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## CAREER & TECHNICAL EDUCATION (CTE)

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Each *Career and Technical Education (CTE)* program consist 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

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## THE INSTITUTE FOR INTERACTIVE DESIGN TECHNOLOGY

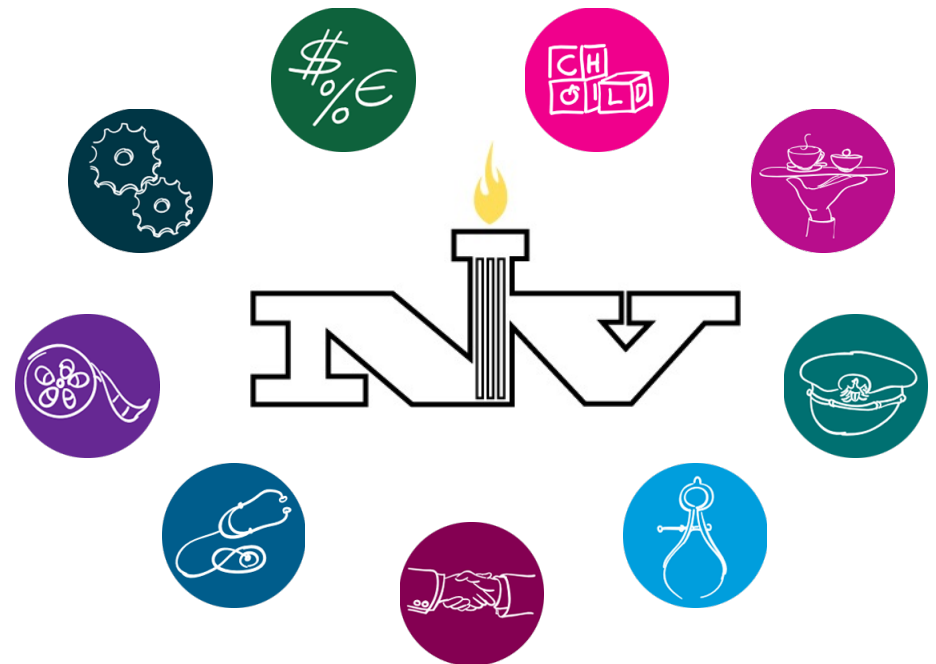
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In partnership with BCTS, the Institute for Interactive Design Technology (IIDT) Program provides students access to a cutting edge pathway focused on the emerging career of User Experience and User Interface (UX/UI) Design. This program blends technology, 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.

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# CAREER PATHWAYS

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NORTHERN VALLEY REGIONAL  
HIGH SCHOOL

## CURRICULUM PHILOSOPHY

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.

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***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.***

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## SENIOR OPTIONS

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*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.

# 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



## 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



## 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

## 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  
Creative Nonfiction 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



## GOVERNMENT & PUBLIC ADMINISTRATION

Constitutional Law  
Speech & Debate  
Sociology  
AP Government & Politics  
Psychology/AP Psychology  
World Language  
American Studies  
European History AP  
AP Language & Composition  
Economics/AP Economics  
Trig/Stat or AP Stat  
International Business Honors  
Business Organization Management  
Statistics of Applied and Social Sciences

## FINANCE

Business & Personal Finance  
21st Century Business Apps  
Entrepreneurship & Management  
Accounting Honors  
World Language  
Trig/Stat or AP Stat  
Economics/AP Economics  
International Business Honors



## RELATED CAREERS/FIELDS

Lawyer, Law Enforcement, Political Fields, Social Work, Civil Service, FBI, CIA, Foreign Service, Peace Corps, Banking, Bookkeeping, Accounting, Financial Analyst, Stock Trader, Advertising, Promotions, Marketing Manager, International Marketing, International Sales, Graphic Designer, Market Research Analyst, Operations Research Analyst, Financial Advisor, Business Operations Manager, Sports & Entertainment Management, Entrepreneur, Education, Food Marketing, Research Chef, FDA, USDA, Economist, Financial Advisor, HR Specialist

# 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 Performance, Music Business, Journalism, Public Relations, Media/Radio/  
Television Broadcasting, Business Communications & Education, Performing Artist,  
Film Maker, Arts Administrator, Script Writer, Producer/Director, Education, Media,  
Journalism, Publishing, Entertainment, Public Relations, Communications, Writer,  
Food Stylist, Pastry Chef, Food Photographer, Food Writer, Game Design, Set/  
Costume Design, Fashion Design, Illustrator, Music Therapist

## MUSIC

### Instrumental

Concert Strings  
String Orchestra 1-2-3/Honors  
Concert Band  
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

# HUMAN SERVICES

## 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

Education, Corporate Training, Travel Agent, Hotel & Restaurant Management,  
Culinary Arts, Tour Guides, Lawyer, Law Enforcement, Political Fields,  
Social Work, Civil Service, FBI, Social Work, Human Resources,  
Psychologist, Community Organizer, Therapist, Translator/Interpreter