

SCIENCE

Mr. Arthur N. Registre, Director of Science – (516)-560-8857

The science program at Uniondale High School is geared to prepare each Uniondale graduate to understand the science concepts behind the advances of the 21st century. We want our students to experience science and see how it applies in everyday life. The Uniondale High School Science program gives students a strong foundation for careers in technology, medicine, engineering and/or scientific research. The classes below lists the various courses by grade level. The Science Department continues to encourage all students to earn four or more credits in science as the best preparation for careers in the 21st century. Please see the Uniondale Public School Calendar for the New York State graduation science requirements.

LIVING ENVIRONMENT REGENTS

Course No: 2009

Grades Offered: 9-12

Credit: 1.0

Examination: Living Environment Regents

This biology course is aligned to the NYSSLS. This contemporary biology course emphasizes current topics in molecular genetics and ecological relationships, while providing students with a foundation in scientific method, biological concepts, skills and problem solving. Hands-on laboratory work is an integral part of the curriculum. Students must meet the NYS laboratory requirement to be eligible to sit for the Regents examination. This requirement includes successful completion of 1200 lab minutes, plus the four NYS mandated laboratories.

LIVING ENVIRONMENT REGENTS P TECH

Course No: 2009PT

Credit: 1.0

Examination: Living Environment Regents

Prerequisite: Scored 80% or better on 8th Grade ILST,

Cohort of students approved by Director of Guidance

This biology course is aligned with the NYSSLS. This contemporary biology course emphasizes current topics in molecular genetics and ecological relationships, while providing students with a foundation in scientific method, biological concepts, skills and problem solving. Hands-on laboratory work is an integral part of the curriculum. Students must meet the NYS laboratory requirement to be eligible to sit for the Regents examination. This requirement includes successful completion of 1200 lab minutes, plus the four NYS mandated laboratories. PTECH students will have a broader expansion of learning in engineering and technology.

LIVING ENVIRONMENT REGENTS (ENL)

Course No. 2013

Grades Offered: 9-12

Credit: 1.0

Examination: Regents

Prerequisite: LEP/ELL “ENTERING”, “EMERGING”, “TRANSITIONING” designation on NYSITELL, NYSESLAT

This class, taught by a licensed science teacher who holds a bilingual extension or an TSOL license, or who has been trained in the Sheltered Instruction Observation Protocol (SIOP), is especially designed for limited English proficient/English language learner (LEP/ELL) at the “Beginning” or “Intermediate” level of English proficiency. It is geared at preparing ELLs to successfully challenge the “Living Environment” Regents Examination. This biology course is aligned to the NYS Living Environment Core Curriculum. This contemporary biology course emphasizes current topics in molecular genetics and ecological relationships, while providing students with a foundation in scientific method, biological concepts, skills and problem solving. Hands-on laboratory work is an integral part of the curriculum. Students must meet the NYS laboratory requirement to be eligible to sit for the Regents examination. This requirement includes successful completion of 1200 lab minutes, plus the four NYS mandated laboratories.

BILINGUAL LIVING ENVIRONMENT

Course No. 1886

Grades Offered: 9-12

Credit: 1.0

Examination: Regents

Prerequisite: LEP/ELL “ENTERING”, “EMERGING”, “TRANSITIONING” designation on NYSITELL, NYSESLAT

This class, taught by a licensed science teacher who holds a bilingual extension and who is fluent in the LEP/ELL students’ native language, is especially designed for Spanish language dominant limited English proficient/English language learners (LEP/ELLs) at the “Entering,” “Emerging” or “Transitioning” level of English proficiency. It is geared at preparing ELLs to successfully challenge the “Living Environment” Regents Examination. Hands-on laboratory work is an integral part of the curriculum. Students must meet the NYS laboratory requirement to be eligible to sit for the Regents examination. This requirement includes successful completion of 1200 lab minutes, plus the four NYS mandated laboratories.

