



Clean Technologies and Sustainable Industries Early College High School Program

What you need to know about the HVCC college coursework?

- College Pathways- Students explore the different career pathways during their sophomore year high school course. We invite business partners and current seniors about the coursework, training, and careers in each major/pathway.
 - Clean Energy
 - Community Health Navigation
 - Cybersecurity
 - Engineering Sciences
 - Entrepreneurship
 - Polysomnography
 - Surgical Technology
- April/May Students will make their final college major choice.
- **College Pathway Restrictions:**
 - Students who have not completed Algebra 2 OR who are not co-enrolled with Algebra 2 at their home school for junior year will be restricted to the Community Health Navigation and Entrepreneurship pathways.
 - Any student who would like to pursue the *Engineering Sciences* pathway will need to have completed Algebra 2 in their sophomore year of high school so that they are prepared to take the College PreCalculus during their junior year.
- HVCC College Math
 - This is determined by the current math courses and grades students have achieved at their home school.

<u>Sophomore Year</u>	<u>HVCC Math Recommendation</u>	<u>Pathways Available To</u>
Algebra I, Applied Geometry	Intermediate Algebra	Entrepreneurship
Geometry & Enrolled in Algebra II at Home School during junior year	College Algebra with Trigonometry	Clean Energy, Cybersecurity, Entrepreneurship, Surgical Tech
Successful completion of Algebra II	College PreCalculus	All Pathways <i>except</i> Community Health
Algebra I	Elementary Statistics	Community Health Nav

- If a student is in Algebra II at their home school and passes it as a sophomore they will take College PreCalculus. A student will not take PreCalculus at their home school.
- If a student is maintaining less than a 70 in their high school Algebra II course 1st quarter, the student will be recommended to take College Intermediate Algebra as a junior.
- Students will take 2 college courses each semester in person at TEC-SMART from HVCC professors.
- Students will have the coursework in advance so they do not take it at their home school. Students have to take the college coursework assigned to their pathway.
- The college coursework is subject to change by HVCC as their requirements change.
- There are HVCC college classes over February & April high school vacations.



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What is Clean Energy?

The degree program combines renewable energy and business courses to meet industry demands for employees with a blend of technical skills and business management abilities.

In addition to basic electrical theory and an exploration of photovoltaic, geothermal, wind and fuel cell energies, the program focuses on the essential principles of finance, marketing and business development. You'll also get technical training in PV installation, troubleshooting and maintenance.

Clean Energy HVCC College Coursework

HVCC College Coursework	Credits	Year/Semester Taken
MKTG 120: Principles of Marketing	3	Fall Junior Year
BADM 110: Legal & Ethical Environment of Business	3	Fall Junior Year
MATH 150: College Algebra w/ Trig or MATH 170 College PreCalculus	4	Spring Junior Year
ESYS 100: Wind Energy	1	Spring Junior Year
ECMN 210: Photovoltaic Systems Theory & Design	3	Fall Senior Year
ECMN 120: Electrical Theory for Renewable Energy	3	Fall Senior Year
ECMN 211: Photovoltaic Systems Installation & Maintenance	3	Spring Senior Year
ECMN 195: Electrical Power Distribution & Control	3	Spring Senior Year

*****College coursework is subject to change based on HVCC & enrollment decisions.***

<u>Year 5 and 6 Coursework</u>	
ACTG 110: Financial Accounting	HVAC 203: HVAC/R Systems Design I
BADM 200: Business Communications	Business Electives- 6 credits
BADM 207: Organization & Management	Liberal Arts & Sciences Electives: 3 credits
BADM 220: Statistics	
CISS 100: Intro to Computing & Info Sciences	

Clean Energy

Companies	Specific Jobs
TRC	Solar Outreach & Policy
Institute for Building Technology & Safety	Solar QA Inspector
Momentum	Sales & Sales Manager
GE (Lighting, Renewables)	Environmental Project Manager
Century Solar	Renewable Energy Technician
Redfeather Energy	Calibration Technician
APEX Solar	Energy Auditors
Aztec	Wind Energy Engineers
Brookfield Renewables	Photovoltaic Installers
Monolith Solar	Design Analyst
Magnolia Solar	
Kasselman Solar	
NYSERDA	
National Grid	



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What is Community Health Navigation?

The degree program is for those interested in the field of community health who may have little or no background in the field. Community health navigators educate, motivate and empower their clients. Working under licensed health care professionals, they serve as a liaison between clients and the health care system, connecting clients with services and providing support for those navigating the health care landscape.

Coursework in this program will help you acquire a broad base of knowledge that spans health care, community health, health insurance, human services, health literacy and chronic diseases.

