Each Career and Technical Education (CTE) program consists of a three-course sequence that has been developed in collaboration with community and industry partners, and that has been aligned to and articulated with programs at the post-secondary levels. Participation in CTE provides students an opportunity to engage with guest speakers from and field trips to business, industry, and higher education sites. Students may also participate in Career and Technical Student Organizations (CTSOs), take approved courses for dual-enrollment/dual credit at colleges, earn industry valued credentials, and design their own culminating senior experience reflective of their interests.

- **Biomedical Sciences CTE** - Students in the Biomedical Sciences program pathway may enroll in the following course sequence:
  - Biomedical Technology 1, 1H
  - Biomedical Technology 2, 2H
  - STEM Capstone or Honors Independent Study Capstone

- **Engineering CTE** - Students in the Engineering program pathway may enroll in the following course sequence:
  - Innovation and Inventions
  - Engineering Design Honors
  - STEM Capstone or Honors Independent Study Capstone

- **Computer Science CTE** - Students in the Computer Science program pathway may enroll in the following course sequence:
  - Computer Programming, Computer Programming H
  - Computer Science Principles, AP Computer Science Principles
  - Computer Science A, AP Computer Science A

**The Institute for Interactive Design Technology**

In partnership with BCTS, the Institute for Interactive Design Technology (IIDT) Program provides students access to a cutting edge pathway focused on the emerging career of User Experience and User Interface (UX/UI) Design. This program blends technology, visual/graphic design, and business to ensure that students develop a higher level of expertise in the UX/UI skill-set, making them valuable to the workforce and related collegiate program alike.
The Northern Valley Regional High School District provides a comprehensive educational program offering a wide variety of learning opportunities for all students. The curriculum is the means to attain the established educational goals of the Northern Valley district. More specifically, the curriculum is designed to provide students with the knowledge and skills required:

(a) for success in college/university level studies or in the workplace
(b) to meet the challenges of the global economy
(c) to become life-long learners
(d) for practicing responsible citizenship and family life
(e) for the successful completion of the NJ State Assessment Program.

Full-year and half-year courses are offered in eleven content areas. Some courses are required to meet district and NJ State Department of Education mandates while others provide students with electives to fulfill individual interests and needs. Courses are aligned with the NJ Core Curriculum Content Standards and most incorporate technological components.

It is expected that college-bound students experience college-level work by 12th grade, such as: AP courses, college enrichment, dual enrollment (Project Acceleration), virtual courses or partial early college enrollment.

Career Pathways are opportunities for students to design an educational program aligned with possible post-secondary college or career interests. Elective course clusters are sequenced for students to follow a career path. Students can select their rigorous required courses and electives to create a “mini-major” or concentration of courses that will be helpful as they pursue post-secondary opportunities. Please note that students may opt to choose a variety of elective courses to explore potential opportunities.

Senior options are designed to give seniors the opportunity to explore valuable topics, careers and experiences outside of the normal Northern Valley Program of Study in real-world settings. Each option has its own requirements and students should speak to their guidance counselor about which option is best for their goals.

- **BCC Prep** - Students have the opportunity to enroll in courses at Bergen Community College and earn up to 18 college credits. Day or evening classes are available.
- **Dual Enrollment** - Students in grades 11 & 12 studying various courses have the opportunity to participate in dual enrollment programs sponsored by Seton Hall University and/or Bergen Community College.
- **Honor Independent Study Capstone** - provides students with a rigorous learning experience tailored to their individual needs and talents. Students in the honors independent study will present their project/results locally, or at regional or national conferences and/or competitions.
- **STEM Capstone** - The main goal of this course is to provide 11th and 12th grade students with an opportunity for a student driven, teacher guided, semi-structured project/problem-based learning experience.
- **Work Study (CBE/CBI)** - The school provides classroom training in developing business knowledge, workplace skills, and occupational information while the business community provides the employment where the students practice these skills and acquire experience that can only be gained on the job. Community Based Internship (CBI) course will develop skills to educate students and prepare them for the transition from school to the world of work. Students will develop skills and strategies that promote personal responsibility related to employment.
- **Structured Learning Experience (SLE):**
  - **SLE: Service Learning/Volunteering** - Students will be able to receive high school credit by participating in a project that is designed to enhance and augment some aspect of the Northern Valley Community. Educational experiences will take place outside the school building during and/or after the regular school day or as determined by the representative of the community that is responsible for overseeing the project.
  - **SLE: Teaching Mentorship** - This is a program of study which includes supervised practical training in an educational setting. Students develop workplace readiness skills, professionalism, and independence. Students will also have an opportunity through observation, interview and study to develop an understanding of the teaching profession.
  - **SLE: Unpaid Internship/Job Shadowing** - This is a program of study which includes supervised practical training. Students develop workplace readiness skills, professionalism, and independence. Students will also have an opportunity through observation, interview and study to develop an understanding of specific occupations.

