

Course Descriptions

PER101 - Perfusion Theory I

Clock Hours: 48

This is an introductory course starting with cardiovascular anatomy, principles of hemodilution, myocardial protection and pharmacology. Topics include the perfusion circuit and ancillary equipment as it pertains to the patient's pathology.

Pre-requisite: Admission to the Program

Co-requisites: PER102, PER103, PER100L

PER102 - Perfusion Theory II

Clock Hours: 33

This course is concurrent with the topics in Perfusion Theory I. Emphasis is given to blood components and coagulation, autotransfusion, and laboratory analysis.

Pre-requisite: Admission to the Program

Co-requisites: PER101, PER103, PER100L

PER103 - Perfusion Circuit

Clock Hours: 32

This course is designed to acquaint the student with the various components that make up the perfusion circuit. Emphasis is placed on the history, performance and limitations of each component in the perfusion circuit.

Pre-requisite: Admission to the Program

Co-requisites: PER101, PER102, PER100L

PER100L - Clinical Instruction I

Clock Hours: 579

This is an introductory course acquainting the student with the heart-lung machine. Emphasis is placed on the student to learn how to assemble the disposables of the perfusion circuit and to be able to prepare the heart-lung machine in a timely manner.

Pre-requisite: Admission to the Program

Co-requisites: PER101, PER102, PER103

PER101L - Clinical Implementation I

Clock Hours: 32

This course integrates perfusion theory and the components of the perfusion circuit. Emphasis is placed on patient strategies for successful outcomes with routine cardiac procedures.

Pre-requisite: Successful Completion of 1st Term

Co-requisites: PER105, PER104, PER200L

PER104 - Perfusion Theory III

Clock Hours: 33

This course is a continuation of the topics introduced in Perfusion Theory I and II. Emphasis is given to pediatrics and unique patient pathologies and surgical techniques.

Pre-requisite: Successful Completion of 1st Term

Co-requisites: PER105, PER101L, PER200L

PER105 - Research Seminar I

Clock Hours: 16

This is an introductory course acquainting the student with research methods in perfusion. The student will complete a case report and presentation.

Pre-requisite: Successful Completion of 1st Term

Co-requisites: PER104, PER101L, PER200L

PER106 - Perfusion Special Topics

Clock Hours: 16

This course is a compilation of perfusion topics of special interest to complete the students' perfusion education.

Pre-requisite: Successful Completion of 3rd Term

Co-requisites: PER107, PER109, PER400L

PER200L - Clinical Instruction II

Clock Hours: 586

This course is a continuation of the Clinical Instruction for Perfusion students. Emphasis is placed on the management of an open-heart surgery case from start to finish.

Pre-requisite: Successful Completion of 1st Term

Co-requisites: PER105, PER104, PER101L

PER201L - Clinical Implementation II

Clock Hours: 28

This course is a continuation of Clinical Implementation I with a focus on practical application of perfusion theory and the components of the perfusion circuit. Emphasis is placed on patient strategies for successful outcomes with complex cardiac procedures.

Pre-requisite: Successful Completion of 2nd Term

Co-requisites: PER108, PER300L

PER107 - Mechanical Circulatory Support

Clock Hours: 16

This course is designed to introduce students to the scientific concepts involved with all types of mechanical circulatory support devices, including extracorporeal membrane oxygenation (ECMO) and ventricular assist devices (VADs).

Pre-requisite: Successful Completion of 3rd Term

Co-requisites: PER106, PER109, PER400L

PER108 - Research Seminar II

Clock Hours: 16

This is a continuation of Research Seminar I. Students will complete case reports and select a topic for their Quality Improvement project.

Pre-requisite: Successful Completion of 2nd Term

Co-requisites: PER201L, PER300L,

PER300L - Clinical Instruction III

Clock Hours: 669

This course is a clinical continuation for perfusion students. Perfusion students are expected to run a routine case and may now start to document their successful cases toward their graduation requirements.

Pre-requisite: Successful Completion of 2nd Term

Co-requisites: PER108, PER201L

PER109 - Research Seminar III

Clock Hours: 16

This is the final course of the Research Seminar series where the student writes their manuscript and presents the findings of their research.

Pre-requisite: Successful Completion of 3rd Term

Co-requisites: PER400L, PER106, PER107

PER400L - Clinical Instruction IV

Clock Hours: 774

This course is a clinical continuation for perfusion students. Students are expected to manage all case types and finish their case requirements for graduation.

Pre-requisite: Successful Completion of 3rd Term

Co-requisites: PER109, PER106, PER107