



MEDICAL ARTS

Medical Arts

The Medical Arts program provides students with a strong academic foundation and practical experiences designed to prepare them for careers in the healthcare field. Students explore a wide range of medical and health-related disciplines while developing the knowledge, skills, and professionalism necessary for success in college, technical training, or entry-level healthcare positions.

Through a combination of classroom instruction, laboratory practice, and clinical or internship opportunities, students gain exposure to areas such as medical terminology, anatomy and physiology, patient care, and healthcare ethics. Emphasis is placed on communication, teamwork, and critical thinking—skills essential for effective performance in the healthcare environment.

Location: Paterson STEAM High School

The program is broken into two tracks: one for students who wish to go directly into the workforce, and the second is for students who will pursue a more rigorous track moving them toward more advanced careers in the field of medicine.

Patient Care	Advanced Medical Arts
Medical Terminology (Grade 10) The medical terminology course is designed to introduce students to basic medical language and terminology that they would need to enter a health care field. Emphasis will be placed on definitions, proper usage, spelling, and pronunciation. Students will employ a systematic word-building approach to	Dynamics of Health Care in Society (DE) This course provides an interdisciplinary orientation to the U.S. health care system. The objective is to orient students to health care occupations, services, and how they are delivered. Medical Terminology (DE)

master the complex terminology that pertains to body systems, anatomy, physiology, medical processes and procedures, and a variety of diseases. The course includes but is not limited to terms related to anatomy of the human body, functions of health and disease, and the use of language in processing medical/dental records as well as claim forms.

Anatomy and Physiology (Grade 11)

Human Anatomy and Physiology is the study of the structure and function of the human body. This course follows a sequential development of the major body systems in an organized and structured curriculum. The course is designed to give the students a selective overview of human anatomical structure and an analysis of human physiological principles. Labs will include slide work, dissection of various animals, and studies of the human skeleton, muscles, nervous system, and sensory organs. The course will also use computer-simulated dissection. The study of the structure and function of the human body is necessary as a basic health science prerequisite. These topics will prepare the student for all other basic science and clinical courses. This introductory course includes lectures and lab components of Anatomy and Physiology One. It will also include basic chemistry and microbiology. Topics include characteristics of life; levels of organization, chemistry, biochemistry, cells, tissues, and the body

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Anatomy and Physiology I Lec/Lab (DE)

This course is a foundational introduction to the structure and function of the human body. It is specifically designed for students pursuing careers in health sciences, such as nursing, physical therapy, and medical technology.

Emergency Clinical Care (DE)

The Emergency and Clinical Care course is designed to introduce the students to introductory information as it relates to the evaluation of individuals who have either critical medical conditions or sustained acute injuries and their subsequent pre-hospital treatment. Students are, at minimum, expected to have the knowledge and skills to perform basic life support and elementary treatment to stabilize a patient for transport to a hospital. Students will learn first aid, gain the knowledge of understanding when

systems. Aspects of disease and treatments will also be included.

Patient Care Assistant I

The Patient Care Assistant I course is the first part of a two-year program. The course will introduce the students to the field of medicine through study and hands-on application. During PCA Levels I and II, the student will learn how to provide medical care to patients. They will learn the typical duties of a PCA, like taking a patient's temperature, blood pressure, pulse, and respiration; assisting the patient with basic tasks, such as bathing, dressing, and eating; preparing and administering some medications; collecting specimens for lab tests; monitoring patients; preparing patients for EKGs; performing glucose monitoring tests; and recording treatments throughout this two-year program. Specifically in the PCA I course, the student will (1) learn to develop effective oral and written communication skills necessary to interpret information and data incorporating medical terminology, critical thinking, and problem-solving skills; (2) understand the roles of various healthcare professionals and their impact both individually and as a team; (3) health and environmental safety guidelines; (4) legal and ethical responsibilities, issues, and concerns (5) age-specific healthcare modalities; (6) infection control; and (7) how to provide personal care, for example, helping a patient in and out of bed, use of assistive devices, and bed making.

more experienced or sophisticated help is needed, and learn how to prioritize the need for care. In this course, students will also learn to do no harm as well and understand the scope of practice for a first aid provider and how that differs from the level of care provided by a licensed EMT. Upon completion of this course, students will learn pertinent first aid terminology, what characterizes an emergency, and why first aid is important, and they will be able to identify those who may require the assistance of a first aid provider.

