### The Cardiovascular Technology Program

The cardiovascular technologist is the link between the physician and the patient by way of the sophisticated medical instrumentation currently utilized in the diagnosis and treatment of cardiovascular disease.

The Cardiovascular Technology Program at Grossmont College is a two-year course of study leading to an Associate in Science Degree. Graduates enter the health care profession as cardiovascular technologists.

Students are educated in the theoretical concepts and clinical application of a broad spectrum of courses and techniques, including Cardiovascular Anatomy and Physiology, Physical Principles of Medicine, Medical Instrumentation/Electronics, and Clinical Practicum.

The program begins with a first semester of major coursework followed by one and a half years of concentrated study in one of three specialties within the field.

#### Invasive Cardiology Technology

Invasive Cardiovascular technologists work in cardiac catheterization laboratories where they assist the invasive cardiologist in performing diagnostic and interventional procedures such as cardiac catheterization, percutaneous coronary intervention, electrophysiology studies and pacemaker placement.

### 2. Adult Echocardiography

Echo technologists perform cardiac ultrasound studies such as 2-Dimensional and Doppler echocardiograms, electrocardiograms, exercise stress tests, and ambulatory ECG monitoring. These tests are noninvasive examinations and provide information to the physician on both the anatomic structure and function of the heart.

### Vascular Technology

Vascular technologists use ultrasound and other noninvasive techniques to diagnose disease of the vascular system. Tests include ultrasonic imaging and flow studies of the arteries and veins to detect problems in patients who are at risk for stroke, arterial occlusion, or venous disease.

Cardiovascular technology is a challenging and rewarding career which demands individual initiative, clinical judgment, and a commitment to on-going professional growth in the rapidly evolving field of cardiovascular diagnosis and

# **Employment Opportunities**

Graduates of the Cardiovascular Technology Program are actively recruited by hospitals and clinics in the San Diego area and throughout the country. Employment opportunities are excellent and current trends indicate that demand exceeds supply now and for the foreseeable future. Check with the U.S. Bureau of Labor website for more information.

IMPORTANT: Students accepted to the Cardiovascular Technology Program are required to undergo a background check and urine drug screening test prior to starting the program and being placed at any clinical site. Students are responsible for a minimum cost for these procedures. Failure to pass either or both of these procedures, or any prior convictions of a misdemeanor or felony may interfere with acceptance to the program, clinical placement, eligibility for the registry exam, or securing employment. The CVT Program cannot advise students on individual background checks or drug screens. Applicants are urged to visit the Cardiovascular Credentialing International (CCI) website at www.cci-online.org and the American Registry of Diagnostic Medical Sonographers (ARDMS) a www.ardms.org.

### **Prerequisites**

The Cardiovascular Technology Program admits a limited number of students every fall semester. To be eligible to apply for the program, the following must be completed:

- 1. High School graduation, equivalency, or a higher degree.
- 2. Required immunizations. Completion of the HepB series or a positive HepB immunity test. Tdap, MMR and Varicella series. All have specific requirements, refer to the program website for detailed information.
- 3. Completion of Anatomy, Physiology and Chemistry. All courses to be completed with a grade of "C" or higher and must include a lab. Courses taken for the CVT major must be taken at a regionally accredited institution. a. Anatomy & Physiology (Bio 140, 141 and 141L or Bio144 and 145).

  - b. Fundamentals of Chemistry (Chem 102, 115 or passing AP exam).

Science recency requirement- Anatomy, Physiology and Chemistry must be completed within 7 years of the application date.

If taking the science prerequisites as a series (offered as part I and part II), applicants are strongly encouraged to complete the entire series at the college in which they started part I. This enables the student to maintain continuity with course

Prospective students may submit a completed application packet throughout the year once prerequisites and required immunizations are complete. Documentation for all criteria being requested and official transcripts of all science prerequisites must be submitted with the application. If courses were taken at Grossmont or Cuyamaca College, transcripts do not have to be included. Do not send transcripts electronically or by postal mail, they cannot be accepted.

The program application and accompanying forms can be found on the website. Additional requirements will be needed when accepting an invitation to the program, specific information will be provided to the student on acceptance. It is strongly recommended that students complete their General Education requirements prior to being invited to begin the program.

For more information on prerequisites, structure of the Program, employment opportunities and career paths, or to attend a program preview, visit the CVT website: www.grossmont.edu/cvt For information about General Education requirements or to develop an educational plan, contact the Grossmont College Counseling Department at: 619-644-7208 for an appointment with a Counselor or to find out more about walk-in services.

### Questions?

**GROSSMONT COLLEGE** Cardiovascular Technology 8800 Grossmont College Drive El Caion, CA 92022 (619) 644-7303 www.grossmont.edu/cvt

Email: grossmontcvt.info@gcccd.edu

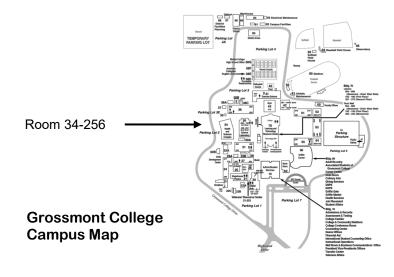
Office Hours: Monday-Friday 8:00 a.m. to 4:30 p.m.

