



# **North Tonawanda City School District**



## **Secondary Curriculum Handbook 2023-2024**

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176 Walck Road  
North Tonawanda, New York 14120



# 2023-2024 SECONDARY CURRICULUM HANDBOOK

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*Assistant Superintendent of Administrative Services*

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*Director of Special Education*

Mrs. Elizabeth Bittar  
*Asst. Director of Special Education*

## From the Superintendent

North Tonawanda High School offers a broad variety of courses during the 2023-2024 school year. It is designed to assist students in planning for their next academic year and the remainder of their high school academic experience taking into account the revised graduation requirements, preparation for post high school study and their career plans. Your child can be part of a smaller academic group if they choose to be part of one of our Academies. For more information on these unique groups, see page 8 of this book. Parents are strongly encouraged to become involved in this scheduling process. Please take the time to thoroughly review and select your courses. With approximately eleven hundred students at NT High School, it is important that parents and students make the most of this process.

To the best of our ability we will provide a schedule that meets the students' academic goals and allows them to take advantage of the diverse programs we are able to offer. Please keep in mind that through the scheduling process final course offerings may change for a variety of reasons, including state requirements, staffing, budget concerns, and the number of student requests.

Finally, if questions arise or if you need further clarification, please contact your school Student Support Center.

Best wishes for a successful high school experience.

Gregory J. Woytila, *Superintendent*

## Secondary Administration & Guidance

### NORTH TONAWANDA HIGH SCHOOL

(Grades 9-12) 807-3600

Bradley Rowles, *Principal*  
Joseph Pray, *Assistant Principal*  
Rachel Ross, *Assistant Principal*  
Rachel Wagner, *Assistant Principal*

School Counselors 807-3642

Alyssa Hawkins  
Jennifer Kupiec  
David Musielak  
Jennifer Schultz  
Lynn Wright

### NORTH TONAWANDA MIDDLE SCHOOL

(Grades 7 – 8) 807-3700

Joshua Janese, *Principal*  
Scott Mueller, *Assistant Principal*

School Counselors 807-3705

Sue Evarts  
Angela Vecchio

### *To all of our parents...*

the purpose of this "Secondary Handbook" is to assist you in planning courses that your child may wish to consider.

For current 6th grade parents, foreign language classes of Spanish or French will be the first choice your child will have to make as they enter 7th grade.

This book may also be viewed on-line @ [www.ntschoools.org](http://www.ntschoools.org)

## The NORTH TONAWANDA CITY SCHOOL DISTRICT

Provides equal opportunity to all students and employees regardless of sex, race, handicap, color, and nationality of ethnic origin.

Further inquiries regarding compliance may be directed to:

Title IX	Scott Mueller	716-807-3712
	Katie Smith	716-807-3514
Sec. 504	Michael Tambroni	716-807-3561

# Graduation Requirements

(Subject to change by the New York State Board of Regents)

GRADUATION REQUIREMENTS (all of these requirements must be met in order to participate in the graduation ceremony)				
COURSES	Regents Diploma		Advanced Designation	
	Required Courses	Required Exams	Required Courses	Regents English (passing 65 +)
English Language Arts	4	Regents English	4	Regents English
Social Studies	4	Regents Global Studies	4	Regents Global Studies
		Regents U.S. History		Regents U.S. History
Math*	3	Regents Math	3	Regents Math
Science**	3	Regents Science	3	Living Environment & Physical Science
World Language	1		3	(a) Regents World Language
Art/Music	1		1	
Health	.5		.5	
Sequence Courses/Electives	3.5		1.5	
Physical Education	2		2	
<b>TOTAL Required (minimum)</b>	<b>22</b>		<b>22</b>	<b>22</b>

\*Math Test Requirement:

Regents: Algebra

Advanced Regents: Algebra, Geometry, and Algebra 2

\*Students are required to have completed one unit of credit in a World Language by graduation or pass the New York State Proficiency Exam given in 8th grade, unless they are special education students who are “exempt” from this requirement by the Committee on Special Education.

[a] For an Advanced Designation Regents Diploma, students may replace the 3 unit World Language requirement with 5 units in either Art, Music, Business, Technology, Technical Drawing, Family and Consumer Sciences, or BOCES.

## Credit Recovery

Students will be permitted to earn recovery credit for a course they have previously taken (seat time satisfied) and unsuccessfully earned course credit. Students will be utilizing a district approved online platform to recover course credit. Students will only be allowed to complete one credit recovery course at a time. Phys. Ed. credit must be completed during an instructional class period. Students may be permitted to earn course credit through enrichment. Enrichment courses include: ELA12, Health, Economics and Government.

## Promotion

The following indicated units must be completed for grade level placement.

Sophomore—5.5 units of credit

Junior—11 units of credit

Senior—16.5 units of credit

To be eligible to attend BOCES—students must have completed 10 units of credit, Global Studies 2, and English 10.

## Bonafide student

Students must carry a minimum of 5.5 units of academic credit including physical education to be a bonafide student of NTHS; 5th year seniors are exempt from this criteria. The recommended course load for a student at NTHS is 6.5 credits.

## Testing:

Students must take and earn a 65, on Regents exams in English, Math, Global Studies, US History and Science.

Passing scores for special education students taking regents exams may vary based upon grade level. Please see your school counselor if you have any questions.

# Student Services

Student services are provided in order that students may fully profit from their school learning experiences. Student services are provided directly to students via the school Student Support Center or indirectly through teachers, parents, administrators, and community agencies.

## A TEAM APPROACH

The success of a student services program is dependent upon a team approach of teachers and student services personnel, supported by the school's administrative and supervisory staff. The student services staff includes personnel from the areas of school counseling, health, speech, psychology, social work, special education services and the Family Resource Center. The student services staff has specialized skills which support classroom teachers in providing an effective learning climate.

The framework within which a student services team functions is flexible and broad enough to encompass each professional discipline in an integrated manner. Each offers unique contributions to the total development of the child. The team approach insures that the professional expertise of the staff will be coordinated to provide maximum assistance to the learner.

## SCHOOL COUNSELORS

The school counselors work with students individually, in small groups and in classroom settings to promote students' academic, career and social/emotional development. Services include individual and group counseling, academic, college and career planning, course selection, 4 year planning, scheduling, financial aid guidance, grade reporting services, goal setting, interest/aptitude/PSAT/SAT/ACT testing, family referrals and college and scholarship application processing.

They assist students, parents and faculty in dealing with crisis situations, inter-personal concerns and in making referrals to the Student Support Team and community agencies.

The school counselors utilize the Career Development Continuum to help students effectively and realistically plan for their futures. School counselors help students learn more about themselves, make appropriate choices, and access college or post-secondary information. Additional scholarship and career information are provided to students through resources available in the Career Center, online and through community contacts.

*Students are encouraged to make appointments as needed as they are encouraged to take responsibility for their choices.*

## SCHOOL PHYSICIAN

The school physician is employed part-time. He serves as an integral part of the school teaming process, provides student assessments, sports physicals, and consults with the staff. He provides medical direction for planning the health service program and the work of the nurses within the schools.

## SCHOOL PSYCHOLOGISTS

School psychologists help ALL children succeed academically, socially, behaviorally, and emotionally. They collaborate with educators, parents, agency personnel and medical professionals in order to create safe, healthy, and supportive learning environments that strengthen connections between home, school, and the community. They have an advanced graduate degree that emphasizes analysis of education and psychology. Counseling is also provided for a crisis or regular help. Their expert level training promotes extensive preparation in mental health and educational interventions, child development, learning behavior, motivation, curriculum and instruction, assessment, consultation, school law, and especially children with special needs. They are strong advocates for the child and family. They help analyze how a child's brain works to think and solve problems; then they meet with everyone involved to plan a comprehensive program that helps your child succeed in school and in life. A mandatory Consent to Test signed by a parent/guardian is always needed for this analysis.

## SCHOOL SOCIAL WORKER

School social workers are part of a multidisciplinary educational team that helps address the needs of students and their families. Students are referred to school social workers by parents, administrators, school counselors and teachers. Students receive assistance to help them overcome issues with self-esteem, social skills, depression, anxiety, anger management, and much more.

Because of their specialized education and training, school social workers are adept to address the social and psychological issues that can block academic progress. Through student screening, individual and group counseling, crisis intervention and prevention programs, they help young people overcome the difficulties in their lives, and as a result, give them a better chance to reach their full academic and personal potential.

## SCHOOL NURSES

School nurses work with children, parents, and other professional members of the student services team. Their responsibilities include the planning and supervision of activities related to health screening programs, emergency care, health appraisal of children, interpretation of health needs, resources, and health records. They make referrals for health counseling and home visits.



**SPEECH THERAPISTS**

Speech language-therapists work with students who may exhibit communicative needs in the areas of: articulation, language, stuttering (fluency), voice and hearing loss.

Speech-language therapists provide diagnostic assessments, participate on student support teams, and attend the Committee on Special Education on behalf of their students. Speech therapists work closely with parents, building staff, administrators, community agencies and clinics in order to develop individualized programs to correlate speech-language skill development in relation to the learning process.

**SPECIAL EDUCATION TEACHERS**

A variety of special education programs ranging from resource rooms, integrated co-teaching, and special classes are available. Special education students receive instruction within the least restricted environment appropriate to their needs.

Special education teachers work closely with other teachers, administrators, related service providers, parents, and community agencies, to develop individualized educational programs for our special education students.

**INDIVIDUALIZED LEARNING OPTIONS**

High school students in North Tonawanda are encouraged to assume increasing responsibility for their educational experience through the use of individualized learning arrangements. Among the available options are independent study, credit by examination, shadowing, and Career Exploration Internships (CEIP). Credit may be given for programs endorsed by the State Education Department.

Formal arrangements are made among students, parents, teachers, out-of- school supervisors, and administrators. Students may obtain additional information from their school counselor.

