

# North Penn School District Career Pathways Planner

The Career Pathways Planner is a guide for course selection based on your career interest! You can match your courses in ninth grade and at the high school with your career plan.

To plan for your future, begin now to

- Explore the Career Possibilities
- Determine your Career Pathway
- Choose courses that follow your interests

Programs for career exploration begin in eighth grade and continue through high school. Each grade has a different focus with websites to help find information about career options, educational requirements for those careers, colleges that offer your specific career interests.

As you select a Career Pathway and investigate specific occupations, you will be able to focus your goals. You will need an academic program that gives you a solid foundation and offers elective courses in your chosen field.

This Career Planner is for ALL students! You may decide to attend college or technical training; you may decide to enter the military; you may decide to enter the workforce directly after graduation. This planner will help you decide what course will take you to your goal.

This Career Planner is unique to North Penn School District – It recommends courses offered in ninth grade in the three middle schools and North Penn High School. You will have the opportunity through website searches to learn about careers and colleges. This Career Planner guides you one step further in your planning process: it shows you the steps to plan your academic program to lead you to your career goal.

## *How to use this Career Planner to plan YOUR Academic Program*

1. Use the results from
  - Interest Inventories (8<sup>th</sup> grade)
  - Career Aptitude Test (9<sup>th</sup> grade)
  - MyRoad on College Board (10<sup>th</sup> & 11<sup>th</sup> grades)to explore possible careers on the respective websites.
2. Consider each pathway and select those that correspond to your specific interests and aptitudes.
3. Discuss your plans with your family, counselor, and teachers.
4. Visit the College and Career Center at North Penn High School. It's open late Tuesday, Wednesday, and Thursday afternoons, by appointment, for students and their families.
5. Select one of the six pathways.
6. Determine which career concentration aligns with your career goals.
7. Select the foundation courses listed for your career goal at your level of study and decide on the focus area for your elective courses.
8. Complete the four year course planner worksheet at the end of the Career Planner. Review your academic plan with your family and guidance counselor.
9. Choose specific courses for next year, and using the *Program of Academic Studies*, complete your course selection card by the due date.
  - ✓ Entry Level positions are most likely to begin immediately after high school.
  - ✓ Technical or skilled occupations usually require advanced skill or technical training in a two year or certificate program.
  - ✓ Professional occupations usually require four or more years of college or university experience. Students are encouraged to consider Advanced Placement and Honors courses.

The Career Pathways Planner is a publication of the North Penn School District.

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**Most careers of the future will require  
some advanced training.**

**Be prepared to be a life-long learner.**

# The North Penn School District Career Pathways

## *Science and Math Pathway*

Science Careers- General  
Agricultural and Natural Science & Technology Careers  
Biomedical Science Careers  
Environmental Science Careers  
Horticultural Careers  
Mathematics & Statistics Careers

## *Media & the Arts Pathway*

Journalism & Language Arts Careers  
Media Careers  
Music Careers  
Performing/Theater Arts Careers  
Visual Art Careers

## *Business, Finance, Computers Pathway*

Business Management, Marketing & Sales Careers  
Computers Information Careers  
Business - Finance Careers  
Public Relations Careers

## *Human Services Pathway*

Consumer Services Careers  
Counseling, Psychology, & Community Service Careers  
Education Careers  
Medical, Health & Fitness Careers  
Personal Care & Cosmetology Careers

## *Engineering, Information Systems, Industrial Technology Pathway*

Construction Careers  
Engineering & Engineering Technology Careers  
Information Systems Careers  
Manufacturing & Industrial Technology Careers  
Transportation Careers

## *Law, Justice, & Protective Services Pathway*

Law & Government Careers  
Protection & Security Systems Career

# Career Exploration Categories By Program

In 8<sup>th</sup> and 9<sup>th</sup> grades, students have the opportunity to use two different programs to explore career options as they plan for their courses at the high school. In 10<sup>th</sup> and 11<sup>th</sup> grades, after students have taken the PSAT, they have access to MyRoad on the College Board website. Each website offers information on college and career counseling.

On these websites a student can: look up many career opportunities according to their interests; find out what the educational requirements are for the careers which interest them; investigate the colleges that have programs that match career interests; determine basic course requirements for different careers.

The North Penn Career Pathways Planner is unique! A student is able to select an interest, match it to a career, and then plan an academic program based on North Penn courses.

NPSD Pathways Planner	Career Cruising Occupational Clusters 8 <sup>th</sup> grade	Career Scope GOE Work Groups 9 <sup>th</sup> grade	MyRoad College Board Career Classifications 10 <sup>th</sup> & 11 <sup>th</sup> grades
<ul style="list-style-type: none"> <li>~ Business, Finance, Computers</li> <li>~ Engineering, Information Systems, Industrial Technology</li> <li>~ Human Service</li> <li>~ Law, Justice, &amp; Protective Services</li> <li>~ Media &amp; The Arts</li> <li>~ Science &amp; Math</li> </ul>	<ul style="list-style-type: none"> <li>~ Architecture &amp; Construction</li> <li>~ Arts &amp; Culture</li> <li>~ Business &amp; Finance</li> <li>~ Computers &amp; Telecommunications</li> <li>~ Education &amp; social Services</li> <li>~ Fashion &amp; Design</li> <li>~ Law and Government</li> <li>~ Medical &amp; Health</li> <li>~ Natural Resources &amp; Transportation</li> <li>~ Science &amp; Engineering</li> <li>~ Skilled Trades</li> <li>~ Service Industry</li> <li>~ Sports &amp; Recreation</li> </ul>	<ul style="list-style-type: none"> <li>~ Artistic</li> <li>~ Scientific</li> <li>~ Plants &amp; Animals</li> <li>~ Protective</li> <li>~ Mechanical</li> <li>~ Industrial</li> <li>~ Business Detail</li> <li>~ Selling</li> <li>~ Accommodating</li> <li>~ Humanitarian</li> <li>~ Leading/Influencing</li> <li>~ Physical Performing</li> </ul>	<ul style="list-style-type: none"> <li>~ Arts &amp; Media</li> <li>~ Medicine &amp; Health</li> <li>~ Trades &amp; Services</li> <li>~ General Business</li> <li>~ Business Specialties</li> <li>~ Technology</li> <li>~ Public &amp; Social Services</li> <li>~ Research &amp; Education</li> </ul>

# Career Pathways Opportunities

## *A Comparison Chart of the career pathways on Websites used in the district.*

The NPSD Career Pathways Planner provides suggestions of academic courses based on a career interest and aptitude. The chart below demonstrates the connections among the career exploration computer programs used across the district. Not all websites used the same pathways. Career Cruising is used in 8<sup>th</sup> grade as an interest inventory and to search career information; Career Scope is used in 9<sup>th</sup> grade as an aptitude inventory and to search career information; MyRoad (College Board based) is used in 10<sup>th</sup> & 11<sup>th</sup> grade to search career and college information.

While each career exploration program has different career categories, NPSD uses six major pathways and sub-divides these pathways into career sequences. The chart gives the career categories in the specific web-based computer program as they relate to the NPSD pathways.

<b>NPSD Career Pathways</b>	<b>Business, Finance, Computers</b>	<b>Engineering, Information Systems, Industrial Technology</b>	<b>Human Services</b>	<b>Law, Justice &amp; Protective Services</b>	<b>Media and The Arts</b>	<b>Science &amp; Math</b>
<b>NPSD Career Sequences</b>	~ Marketing & Sales ~ Finance ~ Business Management	~ Information Systems ~ Engineering ~ Manufacturing & Industrial Technology ~ Construction ~ Transportation Systems	~ Consumer Science ~ Education ~ Health, Fitness ~ Counseling & Psychology ~ Personal Care & Cosmetology	~ Law & Government ~ Protection & Security Systems	~ Visual Arts ~ Performing Arts ~ Music ~ Media ~ Journalism ~ Public Relations	~ Science & Technology (General) ~ Math & Statistics ~ Agricultural ~ Biomedical ~ Environmental ~ Horticultural ~ Medical
Career Categories found on <b>Career Cruising</b> Occupational Clusters (8 <sup>th</sup> grade career interest inventory)	~ Business & Finance ~ Computers Telecommunication	~ Architecture & Construction, ~ Computers & Telecommunication ~ Natural Resources & Transportation ~ Skilled Trades	~ Sports & Recreation, ~ Education & Social Services, ~ Fashion & Design, ~ Medical & Health ~ Service Industry ~ Sports & Recreation ~ Skilled Trades	~ Law & Government ~ Skilled Trades	~ Arts & Culture, ~ Fashion & Design	~ Architecture & Construction, ~ Computers & Telecommunication, ~ Medical & Health ~ Science & Engineering ~ Natural Resources & Transportation ~ Skilled Trades
Career Categories found on <b>Career Scope</b> (9 <sup>th</sup> grade aptitude survey tool)	~ Business Detail ~ Selling ~ Leading/Influencing	~ Scientific ~ Mechanical ~ Leading/Influencing	~ Accommodating ~ Leading/ Influencing ~ Physical Performing ~ Selling	~ Protective ~ Leading/ Influencing	~ Artistic ~ Physical Performing	~ Scientific ~ Plants & Animals ~ Mechanical ~ Industrial