EARTH SCIENCE REGENTS

Course No: 2020F

Grades Offered: 9-12

Credit 1.0

Examination: Earth Science Regents Exam

Prerequisite: Living Environment Regents

This course is aligned to the NYSSLS. Topics include Earth and celestial phenomena, the origin of the universe and solar system, weather patterns, seasonal changes, plate tectonics, landforms, the rock cycle, the chemical and physical properties of minerals, weathering and erosion and other related topics. Hands-on laboratory work is an integral part of the curriculum. Students must meet the NYS laboratory requirement of 1200 minutes to be eligible to sit for the Regents examination, which includes a Laboratory Performance Test that will be administered before the written portion of the Regents examination.

BILINGUAL EARTH SCIENCE REGENTS

Course No. 1883

Grades Offered: 9-10

Credit 1.0

Examination: Bilingual Earth Science Regents

Prerequisite: Bilingual Living Environment, “ENTERING”, “EMERGING”, “TRANSITIONING”

Co-Requisite: NYSESLAT (1-3) emerging or transitioning

This course is aligned to the NYS Physical Setting/Earth Science Core Curriculum and was developed to integrate the Spanish language and culture into the Earth Science classroom. Students will develop English listening, reading, speaking, and writing skills. Hands-on laboratory work is an integral part of the curriculum. Students must meet the NYS laboratory requirement of 1200 minutes to be eligible to sit for the Regents examination, which includes a Laboratory Performance Test that will be administered before the written portion of the Regents examination. The students may take the Spanish version of the Earth Science Regents examination.

Note: Instruction in Spanish and English.

ENL EARTH SCIENCE REGENTS

Course No: 1896

Grades Offered: 9-12

Credit 1.0

Examination: Earth Science Regents Exam

Prerequisite: Pre-/Co-requisite, LEP/ELL “ENTERING”, “EMERGING”, “TRANSITIONING”

designation on NYSITELL, NYSESLAT

This class, taught by a licensed science teacher who holds a bilingual extension or an ESOL license, or who has been trained in the Sheltered Instruction Observation Protocol (SIOP), is especially designed for limited English proficient/English language learner (LEP/ELL) at the “Beginning” or “Intermediate” level of English proficiency. It is geared at preparing ELLs to successfully challenge the “Earth Science” Regents Examination. This course is aligned to the NYS Physical Setting/Earth Science Core Curriculum. Topics include Earth and celestial phenomena, the origin of the universe and solar system, weather patterns, seasonal changes, plate tectonics, landforms, the rock cycle, chemical and physical properties of minerals, weathering, erosion and other related topics. Students must meet the NYS laboratory requirement of 1200 minutes to be eligible to sit for the Regents examination, which includes a Laboratory Performance Test that will be administered before the written portion of the Regents examination.

CHEMISTRY REGENTS

Course No: 1960

Grades Offered: 11-12

Credit 1.0

Examination: Chemistry Regents

Prerequisite: Successfully passed Living Environment Regents Exam, and Algebra 1 Regents Exam with 85% or better.

This course is aligned to the NYSSLS. Chemistry is the study of matter and its changes. The atomic model is approached through studies of the solid, liquid and gaseous states by means of observations, both qualitatively and quantitatively. Included is the study of chemical and nuclear reactions, acid and base composition of solutions, chemical equilibrium, electrochemical energy, and organic chemistry. This course is essential for students interested in science and who plan further scientific study in college leading to careers in biology, chemistry, engineering, mathematics, medicine, nursing, physics, and science education. Hands-on laboratory work is an integral part of the curriculum. Students must meet the NYS laboratory requirement of 1200 minutes to be eligible to sit for the Regents examination in Physical Setting/ Chemistry.

CHEMISTRY REGENTS PTECH

Course No: 1960PT

Grades Offered: 11-12

Credit 1.0

Examination: Chemistry Regents

Prerequisite: Successfully passed Living Environment Regents Exam, and Algebra 1 Regents Exam. Cohort of students approved by Director of Guidance.

