

# Cardiothoracic Surgery

## Chair

- Kalpaj Parekh

## Interim Director, Perfusion Technology

- Shahna Helmick

**Undergraduate certificate:** perfusion technology

**Website:** <https://medicine.uiowa.edu/perfusion/>

## Courses

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## 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 setup, surgical procedure. Requirements: Perfusion Technology Program enrollment.

### PERF:4164 Clinical Experience II

3 s.h.

Continuation of PERF:4163; setup of extracorporeal 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.

Components of extracorporeal circuit; in vitro laboratory evaluation of components. Requirements: Perfusion Technology Program enrollment.