**ENGLISH AS A NEW LANGUAGE (ENL)**

Eligible English Language Learning students receive instruction in English from certified ENL teachers. The amount of service depends on the degree of proficiency the student has in the English language, as determined by the results of the NYSESLAT. The primary focus of the program is to assist the students in developing their listening, speaking, reading, and writing proficiency in the English language.

The ENL teacher assists students in making the cultural transition and works cooperatively with selected content area teachers to reinforce language and content-area skills. Individual cultural and academic needs are taken into consideration.

**ADVANCED PLACEMENT**

Advanced Placement courses offer our students the opportunity to do college-level work in a high school setting. These courses are available to qualified, academically oriented students in the tenth, eleventh and twelfth grades. Students should refer to the specific course prerequisites listed in the curriculum guide. The AP courses require a substantial commitment of time and effort by the student.

The Advanced Placement Examinations are administered nationwide in May by the Educational Testing Service, Princeton, New Jersey. Students are advised to check with colleges to which they are applying for verification of credit acceptance.

Students enrolled in Advanced Placement courses are highly encouraged to take the affiliated Advanced Placement Examinations. A fee is required for each examination taken by the student. Fee reduction is available to financially needy students. In accordance with District policy, the non refundable exam fees will be collected during the first marking period. The exams will be administered in North Tonawanda. An AP grade report is sent in early July to each student, school, and, if the student requested it, to his or her college. Courses are offered in Art, English Literature, United States History, European History, Economics, Government, Calculus, Biology, Chemistry and Physics.

**HOME TEACHING**

**Purpose**

Home teaching is available to minimize the educational disruption to students in grades 1-12 who are expected to be confined to home or hospital for an extended period due to illness or injury. Home teaching is authorized for one hour per day for students in grades 1-6 and two hours per day for students in grades 7-12. Parents should request home teaching in writing. In addition a note from the attending physician that indicates a specific diagnosis and time frame for which the service is required. Any student who would be likely to return to school within 10 days is not eligible.

**EARLY GRADUATION**

Requests for early graduation must be submitted in writing to your school counselor before the end of the summer preceding the date of early graduation.

DISTRICT STANDARDIZED TESTS	
Grade	Test
3-8	State English, Math
5 & 8	Local Social Studies
8	Technology, Science
9	Gates-MacGinitie Reading Test

# 2023-2024 COURSE OFFERINGS

## ACADEMIES

NTHS offers 4 career-themed academies as part of a comprehensive plan to help students to identify and to nurture potential career interests. These small learning communities, or schools within the school, present a focused sequence of courses that are designed to develop an educational foundation relevant to specific career themes. The opportunities described below are intended for students who, at an early age, express a strong interest in a career that is associated with the various academies. Students who wish to be considered for participation must apply. See your School Counselor for more details.

### **ACADEMY OF ENGINEERING AND ARCHITECTURE**

Twenty eighth grade students will be selected to attend “the school within a school.” A traditional curriculum is enhanced with a career theme of relevant courses and experiential activities. Courses are designed for students to develop their creative problem-solving and critical thinking skills. They will learn the basic skills of drafting, design and the most widely used computer software programs and be challenged creatively, technically and artistically. Projects are based on numerous design, engineering, and architectural occupations directly related to real world applications. This four year program is a comprehensive and challenging pre-university course. It encompasses careers related to the design fields in high demand and some of the highest paid professions in the country. This curriculum covers a wide range of academic subjects in the fields of science, math, art, and technology.

### **ACADEMY OF BUSINESS AND FINANCE**

This is a small learning community within the high school. A group of up to 24 students will be selected during eighth grade on the basis of academics, attendance and citizenship. Starting in their freshman year, students will take a sequence of business and finance courses related in addition to their regular curriculum. This will prepare them for continuing education and employment in business or finance careers, which are some of the highest in demand and some of the highest paid professions in the country. Students also prepare for a paid internship in their junior or senior years, giving the students real world experience to help make decisions about their future. This Academy is affiliated with the National Academy Foundation, for more information please see [www.naf.org](http://www.naf.org).

### **The Seal of Biliteracy**

The Seal of Biliteracy is an award given by a school, district, or state in recognition of students who have studied and attained proficiency in two or more languages by high school graduation. This program will be guided towards courses that will prepare them for continuing education and employment. Students will also have the opportunity to earn a maximum of 12 college credits while still in high school.

### **ACADEMY OF INFORMATION TECHNOLOGY**

This small learning community is designed to provide a cohort of students with a 4-year educational experience that will develop skills that are needed in high demand 21st century careers. A group of 24 incoming 9th grade students will be selected to participate each year on the basis of expressed interest, academics, and attendance. Coursework is rooted in the Art, English, Technology, and Business/Computer departments. This academy will introduce students to the ever-expanding digital workplace and to the career opportunities offered in programming, database administration, web design, digital media, and digital media technology & production. Then in the 3rd and 4th years of the program students may elect to take courses that lead them on a more refined path toward Computer Science careers or those in the Communications field. A state-of-the-art digital media production studio housed in our school will enhance the instructional experience.

### **ACADEMY OF HEALTH SCIENCES**

A small learning community within the high schools, the Academy of Health Sciences is designed for students with an interest in various fields of Health and medicine. Students in the program will study classes geared towards applied or pre-professional health and medicine. In their third and fourth years of the program, students may elect to take courses that lead them on more of a refined path towards an applied or pre-professional career. There will be opportunities to earn college credit and to take electives. Students in the academy will take part in an internship program where they can work with a company and/or hospital or school in their career field of interest. Students will be part of a cohort of 44-48 students and will serve as student ambassadors in various school activities, and will also have an opportunity to earn over 8 college credits throughout their four years of high school.



# BUSINESS

## MAJOR SEQUENCE

Business and Marketing is a broad and diverse discipline that enables a student to prepare for entry-level employment in the business office in marketing or accounting occupations, and/or post secondary education. Students may take five units in Business to replace the foreign language requirement for an Advanced Regents Diploma; this MUST include Personal Financial Literacy/CFM.

Accounting/Finance	
Career & Financial Mgt.	.5
Career Internship	.5 or 1
Personal Keyboarding	.5
Computer Applications	.5
Intro to Accounting	1.0
Advanced Accounting	1.0
Business Law	1.0

Business Administration	
Career & Financial Mgt.	.5
Career Internship	.5 or 1
Personal Keyboarding	.5
Computer Applications	.5
Business Law	1.0
International Business	.5
Business Ownership	.5

Marketing	
Career & Financial Mgt.	.5
Career Internship	.5 or 1
Personal Keyboarding	.5
Computer Applications	.5
Business Ownership	.5
Hospitality/Sports & Ent. Marketing	1.0
International Business	.5
Web Design and Multimedia	1.0

AND a credit from the following electives:

Hospitality Sports & Entertainment Marketing, Web Design & Multimedia, Intro to Accounting, College Accounting

## ACADEMY OF BUSINESS AND FINANCE

This is a small learning community within the high school. A group of up to 24 students will be selected during eighth grade on the basis of academics, attendance and citizenship. Starting in their freshman year, students will take a sequence of business and finance courses related in addition to their regular curriculum. Many of these courses are also available for optional college credit. This will prepare them for continuing education and employment in business or finance careers, which are some of the highest in demand and some of the highest paid professions in the country. Students also prepare for a paid internship in the summer between their junior and senior years, giving the students real world experience to help make decisions about their future. This Academy is affiliated with the National Academy Foundation. For more information please see [www.naf.org](http://www.naf.org).

### BANKING

Banking provides students with an overview of banks and other financial service companies. The course begins by introducing students to the origins of money and banking, and then examines the early history of banking in the U.S. Students will study the banking industry and explore the types of companies that make up this industry. A study of ethics in the financial services industry follows. The advantages and disadvantages of credit and the topic of debt is also discussed.

Credit: 1/2 unit                      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: None

## BUSINESS LAW

Students will develop a respect for and understanding of law and legal concepts as it affects their personal, family, and occupational pursuits. Topics include our legal system, criminal and civil procedure, trial procedure, the jury process, contracts, employment, renting/owning property, marriage/divorce, insurance and wills. Current legal issues in cyber law, sports law, and entertainment law are also explored. Participation in Mock Trials throughout the course will enhance the learning and understanding of the legal system.

Credit: 1 unit, optional 3 transferable credits from NCCC  
at a reduced rate              Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: None

## BUSINESS OWNERSHIP

Students will have the opportunity to explore the small business environment and related basic economic concepts with focus on the music industry. Computer integration and projects will be used to provide students with the opportunity to develop creative and critical thinking, decision making and communication skills. Multimedia and presentation tools are extensively utilized throughout the course. A major business plan will be created to organize, manage and promote a virtual band. College credit for this course is possible.

Credit: 1/2 unit, optional 3 transferable credits from NCCC  
at a reduced rate              Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: None

## INTRODUCTION TO ACCOUNTING

This is a basic accounting introduction. Every college requires an accounting course for all business, marketing and finance degrees. By taking this course students have the opportunity to learn these skills at the high school level, enabling them to be more successful in their college accounting course. Students learn to keep records for a small business including payroll, checking accounts, journal entries and financial reports such as balance sheets and income statements. This course is strongly recommended for students who will pursue business or accounting degrees and is a prerequisite for our College Accounting course offered to juniors and seniors.

Credit: 1 unit Business or Math      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: **Sophomore or above standing recommended**

## ADVANCED ACCOUNTING

This course expands on the introduction to Accounting course. We use project-based learning to utilize financial information to make managerial decisions and to create budgets. Computerized accounting programs are incorporated into the course to simulate the real world experience of a financial professional. This course is strongly recommended for students who will pursue business or accounting degrees. All college business degrees require accounting courses.