<b>NPSD Career Pathways</b>	<b>Business, Finance, Computers</b>	<b>Engineering, Information Systems, Industrial Technology</b>	<b>Human Services</b>	<b>Law, Justice &amp; Protective Services</b>	<b>Media and The Arts</b>	<b>Science &amp; Math</b>
<p>Career Categories found on <b>MyRoad</b></p> <p>(10<sup>th</sup> &amp; 11<sup>th</sup> grade College Board's college &amp; career planning tool used after the PSAT)</p>	<p>~ General Business ~ Business Specialties ~ Technology</p>	<p>~ Trades &amp; Services ~ Technology</p>	<p>~ Public &amp; Social Services ~ Medicine &amp; Health ~ Research &amp; Education ~ Trades &amp; Services</p>	<p>~ Public &amp; Social Services</p>	<p>~ Arts &amp; Media</p>	<p>~ Medicine &amp; Health ~ Technology ~ Research &amp; Education</p>

# Advanced Placement Courses

Students whose career goal falls into the professional arena are encouraged to consider high potential courses in middle school and Advanced Placement (AP) or Honors courses at the high school. AP courses prepare students to take the AP Exam, and depending upon the score, students may earn college credit. (See [www.CollegeBoard.com](http://www.CollegeBoard.com))

## North Penn Course Title

AP Studio Art - Drawing  
AP Studio Art: 2-Dimensional Design  
AP Art History  
AP English [11] - Language & Composition  
AP English [12] - Literature & Composition  
AP Calculus [AB]  
AP Calculus 2 [BC]  
AP Computer Science [A]  
AP Statistics  
AP Biology  
AP Chemistry  
AP Physics 1  
AP Physics C: Mechanics  
AP Physics C: Electricity and Magnetism  
AP World History  
AP US History  
AP Government: US & Comparative #  
    [AP US Government & Politics/  
    AP Comparative Government & Politics]  
AP Psychology  
AP European History  
AP Macro/Micro Economics #  
  
AP Latin Vergil  
AP Spanish Language [5]  
AP French Language [5]  
AP German Language [5]  
AP Music Theory

## AP Exam

AP Studio Art: Drawing  
AP Studio Art: 2-D Design  
AP Art History  
AP English Language and Composition  
AP English Literature and Composition  
AP Calculus AB  
AP Calculus BC  
AP Computer Science A  
AP Statistics  
AP Biology  
AP Chemistry  
AP Physics 1  
AP Physics C: Mechanics  
AP Physics C: Electricity and Magnetism  
AP World History  
AP United States History  
AP United States Government & Politics  
AP Comparative Government and Politics  
  
AP Psychology  
AP European History  
AP Macroeconomics  
AP Microeconomics  
AP Latin Vergil  
AP Spanish Language  
AP French Language  
AP German Language  
AP Music Theory

Note: Environmental Science is offered through the virtual high school option.  
# These courses culminate with 2 or more AP exams.



# North Penn School District

## A CAREER PATHWAYS PLANNER

### Four year course planner worksheet (to be updated annually)

Name \_\_\_\_\_ Address \_\_\_\_\_

Pathway Choice \_\_\_\_\_ Career Choice \_\_\_\_\_

SUBJECT	GRADE 9	GRADE 10	GRADE 11	GRADE 12
<b>Required Courses:</b> <b>English</b>	English 9	English 10	English 11	British Lit * and one senior English elective
<b>Social Studies</b>	America in History 2	America in History 3	American Cultures	American Government & Senior semester elective
<b>Science</b>	Physical Science	Biology		
<b>Mathematics</b>				
<b>Health &amp; Physical Education</b>	Health Physical Education	Health Aquatics	Health Lifetime Fitness	Senior Electives in Physical Education (2)
<b>Elective Courses:</b>				
<b>TOTAL CREDITS</b>				

You are invited to schedule a meeting with your counselor to discuss your career focus & course selection. See Program of Academic Studies for Graduation Requirements and course descriptions. Every student must schedule a minimum 38 periods per six day cycle.

# **The North Penn Career Pathways**

# Science & Math Pathway

## SCIENCE CAREERS ~ GENERAL

Are you interested in...	Can you...	Do you enjoy...
building materials & equipment math & science classes medicine & health laboratory experiments computers	work with others follow instructions precisely & pay attention to detail use a calculator and computer analyze data collected from experimentation	conducting laboratory experiments preparing chemicals for an experiment or observation spending time in a research laboratory & collecting specimens establishing a research base learning about concrete facts & theoretical conclusions working with the scientific method of observation & application

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

### POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Assembly line operator Computer operator Data entry Lab assistant Medical/dental assistant Zoo caretaker	Appliance service Aircraft mechanic Auto mechanic Computer technician Dental technician Electrician Electronic technician Engineering technician Heating/air conditioning/ventilation technician Laser technician Media specialist Network technician Optician Plumber Science technician Surveyor TV & radio repair Word processor Wildlife technician	Aerospace engineer Anesthesiologist Animal researcher Astronomer Biologist Cartographer Chemist Computer scientist Cryptologist Geographer Geologist Hydrologist Lab researcher (varied fields) Marine biologist Meteorologist MRI technician Medical examiner Medical technologist Navigator Nuclear quality control Nurse Oceanographer Optometrist Pharmacist Pathologist Podiatrist Physical therapist Sonographer Veterinarian X-Ray technician Zoologist

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Economics
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Geometry	Algebra 2	Pre-calculus Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trig	Calculus or Probability/Calculus or Statistics
	Algebra 2	Pre-calculus	AP Calculus [AB]	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Biology *	Chemistry	Physics See Elective courses
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness * Health *	Physical Education – Senior Options*
Business Administration & Technology	Computer Applications 3 *			
World Language	Open Selection	Open Selection	Open Selection	Open Selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Science	Science of Flight & Intercommunication Skills +**	Frontiers of Aviation History + #	Principles of Technology # Astronomy # Botany # Marine Science # Genetics # Genetics & Embryology # Meteorology # Aerospace Science: The Exploration of Space +^ AP Physics C: Mechanics^	Forensic Science Adv./AP Biology AP Chemistry Chemistry 2 AP Phys C: Electricity & Magnetism

\*\* May be taken in grade 9, 10, 11, or 12 # May be taken in grade 10, 11 or 12 ^May be taken in grade 11 or 12 + Course required for JROTC

## RELATED NORTH MONTCO TECHNICAL CAREER CENTER CLUSTER(S)

Engineering/Manufacturing Technology Cluster

Health & Human Services Cluster

# Science & Math Pathway

## AGRICULTURAL & NATURAL SCIENCE CAREERS

Are you interested in...	Can you...	Do you enjoy...
Caring for animals Science of medicine Medical research Wildlife, animals, parks, forestry Environment & conservation Agricultural related business & management Developing plans for a project outdoors Building materials & equipment Food production	Use a calculator & computer Work outdoors around animals and plants Work with others Follow instructions precisely Pay attention to details Collect, analyze data from field experiments	Diagnosing & caring for sick animals & plants Preparing animals for show Judging animals in shows Working outdoors with wildlife, animals, plants Learning about the land, ocean and forests Building designing & preparing projects for construction Conducting experiments with animals and plants

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Agricultural worker Animal caretaker Breeder Extension service worker Farm equipment mechanic Farm manager Gardener, groundskeeper Ranch or farm worker Stable attendant	Animal trainer Breeder Equipment operator Farm equipment mechanic/technician Food processor & distributor Fish & game warden Forest conservationist Forester Health inspector Surveyor Veterinarian assistant Water plant operator	Agri-science engineer Agronomist Aqua-culturalist Biologist Botanist Chemist Conservationist Earth scientist Geologist Geophysicist Veterinarian (large, small, livestock) Wildlife conservationist

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Economics or Topics in American Life
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Geometry	Algebra 2	Pre-calculus Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trig	Calculus or Probability/Calculus or Statistics
	Algebra 2	Pre-calculus	AP Calculus [AB]	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Biology *	Chemistry See elective course	Physics See elective courses
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness * Health *	Physical Education – Senior Options*
Business Administration & Technology	Computer Applications 3 *			
World Language	Open Selection	Open Selection	Open Selection	Open Selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Science			Principles of Technology # Botany # Marine Science # Genetics # Genetics & Embryology #	Adv./AP Biology AP Chemistry Chemistry 2

\*\* May be taken in grade 10, 11, or 12 # May be taken in grade 11 or 12

## RELATED NORTH MONTCO TECHNICAL CAREER CENTER CLUSTER(S)

Environmental Horticulture Technology Cluster

# Science & Math Pathway

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## BIOMEDICAL SCIENCE CAREERS

Are you interested in...	Can you...	Do you enjoy...
Medical research Medicine Pharmacy Dentistry Physical therapy Radiology	Use laboratory equipment Work with scientific & mathematical theories Use technology – computers Pay attention to details Work on a team Organize a work schedule or process	Medical laboratory research Making a contribution to society Solving problems Developing research techniques Working on the cutting edge of medical research Working in a hospital or other medical building