This course is aligned to the NYSSLS. Chemistry is the study of matter and its changes. The atomic model is approached through studies of the solid, liquid and gaseous states by means of observations, both qualitatively and quantitatively. Included is the study of chemical and nuclear reactions, acid and base composition of solutions, chemical equilibrium, electrochemical energy, and organic chemistry. This course is essential for students interested in science and who plan further scientific study in college leading to careers in biology, chemistry, engineering, mathematics, medicine, nursing, physics, and science teaching. Hands-on laboratory work is an integral part of the curriculum. Students must meet the NYS laboratory requirement of 1200 minutes to be eligible to sit for the Regents examination in Physical Setting/ Chemistry. PTECH students will have a broader expansion of learning in engineering and technology.

CHEMISTRY HONORS

Course No: 1950

Grades Offered: 9-12

Credit 1.0

Examination: Chemistry Regents

Prerequisite: Successfully passed Living Environment Regents with 85% or better and successfully pass Algebra 1 Regents with 85% or better.

This course is aligned to the NYSSLS and incorporates enrichments to prepare students for advanced study in chemistry including emphasis on laboratory work. This course is recommended for students who plan to take AP Chemistry and/or plan medical, scientific or engineering careers. Hands-on laboratory work is an integral part of the curriculum. Students must meet the NYS laboratory requirement of 1200 minutes to be eligible to sit for the Regents examination in Physical Setting/Chemistry.

PHYSICS REGENTS

Course No: 1940

Grades Offered: 11-12

Credit 1.0

Examination: Physics Regents

Prerequisite: Successfully passed Living Environment Regents, Chemistry Regents and Geometry Regents with an 80 or better.

This course is aligned to the NYSSLS. This course is recommended for any student intending to major in any field of science or mathematics in college. Physics is essentially the study of energy and explores the following areas: mechanics, simple machines, light, heat, sound, electricity, magnetism, and atomic structure. Hands-on laboratory work is an integral part of the curriculum. Students must meet the NYS laboratory requirement of 1200 minutes to be eligible to sit for the NYS Regents examination in Physical Setting/Physics.

PHYSICS HONORS**Course No: 1930****Grades Offered: 9-12****Credit 1.0****Examination: Physics Regents****Prerequisite: Successfully passed Living Environment Regents, Chemistry Regents, Algebra 1 Regents, and Geometry Regents with 85% or better.**

This course is aligned to the NYSSLS. Further, this course is recommended for any students interested in scientific, mathematical and/or engineering careers. This enriched physics course integrates extensive laboratory work with challenging problems and assignments. Hands-on laboratory work is an integral part of the curriculum. Students must meet the NYS laboratory requirement of 1200 minutes to be eligible to sit for the Regents examination in Physical Setting/Physics.

PHYSICS HONORS - PHYSICS FIRST PROGRAM**Course No: 1930A****Grade Offered: 9****Credit: 1.0****Examination: Physics Regents Exam****Prerequisite: Scoring an 85% or better on the Algebra 1 Regents, as well as scoring an 85% or better on Living Environment Regents and recommendation of Middle School Guidance Counselor.**

This course is aligned to the NYSSLS. Further, this course is recommended for any students interested in scientific, mathematical and/or engineering careers. This is an enriched physics course that integrates extensive laboratory work with challenging problems and assignments. Hands-on laboratory work is an integral part of the curriculum. Students must meet the NYS laboratory requirement of 1200 minutes to be eligible to sit for the Regents examination in Physical Setting/Physics.

SCIENCE ELECTIVE COURSE OFFERINGS

LIVING ENVIRONMENT ENRICHMENT

Course No: 2022

Grade Offered: 9

Credit: 0.5

Max Number of Students: 15

Prerequisite: Recommended by Science Director & Results Grade 8 ILST Examination

This course is mandatory for any student who did not pass the New York State 8th Grade ILST exam and who is currently in the 9th grade and enrolled in a Living Environment Regents course. Students will follow the Living Environment Regents course curriculum with emphasis on Regents examination questions and test taking skills provided in workbooks. The course also allows students to earn a half credit toward graduation. Course is given every other day on A days or B days. Students will use the Achieve 3000 online teaching website as a tool on their journey to success. Achieve3000® believes that every student — mainstream, English language learners, special needs and gifted alike — can reach higher. All students have the ability to improve their reading and writing, with this ability they have the means to master the curriculum to meet the standards set by Common Core and to be prepared for college and career.