Prerequisite: **Intro to Accounting**

## CAREER EXPLORATION INTERNSHIP PROGRAM (CEIP)

This program provides an opportunity for juniors and seniors with good academic and attendance records to gain hands-on experience and networking opportunities by working with a professional in industry. Students can test their interest, abilities, strengths and weaknesses relative to real job situations, helping them to make future career decisions. This is a non-paid internship. During class, students work on a professional portfolio they may use for career or college applications. Outside of school hours, students report to a particular organization for their internship. Scheduling is flexible. Transportation is essential. Students who are interested in an internship experience should complete an application with their school counselor.

Credit: 1/2 unit      Time: 1 semester (80 hours)  
1 unit      1 semester (160 hours)  
Assessment: Career Portfolio and completion of Internship  
Prerequisite: **Junior or Senior Standing, good academic and attendance record**

## Broadcasting Technology

In this course students will use digital cameras and computer software to create short video segments. Students will learn video editing, lighting techniques, correct camera frame-ups, storyboard writing and microphone placement. The students will explore software programs relative to the video production industry. This is a recommended course for students in the Academy of Information Technology.

Credit: 1 unit Business      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: none

## PERSONAL FINANCIAL LITERACY/CFM

(Business)

This course is mandated for every career and technical program including five-unit programs. Students will develop skills essential to all occupations and introduce students to the realities of the working world. Students will work through a simulation where they will write checks, post transactions and reconcile their accounts. Additional simulations are used to help students learn about and practice topics such as: budgeting, income taxes and insurance. Other topics include career interests, job searches, writing resumes, completing job applications and preparing for job interviews.

Credit: 1/2 unit      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: None

## 21ST CENTURY SKILLS/FINANCIAL LITERACY

This course is designed to develop skills essential to all occupations and introduce students to the realities of the working world. Simulations are used to help students learn about practice skills in personal banking, budgeting, credit, investing, income taxes and insurance. Learn how to be smart with your money. Students also study career related topics, such as career interests, job searches, resume writing, completion of job applications and preparation for job interviews. Students can test their interests, abilities, strengths and weaknesses relative to real job situations, helping them to make future career decisions. During class, students work on a professional portfolio they may use for career or college applications.

It's a combo of CEIP & Career & Financial Management/Personal Finance.

## PRINCIPLES OF INFORMATION TECHNOLOGY

This is the first course students take in the Academy of Information Technology. It provides an overview of information technology and introduces students to the basics of hardware and software. This course will combine the skills traditionally learned in the Computer Applications course with additional key concepts and explorations, including: programming languages, career opportunities in computer technology/digital communications, digital design (graphic, web, animation, game), computer etiquette/legal concepts. The information learned will be accomplished through integrated projects, guest speakers, enrichment activities, virtual field trips and co-teaching.

Credit: 1/2 unit      Time: 20 weeks (half year)  
Examination: Local/Project  
Prerequisite: None

**AP Computer Science Principles**

An introductory college-level computing course that introduces students to the field of computer science. Students learn to design and evaluate solutions and to apply computer science to solve problems through the development of algorithms and programs. This course provides the students with the opportunity to earn college credit concluded by taking the AP exam in May. Students will be working with Edhesive as an online provider.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: Local/Project

**HOSPITALITY/SPORTS AND ENTERTAINMENT MARKETING**

The sports and hospitality industries have enabled the United States to be one of the most successful economies in the world. Tourism is one of America's largest employment sectors. The sports and entertainment industries offer a wide variety of job/career opportunities. This course will take you on a step-by-step journey through the world of marketing. Students will learn the basic functions of marketing and how those functions are applied to the hospitality sports and entertainment industries. This project-based course will enable students to apply marketing strategies through simulation activities for development of products and promotions. Print publications and

multimedia presentations are a central part of this course. The Microsoft Office Suite will be used extensively throughout the course. Students may receive a three (3) credit hour business elective credit at NCCC (passing exam with 80% or better).

Credit: 1 unit/3.0 credit hours NCCC-no fee  
for these college credits      Time: 40 weeks (full year)  
Examination: Local/College  
Grade Recommendation: 11, 12 or teacher recommendation  
Prerequisite: None

**INTERNATIONAL BUSINESS**

This course is designed to make students aware of the global economy in which they live. It also allows them to investigate the need to explore career pathways on an international level. Students research countries and include the historical view, culture, political, legal and economic environment, social and business environment, communications and ethics in a final project. This research will be applied to design and market a product for a global marketplace. Additional emphasis in this course is placed on future job skills for a diverse world. Multicultural etiquette and communication skills will be emphasized throughout the course.

Credit: 1/2 unit                      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: None

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# COMPUTERS

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**MICROSOFT COMPUTER APPLICATIONS**

This class provides students with the computer skills necessary for college. In this hands-on class, the students will learn to use Microsoft Office applications, which include Microsoft Word, Excel, Access and PowerPoint. Students will be able to create professional looking documents using Microsoft Word. Microsoft Excel will be used to create spreadsheets that allow students to enter and format data, calculate data using a variety of methods, and generate and format charts. Access is a database used in many businesses. PowerPoint will be used to create presentations students can use in many of the classes that they are currently taking or will take in the future.

Credit: 1/2 unit, optional 3 transferable credits from NCCC  
at a reduced rate      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: **Personal Keyboarding strongly recommended**

**MICROSOFT COMPUTER APPLICATIONS (EOD)**

Course content is the same as Computer Applications; however this section meets 40 weeks every other day.

Credit: 1/2 unit Time: 40 weeks (class meets every  
Examination: Local                      other day 1,3,5 or 2,4,6)  
Prerequisite: **Personal Keyboarding strongly recommended**

**ADVANCED COMPUTER APPLICATIONS**

This course provides students the opportunity to learn advanced features of Microsoft Word, Power Point and Excel. At the end of the course, students will be eligible to take the appropriate online exam for MCAS Certification. After successfully passing the online exam, students will obtain their MCAS Certification. MCAS Certification is a globally recognized credential which validates the students' knowledge of Microsoft Office Applications. Individuals with this certification are set apart in today's competitive job market providing more job opportunities with greater earning potential and career advancement. Students have the opportunity to receive college credit from NCCC or Medaille upon successfully completing this course and obtaining their MCAS certification. (Exam Fee required).

Credit: 1/2 unit Time: 20 weeks (half year)  
Examination: Local/Optionally on line for MCAS Certification  
Prerequisite: **Microsoft Computer Applications**

## ANIMATION AND GAME DESIGN

This project-based course will expand students' computer skills through a variety of media and software applications including Photoshop/graphic image design, video production, video game design, graphic animation and web cartooning. Students will learn to create a variety of animation and game design applications to construct basic games. This course covers foundations in game design. Students will explore the process of developing a successful game. Topics included are brainstorming, story boarding, scripting, game balancing, player motivation, level design, programming structure, play testing, interactive game history and types of games.

Credit: 1 unit Business OR Art      Time: 40 weeks (full year)  
Examination: Final Project  
Prerequisite: Studio in Art and Computer Science

## PERSONAL KEYBOARDING

Keyboarding is a life skill that has value to every student in our digital world. With nearly all jobs requiring some use of keyboarding skills, this course gives students a definite advantage. Students will have the opportunity to develop correct techniques, speed, and accuracy, as well as proofreading and editing skills. Students will produce personal and business documents. Keyboarding provides a building block to word processing skills that will be utilized in other high school or college classes, future career, and personal use. Throughout this course we use an online keyboarding program as well as a variety of other instructional materials.

Credit: 1/2 unit      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: None

## WEB PAGE DESIGN AND MULTIMEDIA

The goal of this course is to give students the knowledge and practical experience of being a web designer and/or graphic designer. It will provide students an all-around ability to understand web development as it applies to personal and professional use. Students in this course will create dynamic graphics and web pages using HTML, CSS and web design software (Adobe Dreamweaver CSS), and will focus on basic design principles of topography, graphics and page layout. Students will also use Flash and Fireworks to create dynamic, interactive multimedia presentations. The integration of business principles and communication skills will be a central focus of the course, developing professional interaction for future employment. Additional multimedia projects will include game design, animation and film production. The development and practicing of presentation skills is an integral part of this course. Project themes will be adapted to student interests and career academy.

Credit: 1 unit      Time: 40 weeks (full year)  
Examination: Local/Project

## COMPUTER PROGRAMMING

*Basic, advanced, and AP computer programming is offered in JAVA. These courses may be used as part of the business sequence.*

*Please note: Microsoft Computer Applications strongly recommended*

## INTRODUCTION TO COMPUTER PROGRAMMING

This course introduces the students to computer programming, with an emphasis on object-oriented programs. Students will develop the fundamental skills to design and implement programs as applications and applets. Topics include: problem solving, Java syntax, data types, flow of control, methods, objects and arrays.

Credit: 1 unit Business OR Math      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: **Basic math/algebra skills**

## ADVANCED COMPUTER SCIENCE: JAVA

This course is designed for students with a good foundation in Java programming. Through labs and assignments, students will gain practical hands-on experience in creating and deploying advanced Java technologies. Topics include: review of class composition and inheritance, problem solving, Java interfaces, exception handling, streams, containers, multithreading, and networking. Students will be working with Edhesive as an online provider.

Credit: 1 unit      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: **Beginning Computer Science and/or teacher recommendation**

## ADVANCED PLACEMENT COMPUTER SCIENCE: JAVA

Algorithm development is stressed. Designing, coding, debugging, and documenting programs are emphasized. The course offers the opportunity of earning college credit in a high school setting by providing students with skills needed in taking the AP exam in May. The language is JAVA.

Credit: 1 unit      Time: 40 weeks (full year)  
Examination: AP Exam  
Prerequisite: **Advanced Computer Science in JAVA and/or teacher recommendation**

## PHYSICAL COMPUTER WITH RASPBERRY

Discover the principles of computer science and programming through a series of hands-on projects and challenges. In this course you will learn how to program a Raspberry Pi microcomputer with the Python language, and how to collect and analyze data from the world around us through a network of different sensors. Gain the skills required for modern careers in the STEM fields, as you employ the same techniques used in data science, robotics, and engineering.

