Cardiothoracic Surgery

Chair
• Kalpaj Parekh

Program Director
• Shahna Helmick

Undergraduate certificate: perfusion technology
Website: https://perfusion.medicine.uiowa.edu/

Courses

• Cardiothoracic Surgery Courses [p. 1]
• Perfusion Technology Courses [p. 1]

Cardiothoracic Surgery Courses

**CTS:8401 Advanced Inpatient Subinternship in Cardiothoracic Surgery**
Arr.
Participation in diagnosis, preoperative, operative, and postoperative care of thoracic and cardiac patients; attendance at division conferences; students assume responsibility and act as an intern; may concentrate interest in cardiac surgery or thoracic surgery; diagnosis and management of patients on an inpatient service under close supervision by an upper-level resident/fellow and faculty member.

**CTS:8497 Research in Cardiothoracic Surgery**
Arr.
Work on a short- or long-term research project arranged with instructor; may involve clinical material or laboratory; students organize and complete a project, finishing with a publishable manuscript.

**CTS:8498 Cardiothoracic Surgery On Campus**
Arr.
Clinical clerkship individually arranged by student with department approval.

**CTS:8499 Cardiothoracic Surgery Off Campus**
4 s.h.
Individually arranged by student with approval of department to rotate outside of University of Iowa Hospitals & Clinics. Requirements: MD enrollment.

Perfusion Technology Courses

**PERF:4161 Instrumentation in Perfusion Technology**
3 s.h.
Electrical circuitry, filters, pressure transducers, thermistors, cardiac output computers, fluid dynamics, intra-aortic balloon pumps, blood gas analyzers. Requirements: Perfusion Technology Program enrollment.

**PERF:4162 Pathophysiology of Perfusion Technology**
5 s.h.
Hemostasis, acid base physiology, gas transfer, heart anatomy, heart embryology, congenital cardiac defects. Requirements: Perfusion Technology Program enrollment.

**PERF:4163 Clinical Experience I**
2 s.h.
Perfusion in operating room: patient workup, observation, and reporting on extracorporeal bypass, surgical procedure. Requirements: Perfusion Technology Program enrollment.

**PERF:4164 Clinical Experience II**
3 s.h.
Continuation of PERF:4163; setup of extracorporeal bypass circuit; ancillary duties of perfusionist. Requirements: Perfusion Technology Program enrollment.

**PERF:4165 Clinical Experience III**
12 s.h.
Continuation of PERF:4164; management of cardiopulmonary bypass system. Requirements: Perfusion Technology Program enrollment.

**PERF:4166 Clinical Experience IV**
12 s.h.
Continuation of PERF:4165; emphasis on supply maintenance, perfusion department management. Requirements: Perfusion Technology Program enrollment.

**PERF:4167 Perfusion Seminar**
1 s.h.
Ethics in perfusion. Requirements: Perfusion Technology Program enrollment.

**PERF:4168 Research in Perfusion**
1 s.h.
From topic selection to manuscript. Requirements: Perfusion Technology Program enrollment.

**PERF:4169 Clinical Experience V**
12 s.h.
Continuation of PERF:4166. Requirements: Perfusion Technology Program enrollment.

**PERF:4170 Principle and Practice of Perfusion Technology**
6 s.h.
Hypothermia, hemodilution, left heart bypass, dialysis, ultrafiltration, membrane and bubbler oxygenation. Requirements: Perfusion Technology Program enrollment.

**PERF:4171 Devices in Perfusion Technology**
3 s.h.