Introduction to Clinical Research (DE)

The primary goal is to provide a comprehensive overview of what clinical research is and the scientific principles that underpin it.

Anatomy and Physiology II Lec/Lab (DE)

This course is designed for students in health-related fields like nursing and physical therapy. The course builds upon the foundational knowledge from Anatomy and Physiology I.

Patient Care Assistant II

The Patient Care Assistant II course is the second part of a two-year program. The PCA II is comprised of two components: (1) Theoretical/systematical approach to patient care and (2) practical application/clinical rotations. The first component will focus on the following body systems and related care: musculoskeletal, integumentary, circulatory, respiratory, gastrointestinal, urinary, endocrine, reproductive, and nervous. The student will also learn about the nutritional needs of patients, the care of a surgical patient, caring for patients with special needs, neonatal and pediatric care, the care of older patients, long-term care, rehabilitative care, and finally the care of a terminally ill patient and how to render postmortem care. The second component, a clinical rotation, will provide a practicum for the students to experience a clinical setting and put into practice the observation, communication, personal care skills, and other professional skills acquired in the prerequisite career and technical courses. The student will complete a minimum of 50 hours of supervised activities, participate in group discussions and reflections, and complete weekly journal entries. During the clinical rotation, emphasis will be placed on self-motivated research and documentation.

Medical Math Honors

This honors course will provide a review of basic mathematical calculations and will instruct the learner on how to convert equivalents from one system to another

and accurately mix and measure drugs. Emphasis will be placed on how these techniques are used in the administration of medications for patient use. Additionally, it will provide the learner with the necessary mathematical background needed for pharmacology and the theory and skills necessary to administer medication safely. For the purpose of sharpening the learners' math calculation skills and developing a logical sequence of operations in solving complex dosage calculations, no calculators are used during this course.

Emergency Clinical Care (DE)

The Emergency and Clinical Care course is designed to introduce the students to introductory information as it relates to the evaluation of individuals who have either critical medical conditions or sustained acute injuries and their subsequent pre-hospital treatment. Students are, at minimum, expected to have the knowledge and skills to perform basic life support and elementary treatment to stabilize a patient for transport to a hospital. Students will learn first aid, gain the knowledge of understanding when more experienced or sophisticated help is needed, and learn how to prioritize the need for care. In this course, students will also learn to do no harm as well and understand the scope of practice for a first aid provider and how that differs from the level of care provided by a licensed EMT. Upon completion of this course, students will learn pertinent first aid terminology and what characterizes an emergency, and why first aid is important,

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Skills Gained

- Effective communication and patient care
- Organization and time management in a clinical setting
- Knowledge of infection control and sterilization practices
- Understanding of professional ethics and workplace safety
- Measuring vital signs (temperature, pulse, respiration, and blood pressure). CPR, First Aid, and AED use.
- Basic patient care techniques (hygiene, mobility assistance, and infection control).
- Phlebotomy, EKG, or lab procedures (in advanced programs).
- Safe use of medical equipment and technology.
- Critical Thinking & Problem-Solving
- Time Management & Organization
- Research and documentation skills

Dual Enrollment/College Credit

Rutgers University

Careers

Certified Nursing Assistant (CNA), Medical Assistant, Phlebotomy Technician, EKG Technician, Emergency Medical Technician (EMT), Dental Assistant, Home Health Aide, Licensed Practical Nurse (LPN), Radiology Technician, Surgical Technologist, Respiratory Therapist, Occupational Therapy Assistant, Physical Therapy Assistant, Medical Laboratory Technician, Health Information/Medical Records Specialist, Registered Nurse (RN), Physician (MD/DO), Dentist, Pharmacist, Physical Therapist, Occupational Therapist, Physician Assistant (PA), Medical Research Scientist, Public Health Professional, Healthcare Administrator

While most careers in this field require additional training and education beyond high school, the Medical Arts program provides students with a strong foundation for future success in the medical field.