Credit: 1 unit      Time: 40 weeks  
Prerequisite: None



# ENGLISH

Four years of English credit are required for graduation from North Tonawanda High School. Each year's course work evolves from curriculum guides developed by teachers and supervisors modeled after the NYS Common Core Learning Standards stating minimum skill attainment for each grade level. All students must take the Regents Common Core final examination in June of their 11th year of English.

## ENGLISH (GRADE 7)

While meeting the New York State Learning Standards, this course continues to develop and reinforce language arts skills while focusing on written language. Students will work on developing evidence-based claims through the use of textual evidence and elaboration. In addition, students will be expanding their written language through Lucy Calkins units of study. Following the writer's workshop model, students will complete a narrative and argumentative writing piece. The literature portion of the course integrates models the NYS Modules reading strategies and skills with literary elements through the study of short stories, drama, novels, nonfiction and poetry. Speaking and listening skills are integrated into the program and are complementary to the reading and writing aspects of the curriculum.



## WRITING WORKSHOP (GRADES 7 & 8)

This workshop is a marking period-long course. The course goals include helping all students in developing and refining basic writing skills, to provide opportunities to challenge the students that have higher level writing skills and to raise the students' writing competencies to levels that will help them improve their writing skills in all content areas.

Students will review basic grammatical and usage skills, sentence structure, and paragraph development in this class. In addition, they will be introduced to the art of argumentative writing, writing for social conventions, and the use of word processing to publish written works.

## ENGLISH (GRADE 8)

In order to meet the New York State Learning Standards, this course integrates the study of written language through the examination of both fiction and nonfiction. Literature study encompasses understanding and identifying the distinguishing features of major genres to include the novel, short story, drama, nonfiction and poetry. It also requires students to apply the literary elements that they have studied in both grades 7 & 8 in order to analyze each text.

With an emphasis on developing the structure of a formal writing piece and utilizing the writing process, students review grammar and usage, mechanics (capitalization and punctuation), and spelling. In addition, grade 8 students will continue with Lucy Calkins units of study through the implementation of the writer's workshop model and the focus on narrative and argumentative writing.

Students continue to build on the foundation of speaking and listening skills developed in grade 7 through both formal and informal discussions and activities in class.

## READING WORKSHOP PROGRAM

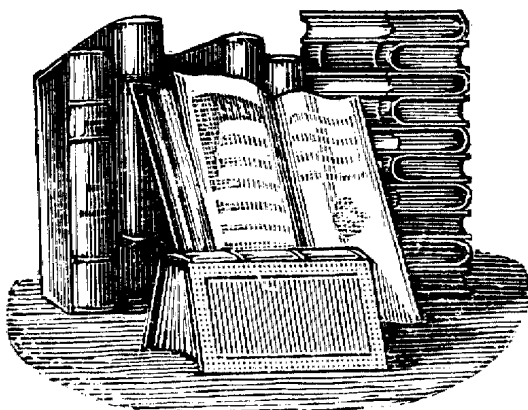
Grades 7 and 8

This program utilizes multiple, educationally related, objective criteria, state and local assessments, and district guidelines to identify students who are performing below the established NYSED competency levels in (reading and writing) literacy skills. Student placement is reassessed throughout the year with progress monitoring. Students work with a certified Reading Literacy Specialist and the goal is to provide students with experiences in using numerous strategies, tools and techniques to support and strengthen their reading and writing, (study, and listening skills). The program supports each student's ELA class curriculum and is aligned with the NYS Common Core Standards. The program also strives to strengthen each student's classroom performance, attitude, and confidence. Quality work is stressed.

## ENGLISH FLOW CHART

### CODE FOR SENIOR ELECTIVE ENGLISH COURSES

Seniors may choose TWO half year electives in place of a full-year English Course.

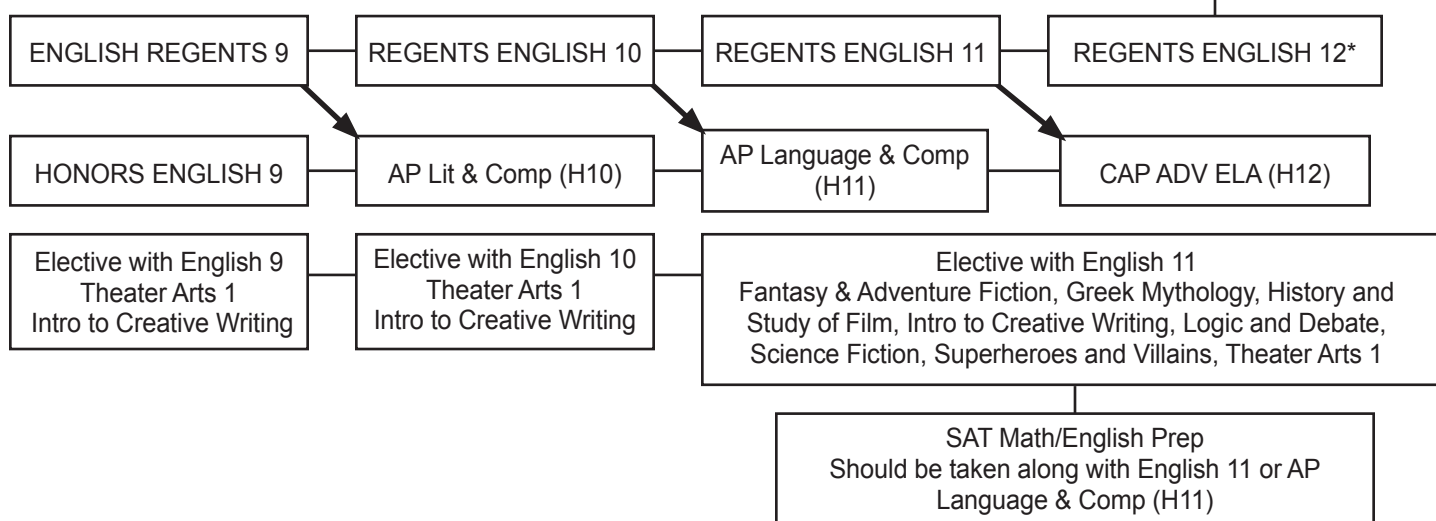


\*1/2 year course

\*\* also available to Juniors with teacher approval

\*\*\*also available to Sophomores with teacher approval

21st CENTURY COMMUNICATIONS  
ADVANCED PLACEMENT ENGLISH  
CAP ADVANCED ELA  
FANTASY & ADVENTURE FICTION  
GREEK MYTHOLOGY \*/\*\*  
HISTORY AND STUDY OF FILM  
INTRO TO CREATIVE WRITING  
LOGIC AND DEBATE  
SAT MATH/ENGLISH PREPARATION\*/\*\*/\*\*  
SCIENCE FICTION \*/\*\*  
SUPERHEROES AND VILLAINS  
THEATER ARTS 1



### REGENTS ENGLISH 9

This skills-based course reflects the NYS Common Core standards for a Regents diploma. The scope/depth of this course is to prepare students to pass the New York State Common Core English exam in June of their 11th year of English. During this course students will improve their skills in the areas of listening, reading and writing, utilizing various genre of literature and nonfiction materials. Students will complete a research assignment focusing on the following skills: source validity, note taking/source carding and organization, and the MLA format for source documentation.

Credit: 1 unit

Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Regents English 8**

### REGENTS ENGLISH HONORS 9

This skills-based course reflects the NYS Common Core standards for a Regents diploma. The scope/depth of this course is to prepare students to pass the New York State Common Core English exam in June of their 11th year of English. During this course students will improve their skills in the areas of listening, reading and writing, utilizing various genre of literature and nonfiction materials. Students will complete a research assignment focusing on the following skills: source validity, note taking/source carding and organization, and the MLA format for source documentation. In addition, students will be prepared to meet the needs of English 10 Honors.

Credit: 1 unit

Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Grade 8 Teacher recommendation with Exam grade of 85% or better and meeting the criteria for Honors participation.**



**REGENTS ENGLISH 10**

This course reflects the NYS Common Core standards for a Regents diploma. The scope/depth of this course is to prepare students to pass the New York State Common Core English exam in June of their 11th year of English. During this course students will improve their skills in the areas of listening, reading and writing, utilizing various genre of literature and nonfiction materials. Students will complete a research assignment focusing on integrating sources in the paper and striving for unity with the thesis statement. The final product will include note/source cards, an outline, title page, works cited page, draft and final copy.

Credit: 1 unit Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Regents English 9**

**REGENTS ENGLISH 11**

This course reflects the NYS Common Core standards for a Regents diploma. The scope/depth of this course is to prepare students to pass the New York State Comprehensive English exam given in June. During this course students will practice and prepare for all reading and writing prompts on the Common Core exam. Students will complete a mandatory research assignment that will include note/source cards, an outline, a title page, a works cited page, and a draft and final copy.

Credit: 1 unit Time: 40 weeks (full year)

Examination: Common Core

Prerequisite: **Regents English 10**

**REGENTS ENGLISH 12 (Senior course)**

This course applies the NYS Common Core Learning Standards, utilizing selected readings from British, American and Multicultural literature. This skills-based course focuses on short, targeted writings as well as longer, student-directed researches.

Credit: 1 unit Time: 40 weeks (full year)

Examination: Project-based Assessment

Prerequisite: **Passed the Regents English 11 exam**

**AP LITERATURE & COMPOSITION (Honors English 10)**

\*This course is also open to Seniors wishing to take AP English.\*

This course follows the AP Literature and Composition syllabus and is aligned with NYS Standards. English Honors 10 directs students to read and respond to literature analytically in both oral and written modes via a Socratic approach. The course requires the AP Lit and Comp Exam in May, and culminates in a Final Project in June. Emphasis will be placed on essay response as practice for the final exam.