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Hospital attendant Hospital volunteer Orderly Patient care technician	Clinical lab technician Dental assistant Dental hygienist Medical technician MRI technician Optician Research technician Surgical technologist X-Ray technician	Biologist Bio-medical engineer Bio-medical lab researcher Biostatistician Cardiovascular technologist Dental medical illustrator Forensic artist Medical examiner Medical researcher Optometrist/Ophthalmologist Pharmacist Physician Physical therapist Prosthesis model maker Sonographer

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Economics or Topics in American Life
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Geometry	Algebra 2	Pre-calculus Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trig	Calculus or Probability/Calculus or AP Statistics
	Algebra 2	Pre-calculus	AP Calculus [AB]	AP Calculus 2 [BC] AP Statistics
Science (3/4 yrs required)	Physical Science *	Biology *	Chemistry	Physics See Elective courses
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness * Health *	Physical Education – Senior Options*
Business Administration & Technology	Computer Applications 3 *			
World Language	Open Selection	Open Selection	Open Selection	Open Selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Science			Principles of Technology # Astronomy # Botany # Marine Science # Genetics # Genetics & Embryology # AP Physics C: Mechanics#	Forensic Science Adv./AP Biology AP Chemistry Chemistry 2 AP Phys C: Electricity & Magnetism

\*\* May be taken in grade 10, 11, or 12 # May be taken in grade 11 or 12

## RELATED NORTH MONTCO TECHNICAL CAREER CENTER CLUSTER(S)

Allied Health Technology (Seniors Only)



# Science & Math Pathway

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## ENVIRONMENTAL SCIENCE CAREERS

Are you interested in...	Can you...	Do you enjoy...
saving the environment studying & analyzing patterns in nature government regulations a global perspective of the environment conservation science	use a calculator & computer draw conclusions from an information system work with a variety of science fields apply scientific principles to real-world situations	working outdoors doing field research applying government regulations to real-world situations trouble shooting problems that occur in systems

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

### POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Extension service worker Forest conservation worker Hazardous waste technician Irrigation systems installer Wildlife preserve worker	Activist/lobbyist Conservation technician Environmental inspector Forest conservation worker Forest, park ranger Irrigation systems designer Lab technician Wildlife preserve manager	Biological/Chemical researcher Botanist Chemist Conservation scientist Environmental engineer Environmental health specialist EPA employee Geographer Marine Biologist Soil conservationist Urban/city planner

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Sociology or Economics or Topics in American Life
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Geometry	Algebra 2	Pre-calculus Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trig	Calculus or Probability/Calculus or Statistics
	Algebra 2	Pre-calculus	AP Calculus [AB]	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Biology *	Chemistry	Physics and Environmental Science
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness * Health *	Physical Education – Senior Options *
Business Administration & Technology	Computer Applications 3 *			
World Language	Open selection	Open selection	Open selection	Open selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Science	Science of Flight & Intercommunication Skills ^+	Frontiers of Aviation History + **	Astronomy # Botany # Marine Science # Genetics # Genetics & Embryology # Meteorology # Aerospace Science: The Exploration of Space +^ AP Physics C: Mechanics^	Forensic Science AP Biology Adv. Biology AP Chemistry Chemistry 2 AP Phys C: Electricity & Magnetism

\*\* May be taken in grade 9, 10, 11, or 12    # May be taken in grade 10, 11 or 12    ^May be taken in grade 11 or 12    + Required course for JROTC Program

# Science & Math Pathway

## HORTICULTURE CAREERS

Are you interested in...	Can you...	Do you enjoy...
production of fruits, vegetables & ornamental plants greenhouse crops landscape horticulture plant nursery operation & management floristry & floral design	perform physical labor tolerate varying weather conditions work with others create floral, landscape designs manage a business	creating beauty through nature working with plants designing & creating gardens arranging plants & floral displays serving clients

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Agricultural worker Extension service worker Flower arranger Gardener, groundskeeper Greenhouse keeper Irrigation systems installer Landscape designer Lawn service Plant grower Lawn & garden salesperson	Agricultural worker Field service representative Floriculturist Garden center manager Greenhouse manager Irrigation systems designer Landscape technician Plant grower/retailer Retail florist Lawn & garden salesperson	Agricultural scientist Agri-science & technology Aqua-culturalist Biological sales Chemical sales Conservationist Environmentalist Extension service Forester Horticulturist Lab research (seeds) Landscape architect Turf management

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Sociology or Economics or Topics in American Life
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Algebra 1B	Geometry	Algebra/Geometry 4
	Algebra 1	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry	Calculus or Probability/Calculus or Statistics
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry and Botany #	Physics
Physical Education Health	Physical Education * Health *	Aquatics* Health *	Lifetime Fitness * Health *	Physical Education – Senior Options *
Business Administration & Technology	Computer Applications 3 *			
World Language	Latin or Spanish	Latin or Spanish	Latin or Spanish	Latin or Spanish

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Science			Applied Ecology # Marine Science #	AP Chemistry Chemistry 2 Genetics Genetics/Embryology
Design	Art Major	Art 1 ** Design & Illustration ** Interior Design **	Art 2 # AP Art History #	
Business	Introduction to Business	Marketing Strategies **	Business Law & Legal Practices # Accounting 1 #	Accounting 2 Entrepreneurship

\*\* May begin in grade 10, 11, or 12 # May be taken in grade 11 or 12

## RELATED NORTH MONTCO TECHNICAL CAREER CENTER CLUSTER(S)

Environmental Horticulture Technology Cluster

# Science & Math Pathway

## MATHEMATICS & STATISTICS CAREERS

Are you interested in...	Can you...	Do you enjoy...
computers math courses technical advances information systems	use a calculator & computers analyze data collected from numbers , charts, graphs sequence data work with numbers create a data base	learning about concrete facts & theoretical conclusions working with numbers developing conclusions from a data base

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Accounting clerk Bank teller Bank clerical operations Bill collector CAD (computer aided design) technician Cashier Database clerk Data entry operator General office clerk Insurance clerk Statistical clerk	Administrative clerk Bank marketing Bank public relations Bookkeeper Credit manager Drafter Insurance adjuster IRS consultant Office manager Programmer Purchasing agent	Actuary Biostatistician Corporate analyst Economist Financial consultant Financial planner Financier Industrial mathematics Operations research analyst Programmer Research mathematician Statistician Stockbroker Systems analyst

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Economics or Topics in American Life or Sociology
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Geometry	Algebra 2	Pre-calculus Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trig	Calculus or Probability/Calculus
	Algebra 2	Pre-calculus	AP Calculus [AB]	AP Calculus 2 [BC] AP Statistics
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics or semester electives
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness * Health *	Physical Education – Senior Options*
Business Administration & Technology	Computer Applications 3 *			
World Language	Open selection	Open selection	Open selection	Open selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Business – Math & Technology	Introduction to Business	Marketing Strategies ** Accounting 1 ** Computer Programming ** AP Statistics **	Accounting 2 # Business Law Legal Practices # AP Computer Science # Global Business #	Business Administration Personal Finance

\*\* May begin in grade 10, 11, or 12      # May be taken in grade 11 or 12

## RELATED NORTH MONTCO TECHNICAL CAREER CLUSTER(S)

Engineering/Manufacturing Technology Cluster

# Media & The Arts Pathway

## MEDIA CAREERS

Are you interested in...	Can you...	Do you enjoy...
multi-media productions speech communication story/script writing & reading make-up, costume & hair design acting radio, TV, film, video	be creative with facial expressions, gestures, voice inflections sing, dance, act, recite display poise & stage presence articulate clearly & boldly entertain & communicate with others write & conduct an interview	filming special events making videos working with props, film or in technical media meeting people through interviews & research seeing a creative idea become a visual project working with sound effects taping for broadcast researching new & human interest stories

If you answered "yes" to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Actor/extra Electrical assistant Grip Motion picture projectionist Production assistant Radio operator Researcher Rigging assistant Sound technician Stunt performer Voice over specialist Wardrobe assistant	Audio/audio-visual technician Audio-visual coordinator Broadcast technician Camera operator Commercial writer Copy writer Design & design assistant Disk jockey Editorial writer Film editor Newscaster Program coordinator Reporter Rigger Writer (screen, news, magazine)	Advertising manager Audio visual translators Casting agency Desktop publishing specialist Director Director of photography Effects director Manager Media/marketing agent Media planner Producer Program manager Radio/TV announcer Radio/TV engineer School library media specialist Set designer Web designer Webmaster

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Economics or Topics in American Life or World Religions or Sociology
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Geometry	Algebra 2	Pre-calculus Algebra 3/Trigonometry or
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trig	Calculus or Probability/Calculus or Statistics
	Algebra 2	Pre-calculus	AP Calculus [AB]	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics or semester electives
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness * Health *	Physical Education – Senior Options *
Business Administration & Technology	Computer Applications 3 *			
World Language	Spanish or Japanese	Spanish or Japanese	Spanish or Japanese	Spanish or Japanese

