

CARDIOVASCULAR INVASIVE SPECIALIST AAS

Purpose: RCTC’s Cardiovascular Invasive Specialist (CVIS) program educates graduates to work in collaboration and under the supervision of physicians to assist with the preparation and to perform diagnostic and therapeutic invasive cardiology procedures. The technologist must have the technical skills and competence to assist with these invasive procedures. Invasive cardiovascular procedures are performed in a clinical cardiovascular laboratory environment.

The areas of study are cardiovascular anatomy and physiology, cardiovascular pathophysiology, electrocardiography, cardiovascular pharmacology, diagnostic angiography, interventional angiography, electrophysiology, cardiac pacing, cardiovascular hemodynamics, valvular assessment, pediatric/congenital heart disease assessment, cardiac/coronary physio instrumentation and electronics associated with the cardiac laboratory environment.

Cardiovascular anatomy and physiology and pathophysiology concentrate on the structures, function, and disease processes of the heart. Angiography and interventional cardiology concentrate on the specific entities of coronary anatomy and treatment(s) for various disease entities of the heart. The cardiac electrical system and its diagnosis and treatment(s) are the areas concentrated on in electrophysiology and cardiac pacing. Advanced cardiac assessment (i.e.: hemodynamics, coronary physiology, cardiac valve study, congenital heart disease, etc.) concentrate on in-depth cardiovascular anatomical and physiological data. Instrumentation, electronics, and x-ray basics concentrate on the radiation and electrical processing and safety in the clinical cardiovascular laboratory setting.

Award

Cardiovascular Invasive Specialist A.A.S. Degree.....63 credits total
*Cardiovascular Invasive Specialist curriculum 41 credits**
MnTC curriculum/General Education..... 22 credits

RECOMMENDED FULL-TIME COURSE SEQUENCE

Not all courses are scheduled every semester. See course schedule: <https://eservices.minnstate.edu/registration/search/basic.html?campusid=306>.

| Semester 1 (Fall) | 4 cr | Semester 2 (Spring) | 4 cr |
|---|-----------|---|-----------|
| BIOL 1217 Anatomy and Physiology I | 4 cr | BIOL 1218 Anatomy and Physiology II | 4 cr |
| CHEM 1117 General, Organic & Biological Chemistry I | 4 cr | ENGL 1117 Reading and Writing Critically I | 4 cr |
| PHYS 1103 Principles of Physics | 3 cr | PHIL 1135 Bioethics | 3 cr |
| CVIS 1010 Introduction to Cardiology | 2 cr | or | or |
| | | PHIL 1125 | 3 cr |
| | | CVIS 1020 Introduction to Electrocardiography | 2 cr |
| Total Credits | 13 | Total Credits | 13 |
| Semester 3 (Summer) | | | |
| CVIS 2010 Cardiovascular Physiology & Pathophysiology | | | 4 cr |
| CVIS 2020 Invasive Cardiology I | | | 5 cr |
| CVIS 2060 Diagnostic Imaging & Fluoroscopy | | | 2 cr |
| | | Total Credits | 11 |
| <i>Continued on reverse side of page...</i> | | | |

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| Semester 4 (Fall) CVIS 2030 Cardiovascular Pharmacology CVIS 2021 Invasive Cardiology II CVIS 2040 Clinical Total Credits | 2 cr 6 cr 6 cr 14 | Semester 5 (Spring) CVIS 2070 Internship Total Credits | 12 cr 12 |
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*All CVIS courses are taken at Mayo Clinic School of Health Sciences.

Course descriptions can be found at: <https://www.rctc.edu/academics/courses/course-descriptions>.