Credit: 1 unit Time: 40 weeks (full year)

Examination: AP Lit and Comp EXAM in May; final course project due in June

Prerequisite: **Teacher recommendation with Exam grade of 85% or better and meeting the criteria for Honors participation.**

**AP LANGUAGE & COMPOSITION (Honors English 11)**

This is a college preparatory course designed for the serious English student. In accordance with the College Board's

description, students will become critical readers of predominantly nonfiction works. The course strengthens the effectiveness of the student's writing through close reading and frequent practice at applying rhetorical strategies, analyzing information from source

tests, and writing arguments. The course culminates in an AP English Language and Composition exam in May.

Credit: 1 unit Time: 40 weeks (full year)

Examination: AP Language and Composition EXAM in May:

ELA Common Core Regents Exam in June

Prerequisite: **Teacher recommendation with Exam grade of 85% or better and meeting the criteria for Honors participation.**

**FANTASY & ADVENTURE FICTION (Junior and Senior course)**

All cultures, societies, and civilizations share a collection of stories. The oldest and most celebrated type of story is the heroic or adventure fantasy. Tales of heroes shaping societies' ideals, fighting monsters (real or allegorical) become the basic foundations upon what contemporary entertainment and popular culture today is built. Students will explore the structure of the fantasy adventure story through historical, philosophical, and psychological influences. The works will trace historically from the European fictional tradition (from Beowulf to Tolkien) up and through contemporary Western popular fantasy (from Lovecraft, R.E. Howard, to Gaiman) to the present day heroes and narratives that give our world meaning.

Content will include traditional print as well as digital texts of short stories, excerpts, at least one novel, in addition to film and media sources.

Student learning will be assessed through a variety of methods including, but not limited to, quizzes, short but focused writing, creative pre and researched materials. Assessments will be both traditional as well as digital. Active and thoughtful participation is required... "Here there be dragons."

\*Offered as a senior elective for credit

\*\*Open to Juniors as a free elective

Credit: 1/2 unit Time: 20 weeks (half year)

Examination: In class Final Exam: Individual Writing Project

Prerequisite: **Juniors must achieve an over-all score of 85 in English 10. First preference is given to seniors, who must have passed the Regents English 11 exam and/or have teacher recommendation.**

**GREEK Mythology** (Junior and Senior course)

Learn tales of heroism, betrayal and passion in this course. GREEK DRAMA gives an overview of the huge collection of stories and plays explaining the creation of the world, the lives of the gods and goddesses, and how it has all been told to generations throughout the ages. This course is filled with passionate love stories, superhuman tales, mythical beasts and epic adventures. Be ready to read and make in-depth analysis of these tales, as well as create your own myths.

\*Offered as a senior elective for credit

\*\*Open to Juniors as a free elective

Credit: 1/2 unit Time: 20 weeks (half year)

Examination: In class Final Exam

Prerequisite: **Juniors must achieve an over-all score of 85 in English 10. First preference is given to seniors, who must have passed the Regents English 11 exam and/or have teacher recommendation.**

**HISTORY AND STUDY OF FILM**

This is a course intended to familiarize students with the particulars of film history and its impact on American pop culture over the past century, as well as provide students with a chance to analyze film as a visual art and entertainment form. Exposure to various film techniques and a variety of genres will be emphasized throughout the course. In addition, the course is designed to help students develop critical thinking, listening, and viewing habits through film screenings, weekly readings (articles), creative writing, written analyses, and participation in class discussion.

\*Offered as a senior elective for credit

\*\*Open to juniors as a free elective

Credit: 1/2 unit

Time: 20 weeks (half year)

Examination: In class Final Project

Prerequisite: **Juniors must achieve an over-all score of 85 in English 10. First preference is given to seniors, who must have passed the Regents English 11 exam and/or have teacher recommendation.**

**INTRO TO CREATIVE WRITING**

This course will explore expressive writing in many different forms. Students in Intro to Creative Writing will write poems, short stories, scripts, news stories, comic strips, children's books, an autobiography and other types of writing that express creativity. Students will also study writing samples from professional writers as well as student writers to guide student progress. Students will have the opportunity to explore several different writing styles, as well as responding to literature, art mediums, quotes, and music. Strategies to avoid writer's block and new ways to uncover ideas for writing will be studied. Peer reviews and sharing ideas are essential elements to this course.

This course will explore variations of genre and word choice emphasizing precise language, poetic structure, adventure stories, characterization, setting, plot development, script

writing, humor, reflective writing, and more, while utilizing a plethora of inspiration not limited to art, music, poetry, film, and other writings. I hope to challenge you to become better, more confident writers and thinkers and to discover more about yourself and your world through your writing. Enjoy being in a class with those who share your interest in writing creatively. May you all become your own writers!

\*Offered as a senior elective for credit

\*\*Open to underclassmen as a free elective

Credit: 1/2 unit

Time: 20 weeks (half year)

Examination: In class

Final Exam: Writing Project

**LOGIC AND DEBATE** (Junior and Senior course)

This class will provide practice in developing sound and logical arguments, and will give students the opportunity to practice speaking in front of an audience and demonstrating grace under pressure. Students will come away knowing how to synthesize information and deliver it to an audience. Critical thinking skills come in handy when interviewing for jobs, networking for career advancement, conducting meetings and giving presentations. Outside of the working world, having good communication skills is useful in activities as ordinary as meeting new people, as debate helps people learn composure and confidence when speaking with others. All students must be willing to speak in front of their peers as well as argue topics in order to be successful in this class.

\*Offered as a senior elective for credit

\*\*Open to juniors as a free elective

Credit: 1/2 unit

Time: 20 weeks (half year)

Examination: In class Final Project

Prerequisite: **Juniors must achieve an over-all score of 85 in English 10. First preference is given to seniors, who must have passed the Regents English 11 exam and/or have teacher recommendation.**

**SCIENCE FICTION** (Junior and Senior course)

This course explores the shapers of society, societal elements and themes of the specific genres known as Science Fiction. Emphasis will be placed on the works of Asimov, Bradbury, Vonnegut, Lewis, McCaffrey, Joss Whedon and Niccoli. Content includes short stories, a novel, film and media excerpts. Students will read, view, discuss, and respond to assigned materials. A variety of evaluation methods will be used, including but not limited to, quizzes, short targeted writings, and creative presentations. Active, thoughtful participation is required.

\*Offered as a senior elective for credit

\*\*Open to juniors as a free elective

Credit: 1/2 unit

Time: 20 weeks (half year)

Examination: In class Final Exam: Writing Project

Prerequisite: **Juniors must achieve an over all score of 85 in English 10. First preference is given to seniors, who must have passed the Regents English 11 exam and/or have teacher recommendation.**

**SUPERHEROES AND VILLAINS** (Junior and Senior course)

This course will focus on the concept of a hero versus a villain, defining good versus evil. It will examine the complicated nature of heroism and the complexity of mankind. It will discuss the fine line that separates a hero from a villain—or if even they are essentially the same; does it just depend on who tells the tale and point of view? The course will be reflective in nature exploring the question of whether or not there's a hero and villain in all of us, but we continuously battle for the one we want to be. Students will explore and create their own superhero and/or villain including backstories. Heroes/Villains to be explored may include but are not limited to Batman and the Joker, Anakin Skywalker to Darth Vader, Superman/Lex Luther, Captain America/Red Skull, Rick/Negan. We will look at comics, graphic novels, films, television and supplemental articles and podcasts.

\*Offered as a senior elective for credit

\*\*Open to juniors as a free elective

Credit: 1/2 unit                      Time: 20 weeks (half year)

Examination: In class

Final Exam: The final exam will be student designed.

**CAP ADVANCED ELA** (Senior Course)

*"Writing is the key to success, and reading opens the door to fuller understanding."*

This course is divided into two sections, meeting the requirements for English 101 and English 102, with the added option of obtaining either 3 or 6 credit hours available to the student through NCCC.

Section one is intended to help the student effectively communicate his/her ideas in writing at a highly developed level. Students will read and study various modes of writing. Purpose, audience, unity, organization, development, coherence, and style will be examined. As with any advanced skill, the level of difficulty is challenging. Furthermore, writing is a complex process that involves critical thinking. Therefore, students must commit considerable time and thought to improving their reading and writing.

Section two is intended to help the student effectively explore the intentions and elements of college-level short fiction and essays through an analysis of plot/action, character development and thematic development. There is heavy emphasis of student-supported discussion of the literature pieces as well as written analysis. The level of difficulty is challenging, demanding both critical thinking and writing skill development on the part of the student.

Credit: 1 unit                      Time: 40 weeks (full year)

Examination: Term Research paper

Prerequisite: **Teacher recommendation and/or passed the REGENTS ENGLISH 11 examination with a minimum of 85%.**

**21st CENTURY COMMUNICATIONS** (Senior course)

21st Century Communications is a dynamic, project driven course where you will learn to create and understand film and mass media. You will develop speech writing skills and presentation through a variety of creative outlets. You will learn to incorporate logic and debate as well as communications strategies. It is fun, challenging and rewarding.

Credit: 1 unit                      Time: 40 weeks (full year)

Examination: End Project

Prerequisite: **Passed the REGENTS ENGLISH 11 exam and/or teacher recommendation**

*Note: 21st Century Communications is NOT an NCAA-approved class. Please see page 41 for more information.*

**THEATER ARTS 1**

Fine Arts are central to the expression of all human societies, recording and sharing the richness of human experiences and imagination, and changing and shaping both the individual and society.

This course will explore and examine the written play as a literacy form as well as a powerful tool that has been used to incite thinking about key issues both past and present. Student will actively engage in basic movement, pantomime, blocking, classical theatre, characterization, design, and structure, while exploring historical and modern theatrical works.