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Technology	Applying Technology Major/Minor Art Major	Graphic Communications Systems ** Electricity/ Electronics ** Art 1 ** Electronic Art & Graphic Design **	Adv. Graphic Communications # Adv. Electronics # Electronic Simulation Design #	Web Page Design
Journalism		Journalism ** Creative Writing 1** Broadcasting and Video Production 1 ** News Journalism **	Magazine Journalism # Creative Writing 2 # Marketing Strategies # Sports/Entertainment Marketing # Broadcasting and Video Production 2 #	Web Page Design
Design	Art Major Related Fine Arts	Electronic Art & Graphic Design ** Art 1 ** Digital Photo 1 ** Animation 1 **	Art 2 ** Digital Photo 2 # Portfolio Prep # Animation 2 # AP Art History # AP Studio Art #	Digital Photo 3 Web Page Design

\*\* May taken in grade 10, 11, or 12

# May be taken in grade 11 or 12

## RELATED NORTH MONTCO TECHNICAL CAREER CLUSTER(S)

Engineering Technology Cluster  
Visual Communications Cluster



# Media & The Arts Pathway

## MUSIC CAREERS (INSTRUMENTAL & VOCAL)

Are you interested in...	Can you...	Do you enjoy...
performing in band, chorus, orchestra attending concerts marching in a parade or half time show being a professional musician, conductor, music teacher, performer, or composer attending or participating in theater or Broadway productions	sing play an instrument write or perform music work several types of sound equipment or light boards use computers	being creative through musical performances working within a group & with the public participating in a variety of musical styles being part of the technical aspects of putting on a live performance performing in front of a live audience working with computers & electronics

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Local music store employee Manager of local group Musical instrument repair person Pianist/organist for local church Private instrumental teacher Recording technician for local groups Singer in local band/group Writer or composer for local group	Composer or arranger for films, video, TV Director of studio or television group Music store manager Piano tuner, organ builder, or technician Recording engineer Sales rep for music store Studio musician Back-up recording vocalist Conductor of local chorus Minor roles in operas Sound technician in studio Private instrumental teacher Composer or arranger for local groups Conductor of a church, community, or children’s ensemble	Instrument designer & builder Music store owner Major symphony orchestra conductor Music theory or composition teacher Recording artist Soloist with orchestra Studio owner University or public school teacher Travel manager Career roles in opera Conductor of professional musicians Professional conductor Professional music technician Symphony orchestra manager Director of professional chorus

**Note:** Students interested in music careers are recommended to enroll in chorus, band, and/or orchestra (grades 9-12) depending upon their vocal & instrumental interests & talents, and career goals.

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Sociology or Topics in American Life or World Religions
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Algebra 1B	Geometry	Algebra/Geometry 4
	Algebra 1	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry	Calculus or Probability/Calculus or Statistics
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics or semester electives
Physical Education Health	Physical Education * Health *	Physical Education/ Aquatics * Health *	Physical Education * Health *	Physical Education*
Business Administration & Technology	Computer Applications 3 *			
World Language	Open Selection	Open Selection	Open Selection	Open Selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Performance	Band Chorus Orchestra Related Fine Arts	Band, Chorus, Orchestra Fundamentals of Music ** Music Technology 1 ** Public Speaking 1 ** Wind Ensemble ** Contemporary Music ** Audio Engineering ** Solo Performers ** Music Career ** Concert Band ** Intro. to Acting **	Band, Chorus, Orchestra Music Theory # Comprehensive Music Tech. # Music Technology 2 # Advanced Acting # Drama Major #	Band , Chorus, Orchestra AP Music Theory

\*\* May begin in grade 10, 11, or 12

# May be taken in grade 11 or 12

# Media & The Arts Pathway

## PERFORMING/THEATER ARTS CAREERS

Are you interested in...	Can you...	Do you enjoy...
art, design, construction, make-up & fashion television, movies, plays technical support - lighting, sound, staging the performance of dance dance classes, stage productions, sports half-time performances, parades, special events owning/managing a dance studio, fitness center, theatrical related business	speak in front of an audience make people laugh or cry create images in your mind picture yourself or someone else act in a variety of roles dance & express yourself design or help construct sets	entertaining others in a staged setting being part of a team or production company competing with others for dramatic roles teaching acting, choreography, aerobic dancing designing/making costumes, sets, hairstyles & make-up being physically involved with performance

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

### POSSIBLE CAREERS - THEATER/FILM

Entry	Technical/Skilled	Professional
Children’s theater production director Community theater dancer Construction worker Costume designer for local theater Local acting career Public speaker Sound technician Special effects worker Theater ticket salesperson  <i>(See Visual Arts Career sequence)</i>	Camera Community/Repertory theater director Community theater dancer Designer/lighting technician Mime Movie theater publicity manager Recording apprentice Set designer  <i>(See Visual Arts Career sequence)</i>	Broadway stage/music performer <i>(See Visual Arts Career sequence)</i> Commercial advertiser Designer for stage/screen Music video recording artist On-air announcer (news, weather, traffic, sports) Professional actor Professional designer Professional set designer Professional speaker Special effects/TV/stage performer TV/stage/movie director/producer

### POSSIBLE CAREERS - DANCE

Entry	Technical/Skilled	Professional
Choreographer for dance recitals Dance fitness class teacher Dancer in performing group Local competition judge Local costume designer Local groups dancer Local show producer	Choreographer for professional shows Dance center manager Dance team designer Local theater dancer Mime Regional events judge Special events producer      Teacher assistant	Choreographer for Broadway Dance studio owner Professional designer Professional competition judge Professional pageant producer Professional video/TV/film dancer Public/ private school teacher

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or World Religions or Sociology or Topics in American Life
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Geometry	Algebra 2	Pre-calculus Algebra 3/Trigonometry or
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trig	Calculus or Probability/Calculus or Statistics
	Algebra 2	Pre-calculus	AP Calculus [AB]	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics or semester electives
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness* Health *	Physical Education – Senior Options *
Business Administration & Technology	Computer Applications 3 *			
World Language	Open selection	Open selection	Open selection	Open selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Performance	Theater Arts	Intro. to Acting ** Designing for the Stage ** Graphic Comm. Systems ** Public Speaking 1 ** Debate 1 **	Drama Major # Advanced Acting #	
Technical Support	Theater Arts Art Major	Graphic Communications ** Design & Illustration ** Art 1 ** Creative Writing 1 ** Music Technology 1 & 2 ** Contemporary Music ** Audio Engineering ** Broadcasting and Video Prod. 1 **	Adv. Graphic Communications # Art 2 ** Electronic Art & Graphic Design # Creative Writing 2 # AP Art History # Broadcasting and Video Prod. 2 #	

\*\* May taken in grade 10, 11, or 12

# May be taken in grade 11 & 12

Note: Students interested in theater and film are encouraged to participate in the Thespian Troupe.

# Media & The Arts Pathway

## VISUAL ART CAREERS

Are you interested in...	Can you...	Do you enjoy...
drawing & improving your skills working with your hands to improve your artistic abilities creating new things being an original thinker & creating new products seeing art as an integral part of society using a camera	visualize designs draw, paint create forms in clay develop visual competencies using knowledge of elements & principles of design use a computer use a camera	using your imagination to create new products & designs learning new ways to express yourself working with colors, fabrics, many different materials drawing people, buildings, or other objects from life designing clothes, buildings, interiors, window displays, bulletin boards, children's rooms or illustrating stories

If you answered "yes" to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Background artist Desktop publisher Draftsperson Film processor Floral designer Framer Graphic artist Image converter Lab technician Layout artist Photographer Press operator Printing supply sales Retail salesperson Sign maker Stage hand Typesetter Window display dresser	Binder/finisher Camera operator Craftsperson Darkroom assistant Draftsperson Exhibition designer & technician Film processing specialist Illustrator (magazine, fashion, news, product, technical) Image assembly Image converter Image transfer Interior designer Landscape artist Layout artist Media specialist Newspaper/corporate photographer Photographer Press operator Public relations Set builder/painter Staff photographer Technical illustrator	Advertising agency Animator Architect Art & antique dealer, appraiser Art critic/writer Art historian Broker Cartoonist Courtroom illustrator Design & design assistants Fashion designer Fine arts teacher Form converter Gallery manager Graphic designer Illustrator (scientific, technical) Industrial product/ packaging designer Interior designer/shop owner Magazine editor Museum curator/administrator Photographer Print shop owner Public relations Set designer

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Sociology or World Religions or Topics in American Life
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Geometry	Algebra 2	Algebra 2 Part B or Pre-calculus or Algebra 3/Trig
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry	Calculus or Probability/Calculus
	Algebra 2	Pre-calculus	AP Calculus [AB]	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness* Health *	Physical Education – Senior Options *
Business Administration & Technology	Computer Applications 3 *			
World Language	Open selection	Open selection	Open selection	Open selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Design	Art 1 ** Related Fine Arts	Art 2 ** Sculpture ** Ceramics 1 ** Electronic Art & Graphic Design ** Design & Illustration ** Digital Photography 1 **	Portfolio Preparation # Ceramics 2 # AP Studio Art # Digital Photography 2 # AP Art History #	Ceramics 3 Digital Photography 3
Technology		Graphic Communications ** Mechanical Drawing ** Electronic Simulation Design ** Electronic Art & Graphic Design **	Adv. Graphic Comm. Systems # Adv. Mechanical Drawing # Web Page Design #	

