

MAS in Cardiovascular Perfusion

001 Medicine I

Patient support with a heart-lung or dialysis machine not only affects the circulatory system, but the entire human organism. This module will cover important structures and diseases of the human organ systems in depth and point out the diagnostic and therapeutic possibilities. Topics of disinfection and sterilisation round off the module.

Perfusionists are responsible for the extracorporeal circulatory support prior to, during, and following cardiac surgery as well as support activities involving dialysis or therapy for cardiac arrhythmia. This requires a thorough and in-depth knowledge of the circulatory system. Changes in the cardiac circulation have immediate effects upon other physiological systems of the body, which requires comprehensive knowledge of these systems in order to quickly identify correlations and initiate adequate control measures. The perfusionist role is to understand the patient anatomy and physiology, to provide blood perfusion and to manage the metabolic demand.

Learning Outcomes/Competencies

The students will be able to,

- utilize knowledge- and self-management for study and profession in an effective manner
- utilize medical knowledge in anatomy, physiology, pathophysiology, and treatment principles, such as laboratory medicine, hygiene, disinfection and sterilisation to enhance their professional activities
- create a factual and clear presentation.

Module Content

- Introduction in MAS CP - Study Management
- Pulmonary system
- Cardiovascular system
- Hematology
- Blood disorders
- Endocrine system
- Nervous system
- Immune system
- Urinary system
- Gastro-intestinal system
- Hygiene for perfusionists
- Scientific working and writing

Teaching and Learning Methods

Lectures, Learning on the model, Discussions, Case Studies, Guided Self-Study, Training, etc.

Proof of Performance

Written examination

Literature

- Dt. Gesellschaft für Kardiotechnik e.V. (Hrsg.) (2009). Berufsbild Kardiotechniker. 3. Auflage. Hamburg: Medienprojekte.
- Gravlee, G., Davis, R., Hammon, J.; Kussman, B. (2016). Cardiopulmonary Bypass and Mechanical Support (4th edition). Philadelphia: Wolters Kluwer.

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Reinmann, G. & Eppler, M. (2008). Wissenswege. Methoden für das persönliche Wissensmanagement. Bern: Huber.

Sarrazin, T. (2009). Erste Verordnung zur Änderung der ausbildungs- und Prüfungsordnung für Kardiotechnikerinnen und Kardiotechniker. Berlin: Senatsverwaltung für Gesundheit, Umweltschutz und Verbraucherschutz.

Wiater, W. (2007). Wissensmanagement. Eine Einführung für Pädagogen. Wiesbaden: Verlag für Sozialwissenschaften.

Module Convener

Manuel Iafrate, Head of MAS FH in Cardiovascular Perfusion; BSc Cardiovascular Perfusion, ECCP

Teaching Staff

Araujo Klein M., Perfusionist MAS CP
Dr. Asmis Lars
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Dr. Mertens Joachim
Dr. Reser Diana
Dr. Ritter Alexander
Schärli M. MScN, MAS eLearning & Knowledge Management
Dr. Schwarz Esther Iren
Dr. Steiner Urs
Dr. Wegener Susanne

Requirements

- ability to read and understand English expert literature and to follow classes taught in English
- knowledge of Scientific Work
- prospect of an internship in the area Cardiovascular Perfusion

Module Code

MAS_CP_001

Module Type/Module Order

Mandatory Module in the course MAS Cardiovascular Perfusion
The module order is fix.

Study Time/ECTS

150 hours, 5 ECTS points
40 hours Classroom Lessons and 110 hours Guided Self-Study

Module Fees

On request

Teaching Language

English

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