Credit: 1 unit                      Time: 40 weeks (Full year)

Examination: Research and Critique Paper, Performance and Local

Prerequisite: Student must maintain an average of 70% or above in their grade level English course to remain in Theatre Arts.

**Note:** Theatre Arts 1 is NOT an NCAA approved course.

Please see page 41 for more information.

This course is in addition to English 9, 10, 11. This course is acceptable alone as a Senior Elective.

**READING LAB**

The Reading Lab is designed to assist students to reach a reading level at or above their grade placement, as determined by a standardized test, and to help students meet New York State Standards. Assistance is given in a variety of ways: vocabulary development, comprehension improvement, study skill awareness, activities associated with actual tasks from other classes and Regents practice. Positive support is given to students who need a boost in reading. The course is a requirement for students who are identified by either a New York State test or multiple criteria that affect their success. Some students can request support or may be referred by a teacher, school counselor or other staff member.

Credit: 1/4 unit per semester	Time: 20 weeks/2.5 periods
1/2 unit per full year	per week (semester)
	40 weeks/2.5 periods
	per week (full year)

Examinations: Screening for New Students:

Gates-MacGinitie Reading Test,  
Form S Program Test (Grades 9-12)  
Gates-MacGinitie Reading Test,  
Form T (grades 9-12)

Prerequisite: **Identification for program through multiple, educationally-related criteria including report card grades, attendance, testing, and others.**

# ENGLISH EXTRAS

## ENGLISH LANGUAGE ARTS WRITING WORKSHOP LAB

This ELA lab is designed to help those students who are in need of remediation with comprehension and writing skills. The primary goal of the course is to raise students' writing competencies to levels which will help them successfully pass the New York State Comprehensive Regents exam.

Credit: 0 unit                      Time: 20 weeks/2.5 periods  
per week (one-half year)

Prerequisite: **Students identified as needing additional help/ remediation in meeting the ELA standards and/or teacher recommendation**

## SAT MATH/ENGLISH PREPARATION

This will be a semester course preparing students for the SAT Examinations. Test taking tips and common questions will be explored. The semester will be divided into two 10-week sessions, one presented by the math department and one by the English department.

Credit: 1/4 unit math                      Time: 20 weeks (half year)  
& 1/4 unit English

Examination: Local

Prerequisite: **Passed both the Integrated Algebra course and Regents exam and passing English 9.**

*Preference will be given to 11th and 12th graders*

## ENGLISH AS A SECOND LANGUAGE

This course is provided to assist those students whose first language is not English. Students practice using English through reading, writing, listening and speaking activities which guide individual student improvement in both communication and content area performance.

Credit: 1 unit                      Time: 40 weeks (full year)

Examination: LAS-0 and LAS Reading/Writing

Prerequisite: **Identification for program through testing.**

*English as a second language does not replace English 9, 10 11 or 12.*

## INTENSIVE ESL

(English as a second language)

This course is provided to assist beginning limited English proficient students who demonstrate preproduction, early production and speech emergence stages of English second language acquisition. This course satisfies New York State Core Curriculum minimum requirements for ESL grammar instruction.

Credit: 1/4 unit per semester  
1/2 unit per semester

Time: 20 weeks  
40 weeks

Examination: **LAS Oral**

# FAMILY & CONSUMER SCIENCES

## MIDDLE SCHOOL

All students are required to complete a 3/4 unit of Family and Consumer Science by the end of grade 8. The North Tonawanda City School District completes this requirement by teaching ten weeks in grade 7 and twenty weeks in grade 8. The content emphasized includes the development of skills needed now and in the future. Lessons and activities involving decision making, problem solving, and time and resource management are included at each grade level. Students gain hands-on experiences in kitchen skills, food preparation, sewing techniques, entrepreneurship, and family relationships. 8th grade students are also involved in an extensive career research unit project. Each student is required to complete a computer generated work skills brochure and a career specific newsletter.

## HIGH SCHOOL

At the high school level, all courses are electives. Students may use **CLOTHING & TEXTILES** and **HOUSING & INTERIOR DESIGN** to fulfill the art requirement for graduation. Students may take five units in Family & Consumer Sciences to replace the third unit required in foreign language for an Advanced Regents Diploma.

## FOOD AND NUTRITION/GLOBAL FOODS

**\*NOTE – these two courses are linked in the schedule, so that students will take both courses in the same year.**

In the first semester of this course, students will study **FOOD & NUTRITION** and how it applies to good health. Other areas covered include food safety and sanitation, meal management, food purchasing, and basic food preparation techniques. Hands on experiences in the foods lab are conducted, using foods from the various food groups.

Second semester (GLOBAL FOODS) includes cultures of countries from around the world along with food traditions common to these areas. This class includes group projects and food preparation labs to enhance the student's knowledge of global cuisine.

Credit: 1 unit                      Time: 40 weeks (full year)

Examination: Local

Prerequisite: None

**\*Recommended for students in the Academy of Health Sciences**



**CLOTHING AND TEXTILES/HOUSING AND INTERIOR DESIGN**

**\*NOTE** – *these two courses are linked in the schedule, so that students will take both courses in the same year. This will fulfill the student's ART requirement for graduation.*

In the first semester, *CLOTHING & TEXTILES* features the construction of a log cabin quilt and a simple garment. The student will also learn about clothing decisions, fashion, design elements, fibers and fabrics, clothing care, purchasing ready-to-wear, and careers. Students are expected to purchase their own pattern and fabric for the required projects.

In the second semester, *HOUSING & INTERIOR DESIGN* students will investigate how lifestyle, social factors, and stages in the life cycle influence housing decisions. Through hands on experience, students will discover design elements and principles as they relate to architecture and interior design. The student will use software programs to explore the exterior and interior design of homes. Interior design options, such as furniture, wall coverings, window treatments, and floor covering will also be discussed.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: None

**ADVANCED CLOTHING AND TEXTILES**

Students who have completed *CLOTHING AND TEXTILES* can become even more proficient at sewing in this course. Projects include a chevron quilt, a recycling or alteration project and a photo pillow. Students also complete a fashion history project, where they research the influences on fashions of a particular decade.

Credit: 1/2 unit      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: **Clothing and Textiles**

**NUTRITION, HEALTH AND FITNESS**

This course meets every other day for a full year for a half credit. The course is generated directly from the NYS Family and Consumer Science Curriculum. It is designed to include, but not limited to the following: assess personal fitness and eating habits, provide food preparation for healthy meals and food choices and design a personal plan for lifetime fitness.

This course is required for the Academy of Health Sciences.

Credit: ½ unit      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: None

**PARENTING**

The objective of this course is to prepare students to become better parents in the future. Many aspects of parenting are covered, including parenting skills and styles, personal readiness for parenting, pregnancy and birth, the care and guidance of children of various ages, and meeting family responsibilities. Students may practice their parenting roles with an infant simulator for a weekend.

Credit: 1/2 unit                      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: None

**LIFE ON YOUR OWN**

Topics covered include communication and relationship skills, goals and priorities, consumer smarts, personal finances and career exploration. Apartment rental and purchase of cars, clothing and food is also studied. This class is designed to help guide the student toward a successful, independent life!

Credit: 1/2 unit                      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: **CLOTHING AND TEXTILES 10-12 grade only (no freshman)**

**ADOLESCENT ISSUES**

This course examines life as an adolescent. Students learn about themselves and ways of coping with the problems and stresses of adolescence and how to effectively communicate with the people in their lives. They will investigate issues facing teens today, and identify personal characteristics for managing these concerns. Study of the physical, cognitive, social and emotional development of adolescence is included, as well as theories that support this information.

Credit: 1/2 unit                      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: None

**CHILD DEVELOPMENT**

What are children like? This course answers that question. The characteristics of children from birth to age 6 are studied in depth. The physical, emotional, social and intellectual aspects of growth and development are studied for each age group. A highlight of the course is the six week Playschool program, where students plan lessons and teach a group of 16 three and four year olds. This is excellent preparation for any student who would like to work with children in the future.

Credit: 1/2 unit                      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: None

**CHILD DEVELOPMENT INTERNSHIP**

Upon completion of Child Development, students who have an interest in a teaching career can choose to participate as a Child Development Intern. Students are assigned to a classroom at Meadow Elementary School and act as an assistant to the teacher. They get a first-hand look at the duties of a teacher, as they complete tasks such as grading papers, filing, preparing teaching materials and working one-on-one with the children.

Credit: 1/2 unit                      Time: 20 weeks (every other day)  
Examination: None  
Prerequisite: **Child Development or Parenting**

**CAREER AND FINANCIAL MANAGEMENT**

This course which is required for BOCES students, is designed to develop skills essential to all occupations and introduce students to the realities of the working world. Simulations are used to help students learn about and practice skills in personal banking, budgeting, income taxes and insurance. Students also study career related topics, such as career interests, job searches, resume writing, completion of job applications and preparation for job interviews.

Credit: 1/2 unit                      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: None

# WORLD LANGUAGES

## GRADUATION REQUIREMENTS

All students must earn 1 High School credit of World Language to graduate. 1 unit of High School credit is awarded to those students who take and pass the NYS Proficiency Exam in World Language at the end of 8th grade. Those students who either do not take or do not pass the Proficiency Exam must take and pass one year of World Language at the High School, unless they are “exempt” from this requirement by the Committee on Special Education.

## ADVANCED REGENTS DIPLOMA

In order to obtain an Advanced Regents Diploma, students must pass the NYS Regents Examination in the World Language of their choice. The Regents Exam is administered to students after Level 3.

### The Seal of Biliteracy

The Seal of Biliteracy is an award given by a school, district, or state in recognition of students who have studied and attained proficiency in two or more languages by high school graduation. This program will be guided towards courses that will prepare them for continuing education and employment. Students will also have the opportunity to earn a maximum of 12 college credits while still in high school.

