • General Biology with labs (8 credits) (e.g. NKU- BIO 150/L and BIO 151/L)
   • Microbiology with lab (4 credits) (e.g. NKU- BIO 202/L)
   • College Math (3 credits) (e.g. NKU- MAT 129 or STA 205)
   • Physics with lab (4 credits) (e.g. NKU- PHY 211/L)
   • General Chemistry with labs (8 credits) (e.g. NKU- CHE 120/L and CHE 121/L)
   • Anatomy & Physiology with labs (8 credits) (e.g. NKU- BIO 208/L and BIO 209/L)
   • Biochemistry (3 credits) (e.g. NKU- CHE 115/L)

4. Clinical patient care experience or shadow a perfusionist.
   • Perfusion Shadowing Doc.docx

5. Three professional letters of recommendation

6. Letter of intent discussing why you wish to pursue a career as a cardiovascular perfusionist

7. CV or resume

8. INTERVIEW: Once all requirements are met within the application deadline, qualified applicants may be invited for an interview with the director and clinical coordinator prior to final decision of admission.

Additional Program Requirements

Students are required to use PreCheck/ Sentry MD to purchase and upload a background check, immunizations, drug screen, and health screening documents.

Immunizations and document tracking are conducted through PreCheck/ Sentry MD. Before the start of clinical rotations, students will be required to have the following proof of immunizations. Register for Immunization Tracking at https://candidate.precheck.com/StudentCheck.

- Measles, Mumps, Rubella MMR- Two doses or positive surface antibody titers.
- Tuberculosis (TB)(PPd)- TB documentation or PPd test within 12 months and a negative result or TB blood draw test within 12 months with negative result.
- Influenza Vaccine – required seasonally (October 1st – March 31st)
- Tetanus, Diphtheria, Pertussis (T-DaP)- Vaccine within 10 years or TD/ T-DaP booster within 10 years
- Varicella (chickenpox)- Two dose vaccine or positive surface antibody titer
- Hepatitis B- Two, three, or four doses or positive surface antibody titer
- COVID-19 – Vaccine Documentation
Program Retention and Graduation Requirements

1. Maintain an overall 3.0 GPA
2. Completion of all coursework with a B average or better
3. Successful completion and display of competent clinical skills and knowledge of at least 75 adult clinical cases
4. Successful completion and display of competent clinical skills and knowledge or observation of at least 10 pediatric clinical cases
5. All course work and clinicals are non-repeatable

Tuition

$850/ Credit hour (cr.)

Student Fees for Each of the Following Courses

Fall Semester
CVP 610 Extracorporeal Technology I
- $900
CVP 630 Perfusion Simulation I
- $100

Spring Semester
CVP 611 Extracorporeal Technology II
- $900
CVP 631 Perfusion Simulation II
- $100

Curriculum

The MS Cardiovascular Perfusion Program is a five-semester program consisting of two semesters of in-class instructional learning and three semesters of clinical hands on training at various clinical affiliation sites. Each clinical rotation is 15 weeks in duration coinciding with NKU Summer, Fall, and Spring semesters.

First Year
Fall Semester (22 Credits)
- CVP 600 Anatomy and Physiology in Perfusion (3cr)
- CVP 602 Fundamentals in Perfusion Management I (2cr)
- CVP 610 Extracorporeal Technology I (3cr)
- CVP 620 Physiological Monitoring (5cr)
- CVP 621 Pathophysiology in Perfusion (4cr)
- CVP 630 Perfusion Simulation I (5cr)
Spring Semester (22 Credits)
- CVP 601 Anatomy and Physiology in Perfusion II (3cr)
- CVP 603 Fundamentals in Perfusion Management II (2cr)
- CVP 611 Extracorporeal Technology II (3cr)
- CVP 622 Surgical Technique (2cr)
- CVP 623 Perfusion Pharmacological Intervention (4cr)
- CVP 624 Pediatric Perfusion (3cr)
- CVP 631 Perfusion Simulation II (5cr)

Second Year
Summer Semester (10 Credits)
- CVP 680 Research Methods in Perfusion (2cr)
- CVP 640 Special Considerations in Perfusion (2cr)
- CVP 676 Clinical Practicum I (6cr)

Fall Semester (8 Credits)
- CVP 686 Clinical Practicum II (6cr)
- CVP 691 Perfusion Capstone I (2cr)

Spring Semester (8 Credits)
- CVP 696 Clinical Practicum III (6cr)
- CVP 693 Perfusion Capstone II (2cr)

TOTAL CREDIT HOURS: 70