

# CVT: CARDIOVASCULAR TECHNOLOGY

| Courses  | Credit(s) | Contact | Lab |
|--|-----------|---------|-----|
| CVT 1000C. INTRODUCTION TO CARDIOVASCULAR TECHNOLOGY.  | 4         | 3       | 3   |
| INTRODUCTION TO CARDIOVASCULAR TECHNOLOGY Prerequisite: Acceptance to Cardiovascular A.S. Degree Program This course is an overview of the profession including basic skills and terminology related to historical development, current profession trends, infection control, asepsis, and basic cardiopulmonary patient assessment tools using electrocardiography, chest reontgenography, and clinical laboratory tests. (Special Fee: \$25.00).   |           |         |     |
| CVT 1205C. CARDIOVASCULAR PHARMACOLOGY & ECG MANAGEMENT.   | 3         | 2       | 3   |
| CARDIOVASCULAR PHARMACOLOGY & ECG MANAGEMENT Prerequisite: Minimum grade of C in CVT 1260C Corequisite: CVT 1841L This course is structured to furnish the student with the pharmacological background necessary to function in clinical experiences in the Cardiac Catheterization Lab. It includes classification of medications, modes of action, indications, contraindications, application in the treatment of cardiovascular disease, and their effects on hemodynamic and electrophysiologic variables. This course also prepares the student to identify basic cardiac dysrhythmias. (Special Fees: \$38.00). |           |         |     |
| CVT 1260C. INVASIVE CARDIOLOGY I: CARDIOPULMONARY ANATOMY & PHYSIOLOGY.  | 4         | 3       | 3   |
| INVASIVE CARDIOLOGY I: CARDIOPULMONARY ANATOMY & PHYSIOLOGY Prerequisite: Minimum grade of C in CVT 1000C Corequisite: CVT 1840L This course includes adult, fetal, and newborn cardiopulmonary anatomy and physiology in detail as it applies to the Cardiac Catheterization Lab. Application also includes blood gas analysis, cardiac electrophysiology including ECG dysrhythmias, and other hemodynamic calculations required in cardiopulmonary physiology. (Special Fee: \$42.00).  |           |         |     |
| CVT 1270. PATHOPHYSIOLOGY.   | 3         | 3       | 0   |
| PATHOPHYSIOLOGY Prerequisite: Acceptance to Cardiovascular A.S. Degree Program Corequisite: CVT 1000C This course is structured to furnish the student with the dynamic aspects of disease processes. It is conceptually structured to present the concepts of disease processes by organ disorders of the immune system as it relates to adverse reactions to drugs, hematologic, fluid and electrolytes, cardiovascular, respiratory, renal, neurologic, and endocrine disorders.  |           |         |     |
| CVT 1840L. CARDIOVASCULAR CLINICAL PRACTICUM I.  | 2         | 0       | 6   |
| CARDIOVASCULAR CLINICAL PRACTICUM I Prerequisite: Minimum grade of C in CVT 1000C Corequisite: CVT 1260C (Completion of health physical with required vaccinations and BLS certification required prior to this course.) In this course the student will participate in supervised clinical practices located in the mock cath lab and at local clinical affiliates. The student will observe activities in the following hospital departments: cardiac catheterization lab, non-invasive cardiology, echocardiology, intensive care units, medical/surgical floors, emergency department. (Special Fee: \$11.00).     |           |         |     |

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| CVT 1841L. CARDIOVASCULAR CLINICAL PRACTICUM II.  | 2 | 0 | 6 |
| CARDIOVASCULAR CLINICAL PRACTICUM II Prerequisite: Minimum grade of C in CVT 1840L This course is designed to prepare and test the competency of the CVT student on basic skills in sterile technique, radiation safety, electrical safety, basic tray set-up, and patient prep prior to his /her diagnostic cardiac catheterization clinical rotation. (Special Fee: \$84.00).   |   |   |   |
| CVT 2211C. CRITICAL CARE APPLICATIONS.  | 4 | 3 | 3 |
| CRITICAL CARE APPLICATIONS Prerequisites: Minimum grade of C in CVT 2420C and CVT 2620C Corequisite: CVT 2421C and CVT 2843L This course is designed to teach the student the theory, application, and evaluation of critical care measures for Medical and Surgical emergencies. These applications include chest tubes, emergent airways, intra-aortic balloon pumping, long-term pulmonary artery monitoring and arterial lines. In addition, the student will apply prior knowledge in cardiovascular technology to the specialty areas of peripheral angiography and electrophysiology. (Special Fee: \$44.00).  |   |   |   |
| CVT 2420C. INVASIVE CARDIOLOGY II.  | 4 | 3 | 3 |
| INVASIVE CARDIOLOGY II Prerequisite: Minimum grade of C in CVT 1205C Corequisites: CVT 2620C and CVT 2842L This course is structured to introduce the student to the specific procedures performed in the cardiac catheterization laboratory and to the use of the resulting data for patient diagnosis. Additional topics include aseptic techniques, sterilization, patient assessment, radiography, pharmacology, cardiac waveforms, coronary artery anatomy, equipment and tools utilized in cardiac catheterization, hemodynamic data and analysis, right and left heart cath, and complications of cardiac catheterization and subsequent treatments. (Special Fee: \$30.00).   |   |   |   |
| CVT 2421C. INVASIVE CARDIOLOGY III.   | 4 | 3 | 3 |
| INVASIVE CARDIOLOGY III Prerequisites: Minimum grade of C in CVT 2420C Corequisites: CVT 2211C and CVT 2843L This course is designed to assimilate cardiac diseases as well as to continue teaching the use of equipment and techniques used in invasive cardiology. Includes an in-depth presentation of various diseases including coronary artery disease, angina, myocardial infarction, heart failure, valve diseases, cardiomyopathies, pericardial disorders, dysrhythmias, congenital anomalies and repair procedures. Additionally, students will learn the various calculations performed in the catheterization lab including cardiac outputs, vascular resistance, valve areas, and shunts. (Special Fee: \$58.00). |   |   |   |
| CVT 2426C. ADVANCED CARDIOVASCULAR CONCEPTS.  | 2 | 1 | 3 |
| ADVANCED CARDIOVASCULAR CONCEPTS Prerequisite: Minimum grade of C in CVT 2421C and CVT 2211C Corequisites: CVT 2920 and CVT 2844L This final course is designed to furnish the student with the basics of special procedures and peripheral vascular intervention. The course includes anatomy and physiology, pathophysiology, diagnosis, and intervention for diseases of the aorta, peripheral arteries, carotid artery, and renal artery. The laboratory component will include review and operation of specialty catheters, wires, and devices used in current vascular interventional procedures. (Special Fee: \$38.00).   |   |   |   |
| CVT 2620C. NON-INVASIVE CARDIOLOGY II.  | 4 | 3 | 3 |
| NON-INVASIVE CARDIOLOGY II Prerequisite: Minimum grade of C in CVT 1205C Corequisite: CVT 2420C and CVT 2842L This course is structured to present an introduction to non-invasive cardiology including those tests performed for the purpose of the diagnosis and treatment of cardiac disease. Topics include: 12 lead electrocardiography, cardiac stress testing, Holter monitoring, pacemaker basics, and an introduction to echocardiography. (Special Fees: \$18.00).  |   |   |   |