## COLLEGE CREDIT

Opportunities to earn college credit in World Language while still in High School are available to those students who continue their studies through Level 4 or Level 5. See individual course descriptions for details.

## FRENCH, SPANISH – 7

The 7th grade World Language course is the first half of Level I. Its purpose is to increase vocabulary and structure necessary for simple communication in the World Language. Topics include: clothing, the body, shopping and transportation.

Credit: No Credit

Time: Every day, full year

Examination: Local

## FRENCH, SPANISH – 8

This course presents the second half of Level I and enforces listening, speaking, writing and reading skills introduced in Grade 7.

Credit: 1 unit

Time: 40 weeks (full year)

Examination: NYS Proficiency Exam

Prerequisite: 7th grade World Language

## FRENCH, SPANISH – 1

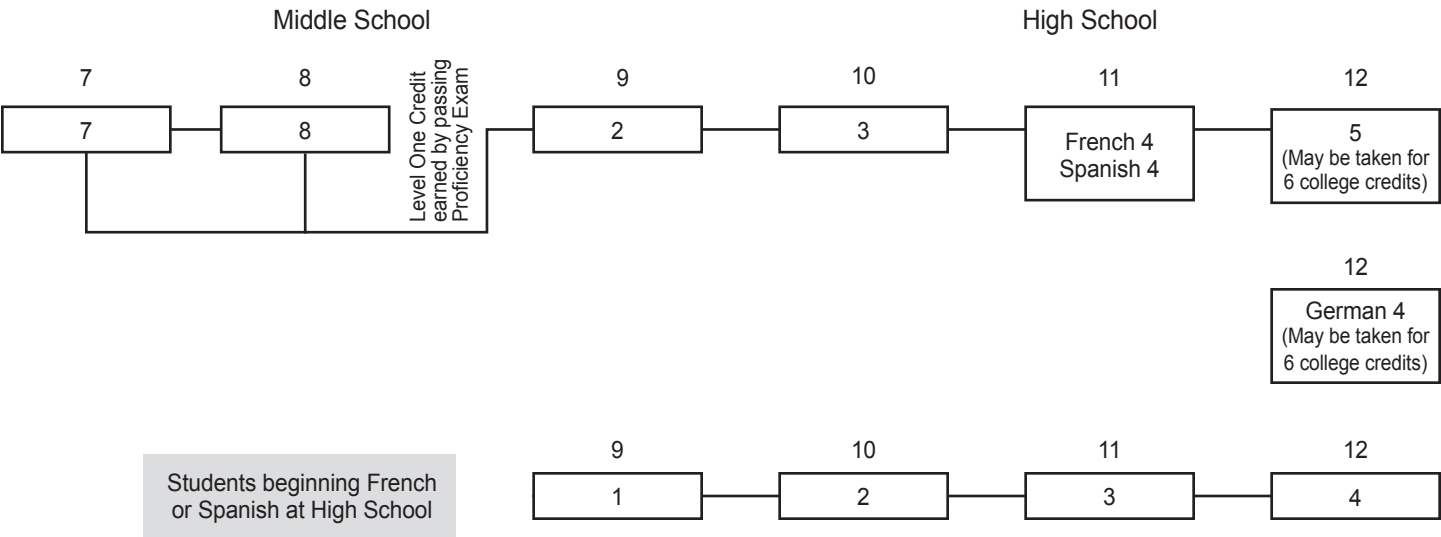
Level I of World Language study introduces listening speaking, writing and reading skills and exposes students to the world culture. Some topics include: family life, foods, recreation, sports and entertainment.

Credit: 1 unit

Time: 40 weeks (full year)

Examination: Local

Prerequisite: None





**FRENCH, SPANISH – 2**

World Language, Level 2 expands the listening, speaking, writing and reading skills introduced in Level 1. Students will learn to express themselves in regard to daily life, including: health, home, school, shopping, travel, etc. This course will broaden the student's vocabulary and increase his/her comprehensibility. Preparation begins for the NYS Regents Examination, which may be given at the end of the third year.

Credit: 1 unit Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Level 1 course and pass examination**

**FRENCH, SPANISH – 3**

An increased level of proficiency will be stressed in the areas of speaking, listening, reading and writing skills at the third level of world Language study. The main goal of the course is to prepare students for the successful completion of the NYS Regents Examination or other appropriate local assessment.

Credit: 1 unit Time: 40 weeks (full year)

Examination: Regents or Local

Prerequisite: **Pass Level 2 course and examination**

**FRENCH, SPANISH – 4**

This course is designed to increase proficiency in the World Language and to promote an appreciation and understanding of the culture, art and history of the people who speak that language. It will also be taught in the target language and include an overview of grammar topics.

Credit: 1 unit Time: 40 weeks (full year)

Examination: Local or Regents

Prerequisite: **Level 3 course and pass examination**

**GERMAN – 4**

This course is structured to promote fluency in the spoken and written language, as well as increase reading and listening proficiency. There will also be an emphasis on the culture, history and art of the target culture. The course follows the syllabus for NCCC's German 203 and 204 courses. Students may opt to take this course for college credit.

Credit: 1 High School unit/and up to 6 college credits for students electing to pay NCCC College Acceleration Program (CAP) tuition (approx. \$84/credit hour)

Time: 40 weeks (full year)

Examination: NCCC German 203 & 204 Exams

Prerequisite: **LEVEL 3, pass Regents Exam and teacher recommendation**

**FRENCH, SPANISH – 5**

This program is structured to promote fluency in the spoken and written language, as well as increase reading and listening proficiency. The course follows the syllabus for NCCC's French and Spanish 203 and 204 courses. Students may opt to take this course for college credit.

Credit: 1 High School unit /and up to 6 hours college credit for students electing to pay NCCC College Acceleration Program (CAP) tuition (approx. \$ 84/credit hour)

Time: 40 weeks (full year)

Examination: NCCC French/Spanish 203 & 204 Exam

Prerequisite: **LEVEL 4 course and pass examination**

**F.L.E.S.**

This unique program allows advanced high school World Language students the opportunity to teach World Language mini lessons to elementary students in a supervised setting.

Credit: 1/2 unit Time: 2 days per week (half year)

Examination: None

Prerequisite: **Successful completion of LEVEL 2 and current enrollment in Level 3 or higher.**

# PHYSICAL EDUCATION

## PHYSICAL EDUCATION (GRADES 9-12)

The Physical Education program is designed to provide students with the skills, knowledge and attitudes necessary to make wellness a priority as well as a commitment for a lifetime. Ninth and tenth graders will take class together and the curriculum's major emphasis is team sports and skill development. The eleventh and twelfth grade curriculum focuses on lifetime sports and activities. If possible, a swim elective will also be offered to all students.

Credit: 1/2 unit per semester Time: 20 weeks (equivalent)  
Examination: Local



upcoming games as well as creating games. All lessons are matched to meet NY State and National Standards.

Credit: ½ unit per semester Time: 20 weeks (half year)  
Examination: Local  
Required for Academy of Health Sciences students.

## AOHS CAP PHYSICAL EDUCATION 1

CAP PE 1 will help our students on their journey as a medical professional. Students will culminate the year with certifications such as first aid, CPR, and AED to use in the medical field of their choice. Students will also participate in new and different sports that are being introduced across the state. Course is for students in the third year of AOHS.

Credit: ½ unit per semester Time: 20 weeks (equivalent)  
Examination: Local  
Prerequisite: **AOHS PE 1 and AOHS PE 2**  
Required for Academy of Health Sciences students.

## AOHS CAP PHYSICAL EDUCATION 2

This course is geared toward students utilizing the skills taught in AOHS 1, AOHS 2 and CAP PE1. Classwork will be more independent than in years past but will also focus on lifelong skills such as communication, teamwork and collaboration. Students are able to contribute and elect on more units. The course is offered for 4th year students in the Health Sciences Academy.

Credit: ½ unit per semester Time: 20 weeks (equivalent)  
Examination: Local  
Prerequisite: **AOHS PE 1, AOHS PE 2 and CAP PE 1**  
Required for Academy of Health Sciences students.

## AOHS 1 PHYSICAL EDUCATION (Grade 9)

This class focuses on the fundamentals of team sports and utilizes those skills in game play. Students have the opportunity to directly apply information taught in their health class to their PE class to gain maximum results. Students are also introduced to outdoor and lifesaving skills. All lessons are matched to meet NY State and National Standards.

Credit: ½ unit per semester Time: 20 weeks (half year)  
Examination: Local

## AOHS 2 PHYSICAL EDUCATION (Grade 10)

This course is geared toward students utilizing the skills taught in Health and AOHS1 and apply that information in class as well as their food, sport and nutrition class. Students will see direct results on how their diet and activity can benefit them. Students are given the opportunity to explore new and

# HEALTH EDUCATION

## HEALTH (CAP)

A comprehensive overview of current health and wellness themes that will assist students in critical thinking and making well informed decisions regarding health related issues. Topic areas include drug misuse and abuse, nutrition and weight management, human sexuality, stress reduction, cancer prevention, cardiovascular disease and others. Successful completion of this course fulfills 1/2 credit of Health for a NYS Regents diploma and qualifies as a NCCC College Acceleration Program (CAP) course. This course follows the NCCC syllabus for Healthful Living.

Credit: 3 credits through NCCC Time: 20 weeks (half year)  
Prerequisite: **Health**

## HEALTH (GRADES 7 & 8)

New York State requires that a student take 1/2 unit of health prior to completion of grade 8. North Tonawanda offers this course to all of its students in grades 7 & 8. The main focus is on personal and emotional health, wellness and family life,

human growth and development, disease prevention including AIDS prevention, substance abuse prevention including alcohol and tobacco, death and dying, safety, first aid and survival.