LIVING ENVIRONMENT SEMINAR 1

Course No: 1996

Grades Offered: 9-12

Credit: 0.5

Examination: Living Environment Regents – January

Prerequisite: Need to retake Regents exam

This course is offered Semester 1 for any student who did not pass the New York State Regents examination in Living Environment. For a Regents diploma, students must pass one Regents science examination. For the Advanced Regents Diploma, students must pass a New York State Regents science examination in Living Environment and one in Physical Setting. Students will retake the Regents examination in January.

LIVING ENVIRONMENT SEMINAR 2

Course No: 1996

Grades Offered: 9-12

Credit: 0.5

Examination: Living Environment Regents – June

Prerequisite: Need to retake Regents exam

This course is offered Semester 2 for any student who did not pass the New York State Regents examination in Living Environment. For a Regents diploma, students must pass one Regents science examination. For the Advanced Regents Diploma, students must pass a New York State Regents science examination in Living Environment and one in Physical Setting. Students will retake the Regents examination in June.

ENL FOUNDATIONS OF SCIENCE

Course No. 2062

Grades Offered: 9-10

Credit 1.0

Examination: Class Exam

Prerequisite: ENL/ELL "ENTERING" designation on NYSITELL or NYSESLAT

This class is especially designed for limited English proficient/English language learner (ELL) newcomer students who need to be brought up to grade level in science. It introduces them to the items, vocabulary and concepts of science they will need to successfully challenge the "Living Environments" and "Earth Science" Curriculums. This course meets the physical science requirement of the Regents and Advanced Regents Diploma.

Astronomy

Course No: 2065- semester 1 or semester 2

Grades Offered: 10-12

Credit: 0.5

Examination: Class Final

Prerequisite Living Environment Regents, Chemistry Regents.

The course is designed for students to study the history of astronomy as a scientific endeavor, explore astronomical phenomena observable in the day and night sky, and consider the major theories explaining the origins and future of the universe. Students will study the structure and evolution of the solar system, stars, galaxies, and the universe including the applications of tools and techniques such as telescopes and spectral analysis. The course is designed to encourage questions about nature, welcome curiosity, value different points of view, engage learners actively through hands-on learning opportunities, and pose problems with real-life applications. This course meets the Physical Science requirement of the Regents or Advanced Regents Diploma.

FORENSIC CHEMISTRY

Course No: 2060

Grades Offered: 11-12

Credit: 1.0

Examination: Final Exam

Prerequisite: must be 11th or 12th grade

This course approaches the challenges, methods and analyses of forensic science from a fundamental chemical perspective. Topics include drug analysis, arson investigation, questioned document analysis and the analysis of paint and gunshot residue samples. This course meets the Physical Science requirement for the Regents or Advanced Regents Diploma.

ENL FORENSIC CHEMISTRY

Course No: 2060EL

Grades Offered: 11-12

Credit: 1.0

Examination: School Exam

Prerequisite: Must be 11th or 12th grade, "ENTERING", "EMERGING", "TRANSITIONING"

This class is especially designed for limited English proficient/English language learner (ELL) newcomer students who need to be brought up to grade level in science. This course approaches the challenges, methods and analyses of forensic science from a fundamental chemical perspective. Topics include drug analysis, arson investigation, questioned document analysis and the analysis of paint and gunshot residue samples. This course meets the Physical Science requirement for the Regents or Advanced Regents Diploma.

FORENSIC SCIENCE

Course No: 2072- semester 1 or semester 2

Grades Offered: 11-12

Credit 0.5

Examination: Class Final

Prerequisite: Completion of Living Environment or Earth Science Regents.