Please note that the career pathways are suggested courses based on career interest. Students are not locked into one pathway and may select any course as long as they have met all requirements and prerequisites.
**STEM**

**BIOMEDICAL & LIFE SCIENCES**
- AP Biology
- Advanced Bio/Chem
- AP Chemistry
- AP Physics 1, 2, or C
- Precalculus
- Calculus/AP Calculus
- Multivariable Calculus
- Forensic Science
- Biomedical Technology 1/1H
- Biomedical Technology 2/2H
- Statistics of Applied and Social Sciences
- AP Environmental Science
- STEM Capstone
- AP Statistics

**INFORMATION TECHNOLOGY & COMPUTER SCIENCE**
- 21st Century Business Apps
- Computer Programming
- Computer Programming H
- AP Computer Science
- AP Computer Science A
- Computer Science Principles
- AP Computer Science Principles
- Marketing 1
- Digital Art & Design
- AP Physics 1, 2, or C
- Accounting Honors

**ENGINEERING**
- Innovations & Inventions 1
- Engineering Design Honors
- STEM Capstone
- Marketing 1
- Entrepreneurship & Management
- AP Chemistry
- AP Physics 1
- AP Physics 2
- AP Physics C
- AP Statistics
- Precalculus
- Calculus/AP Calculus
- Multivariable Calculus
- Digital Art & Design

**RELATED CAREERS/FIELDS**
- Product Designer, Technical Writer, Industrial Engineer, Project Manager, Engineer
- Field Engineer, Digital Electronics Specialist, CAD Designer, Biochemist & Biophysicist, Biological Technician/Engineer, Medical Scientist, Microbiologist, Physicians & Surgeons, Pharmacist, Nursing, Physical/Occupational Therapy, Programming & Software Development Professional, Network Engineer, Interactive Media, Information Support Services, System Engineer, Software Engineer, Web Designer, Network Administrator, Data Systems Designer, Food Science, Education

**BUSINESS, LAW & GOVERNMENT**

**BUSINESS MANAGEMENT & ADMINISTRATION**
- Business & Personal Finance
- 21st Century Business Apps
- Entrepreneurship & Management
- International Business Honors
- AP Language & Composition
- Speech & Debate
- World Language
- Trig/Stat or AP Stat
- Cooperative Business Ed.

**MARKETING, SALES & SERVICE**
- Business Organization Management
- 21st Century Business Apps
- Marketing 1-2-3 Honors
- Accounting Honors
- International Business Honors
- Entrepreneurship & Management
- Digital Art & Design
- Advanced Digital Art & Animation
- Statistics of Applied and Social Sciences
- Creative Writing
- AP Language & Composition
- Journalism 1
- Advanced Journalism 2 Honors
- Advanced Journalism 3 Honors
- Sociology
- Psychology/AP Psychology
- Trig/Stat or AP Stat
- World Language
- Economics/AP Economics
- Advanced Culinary Arts

**FINANCE**
- Business & Personal Finance
- 21st Century Business Apps
- Entrepreneurship & Management
- International Business Honors
- Business Organization Management
- Statistics of Applied and Social Sciences

**RELATED CAREERS/FIELDS**
### Fine, Practical & Performing Arts

#### Visual Arts
- Art Experience
  - Video Game, Anime, & Comic Book Art
  - Digital Art & Design
  - Advanced Digital Art & Animation
  - Printmaking & Photography
  - Digital Photography 1
  - Drawing, Painting, & Mixed Media 1
  - Drawing, Painting, & Mixed Media 2H
  - Three Dimensional Design
  - AP Art History
  - AP Studio Art/Honors Studio Art Portfolio
  - Marketing 1

#### Communications
- Journalism 1
- Advanced Journalism 2 Honors
- Advanced Journalism 3 Honors
- Creative Writing
- Speech & Debate
- Creative Fiction & Nonfiction Writing
- Film/Cinema Studies & Criticism
- History of the US through Film & Media
- Popular Media Studies

#### Theatre Arts
- Introduction to Theater
- Stagecraft and Design 1-2-3
- Theatre Arts 1-2-3/Honors

#### Culinary Arts
- Culinary Arts 1
- Advanced Culinary Arts: Baking, Pastry, & World Cuisine
- Advanced Culinary Arts: Artisanal & World Cuisine

#### Related Careers/Fields

### Music

#### Instrumental
- Concert Strings
- Wind Symphony 1-2-3/Honors
- Guitar 1-2
- Music Theory & Technology
- AP Music Theory

#### Vocal
- Concert Chorus
- Concert Choir 1-2-3/Honors
- Guitar 1-2
- Music Theory & Technology
- AP Music Theory

### Humanities

#### Gender Studies in Literature
- AP Language & Composition
- Creative Fiction & Nonfiction Writing
- Film/Cinema Studies & Criticism
- Wild Things: Children's Literature
- AP Art History
- Exploring Music
- European History AP
- American Studies
- Sports & History
- History of the US through Film & Media

### Education & Training
- Life Skills
- Art Experience
- Child Development 1-2
- Advanced Child Development Honors
- Concert Chorus/Choir 1
- Guitar 1-2
- Speech & Debate
- Creative Fiction & Nonfiction Writing
- Psychology/AP Psychology
- Sociology
- World Language
- Wild Things: Children's Literature

### Hospitality & Tourism

#### Business Organization Management
- Culinary Arts 1-2
- Entrepreneurship & Management
- World Language
- Marketing 1-2-3H
- AP Government & Politics
- Economics/AP Economics
- International Business Honors

#### Education & Training
- Life Skills
- Art Experience
- Child Development 1-2
- Advanced Child Development Honors
- Concert Chorus/Choir 1
- Guitar 1-2
- Speech & Debate
- Creative Fiction & Nonfiction Writing
- Psychology/AP Psychology
- Sociology
- World Language
- Wild Things: Children's Literature

### Law, Public Safety & Security

#### Life Skills
- Child Development
- Sociology
- Speech & Debate
- Psychology/AP Psychology
- AP Language & Composition
- Constitutional Law
- AP Government & Politics
- International Business Honors
- Forensic Science
- Economics/AP Economics
- AP European History
- World Language
- Cooperative Business Ed.

### Human Services

#### Constitutional Law
- Sociology
- Psychology/AP Psychology
- Economics/AP Economics
- American Studies
- World Language
- Child Development 1-2
- Advanced Child Development Honors
- 21st Century Business Apps
- Trig/Stat or AP Stat
- Cooperative Business Ed.
- Life Skills

### Related Careers/Fields