Rev. MDA 5/2024



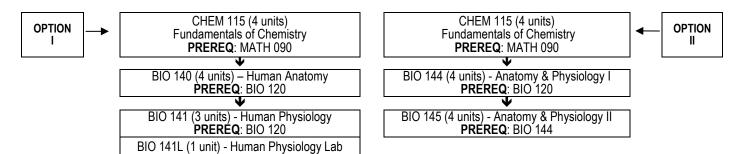
# **Grossmont College** Cardiovascular Technology **Associate in Science Degree** 2024-2025

- Prerequisites/Information
- Major Requirements
- General Education Requirements
- All Allied Health and Nursing students adhere to the graduation requirements outlined in the college catalog for the academic year in which they enter the program
- www.grossmont.edu/cvt



# **Sequence of Prerequisite Courses**

CVTE students have 2 options for completing the science prerequisite courses. See Option I or Option II, as described below. A 2.0 or better G.P.A. in prerequisite courses is required.



# **Sequence of Major Courses**

| Semester I Fall Core Curriculum |       |
|---------------------------------|-------|
| Subject & No.                   | Units |
| CVTE 100                        | 2     |
| CVTE 101                        | 4     |
| CVTE 102                        | 3     |
| CVTE 103                        | 2     |
| CVTE 107 (optional)             | 0.5   |
| Total                           | 11.5  |

## Plus Courses in Selected Areas of Emphasis

|                    |                        |    | · ·                |  | 340 O. —p          | <br>                |    |
|--------------------|------------------------|----|--------------------|--|--------------------|---------------------|----|
| Semester II Spring |                        |    | Semester II Spring |  | Semester II Spring |                     |    |
| Adult Echoca       | Adult Echocardiography |    |                    | Adult Echocardiography Invasive Cardiology |                    | Vascular Technology |    |
| CVTE 110           |                        | 3  |                    | CVTE 109                                   | 3                  | CVTE 110            | 3  |
| CVTE 111           |                        | 4  |                    | CVTE 111                                   | 4                  | CVTE 111            | 4  |
| CVTE 113           |                        | 1  |                    | CVTE 113                                   | 1                  | CVTE 113            | 1  |
| CVTE 115           |                        | 4  |                    | CVTE 116                                   | 4                  | CVTE 117            | 4  |
|                    | Total                  | 12 |                    | Tot  | al 12              | Total               | 12 |

| Semester III Summer<br>Adult Echocardiography |   | Semester III Summer<br>Invasive Cardiology |   | Semester III Summer<br>Vascular Technology |   |  |
|---|---|--|---|--|---|--|
| CVTE 114                                      | 2 | CVTE 114                                   | 2 | CVTE 114                                   | 2 |  |
| CVTE 130                                      | 2 | CVTE 130                                   | 2 | CVTE 130                                   | 2 |  |
| Total   | 4 | Total                                      | 4 | Total                                      | 4 |  |

| Semester III Fall      |    | Semester III Fall   |    | Semester III Fall   |    |
|------------------------|----|---------------------|----|---------------------|----|
| Adult Echocardiography |    | Invasive Cardiology |    | Vascular Technology |    |
| CVTE 221               | 5  | CVTE 222            | 5  | CVTE 223            | 5  |
| CVTE 220               | 5  | CVTE 220            | 5  | CVTE 220            | 5  |
| Total                  | 10 | Total               | 10 | Total               | 10 |

| Semester IV Spring     |    | Semester IV Spring  |    | Semester IV Spring  |    |
|------------------------|----|---------------------|----|---------------------|----|
| Adult Echocardiography |    | Invasive Cardiology |    | Vascular Technology |    |
| CVTE 251               | 5  | CVTE 252            | 5  | CVTE 253            | 5  |
| CVTE 250               | 5  | CVTE 250            | 5  | CVTE 250            | 5  |
| Total                  | 10 | Total               | 10 | Total               | 10 |

Total Units for CVT Major = 47.5

\*Disclaimer: Every effort has been made to ensure that this information is accurate and timely. However, the official college document is the Grossmont College Catalog 2024-2025.

| Date:  |  |  |
|--------|--|--|
| 112110 |  |  |
|        |  |  |

# **CARDIOVASCULAR TECHNOLOGY**

### **ASSOCIATE IN SCIENCE DEGREE**

General Education Requirements for Cardiovascular Technology Students Only **Grossmont College** 