\*\* May begin in grade 10, 11, or 12

# May be taken in grade 11 or 12

### RELATED NORTH MONTCO TECHNICAL CAREER CLUSTER(S)

Visual Communications Technology Cluster

# Business & Technology Pathway

## BUSINESS MANAGEMENT, MARKETING & SALES CAREERS

Are you interested in...	Can you...	Do you enjoy...
a business environment office management sales hospitality & tourism computers & technology your own business advertising presentations to groups buying & merchandising marketing research different work sites insurance/banking/finance accounting/record keeping/bookkeeping telecommunications	work easily with others or independently organize your time effectively design & give presentations use computers and other technology persuade others work with statistics show initiative relate to people work with the public pay attention to detail	meeting with groups assisting people with products/services selling a variety of products/services doing market research forecasting market demands using numbers to develop proposals working in a variety of places communicating with others in a variety of ways working with technology organizing a project planning an event learning new software programs follow directions keeping records, budgets, financial reports

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

### POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Accounting assistant Adjustment clerk Auto sales Bank clerk/teller Bookkeeper Cashier Computer operator Data entry clerk General merchandising Insurance clerk Payroll clerk Product demonstrator Receptionist Recreation/sporting goods rep Restaurant manager trainee Retail sales	Shipping/receiving Travel agent trainee Typist Wholesale sales	Account clerk Administrative assistant Buyer Commercial artist Computer maintenance Entrepreneur Fashion merchandiser Insurance agent Marketing research Media buyer Merchandising manager Purchasing manager Real estate agent Restaurant management Secretary Tax estimator Telecommunications technician Travel agent
		Accountant Actuary Advertising manager Auditor Computer programmer Computer systems analyst Economist Electrical engineer Hotel management Human resource administrator Insurance broker Manufacturer’s rep Marketing manager Software developer Statistician Stockbroker Store manager Travel agent Underwriter

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Economics or Sociology or Topics in American Life
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Geometry	Algebra 2	Pre-calculus Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trig	Calculus or Probability/Calculus or Statistics
	Algebra 2	Pre-calculus	AP Calculus [AB]	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics or semester electives
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness * Health *	Physical Education – Senior Options*
Business Administration & Technology	Computer Applications 3 *			
World Language	Open selection	Open selection	Open selection	Open selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Business	Introduction to Business	Accounting 1 ** Public Speaking 1 ** Marketing Strategies ** Sports/Ent. Marketing **	Accounting 2 # Bus. Law and Legal Practices # Global Business # Entrepreneurship # Multimedia Presentations # Electronic Simulation Design #	Business Administration Web Page Design

\*\* May be taken in grade 10, 11, or 12    # May be taken in grade 11 or 12



# Business & Technology Pathway

## BUSINESS ~ COMPUTER INFORMATION CAREERS

Are you interested in...	Can you...	Do you enjoy...
a business environment office management sales hospitality & tourism computers & technology your own business advertising presentations to groups buying & merchandising marketing research different work sites insurance/banking/finance accounting/record keeping/bookkeeping telecommunications	work easily with others or independently organize your time effectively design & give presentations use computers and other technology persuade others work with statistics show initiative relate to people work with the public pay attention to detail	meeting with groups assisting people with products/services selling a variety of products/services doing market research forecasting market demands using numbers to develop proposals working in a variety of places communicating with others in a variety of ways working with technology organizing a project planning an event learning new software programs follow directions keeping records, budgets, financial reports

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

### POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Accounting assistant Bank clerk/teller Bookkeeper Computer operator Data entry clerk Insurance clerk Payroll clerk Wholesale sales	Account clerk Computer maintenance Entrepreneur Insurance agent Marketing research Network installer Purchasing manager Tax estimator Telecommunications technician	Accountant Actuary Auditor Computer programmer Computer systems analyst Economist Electrical engineer Information systems specialist Insurance broker Internet consultant Network consultant Network designer, developer Software developer Statistician Stockbroker Underwriter Webmaster Web designer, developer

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Economics or Sociology or Topics in American Life
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Geometry	Algebra 2	Pre-calculus Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trig	Calculus or Probability/Calculus or Statistics
	Algebra 2	Pre-calculus	AP Calculus [AB]	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics or semester electives
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness * Health *	Physical Education – Senior Options*
Business Administration & Technology	Computer Applications 3 *			
World Language	Open selection	Open selection	Open selection	Open selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Business - Computers	Introduction to Business	Accounting 1 ** Computer Programming ** Marketing Strategies ** Sports/Ent. Marketing **	Accounting 2 # Bus. Law and Legal Practices # Entrepreneurship # Multimedia Presentations # Electronic Simulation Design # Global Business #	Business Administration Web Page Design # Probability and Statistics

\*\* May be taken in grade 10, 11, or 12    # May be taken in grade 11 or 12

# Business & Technology Pathway

## BUSINESS FINANCIAL CAREERS

Are you interested in...	Can you...	Do you enjoy...
a business environment office management sales hospitality & tourism computers & technology your own business advertising presentations to groups buying & merchandising marketing research different work sites insurance/banking/finance accounting/record keeping/bookkeeping telecommunications	work easily with others or independently organize your time effectively design & give presentations use computers and other technology persuade others work with statistics show initiative relate to people work with the public pay attention to detail	meeting with groups assisting people with products/services selling a variety of products/services doing market research forecasting market demands using numbers to develop proposals working in a variety of places communicating with others in a variety of ways working with technology organizing a project planning an event learning new software programs follow directions keeping records, budgets, financial reports

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Accounting assistant Adjustment clerk Auto sales Bank clerk/teller Bookkeeper Cashier Computer operator Data entry clerk General merchandising Insurance clerk Payroll clerk Product demonstrator Recreation/sporting goods rep Retail sales Travel agent trainee Word Processor	Account clerk Administrative assistant Buyer Entrepreneur Insurance agent Marketing research Purchasing manager Real estate agent Restaurant management Tax estimator Telecommunications technician	Accountant Actuary Underwriter Auditor Computer programmer Computer systems analyst Economist Hotel management Human resource administrator Insurance broker Internet consultant Network consultant Network designer Software developer Statistician Stockbroker Store Manager

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Economics or Sociology or Topics in American Life
Math (3/4 yrs required) Select 1 option from math sequence chart (p.?)	Algebra 1	Geometry	Algebra 2	Pre-calculus Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trig	Calculus or Probability/Calculus or Statistics
	Algebra 2	Pre-calculus	AP Calculus [AB]	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics or semester electives
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness * Health *	Physical Education – Senior Options*
Business Administration & Technology	Computer Applications 3 *			
World Language	Open selection	Open selection	Open selection	Open selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Business - Financial	Introduction to Business	Accounting 1 ** Public Speaking 1 ** Marketing Strategies ** Sports/Ent. Marketing **	Accounting 2 # Bus. Law and Legal Practices # Global Business # Entrepreneurship # Multimedia Presentations # Computer Programming # Probability and Statistics #	Business Administration Web Page Design Personal Finance

\*\* May be taken in grade 10, 11, or 12    # May be taken in grade 11 or 12

# Business & Technology Pathway

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## PUBLIC RELATIONS CAREERS

Are you interested in...	Can you...	Do you enjoy...
advertising with print media and/or broadcast media computers journalism graphic arts selling photography writing speaking before a group	persuade others influence others use computers design presentations & layouts work on a team imagine an advertising campaign	speaking before a group working with computers & graphics selling writing advertising & sales copy designing distinctive ads & communication public relations consultants, professionals, managers & administrators public affairs officers

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Broadcast intern Newspaper intern Public relations intern Public opinion researcher Window/display dresser	Broadcast advertising journeyman Newspaper advertising journeyman Public relations office journeyman Promotions specialist Sales	Advertising in broadcast media Advertising in print Public relations office for business, government or school Sports management Media planner Event planner Exhibition designers & technicians Media-relations officer

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Economics or Sociology or Topics in American Life
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Geometry	Algebra 2	Pre-calculus Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trig	Calculus or Probability/Calculus or Statistics
	Algebra 2	Pre-calculus	AP Calculus [AB]	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics or semester electives
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness * Health *	Physical Education – Senior Options *
Business Administration & Technology	Computer Applications 3 *			
World Language	Spanish, French or Japanese	Spanish, French or Japanese	Spanish, French or Japanese	Spanish, French or Japanese

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Business	Introduction to Business	Public Speaking 1 ** Marketing Strategies ** Sports/Ent. Marketing ** Accounting 1 **	Multimedia Presentations # Web Page Design # Accounting 2 #	Entrepreneurship Business Law & Legal Practices Business Administration
Media	Introduction to Business Art Major	Journalism ** Creative Writing 1** Elect. Art & Graphic Design ** Public Speaking 1 ** Broadcasting and Video Prod. 1 **	News Journalism # Creative Writing 2 # Marketing Strategies ** Sports/Ent. Marketing ** Broadcasting and Video Prod. 2 # Multimedia Presentations #	Web Page Design Entrepreneurship Business Law & Legal Practices Business Administration