This course is a “hands-on” introduction to the contemporary field of Forensic Science. Forensic Science represents an application of the natural sciences (Biology and Chemistry) to the investigation of physical evidence in matters of the law. Laboratory investigation and problem-solving techniques will involve criminalistics (recognition, identification and evaluation of evidence), toxicology (study of physical and chemical agents on living systems), poisoning, arson, fingerprints, and forgery. Questions will be answered such as: Is the signature genuine? Was the ransom note typed on the principal’s typewriter? Was the fire in the boy’s room of natural causes? Are there detectable traces of gasoline? Is the stain on the suspect’s clothes blood? Whose fingerprints are on the stolen mid-year exams? Is the hair sample human or animal? Field trips to professional laboratories, the coroner’s office, police lab, and medical examiner will be an integral part of the course. Forensic Science is recommended for students who are interested in careers in medicine, law environment, police work, or security work. This course meets the Physical Science requirement of the Regents or Advanced Regents Diploma.

HUMAN ANATOMY AND PHYSIOLOGY

Course No: 2100 (course takes place every day for ½ year – semester 1 or semester 2)

Course No: 2100A (course takes place every other day for a full year)

Grades Offered: 11-12

Credit: 0.5

Examination: School Exam

Prerequisite: Successfully passed Living Environment Regent exam or Earth Science Regents exam and currently in 11th grade

Anatomy and Physiology is the study of the structure (anatomy) of the human body and how it functions (physiology). This course is ideal for students contemplating careers in the medical professions, biological sciences or physical education. The gross anatomy of all the body systems will be examined with emphasis on the muscular and skeletal systems. Functions of all systems will be explored. The course will also include topics in nutrition, weight training, and kinesiology. This course meets the Life Science requirement for the Regents or Advanced Regents Diploma.

INTRODUCTION TO GENETICS

Course No: 2075 – semester 1 or semester 2

Grades Offered: 11-12

Credit: 0.5

Examination: Final Exam

Prerequisite: Living Environment Regents or Earth Science Regents, currently in 11 or 12 grade

Genetics is the science of heredity. Classical principles of genetics together with the most modern advances in technology are applied to the study of human traits. Some of the topics include how traits are inherited, genetic diseases and their causes, sex determination, birth defects and the future of genetic engineering. This course meets the Life Science requirement for the Regents or Advanced Regents Diploma.

MARINE BIOLOGY AND OCEANOGRAPHY

Course No: 2110

Grades Offered: 11-12

Credit: 1.0

Examination: Class Final

Prerequisite: Successfully passed Living Environment Regents exam or Earth Science Regents exam.

This course is designed to introduce students to the study of Marine Science. Emphasis is placed on the marine ecosystems that surround Long Island. Topics include geological, physical, and chemical oceanography, energy flow, and evolution of marine plants, aquatic organisms, disruptions and threats to ecosystem survival. Laboratory experiences, demonstrations, and field trips are integral components of this course. This course meets the Life Science requirement for the Regents or Advanced Regents Diploma.

CONCEPTUAL PHYSICS

Course No: 1941

Grades Offered: 11-12

Credit 1.0

Examination: Physics Final Exam

Prerequisite: Successfully passed Living Environment Regents and Algebra 1 Regents. Score of 70% or below on Chemistry Regents.

This course is aligned to the NYSSLS. This course is designed to provide a conceptual exposure to the fundamental principles and process of the physical world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Hands-on laboratory work and computer-based exercises are an integral part of the curriculum. Students will have input in selecting areas of interest to study. Upon completion, students will be able to demonstrate their understanding of selected Physics concepts and be able to describe examples and applications of the principles studied. This course meets the physical science requirement for the Regents and Advanced Regents Diploma.

COLLEGE PREP PHYSICS P-Tech (COLLEGE LEVEL)

Course No: 1934PT

Grades Offered: 11-12

Credit: 1.0

Examination: Final Exam

Prerequisite: P-Tech Chemistry

College Physics is a one-year course in introductory physics. The mathematical techniques used in this book include algebra, geometry, and trigonometry but not calculus. This course covers the standard topics in classical physics and twentieth-century physics. This course is intended to provide the student with a clear and logical presentation of the basic concepts and principals of physics to strengthen their understanding of them through a broad range of interesting, real world applications.