This general education applies to students entering the Grossmont College Cardiovascular Technology program

| for the 2024-2025 academic year.  |                                       |
|---|---------------------------------------|
| NAMECOUNSELOR   |                                       |
| AREA A – LANGUAGE AND RATIONALITY (minimum 9 units) Complete three courses, one course from A1, A2, and A3.   |                                       |
| A1: Written Communication* – English 120, 124; English as a Second Language 122  A2: Oral Communication – Communication 120, 122, 130  A3: Analytical Thinking* - Geography 104; Mathematics 120, 125, 126, 160, 170, 175, 176, 178, 180, 245, 280, 281, 284, 285; **Philosophy 125, 130; Physical Science 120, Statistics: Anthropology 215, Biology 215, Economics 215, Math 160, Psychology 215, Sociology 215   |                                       |
| **Students using PHIL 125 or 130 to meet the Analytical Thinking requirement must still meet the Math competency requirement to graduate. Competency requirements are located in the college catalog.   |                                       |
| *A1 and A3 must be completed with a grade of "C" or better, or "P" to satisfy competency requirement.   |                                       |
| AREA B - NATURAL SCIENCES (minimum 7 units) Complete two courses.   |                                       |
| <b>Biology</b> (140, 141, and 141L) OR (144 and 145)  |                                       |
| All courses must be completed with a "C" grade or higher.   |                                       |
| Chemistry 102, 115 or equivalent or passing AP exam is required for the major. See "Prerequisites" on back panel.   |                                       |
| AREA C - HUMANITIES (minimum 3 units) Complete one course.  |                                       |
| American Sign Language 120, 121, 140, 220, 221, 250; Arabic 120, 121, 122, 123, 148, 220, 221, 250, 251; Art 100, 120, 124, 129, 140, 141, 142, 143, 145, 146, 147, 171; Chinese 120, 121, 220, 221, 250, 251; Communication 135, 137, 144, 145; Dance 1 120; English 122, 126, 134, 135, 136, 137, 201, 203, 215, 217, 218, 219, 221, 222, 231, 232, 236, 237, 238, 239, 271, 277; ESL 1120; Ethnic Studies 126, 127, 134, 144, 236, 237, 238, 239; French 120, 121, 152, 220, 221, 250, 251; German 120, 121, 220, 222, 251; History 100, 101, 103, 105, 106, 113, 126, 135, 136, 137, 148; Humanities 110, 120, 125, 130, 135, 140, 160, 170; Italia 120, 121, 220, 221, 250, 251; Japanese 120, 121, 149, 220, 221, 250, 251; Media Communications 111; Music 110, 111, 115, 1117, 123, 189; Philosophy 110, 111, 112, 114, 116, 118, 140, 141, 145, 150,155, 160; Photography 150, 154; Religious Studies 110, 120, 130, 140, 150, 170; Russian 120, 121, 220, 221, 250, 251; Spanish 120, 121, 122, 123, 141, 145, 220, 221, 250, 251; Theatre Arts 101, 110, 130,143, 144, 205 | 10,<br>15;<br>21,<br><b>an</b><br>16, |
| AREA D - SOCIAL SCIENCES (minimum 3 units) Complete one course.   |                                       |
| Administration of Justice 110; Anthropology 120, 122, 127, 140; Child Development 115, 125, 131, 134, 145, 153; Communication 124, 126, 128; Economics 110, 120, 121; Ethnic Studies 114, 115, 118, 119, 125, 128, 130, 131, 132, 133, 135, 145, 154, 155, 160, 161, 180, 181; Family Studies 115, 120; Gender Studies 116, 117, 154, 155; Geography 100, 101, 106, 130, 170; Health Education 120, 201; Health Science 110; History 107, 108, 109, 114, 115, 118, 119, 122, 123, 124, 130, 131, 154, 18, 160, 161,180, 181; Media Communications 110, 210, 250; Nutrition 155, 158, 159; Political Science 120, 121, 124, 130, 140, 15, 160; Religious Studies 175,165, Psychology 120, 125, 132, 134, 138, 140, 170, 211, 220; Sociology 114, 120, 125, 130, 138, 14, 150   | ,<br>55,<br>50,                       |
| AREA E - FITNESS AND WELLNESS Minimum two courses.  | $\overline{}$                         |

Dance: 68, 71A, 71B, 72A, 72B, 74A, 74B, 78A, 78B, 80A, 80B, 80C, 80D, 81A, 81B, 81C, 81D, 82A, 82B, 83A, 83B, 84A, 84B, 84C, 84D, 88A, 88B, 88C, 88D, 94A, 94B, 94C, 94D, 99A, 99B, 99C, 118A, 118B, 118C, 118D Exercise Science: 1, 2, 3, 4A, 4B, 4C, 5A, 5B, 5C, 6A, 6B, 6C, 7A, 7B, 7C, 8A, 8B, 8C, 9A, 9B, 9C, 16A, 16B, 16C,17A, 17B, 17C, 21A, 21B, 21C, 22, 23A, 23B, 23C, 24A, 24B, 24C, 26, 27A, 27B, 27C, 28A, 28B, 28C, 29, 30, 35, 37A, 37B, 37C, 39, 40A, 40B, 40C, 41, 43A, 43B, 43C, 44A, 44B, 44C, 60A, 60B, 60C, 61A, 61B, 61C, 76A, 76B, 76C, 125A, 125B, 125C, 130A, 130B, 130C, 155A, 155B, 155C, 170A, 170B, 170C, 171A, 171B,171C, 172A, 172B, 172C, 175A, 175B, 175C, 175A, 176A, 176B, 176C, 180, 185A,185B, 185C

Important Information: All Allied Health and Nursing students adhere to the graduation requirements outlined in the college catalog for the academic year in which they enter the program.