\*\* May taken in grade 10, 11, or 12

# May be taken in grade 11 or 12

# Human Services Pathway

## CONSUMER SERVICES CAREERS

Are you interested in...	Can you...	Do you enjoy...
child development retail management & service family & social services food service hotel & tourism fashion design & merchandising interior design gerontology	communicate with others design a display or presentation use a computer work with colors & design organize travel plans make learning an interesting & exciting experience for others	preparing & serving food designing & sewing fashion designs working with pre-school children or the aging population working in a retail business helping people solve problems planning vacations

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Bartender Chauffeur Childcare worker Cook Custodian Dining room attendant Direct to consumer sales Flight attendant Florist Food services worker Host/hostess restaurant Hotel/food services Hotel/motel maintenance Merchandise display worker Personal shopper Private household worker Product demonstrator Retail sales	Senior center worker Taxi/bus driver Upholsterer	Advertising agent Appraiser (real estate) Baker Banker/bank teller Chef (primary, sous) Childcare director Dietetic technician Exhibit designer/technician Fashion management Home appliance technician Hotel/motel management Insurance agent Interior decorator Landscape architect/designer Private investigator Reservation agent Retail manager Tax preparer Travel agent
		Banker - manager Dietitian/nutritionist Extension service specialist Fashion designer Gerontologist Internet consultant Interior designer Personnel management

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Economics or Sociology or Topics in American Life
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Algebra 1B	Geometry	Algebra/Geometry 4
	Algebra 1	Geometry	Algebra 2 Part A or Algebra 2	Algebra 2 Part B or Pre-calculus or Algebra 3/Trig
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry	Calculus or Probability/Calculus
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics or See recommended electives below
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness* Health *	Physical Education – Senior options*
Business Administration & Technology	Computer Applications 3 *			
World Language	Spanish or French	Spanish or French	Spanish or French	Spanish or French

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Consumer Service	FCS Major/Minor or Introduction to Business	Child Development** Challenges Across the Life Cycle ** Public Speaking 1 ** Clothing, Textiles & Fashion Merchandising ** Interior Design ** Food Science/Food and Nutrition ** Marketing Strategies ** Sports/Entertainment Marketing **	Preschool Laboratory 1 # Challenges of the Aging Adult # Anatomy # Accounting 1# Business Law & Legal Practices # Adv. Clothing, Textiles & Fashion Merchandising # Multimedia Presentations #	Preschool Laboratory 2 Emergency Care Genetics Botany Accounting 2 Business Administration

\*\* May taken in grade 10, 11, or 12

# May be taken in grade 11 or 12

## RELATED NORTH MONTCO TECHNICAL CAREER CLUSTER(S)

Culinary Arts Technology Cluster  
Environmental Horticulture Technology Cluster



# Human Services Pathway

## COUNSELING, PSYCHOLOGY & COMMUNITY SERVICES CAREERS

Are you interested in...	Can you...	Do you enjoy...
family & social services social work/counseling caring for people health care environments science & medicine child development aging adults	relate to others pay attention to detail be conscientious, dependable & punctual use computers & technology apply theory to real world problems use interpersonal skills assume leadership roles work with an organization relate to diverse populations easily	communicating with a variety of people serving others' needs searching for answers to human problems studying the human body & its workings working with people of all ages using technology in many areas helping others reach their potential reaching out to your community

If you answered "yes" to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional	
Camp counselor Community coach Custodian Home health aide Postal clerk/mail carrier Recreational facility attendant Telephone operator	Community/social activists Firefighter (see Protective Services Pathway) Police (see Protective Services Pathway) Psychiatric technician Recycling coordinators Survey worker	Addictions counselor Art therapist Case manager Clergy/spiritual leader Community organizer Counselor (ind., family, group) Dietitian Health educator Health inspector Health & safety engineer Health services administrator Human resources manager Human resources social worker Policy analyst Policy planner Politician	Psychologist Recreation facility director Recreational therapist Rehabilitation counselor Safety inspector Social worker Sports psychologist Therapist

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Economics or Sociology or Topics in American Life or World Religions
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Geometry	Algebra 2	Pre-calculus or Algebra3/Trig
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry	Calculus or Probability/Calculus
	Algebra 2	Pre-calculus	AP Calculus [AB]	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry	Physics or See recommended electives below
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness * Health *	Physical Education – Senior Options*
Business Administration & Technology	Computer Applications 3 *			
World Language	Spanish or French	Spanish or French	Spanish or French	Spanish or French

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Science			Anatomy # Emergency Care #	Genetics Genetics & Embryology Forensic Science
Human Service	FCS Major/Minor	Child Development ** Challenges Across the Life Cycle ** Public Speaking 1 **	Challenges of the Aging Adult ** Food & Nutrition # Child and Family Studies # Independent Living # Global Business #	

\*\* May taken in grade 10, 11, or 12

# May be taken in grade 11 or 12

## RELATED NORTH MONTCO TECHNICAL CAREER CLUSTER(S)

Health & Human Services Cluster

# Human Services Pathway

## EDUCATION CAREERS

Are you interested in...	Can you...	Do you enjoy...
aging adults children teaching & education child development specific academic disciplines intergenerational projects	relate to people easily use interpersonal skills assume leadership roles work within an organization	helping people solve problems teaching & preparing lessons planning thematic units working with a variety of people of different ages helping others grow & develop

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Camp counselor Day care worker Library aide Teacher’s aide Adult day care worker	Library aide Teacher’s aide Special education classroom assistant	Administrator Counselor Educational consultant Higher educational policy specialist Librarian (research, acquisitions) Teacher - Preschool, Elementary, Secondary, Special education University faculty School nurse School social worker Speech therapist Psychologist

Note: Students interested in becoming a secondary teacher should concentrate in the field in which they plan to teach.

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Economics or Sociology or Topics in American Life or World Religions
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Geometry	Algebra 2	Pre-calculus Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trig	Calculus or Probability/Calculus or Statistics
	Algebra 2	Pre-calculus	AP Calculus [AB]	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics or Semester Electives
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness* Health *	Physical Education – Senior Options *
Business Administration & Technology	Computer Applications 3 *			
World Language	Spanish or French	Spanish or French	Spanish or French	Spanish or French

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
General Education	FCS Major/Minor	Public Speaking 1 ** Debate 1 ** Challenges Across the Life Cycle ** Child Development ** Emergency Care **	Preschool Laboratory 1# Challenges of the Aging Adult # Multimedia Presentations #	Preschool Laboratory 2
Elementary Education (in addition to General Ed)	FCS Major/Minor	Art 1 ** Child and Family Studies **	Art 2 # Electronic Art & Graphic Design # Animation 1 #	Animation 2

\*\* May be taken in grade 10, 11, or 12      # May be taken in grade 11 or 12

# Human Services Pathway

## MEDICAL, HEALTH, & FITNESS CAREERS

Are you interested in...	Can you...	Do you enjoy...
family & social services social work/counseling caring for people health care environments science & medicine fitness & body building child development dentistry pharmacy sports aging adults	relate to others pay attention to detail be conscientious, dependable & punctual use computers & technology work in a laboratory setting or a medical facility apply theory to real world problems use interpersonal skills assume leadership roles work with an organization relate to diverse populations easily	communicating with a variety of people serving others' needs searching for answers to human problems studying the human body & its workings working with people of all ages maintaining physical fitness supervising fitness training using technology in many areas helping others reach their potential

If you answered "yes" to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Athlete Athletic trainer aid Clinical lab technician Dental assistant Dental lab assistant Electrocardiograph technician Electroencephalograph technician Health record technician Home health aide Medical assistant Nursing aide Nursing home attendant Optometric aide Pharmacy aide Phlebotomist Physical therapy aide Recreational facility attendant X-Ray technician	Athletic trainer Dental hygienist Dental lab technician Dispensing optician technician Emergency medical technician Fitness trainer/instructor Licensed practical nurse Medical lab technician/technologist Medical records Optician Pharmacist technician Physical therapy technician Psychiatric technician Radiological technician Respiratory therapists Sports instructor Surgical technician Yoga instructor Veterinary technician	Art therapist Audiologist Case manager Chiropractor Counselor Dental hygienist Dietitian Exercise physiologist Gerontologist Gynecologist/obstetrician Health educator Health & Safety Engineer Health services administrator Medical records Medical/scientific illustrator Nurse practitioner Nursing home director Oncologist Occupational therapist Pathologist Pharmacist Physical therapist Physician Physician assistant Podiatrist Psychologist/psychiatrist Radiologist Recreational therapist Registered nurse Social worker Speech pathologist Sports psychologist Surgeon Veterinarian Vocational nurse