Sound physical arguments and problem solving methodology. At the same time we have attempted to motivate the student through practical examples that demonstrate the role of physics in other disciplines. Finally, with the text fully integrated into Mind Tap we provide a learning path that keeps students on track for success. PTECH students will have a broader expansion of learning in engineering and technology

ADVANCED PLACEMENT BIOLOGY (College Level)**Course No: 1910****Grades Offered: 11-12****Credit: 2.0 (Double Period)****Examination: AP Exam****Prerequisite: Living Environment R or H with 85% (+) including passing the NY Regents Exam, Chemistry R or H with 85% (+), including passing the NY Regents Exam and Algebra 1 with 85% (+) including passing the NY Regents Exam.****Students not meeting criteria must be approved by Director of Science.**

Advanced Placement Biology is a freshman college-level biology course. Topics include ecological studies, comparative anatomy, biochemistry, anatomy, histology, microbiology, and genetics. Laboratory work is an essential part of the course. All students will be required to perform laboratory experiments and to complete laboratory reports. All students are required to take the College Board Advanced Placement Examination in May.

ADVANCED PLACEMENT CHEMISTRY (College Level)**Course No: 1915****Grades Offered: 11-12****Credit: 2.0 (Double Period)****Examination: AP Exam****Prerequisite: Living Environment Honors with an 85% or better including passing the NY Regents Exam,****Chemistry Honors with an 85% or better) including passing the NY Chemistry Regents Exam and Algebra 1 with 85% (+) including passing the NY Regents Exam. Students not meeting criteria must be approved by Director of Science. (Completion of Physics is highly recommended)**

Advanced Placement Chemistry is a freshman college-level chemistry course. Topics include atomic structure, bonding, stoichiometry, gas laws, thermodynamics, kinetics, chemical equilibrium, acid/base theory, solutions, organic chemistry, and nuclear chemistry. Laboratory work is an essential part of the course. All students will be required to perform laboratory experiments and to complete laboratory reports. All students are required to take the College Board Advanced Placement Examination in May.

ADVANCED PLACEMENT PHYSICS 1 (College Level)**Course No: 1900****Grades Offered: 11-12****Examination: AP Exam****Co-Requisite: Algebra 1, Geometry, Algebra 2 Trigonometry****(Completion of Physics is highly recommended)****Credit: 2.0 (Double Period)**

This course is designed to be equivalent to the first semester of an introductory college-level algebra based physics course. This course would be useful for potential engineering, pre-med, science and computer science majors as well as anyone interested in Physics. This would also be a fantastic college preparatory course. As AP Physics 1 is taught over a full school year there is time for thorough, in-depth, student centered inquiry activities activates allowing students to perform careful experiments and design laboratory practical work to answer real world questions.

The first year is the study of Classical Mechanics including: Kinematics, Projectile Motion, Newton's Laws, circular Motion, Gravitation and Kepler's Laws, Work and Energy, Momentum & Impulse and Torque & Rotational Dynamics. Students will also study Electrostatics & basic DC Circuits, Simple Harmonic Motion and Mechanical Waves. Year one will culminate with the AP Physics 1 examination in May.

SCIENCE RESEARCH PROGRAM

This course is designed to provide students with the necessary tools for the design and implementation of original research for high-level competition such as the INTEL National Science Talent Search competition. Topics include theoretical issues in scientific research, research techniques, design and methodology, data analysis, and proper formatting of scientific reports. The specifics of the course content evolve in response to issues that emerge as students develop their projects. This course affords talented and hard-working High school students the opportunity to participate in scientific research and scholarship. Students will further their skills in performance and achievement as they develop their skills as a researcher and scientist.

SCIENCE RESEARCH METHODOLOGY

Course No: 1987A (course takes place every day for a full year)

Grade Offered: 9

Credit: 1.0

Examination: Class Final

Prerequisite: Score of 80% or better on the Living Environment Regents Examination, approval of Director of Science and Teacher recommendation.

This course has been designed to introduce incoming high school students to the scientific process through a series of engaging activities and investigations while studying thematic units covering population dynamics, diseases, genetic disorders, and pollution. By the end of the course, students will independently gather information, create hypotheses, and investigate issues with a real world application. Some of the skills that we focus on in this course are designing experiments, gathering sources, collecting and recording data, and presenting the results publically.