CVT 2842L. CARDIOVASCULAR CLINICAL PRACTICUM III. 4 0 24

CARDIOVASCULAR CLINICAL PRACTICUM III Prerequisite: Minimum grade of C in CVT 1841L. Clinical experience in all procedures performed in the cardiovascular laboratories, including use of equipment, performing tests and patient care as it relates to the cardiovascular areas. Emphasis will be placed on cardiac catheterization, ECG, stress testing, Holter monitoring, and an introduction to echocardiography. (Special Fee: \$324.00).

CVT 2843L. CARDIOVASCULAR CLINICAL PRACTICUM IV. 4 0 24

CARDIOVASCULAR CLINICAL PRACTICUM IV Prerequisite: Minimum grade of C in CVT 2842L This course is designed for students to gain a more in-depth clinical experience in invasive cardiology including pre and post catheterization activities, cardiovascular techniques, hemodynamic monitoring, intra-aortic balloon pumping, and cardiac output measurements. Clinical practice in the cardiac catheterization lab includes circulating, scrubbing, recording, and manipulating the imaging equipment during diagnostic and interventional catheterization procedures. (Special Fee: \$294.00).

CVT 2844L. CARDIOVASCULAR CLINICAL PRACTICUM V. 3 0 24

CARDIOVASCULAR CLINICAL PRACTICUM V Prerequisite: Minimum grade of C in CVT 2843L Corequisites: CVT 2426C and CVT 2920 This final clinical course is designed for students to gain additional experience and polish their skills in the cardiac catheterization lab, performing all duties in diagnostic and interventional cases. (Special Fee:\$294.00).

CVT 2920. CARDIOVASCULAR TECHNOLOGIST AS A PROFESSIONAL. 2 3 0

CARDIOVASCULAR TECHNOLOGIST AS A PROFESSIONAL Prerequisites: Minimum grades of C in CVT 2421C and CVT 2211C Corequisite: CVT 2426 and CVT 2844L The professional relationship of the Cardiovascular Technologist to the other health professionals is presented, along with the basic format for research. Resume preparation and interview skills are discussed. management, legal, and ethical issues are discussed.

CVT 2930. SELECTED TOPICS IN CVT. 1-4 variable

SELECTED TOPICS IN CVT Pre requisite: CVT 1000C For students interested in obtaining additional cardiovascular skills. Provides clinical and/ or laboratory experience and seminar type discussion activities for students pursuing selected topics in cardiovascular technology. Multiple credit course. May be repeated for credit, but grade forgiveness cannot be applied.

CVT 2942. INTERNSHIP IN CARDIOVASCULAR TECHNOLOGY. 1-4 variable

INTERNSHIP IN CARDIOVASCULAR TECHNOLOGY Prerequisites: Satisfactory completion of all mandated courses in Reading, Mathematics, English and English for Academic Purposes; a minimum 2.0 institutional or overall GPA: and 12 credits, including CVT 1840L, CVT 1841L, and CVT 2842L. In addition, students must have a minimum grade of C in all cardiovascular courses and have the program director's approval. The Program Director/Program Chair/Program Coordinator or Internship Placement Office has the discretion to provide override approval as it relates to the waiver of required program/discipline-related courses. This course is a planned work-based experience that provides students with supervised career exploration activities and/ or practical experiences. Each earned credit of internship requires a minimum of 80 clock hours of work. Multiple credit course. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$10.00).