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Economics or Sociology or Topics in American Life or World Religions
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Algebra 1B	Geometry	Algebra/Geometry 4
	Algebra 1	Geometry	Algebra 2	Analysis and/or Algebra 3/Trigonometry or Probability & Statistics/Calculus
	Geometry	Algebra 2	Pre-calculus	Calculus
	Algebra 2	Pre-calculus	Calculus or AP Calculus [AB]	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry	Physics or See recommended electives below
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness* Health *	Physical Education – Senior Options *
Business Administration & Technology	Computer Applications 3 *			
World Language	Latin or Spanish or French	Latin or Spanish or French	Latin or Spanish or French	Latin or Spanish or French

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Science			AP Physics C: Mechanics Anatomy # Emergency Care # Athletic Training #	AP/Adv. Biology AP Chemistry AP Phys C: Electricity & Magnetism Chemistry 2 Genetics Genetics & Embryology
Human Service	FCS Major/Minor	Child Development ** Challenges Across the Life Cycle ** Public Speaking 1 **	Challenges of the Aging Adult ** Anatomy #	Adv. Biology Chemistry 2

\*\* May taken in grade 10, 11, or 12

# May be taken in grade 11 or 12

## RELATED NORTH MONTCO TECHNICAL CAREER CLUSTER(S)

Health & Human Services Cluster

# Human Services Pathway

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## PERSONAL CARE & COSMETOLOGY CAREERS

Are you interested in...	Can you...	Do you enjoy...
hair design/nail design being a trend setter skin care & make-up applications personal appearance & health care nutrition owning your own business	work with clients imagine visual designs cut & style hair be creative with nails use computers manage finances	being creative working with a variety of people working with hair, nails & make-up working in a shop or service industry planning a fitness & health program helping others with their problems

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Laundry/dry cleaner Model Nail technician Personal shopper Shoe repair Spa worker Tailor	Barber Cosmetologist Esthetician Message therapist Mortician Nannies/Au Pairs Skin care specialist	Clergyman/spiritual leader Director/manager beauty or day spa Funeral director Labor relations specialist Owner beauty/hair salon Personal fitness trainer Yoga instructor

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	English 12 *
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Economics
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Algebra 1B	Geometry	Algebra/Geometry 4
	Algebra 1	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry	Calculus or Probability/Calculus or Statistics
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics or semester electives
Physical Education Health	Physical Education* Health*	Aquatics* Health*	Lifetime Fitness* Health*	Physical Education – Senior Options*
Business Administration & Technology	Computer Applications 3 *			
World Language	Open selection	Open selection	Open selection	Open selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Science	FCS Major/Minor		AP Physics C: Mechanics Anatomy # Emergency Care # Athletic Training #	Chemistry 2 AP/Adv. Biology AP Phys C: Electricity & Magnetism Genetics Genetics & Embryology
Personal Service	FCS Major/Minor	Child Development/Preschool Years ** Challenges Across the Life Cycle ** Clothing, Textiles & Fashion Merchandising ** Interior Design **	Preschool Laboratory 1# Challenges of the Aging Adult # Adv. Clothing, Textiles & Fashion Merchandising #	Preschool Laboratory 2
Business	Introduction to Business	Marketing Strategies **	Accounting 1# Entrepreneurship #	Accounting 2 Business Administration Business Law & Legal Practice Global Business Personal Finance

\*\* May taken in grade 10, 11, or 12

# May be taken in grade 11 or 12

## RELATED NORTH MONTCO TECHNICAL CAREER CLUSTER(S)



# Engineering, Information Systems, Industrial Technology Pathway

## CONSTRUCTION CAREERS

Are you interested in...	Can you...	Do you enjoy...
building & construction math & measurement tools, equipment & materials masonry, brick laying woodworking heating & air conditioning systems precision work electrical systems	work from drawings, illustrations & schematics use computers & technology apply math & science concepts to real world situations follow verbal & written directions work with your hands in a variety of environments design buildings, electrical & HVAC systems	operating tools & equipment designing & constructing buildings designing, installing & repairing electrical, mechanical, & HVAC systems building with your hands applying mathematical theories to real world products

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Brick mason Building maintenance Cabinetmaker’s helper Carpenter’s apprentice Drafting tracer Drywall installer Electrician helper Fitter Fork lift operator Heating & air conditioning Highway maintenance Painter Plumbing Roofer’s helper Welder Welder fitter	Cabinetmaker Carpenter Cost estimator Drafter Heating & air conditioning technician (HVAC) Journeyman plumber Licensed electrician Manufacturer’s sales rep Pipe welder Plasterer Quality control inspector Robotics Roofer Sheet metal worker Welding technician	Architect Builder/developer Construction superintendent Construction supervisor Construction trades teacher Journeyman carpenter Manufacturer’s rep Master electrician Master plumber Welding engineer Welding inspector

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Economics or Sociology or Topics in American Life or World Religions
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Algebra 1B	Geometry	Algebra/Geometry 4
	Algebra 1	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry	Calculus or Probability/Calculus or Statistics
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics or Environmental Science
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness * Health *	Physical Education- Senior Options*
Business Administration & Technology	Computer Applications 3 *			
World Language	Spanish or Open Selection	Spanish or Open Selection	Spanish or Open Selection	Spanish or Open Selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Technology	Applied Technology Major/Minor Technology Drawing & Design	Manufacturing & Construction ** Electricity/Electronics ** Mechanical Drawing ** Power Technology Minor ** Graphic Communication Systems ** Intro to Engineering Design** Principles of Engineering Principles of Technology **	Adv. Manufacturing # Adv. Electronics # Adv. Mechanical Drawing # Principles of Technology # Adv. Graphic Communication Systems # Computer Integrated Manufact .#	Engineering Design & Development

\*\* May begin in grade 10, 11, or 12

# May be taken in grade 11 or 12

## RELATED NORTH MONTCO TECHNICAL CAREER CLUSTER(S)

Construction Trades Technology Cluster  
Engineering/Manufacturing Technology Cluster  
Power & Transportation Technology Cluster

# Engineering, Information Systems, Industrial Technology Pathway

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## INFORMATION SYSTEMS CAREERS

Are you interested in...	Can you...	Do you enjoy...
engineering: aeronautics, biomedical, chemical, civil, electrical, environmental, mechanical, nuclear, systems tools & equipment design & architecture computer & technology systems design computer technology computer games & simulations	use computers, CAD CAM apply mathematical & scientific principles to models use problem solving skills design systems think in an organized way	designing & working with projects, models & prototypes working from diagrams & schematics working in laboratory settings using high technology equipment & principles work on teams

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
	Air traffic controller ATM technician Computer repair & support technicians Design assistant Engineering technician Health information technicians Information technologies assistant Network technicians Robotics technician Semi-conductor processor	Chief Technology Officer (CTO) Computer analyst Credit analyst Database administrator Health information administrator Information systems scientist Library & information manager/specialist Network engineer Software engineer Systems administrator Technology & systems consultant Webmaster Web designer, developer, producer

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Sociology or Economics or Topics in American Life or World Religions
Math Select 1 option from math sequence chart.	Algebra 1	Geometry	Algebra 2	Pre-calculus Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trig	Calculus or Probability/Calculus and AP Statistics
	Algebra 2	Pre-calculus	AP Calculus [AB] Calculus	AP Calculus 2 [BC] and AP Statistics
Science	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics or AP Physics
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness* Health *	Physical Education – Senior Options*
Business Administration & Technology	Computer Applications 3 *			
World Language	Open selection	Open selection	Open selection	Open selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Technology	Applying Technology Major/Minor	Graphic Communications ** Electronic Art & Graphic Design ** Computer Programming ** Intro to Engineering Design** Principles of Engineering	Adv. Graphic Communications # Statistics # Web Page Design # AP Computer Science [A] # Electronic Simulation Design # Digital Electronics# Computer Integrated Manufact. #	Engineering Design & Development
Business	Introduction to Business	Computer Programming **	Web Page Design # Electronic Simulation Design # Multimedia Presentations #	Computing for College & the Workplace Business Administration

\*\* May be taken in grade 10, 11, or 12      # May be taken in grade 11 or 12

## RELATED NORTH MONTCO TECHNICAL CAREER CLUSTER(S)

Engineering Technology Cluster

# Engineering, Information Systems, Industrial Technology Pathway

## MANUFACTURING & INDUSTRIAL TECHNOLOGY CAREERS

Are you interested in...	Can you...	Do you enjoy...
building & making a variety of products materials, tools, machine equipment high technology the way things work production management	visualize a product from beginning to end work indoors be creative & design products improve things to make them work better use systems thinking use computers & computer applications	working with your hands operating machinery/tools working on a team solving problems using technology, math skills, mechanical skills applying technology to production being a trouble shooter creating products using your hands

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

### POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Assembler Boilermaker Computer operator Construction worker/technician Drafter trainer Fitter Machine operator Mechanic assistant Packer/packager Riveter Welder	Associate engineer Auto technician Computer technician Construction foreman Designer Drafting Drafting technician Electronic technician Equipment (heavy/light) technician Job foreman Machinist Manufacturing operations manager Mechanical technician Power plant operator Quality control Sales & service Specialized technician Tool & die maker Welder inspector Welder technician Welding robotics/automation	Advanced technician Architect Civil engineer Construction superintendent Construction supervisor Electrical engineer Industrial designer Manufacturer’s rep Manufacturing engineer Mechanical engineer Plant engineer Production coordinator Welding engineer

