

Circulation Technology

Circulation technologists (also known as perfusionists) apply advanced technology to the monitoring, life support, and diagnosis of patients. Circulation technologists work with physicians in hospitals and clinics by selecting and operating medical equipment used in surgical procedures, cardiac catheterization studies, monitoring in intensive care units, and in other specialized settings. Circulation technologists may also assume administrative duties or instruct other personnel in the proper use of sophisticated instruments and life support equipment.

Pursuing Circulation Technology at Ohio State

Students applying to the circulation technology major are required to complete the following courses (or their equivalents with a grade of C- or better) prior to enrollment in the major:

- Math 151 Elementary Functions
- Chemistry 121 and 122 General Physical Chemistry
- Biology 113 Biological Principles
- Physics 111 Mechanics and Heat
- Physics 112 Electricity, Magnetism and Light
- Anatomy 199.04 Human Anatomy with Lab
- Statistics 135 Elementary Statistics or Statistics 145 General Statistics
- EEOB 232 Introductory Physiology
- GEC courses in humanities and social science (additional 45-50 hours)

Admission to circulation technology is based on a combination of overall academic performance and academic achievement in the prerequisite courses as well as knowledge of the field of circulation technology. Experience in the hospital setting is also an important consideration. A personal interview is required. Visiting the division, talking with faculty, and meeting with local perfusionists are good sources of information about the field.

Completion of all admission criteria does not guarantee admission. Each year more qualified applicants apply than can be admitted. Maximum enrollment is 20 students per year. A minimum cumulative point-hour ratio (CPHR) of 2.50 based on all course work completed at every institution attended is required to apply; however, the average CPHR of the class most recently admitted was 3.25. Students preparing to apply to this program should request more detailed information from the AMP Student Affairs Office (614) 292-1706 or on the AMP web site, amp.osu.edu.

Once admitted to the professional program, students learn science, as it applies to equipment operation, as well as anatomy, physiology, and pathophysiology. Students acquire extensive laboratory and hospital experience and perfect their skills in

managing patients. The professional curriculum is seven quarters in length with three quarters emphasizing clinical experience in cardiology, surgical support, monitoring procedures, and perfusion. Clinical experience may be at institutions outside of Columbus or Ohio.

Ohio State's program features:

- small class size, ensuring individual attention,
- competent and well-qualified faculty,
- a curriculum that emphasizes logical progression from theory to clinical practice,
- facilities that include fully equipped electronics and surgical simulation laboratories,
- more than 25 affiliate hospitals in 12 different states
- job placement rate of nearly 100 percent.

Co-Curricular Opportunities

Ohio State offers many opportunities for students to learn and grow outside of the classroom. These range from cooperative education (co-op) and internships to study abroad programs to student organizations. Co-ops and internships place students in professional environments while they are Ohio State students. Ohio State offers more than 100 study abroad programs in 40 countries around the world. Specific opportunities related to circulation technology include:

- participation in class activities and AMP Student Council,
- options to live in Allied Medical Professions Learning Community, and
- opportunities to attend professional conferences.

In addition, there are hundreds of student organizations on campus to meet the interests of a diverse student population.

These opportunities enable students to gain valuable work experience, learn about cultures, and take on leadership roles before they enter the workforce. All of these experiences enhance learning and may provide an advantage in the job market.

Honors & Scholars Opportunities

Ohio State offers the Honors & Scholars programs to create an environment of intellectual support and stimulation within a close-knit community of high-ability undergraduate students. Through these programs, students have access to smaller classes, undergraduate research opportunities, close working relationships with faculty, priority scheduling, and unique housing options.

Honors & Scholars programs represent great opportunities to be part of a smaller community within a large university.

For more information, check these web sites:

Circulation Technology: amp.osu.edu/CT
Allied Medical Professions: amp.osu.edu
Ohio State: osu.edu

American Society of Extracorporeal Technology: amsect.org
Admissions: undergrad.osu.edu
First Year Experience: fye.osu.edu

Curriculum Sample

This is a sample list of classes a student will take to pursue a B.S. degree in Circulation Technology. Since university students need more than specific education in a narrow field, they also will take classes to complete the General Education Curriculum (GEC). The GEC will allow students to develop the fundamental skills essential to collegiate success across major programs. Course work options satisfying the GEC often come from a variety of academic areas of study allowing students to tailor their GEC toward their interests. Note: This sample represents one of several possible paths to a degree in Circulation Technology. Consult the departmental web site, amp.osu.edu/CT, for details on each specific track.

Freshman Year:

Math, Elementary Functions	5
General Chemistry	10
Biology	5
GEC (English composition)	5
GEC courses	20
AMP Survey	1
Total hours	46

Sophomore Year:

General Physics	10
Basic Human Anatomy	5
Introduction to the Practice of Statistics	5
GEC courses	20
Total hours	40

Junior Year:

Principles of Human Physiology	10
General Pharmacology	3
Professional Course Work	
In Circulation Technology	58
Clinical Experience In Circulation Technology (summer quarter)	3
Total hours	74

Senior Year:

Applied Circulation Technology Seminars And Laboratories	27
Clinical Experience In Circulation Technology	20
Total hours	57

Good candidates for these programs will receive additional information after admission to the university. Learn more about the Honors & Scholars program at honors-scholars.osu.edu.

Career Prospects in Circulation Technology

Most graduates are employed as cardiopulmonary perfusionists (operators of heart-lung machines) and also perform long term life support procedures, blood processing, monitoring, and pacemaker analysis.

The primary area of specialization of graduates has been heart and lung bypass procedures used in open-heart surgery. Places of employment include health care facilities and medical equipment and supply manufacturers.

More than 90 percent of graduates since 1971 are still in the primary field. The starting salary for graduates typically average \$55,000 to \$70,000 annually, including on-call and overtime pay (often required). Ninety percent of our graduates pass the basic science section of the national certification exam on their first try, and 92% pass the clinical science section on their first try.

About Ohio State

The Ohio State University is recognized throughout the nation and the world for its innovative programs, exceptional faculty, and cutting edge facilities. In fact, Ohio State is consistently ranked among the country's best public institutions for overall academic reputation. Because Ohio State is a major teaching and research university, our students receive excellent preparation for entry into top graduate/professional programs and the job market.

Offering over 170 majors and more than 12,000 courses, Ohio State allows students to tailor their education to their interests through double majors, minors, and personalized study programs.

Apply to Ohio State

Students wishing to apply to Ohio State may apply on-line by visiting undergrad.osu.edu or contacting Undergraduate Admissions at (614) 292-3980 or askabuckeye@osu.edu. Student may be admitted to the School of Allied Medical Professions as a pre-major.

Students who have met admission criteria (prerequisite courses, etc.) for their intended major and are ready to begin professional coursework will apply to their professional program online at professional.osu.edu/alliedmed.asp. The School's web site, amp.osu.edu, contains detailed information specific to all major programs in the School of Allied Medical Professions.

Revised July 2007. For the most up-to-date information on the circulation technology program, please visit amp.osu.edu/CT.

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