Community Health Navigation HVCC College Coursework

HVCC College Coursework	Credits	Year/Semester Taken
PSYC 100: General Psychology	3	Fall Junior Year
ENGL 125: Public Speaking	3	Fall Junior Year
BADM 220: Statistics	4	Spring Junior Year
SOCL 120: Cultural Diversity in American Society	3	Spring Junior Year
PSYC 200: Child Psychology	3	Fall Senior Year
SOCL 110: Social Problems	3	Fall Senior Year
CMHL 110: US Healthcare	3	Spring Senior Year
CMHL 100: Intro to Community & Public Health	3	Spring Senior Year

****College coursework is subject to change based on HVCC & enrollment decisions.**

Year 5 and 6 Coursework	
ASLN 100: American Sign Language & Deaf Culture I	BIOL 109: Biology of the Human Organism
CDEP 100: Intro to Chemical Dependency	HUSV 100: Social Service Systems
CMHL 115: Healthcare Ethics	HUSV 115: Perspectives on Disability
CMHL 200: Community Health Navigation	HUSV 240: Professionalism in a Diverse Society
ENGL 104: English Composition II	CMHL 201: Community Health Navigator Practicum
	CMHL 205: Chronic Diseases

Community Health Navigation

Specific Jobs

Patient Navigator Benefits Navigator Community Health Worker Health Outreach Patient Advocate Health Insurance Company



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What is Cybersecurity?

The Cybersecurity degree combines criminal justice and computer information systems coursework with a strong base of liberal arts courses to prepare you for transfer into a bachelor's degree program in Digital Forensics, Cybersecurity and other related programs.

Cybersecurity HVCC College Coursework

HVCC College Coursework	Credits	Year/Semester Taken
CISS 100: Intro. To Computing Info. Sciences	4	Fall Junior Year
PSYC 100: Psychology	3	Fall Junior Year
MATH 150: College Algebra w/ Trig or MATH 170 College PreCalculus	4	Spring Junior Year
CISS 110: Programming & Logic 1	4	Spring Junior Year
BADM 220: Statistics	4	Fall Senior Year
CISS 111: Programming & Logic 2	4	Fall Senior Year
CISS 125: Computer & Information Security	3	Spring Senior Year
CRJS 101: Introduction to Criminal Justice	3	Spring Senior Year

*****College coursework is subject to change based on HVCC & enrollment decisions.***

<u>Year 5 and 6 Coursework</u>	
ACTG 110: Financial Accounting	MATH 135: Elementary Statistics
CISS 120: Networking I- Intro to Data Communication	LA/Gen Ed Arts Elective- 3 credits
ENGL 104: English Composition II- Writing about Lit	LA/Gen Ed American History Elective- 3
FSCI 244: Digital Forensics	LA/Gen Ed Electives- 6
FSCI 245: Forensic Science I	

Cybersecurity

Companies	Specific Jobs
American Technology Consulting	Risk Assessment
Commerce Hub	Offensive Security Management
GreyCastle Security	Defensive Security Management
Annese & Associates Inc.	Patch Management
Twinstare Technologies	Perimeter Protection
TechBridge Group LLC	Vulnerability Assessment
Complete Network Support	Social Engineerign Prevention
Logical Net Corp.	Email Hosting & Protection
ADNET Technologies NY LLC	Chief Information Security Officer
Stored Technology Solutions Inc.	Cybersecurity Specialist



Clean Technologies and Sustainable Industries Early College High School Program

What is Engineering Sciences?

The degree program parallels the first two years of four-year college programs in mathematics, physics, chemistry, and various engineering fields.

Engineering Sciences HVCC College Coursework

HVCC College Coursework	Credits	Year/Semester Taken
CISS 100: Intro. To Computing Info. Sciences	4	Fall Junior Year
ENGR 120: Intro to Engineering Design	3	Fall Junior Year
MATH 170: College PreCalculus	4	Spring Junior Year
CISS 110: Programming & Logic 1	1	Spring Junior Year
ENGR 110: Engineering Tools	3	Fall Senior Year
MATH 180: Calculus I	4	Fall Senior Year
ENGL 102: English Composition II	3	Spring Senior Year
PHYS 150: Physics I	4	Spring Senior Year

*****College coursework is subject to change based on HVCC & enrollment decisions.***

<u>Year 5 and 6 Coursework</u>	
CHEM 110: General Chemistry I	PHYS 151: Physics II
ENGR 211: Engineering Statics	PHYS 250: Physics III
MATH 190: Calculus II	Engineering Electives- 11 credits
MATH 210: Calculus III	
MATH 220: Calculus IV	

Engineering Sciences

Specific Jobs

Mechanical Engineer
 Biomedical Engineer
 Industrial Engineer
 Civil Engineer



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What is Entrepreneurship?

You will learn the fundamentals that will help you learn to better the odds of creating sustainable success in your business. Coursework will help you develop an entrepreneurial mindset and understand entrepreneurial finance, small business management, marketing, and legal issues for small business owners. The internet has greatly expanded the possibilities for small entrepreneurs, allowing businesses to establish niche audiences and clientele around the world.