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Sociology or Topics in American Life or Economics
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Algebra 1B	Geometry	Algebra/Geometry 4
	Algebra 1	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry	Calculus or Probability/Calculus or Statistics
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness * Health *	Physical Education – Senior Options *
Business Administration & Technology	Computer Applications 3 *			
World Language	Open Selection	Open Selection	Open Selection	Open Selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Technology	Applied Technology Major/Minor	Manufacturing & Construction ** Mechanical Drawing ** Electricity/Electronics ** Power Technology Minor ** Intro to Engineering Design ** Principles of Engineering	Adv. Manufacturing & Construction # Adv. Mechanical Drawing # Adv. Electronics # Principles of Technology Computer Programming # Digital Electronics # Computer Integrated Manufact. #	Web Page Design Engineering Design & Development
Design	Applied Technology Major/Minor Art Major	Graphic Communications ** Mechanical Drawing ** Art 1 ** Design & Illustration ** Electronic Art & Graphic Design **	Adv. Graphic Communications # Adv. Mechanical Drawing # Art 2 #	Web Page Design

\*\* May be taken in grade 10, 11, or 12 # May be taken in grade 11 or 12

## RELATED NORTH MONTCO TECHNICAL CAREER CLUSTER(S)

Construction Trades Technology Cluster

# Engineering, Information Systems, Industrial Technology Pathway

## TRANSPORTATION CAREERS

Are you interested in...	Can you...	Do you enjoy...
planes, trains, automobiles, motorcycles electronics engineering: electrical, mechanical, chemical, environmental, civil alternative energy sources, electronics, computers math & science	use computer & other technologies design/repair engines follow a schematic diagram use math to solve problems	operating vehicles designing & using technological systems working with your hands to build & repair designing vehicles solving problems working with electronics & electricity

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Apprentice body repair Apprentice painter Apprentice technician Automotive service center attendant Brake technician Detail Rail worker/conductor Repair technician	Aircraft mechanic Airport/airline customer service Auto technician specialist Automobile salesperson/leasing agent Body technician Diagnostician Diesel technician Estimator/service writer Full line auto technician Locomotive engineer Paint technician Parts store owner Service manager/supervisor Structural technician	Air traffic controller Airline station management Airport management Automotive dealership owner/manager Automotive engineer Automotive instructor Body shop owner/manager Business logistics manager Industrial traffic manager Manufacturer’s rep

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Economics or Sociology or Topics in American Life or Psychology or World Religions
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Algebra 1B	Geometry	Algebra/Geometry 4
	Algebra 1	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry	Calculus or Probability/Calculus or Statistics
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness* Health *	Physical Education – Senior Options *
Business Administration & Technology	Computer Applications 3 *			
World Language	Open selection	Open selection	Open selection	Open selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Technology <i>JROTC Program highly recommended</i>	Applying Technology Major/Minor Technical Drawing & Design Minor The Science of Flight & Intercommunication Skills + ^	Frontiers of Aviation History + ** Mechanical Drawing ** Electricity/Electronics ** Manufacturing & Construction ** Intro to Engineering Design ** Principles of Engineering	Adv. Mechanical Drawing # Adv. Electronics # Adv. Manufacturing & Construction # Principles of Technology # Computer Programming # Aerospace Science: The Exploration of Space +# Digital Electronics #	

\*\* May be taken in grade 10, 11, or 12    # May be taken in grade 11 or 12    ^May be taken in grade 9, 10, 11, or 12    + Required for the JROTC Program

## RELATED NORTH MONTCO TECHNICAL CAREER CLUSTER(S)

Power & Transportation Technology Cluster



# Law, Justice & Protective Services Pathway

## LAW & GOVERNMENT CAREERS

Are you interested in...	Can you...	Do you enjoy...
law & law enforcement government work & agencies public work judicial systems & the court social work administration of justice	use good interpersonal skills be objective in an emergency situation demonstrate leadership ability remain fair & just in a variety of situations use technology think logically & solve problems	working on a team helping & protecting others keeping physically fit analyzing human behavior knowing & upholding the legal system working with details

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Armed Services Court clerk Court reporter State department worker Local government – clerical, facilities, grounds (See Protective Services Career sequence)	Armed Services Community activists & organizers Corrections officer Criminal investigator Database administrator Dept. of Transportation - roads, electrical, grounds crew Detective Law clerk Legal secretary Paralegal Peace corps worker Police officer State department worker State trooper Warrant officer	Armed Service officers CIA/FBI City/county manager Demographer Diplomat District attorney/Public defender Family & children worker Foreign Service Government accountant Immigration agent Information system specialist Judge Lawyer Policy analyst Politician Sociologist State department supervisor/manager Surveyor Translator/linguist/interpreter Urban & regional planner (See Public Relations Career sequence)

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Sociology or Economics or Topics in American Life or World Religions
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Algebra 1B	Geometry	Algebra/Geometry 4
	Algebra 1	Geometry	Algebra 2	Algebra 2 Part B or Pre-calculus or Algebra 3/Trig
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry	Calculus or Probability/Calculus
	Algebra 2	Pre-calculus	Calculus or AP Calculus [AB]	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness * Health *	Physical Education – Senior Options*
Business Administration & Technology	Computer Applications 3 *			
World Language	Open selection	Open selection	Open selection	Open selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Government <i>JROTC Program highly recommended</i>	Introduction to Business Science of Flight & Intercommunication Skills ^+	Public Speaking 1 ** Debate 1 ** Frontiers of Aviation History ** +	Accounting 1# Business Law & Legal Practices # Global Business # Multimedia Presentations # Aerospace Science: The Exploration of Space #+	AP Government Accounting 2 Business Administration Entrepreneurship Forensic Science Global Studies (JROTC only)

\*\* May begin in grade 10, 11, or 12    # May be taken in grade 11 or 12    ^May be taken in grade 9, 10, 11 or 12    + Required for the JROTC Program

## RELATED NORTH MONTCO TECHNICAL CAREER CLUSTER(S)

Protective Services Cluster

# Law, Justice & Protective Services Pathway

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## PROTECTION & SECURITY SYSTEMS CAREERS

Are you interested in...	Can you...	Do you enjoy...
security systems electrical systems safety of others protection of individuals, residences, businesses fire fighting	use computers & technology use diagrams to install systems work on a team think calmly & critically in an emergency situation approach problems logically	helping others installing electrical & mechanical systems observing & being aware of your surroundings meeting physical challenges

If you answered “yes” to most of these questions, you might consider a future in one of the occupations listed below.

## POSSIBLE CAREERS

Entry	Technical/Skilled	Professional
Armed Services Body guard Detention officer Jail officer Health care security & safety personnel Police radio dispatcher Security guard	Armed Services Computer technician Criminal investigator Fire fighter Police officer/detective Private detective Security systems installer State trooper	Armed Services officers Internet consultant Manufacturing security systems design Network consultant Police officer/detective/chief Security systems engineer

## FOUNDATION COURSES

<b>Department</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
English (4 yrs required)	English 9 *	English 10 *	English 11 *	British Lit * and one senior English elective
Social Studies (4 yrs required)	America in History 2 *	America in History 3*	American Cultures*	American Government * and Psychology or Sociology or Economics or Topics in American Life or World Religions
Math (3/4 yrs required) Select 1 option from math sequence chart.	Algebra 1	Algebra 1B	Geometry	Algebra/Geometry 4
	Algebra 1	Geometry	Algebra 2	Algebra 2 Part B or Pre-calculus or Algebra 3/Trig
	Geometry	Algebra 2	Pre-calculus or Algebra 3/Trigonometry	Calculus or Probability/Calculus
	Algebra 2	Pre-calculus	AP Calculus [AB] or Calculus	AP Calculus 2 [BC]
Science (3/4 yrs required)	Physical Science *	Applied Biology * or Biology *	Applied Chemistry or Chemistry or Principles of Technology	Physics
Physical Education Health	Physical Education * Health *	Aquatics * Health *	Lifetime Fitness* Health *	Physical Education – Senior Options*
Business Administration & Technology	Computer Applications 3*			
World Language	Open selection	Open selection	Open selection	Open selection

\* Course required for graduation

## RECOMMENDED ELECTIVE COURSES

<b>Concentration</b>	<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
Technology <i>JROTC Program highly recommended</i>	Introduction to Business Science of Flight & Intercommunication Skills ^ +	Electricity/Electronics ** Frontiers of Aviation History ** + Principles of Technology ** Principles of Engineering **	Adv. Electronics # Emergency Care # Anatomy # Aerospace Science: The Exploration of Space #+	Forensic Science Business Law & Legal Practices Global Business Global Studies (JROTC only)

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## RELATED NORTH MONTCO TECHNICAL CAREER CLUSTER(S)

Engineering Technology Cluster  
Protective Services Cluster

***Direct questions about Career Planning and Academic Program planning to the high school or middle school guidance counselors.***

***See the NPSD Guidance Website.***