

COURSE OUTLINE
CARD-108
Advanced Anatomy and Pathophysiology
3 Semester Hours

HOWARD COMMUNITY COLLEGE

Description

This course is designed for students enrolled in the Cardiovascular Technology Program. It will provide an in-depth study of cardiovascular anatomy and pathophysiology, to include circulatory dynamics, cardiac output and control mechanisms. Also included will be pathophysiological mechanisms of embryology, congenital and acquired cardiovascular diseases. The information gained through this course will serve as the foundation upon which subsequent CV topics and themes will be built. (3 hours lecture) Prerequisite: BIOL-106 or BIOL-204. (3 hours lecture)

Overall Course Objectives

Upon completion of this course, the student will be able to:

1. Describe the components and interrelationships of cardiovascular anatomy.
2. Describe valvular heart disease and its underlying implications.
3. Understand atherosclerosis, coronary artery disease, and myocardial infarction.
4. Explain cardiomyopathies and pericardial disease processes.
5. Explain heart failure, pulmonary edema and acute circulatory failure.
6. Understand systemic and pulmonary hypertension.
7. Describe pulmonary heart disease, pulmonary embolism and cor pulmonale.
8. Describe the various types of cardiac tumors.
9. Describe traumatic heart disease and its underlying implications.
10. Understand heart sounds and their underlying implications.
11. Enter the clinical setting with a thorough knowledge of the pathological processes involving the cardiovascular system.
12. Enter the clinical setting prepared to describe various forms of congenital heart disease.

Major Topics

1. Cardiac Anatomy and Physiology
2. Infective Endocarditis and Rheumatic Heart Disease
3. Cardiomyopathies and Pericardial Diseases
4. Coronary Heart Disease (Atherosclerosis)
5. Coronary Heart Disease (Myocardial Infarction)
6. Heart Failure, Pulmonary Edema, Acute Circulatory Failure
7. Systemic Hypertension
8. Pulmonary Hypertension, Pulmonary Embolism, Cor Pulmonale
9. Congenital Abnormalities
10. Cardiac Tamponade
11. Cardiac Tumors/Traumatic Heart Disease

Course Requirements

Grading/Exams: Grading procedures will be determined by the individual faculty member but will be calculated on the basis of exams, quizzes and written and oral report.

Other Course Information

This is a Cardiovascular core course. Successful completion of the course requires a student to maintain a 2.0 GPA to remain in the Cardiovascular Technology Program.