Entrepreneurship, Innovation, & Leadership HVCC College Coursework

HVCC College Coursework	Credits	Year/Semester Taken
MKTG 120: Principles of Marketing	3	Fall Junior Year
ENTR 110: Introduction to Entrepreneurship	3	Fall Junior Year
MATH 110: Intermediate Algebra, MATH 150: College Algebra w/ Trig or MATH 170: College PreCalculus	3-4	Spring Junior Year
CMPT 101: Computer Concepts & App 1	3	Spring Junior Year
BADM 220: Statistics	4	Fall Senior Year
ENTR 120: Entrepreneurship Process	3	Fall Senior Year
MKTG 210: Digital Marketing	3	Spring Senior Year
BADM 207: Organization & Management	3	Spring Senior Year

****College coursework is subject to change based on HVCC & enrollment decisions.**

<u>Year 5 and 6 Coursework</u>	
ACTG 120: Personal Finance	ENTR 290: Entrepreneurial Strategy
BADM 200: Business Communications	ENTR 295: Entrepreneurial Internship
ECON 101: Principles of Microeconomics	MKTG 214: Selling & Sales Management
ENTR 150: Legal Issues in Entrepreneurship	PSYC 100: General Psychology
ENTR 210: Entrepreneurial Finance	Free Elective: 3 credits

Entrepreneurship, Innovation, & Leadership

Supporting Companies	Specific Jobs
Independent Small Business Owner	Independent Small Business Owner
Saratoga Prosperity Partnership	Sales Managers
Saratoga Economic Development Corporation	Marketing Managers
NYS Business Council	Computer Systems Managers
Troy Innovation Garage	Construction Managers
NY Biz Lab	Public Relations Specialists
Chambers of Commerce	Patent Lawyers
ABM	Inventors
FingerPaint Marketing	Business Development Manager
Higher Logic	Marketing Coordinator
BlueSoho	
FuzeHub	



Clean Technologies and Sustainable Industries Early College High School Program

What is Polysomnography?

The degree program prepares graduates to work in the field of polysomnography OR electroencephalography diagnostic testing. Polysomnography is an allied health specialty that deals with the diagnostic evaluation and management of patients with neurological and sleep abnormalities.

Neurodiagnostic testing may be done with patients of all ages, from the premature infant to the geriatric patient. Job opportunities may be found in sleep labs and EEG departments OR hospitals OR associated with physician's offices.

Polysomnography technologists administer sleep tests and work with physicians to provide information needed for accurate diagnosis and treatment.

This degree prepares you for a career as a technician/technologist in the field of polysomnography, which deals with the diagnostic evaluation and management of patients with neurological or sleep abnormalities. There are over 80 different sleep disorders including sleep apnea, narcolepsy and insomnia. You will learn how to operate sophisticated electronic monitoring devices which record brain activity (EEG), muscle and eye movements, blood oxygen levels and physiological events.

Polysomnography HVCC College Coursework

HVCC College Coursework	Credits	Year/Semester Taken
PSYC 100: General Psychology	3	Fall Junior Year
BADM 220: Statistics	3	Fall Junior Year
PSGT 100: Applied Pharmacology	1	Spring Junior Year
PSYC 205: Developmental Psychology	3	Spring Junior Year
PHYS 110: Physics for the Health Sciences	4	Fall Senior Year
ICVT 200: Introduction to Health Care	2	Fall Senior Year
RESP 110: Human Anatomy & Physiology	3	Spring Senior Year

****College coursework is subject to change based on HVCC & enrollment decisions.**

<u>Year 5 and 6 Coursework</u>	
BIOL 139 Anatomy & Physiology for Respiratory Care Students	PSGT 205: Sleep and Neurological Disorders
BIOL 270: Anatomy and Physiology I	PSGT 210: Polysom. Data Analysis & Recording
ENGL 102: English Composition II	PSGT 220: Electroencephalography Clinical
PSGT 100: Applied Pharmacology	PSGT 225: Polysomnography Clinical I
PSGT 110: Physics for the Health Sciences	PSGT 235: Polysomnography Clinical II
PSGT 120: Fundamentals of Neurodiagnostics I	RESP 101: Basic Interp. & Perform of the Electrocardiogram
PSGT 200 : Fundamentals of Neurodiagnostics II	RESP 130: Ethics & Administration



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What is Surgical Technology?

Surgical technologists prepare operating rooms, arrange equipment and help doctors during a range of surgical procedures. They also may be responsible for ensuring aseptic conditions in the operating room, as well as cleaning and preparing all instruments that might be needed in an operation.

This program prepares you for a career as a professional member of a surgical team. Students are involved in lecture and discussion classes as well as clinical learning experiences

The degree program is ideal for those interested in entering the field of surgical technology and who are looking for an accredited program to gain certification.

Surgical Technology HVCC College Coursework

HVCC College Coursework	Credits	Year/Semester Taken
PSYC 100: General Psychology	3	Fall Junior Year
MATH 150: College Algebra w/ Trig or MATH 170: College PreCalculus	4	Spring Junior Year
PSYC 205: Developmental Psychology	3	Spring Junior Year
BIOL 270: Anatomy & Physiology I	4	Fall Senior Year
BIOL 271: Anatomy & Physiology II	4	Spring Senior Year

*****College coursework is subject to change based on HVCC & enrollment decisions.***

Year 5 and 6 Coursework
ENGL 102: English Composition II
SURG 101: Surg Tech I
SURG 102: Surg Tech II
SURG 201: Surg Tech III
SURG 202: Surg Tech IV
BIOL 205: Microbiology