ADVANCED SCIENCE RESEARCH

Course No: 1988

Grades Offered: 11-12

Credit: 1.0 College Credit – See description below

Examination: Class Final

Prerequisite: Science Research Methodology (Course 1987A)

This program affords students the opportunity to participate in the community of science research in the high school setting. Students taking the course will choose and explore a topic of interest. This topic may originate in the fields of mathematics, physical science, life science, social science, or psychology. Students will learn to conduct online bibliographic searches and use international databases as part of the research process. The goal of this course is to create a product that may be presented at a local science or social science competitions such as LISEF, NYSEF, INTEL National Science Talent Search competition.

PRE-NURSING PROGRAM

The Pre-Nursing Program at Uniondale High School is a professional-oriented program designed to help students interested in the Nursing and Allied Health Careers. The program will emphasize the basic skills needed to pursue a career in nursing and other health careers. The students will be required to develop and demonstrate necessary skills through classroom, laboratory, and clinical internships in the community^ health care institutions. This specialized program will prepare students to advance to institutions of higher learning and successfully pursue training in the health care career of their choice. It is a program in which the students are required to follow a sequence of Science courses such as Biology, Chemistry, as well as Health Career Courses such as Pre-Nursing, Health Core, and Nurse Assistant courses. Students must successfully complete and pass courses in Living Environment and Chemistry. In addition to preparing students to earn a Regents High School Diploma, this program prepares students to obtain positions in health care while they attend college. Upon high school graduation, the students will be prepared to take the New York State Nursing Home Nurse Aide Certification Exam (CNA).

Grade Level	Pre-Nursing Sequence
10th Grade	Health Occupations Education Core
10th Grade	Career and Financial Management
11th Grade	Introduction to Pre-Nursing/Nurse Assisting
12th Grade	Advanced Pre-Nursing/Nurse Assisting

HEALTH OCCUPATIONS EDUCATION CORE

Course No: 4125

Grade Offered: 10

Credit: 1.0

Examination: Class Final

Prerequisite: Students must be entering the 10th grade, successful completion and passing of the Living Environment course (80% average). Completion of Microsoft Office.

Recommendation Form signed by Living Environment Teacher and Guidance Counselor and Science Department Director. Students must maintain a 75% or above average to progress through the full sequence of classes for the Nursing Assistant Program.

The purpose of this series of four courses is to provide students with an introduction to the skills, knowledge, and abilities required of all health care workers. Topics include an overview of all health careers, legal and ethical responsibilities of a health care worker, principles of infection control, personal health and wellness concepts, safety in the health care setting, CPR and First Aid, basic medical terminology, Anatomy & Physiology, and the basics of vital signs.

Career and Financial Management**Course No: 3255****Grade Offered: 10****Credit 0.5****Examination: Final examination****Co-requisite: Health Occupations Education Core****Prerequisite: Students must be entering the 10th grade, successful completion and passing of the Living Environment course (80% average).****Completion of Microsoft Office. Recommendation Form signed by Living Environment Teacher and Guidance Counselor and Science Department Director. Students must maintain a 75% or above average to progress through the full sequence of classes for the Nursing Assistant Program. This is an everyday class for half a year.**

This course examines the relationship between career planning, life-long goals, and the skills necessary for researching and selecting the appropriate careers. Career and Financial Management examine factors that influence economic decisions relating to financial management while understanding the relevance of fiscal responsibilities.

INTRODUCTION TO PRE-NURSING/NURSE ASSISTING**Course No: 2112****Grade Offered: 11****Credit: 2.0****Examination: Class Final****Prerequisite: Health Occupations Education Core Required courses for Pre-Nursing/Nurse Assisting sequence students.****Students must maintain a 75% or above to progress through the full sequence of classes for the Nursing Assistant Program.**

This course is designed to provide the student interested in pursuing a nursing course of study with the opportunity to learn the basic nursing care skills required of the entry level health care provider in an acute-care or long-term care facility. Skills include communication techniques, infection control, personal care and hygiene, vital signs, assisting the client with ambulation, medical terminology, Anatomy & Physiology and disease processes, patient care skills, patient care assessment, and introduction to patient care equipment. The student will be able to practice the skills in our nursing lab under the supervision of a professional nurse instructor.

ADVANCED PRE-NURSING/NURSE ASSISTING AND PRACTICUM**Course No: 2113, 2114****Grade Offered: 12****Credit: 2.0****Examination: Class Final****Prerequisite: Introduction to Pre-Nursing/Nurse Assisting courses required for Pre-Nursing/Nurse Assisting sequence students.****Students must maintain a 75% or above to progress through the full sequence of classes for the Nursing Assistant Program.**

This course provides the students with the opportunity to learn and practice the advanced nursing skills required of an entry-level health care provider in an acute or long-term care facility. Topics include human sexuality including the aging process and its implications for client care, nutrition and diet therapy, pre and post-operative care, care of the patient on oxygen as well as job seeking and job keeping skills. Students will be required to complete an internship at local acute-care and long-term care facilities to practice their nursing skills as well as practice in the nursing lab at Uniondale High School. At the completion of the course, students will be eligible to take the New York State Residential Aide certification exam (CNA) which is required for employment as a nurse aide in a long-term care facility, or a PCA (Personal Care Aide) in a hospital setting.

Students in this course will alternate their schedules weekly, as follows:

Periods	Subject	Activity
Schedule 1 A-Days period 1-4	7:00 a.m.-10:20 a.m.	Health Care Facility
Period 5	10:39 a.m.-11:22 a.m.	Lunch
Period 6-9	11:26 a.m.-2:30 p.m.	Other Academic subjects
Schedule 2 B-Days period 1-2	7:25 a.m. -8:55 a.m.	Physical Education, etc.
Period 3-4	9:05 a.m. -10:35 a.m.	Advanced Pre-Nursing Course at UHS
Period 5	10:39 a.m.-11:22 a.m.	Lunch
Period 6-9	11:26 a.m.-2:30 p.m.	Other Academic subjects

Zucker School of Medicine at Hofstra/Northwell Medical Scholars Pipeline Program

The Hofstra School of Medicine in partnership with North Shore-LIJ Health System, has launched a program to prepare high school students for health care careers that includes hands-on training, rigorous academic classes on a range of medical issues and mentorship from physicians and other clinicians.

The goal of the Pipeline Program is to identify bright, promising students from economically and educationally under-represented groups from our local communities and to give these students an opportunity to develop the confidence and skills, provide them with exposure, moral and financial support needed for them to enter and succeed in higher education, in the medical field, and, ultimately, in the medical profession itself.

This program introduces students to the overall health care system and basic preparatory skills necessary to pursue a career in health care.

The program includes lectures on topics ranging from the ethics of medical research to the politics of health-care reform, on clinical specialties, SAT prep, exercises to develop leadership and team-building skills, as well as CPR training. Similar to the medical school, students rotate through programs held at Hofstra and at various health system facilities, including:

- The Patient Safety Institute
- North Shore/ LIJ Hospitals
- Feinstein Institute for Medical Research

Some of the many activities that students are involved in:

- Exercises in leadership training
- Lectures regarding health care topics
- Patient care experiences
- Spending time with their physician mentor and a senior clinician at North Shore/LIJ Hospital.

The program is a five-year experience designed to supply a steady stream of physicians and medical professions who reflect the cultural, racial, ethnic and economic diversity of the region.

Students participate in the month-long summer session each year, beginning with their junior year of high school through their junior year in college. The program also includes activities during the school year. A new class of rising juniors will be chosen to begin the program every year.

Students are selected for the program meeting the following criteria:

- Grade 10
- Interest in Pre-Med
- GPA of 85% or above
- A minimum score of at least 1000 on the PSAT
- PSAT Score of 50 or above on both Critical Reading and Math
- Enrollment in Regents Chemistry
- Strong Regents scores in Mathematics/Science
- Recommendation by Director of Science
- Application
- Interview