Credit: None Total Time: 20 weeks (half year)  
Examination: Local 10 weeks (Grade 7)  
Prerequisite: None 10 weeks (Grade 8)

## HEALTH (GRADES 10)

New York State requires 1/2 unit of health at the High School level. In North Tonawanda most students take this course during either their sophomore year. It includes a study of topics such as mental health, sexuality and STD's including AIDS, substance abuse prevention including alcohol and tobacco, communicable diseases, first aid and survival, and nutrition and fitness.

Required for Academy of Health Sciences students.  
Credit: 1/2 unit Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: None

**EXERCISE SCIENCE**

This course is specifically geared for students who have a special interest in athletics and/or who may be interested in pursuing a career in sports medicine, physical therapy or other health related fields. A variety of teaching methods will be utilized including lecture, audiovisual aids, group work, projects, practical lab work and written class work.

Credit: 1/2 unit

Time: 20 weeks (half year)

Examination: Local

Prerequisite: None

\*Recommended for AOHS students

Qualifies as a NCCC College Acceleration Program (CAP) course.

# MATHEMATICS

**MATHEMATICS (Grades 7 - 8)**

*The information in this section reflects the requirements established by the Board of Regents and the implementation of the New York State Next Generation Learning Standards for Mathematics.*

**MATH 7**

In Grade 7, instructional time focuses on three areas:

(1) developing understanding of applying and proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; and (3) drawing inferences about populations based on samples. All students will take the Grade 7 NYS Next Generation Mathematics Test as well as a local final exam.

Credit: None

Time: 40 weeks (full year)

Examination: Local and Grade 7 NYS Next Generation Mathematics Tests

**ACCELERATED MATH 7\***

This is a course designed for students who have demonstrated better than average math ability and have the desire to accelerate in math. Accelerated Math 7 covers both the Math 7 and Math 8 curricula described on this page but in a single year. Students who are successful will be able to take Regents Algebra 1 (Common Core) in 8th grade. Additionally, this course will prepare students for the Grade 7 NYS Next Generation Mathematics Test.

Credit: None

Time: 40 weeks (full year)

Examination: Local and Grade 7 NYS Next Generation Mathematics Tests

Prerequisite: *Recommendation of 6th grade math teacher*

\*Some students may be enrolled in the Gifted math program taken at UB. Admission to this program is based upon performance on a screening exam. Students who begin this program in 7th grade can accumulate a total of 22 semester hours by the time they graduate. See your counselor for details. These students will still take the State Assessment for 7th grade math.

**MATH 8**

Instructional time will focus on three critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear

equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity and congruence, and understanding and applying the Pythagorean Theorem. All students will take the Grade 8 NYS Next Generation Mathematics Test as well as a local final exam.

Credit: None

Time: 40 weeks (full year)

Examination: Local and Grade 8 NYS Next Generation Mathematics Tests

Prerequisite: **Successful completion of Grade 7**

**ACCELERATED MATH 8**

(Regents Algebra 1)

Algebra 1 is based on the NYS Common Core Learning Standards. The major emphasis of this course will be seeing structure in expressions, arithmetic with polynomials and rational expressions, creating equations, reasoning with equations and inequalities, interpreting functions, and interpreting categorical and quantitative data.

Credit: 1 unit

Time: 40 weeks (full year)

Examination: Regents Algebra 1 (Common Core) Exam

Prerequisite: Completion of Accelerated Math 7 and

recommendation of 7th grade math teacher.

**HIGH SCHOOL MATH**

ALL HIGH SCHOOL MATH COURSES REQUIRE A TI-83 PLUS OR TI-84 PLUS GRAPHING CALCULATOR

**PRE-ALGEBRA**

This Next Generation based math class is designed for Freshmen to prepare them for the Regents Algebra Next Generation math course that they will be taking next year. It will require students to take notes, study notes, do daily homework assignments, take unit tests, and take a cumulative local exam at the end of the year. Topics covered include: problem solving, explaining mathematical reasoning, numbers and operations, equation solving and graphing.

Credit: 1 unit

Time: 40 weeks (full year)

Examination: Local

Prerequisite: **recommendation of previous teacher; first time freshmen only may be enrolled in this course.**

**ALGEBRA REGENTS**

(Also HONORS ALGEBRA REGENTS—  
see requirements for honor's sections)

This is the first course for the State Regents Mathematics requirement for graduation given in North Tonawanda. Passing the Algebra Regents Exam is necessary for a New York State Regents Diploma. This course will require students to take notes, read a math text, study notes, take unit tests, and take the cumulative state exam at the end of the year. Common Core State Standards topics include: Linear Equations and Functions, Linear inequalities, Systems of Linear Equations and Inequalities, Word Problems, Exponents and Exponential Functions, Polynomials, Factoring, Quadratic Equations and Functions, Rational Expressions and Functions and Data Analysis. Enrollment in Algebra Lab is a requirement for this course. The material taught in lab will be part of the course grade.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: Regents  
Prerequisite: **recommendation of previous teacher/  
successful completion of Math 8, previous enrollment in  
Pre-Algebra.**

**GEOMETRY REGENTS**

(Also HONORS GEOMETRY REGENTS—  
see requirements for honor's sections)

This is the second sequence in the State Regents Mathematics Curriculum. It requires students to take notes, study notes, take unit tests, and take a cumulative exam at the end of the course. The course will cover all key ideas of the New York State and Common Core/Next Generation standards. Topics covered include: Congruence, Proof, Transformations, Rigid Motions, Area and Volume and Constructions; Similarity and Trigonometry; Extending to Three Dimensions; Connecting Algebra and Geometry through Coordinates; and Circles with and without Coordinates.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: Regents  
Prerequisite: **Passing both the Algebra Regents course and  
the NYS Regents Exam in Algebra.**

**INTRO TO ALGEBRA 2**

This is an introductory course to help students prepare for the Regents Algebra 2 course or college algebra. It will require students to take notes, study notes, do daily homework assignments, take unit tests, and take a cumulative local exam at the end of the year. New York State standard topics include factoring, functions, fractional equations, complex fractions, exponents, logarithms, radicals, and continued use of the TI-83 Plus/TI-84 Plus graphing calculator.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: **Passing the Regents Geometry course/  
teacher recommendation**

**ALGEBRA 2 REGENTS**

This is the third course for the New York State Regents Mathematics Sequence. The course will require students to take notes, study notes, take unit tests, and take the Common Core Regents exam in June. Successful completion of this course and the exam will satisfy the math requirement necessary to earn an Advanced Regents Diploma. Common Core State Standard topics include: solving and analyzing polynomial, rational, radical, exponential, and logarithmic functions, trigonometry, series and sequences, probability, and statistics.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: Regents  
Prerequisite: **Passing both the Regents Geometry Course  
and Regents Exam**

**SAT MATH/ENGLISH PREPARATION**

This will be a semester course preparing students for the SAT Examinations. Test taking tips and common questions will be explored. The semester will be divided into two 10-week sessions, one presented by the math department and one by the English department.

Credit: 1/2 unit                      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: **Passing both the Algebra Regents course and  
Regents exam and passing English 9.**

**PHYSICAL MATH**

This course offers a hands-on approach to learning the trigonometric, geometric, statistical, and algebraic skills necessary for success in the Tech-Prep program. It also makes an ideal course for the student intending to attend 2-year college.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: **11th Graders who have passed the Algebra  
Regents course and exam, seniors may enroll by teacher  
recommendation only.**

**INTRODUCTION TO STATISTICS**

This course is run in conjunction with NCCC Introduction to Statistics course. Introduction to statistical concepts include descriptive statistics, basic probability rules, conditional probability, probability distributions, estimation of parameters, hypothesis testing using one or two samples, correlation and regression. Students may choose to double up with this and another math class. This is a course that is required for most 4 year college degrees.

Credit: 1 unit /3 credits thru NCCC    Time: 40 weeks (full year)  
Examination: Local  
Prerequisites: **For both High School and College Credit:  
Passing Algebra Regents course and Regents exam  
and at least one other level regents course or teacher  
recommendation.**



## SENIOR MATH TOPICS

This course provides review of a large range of topics designed to prepare the student for a credit bearing introductory course in college mathematics. Attention will be given to practical mathematical techniques used in both commerce and everyday life. Topics include: operations with real numbers, linear equations and inequalities, operations on polynomials, rational expressions, algebraic fractions, quadratic equations, roots and radicals, descriptive statistics, simple interest, compound interest, loans and other topics. It also prepares the student for college algebra and college placement exams.

Credit: 1 unit Time: 40 weeks (full year)

Examination: Local

Prerequisite: **(Seniors only) who have passed Algebra Regents, Geometry or Physical Math. This course is NOT meant for students who have passed Algebra 2 Regents.**

## COLLEGE PRE CALCULUS A

This course is run in conjunction with NCCC MAT116 Pre-Calculus Mathematics course. While there is not a state exam from Albany for this course, it is every bit as rigorous and demanding as the other Regents Mathematics Courses. Topics include: the Complex Plane, Relations and Functions, topics in solid Geometry, Trigonometry, Trigonometric Form of Complex Numbers, Exponential & Logarithmic Functions, Analytic Trigonometry and Geometry, beginning work with Derivatives as well as many other functions.

Credit: 1 unit /4 credits thru NCCC Time: 40 weeks (full year)

Examination: Local

Prerequisites: **For High School Credit: Passing the Regents Algebra 2 course and regents exam. For College Credit: Passing the Regents Algebra 2 Course and earning a minimum grade of 75% on the Algebra 2 Regents exam.**

## ADVANCED PLACEMENT CALCULUS

This is the Level 5 Advanced Placement AB Course. Topics include: Functions; the derivative; applications of the derivative and integral calculus. In addition to a local exam, students will take the Advanced Placement AB Calculus examination for college placement credit.

Credit: 1 unit Time: 40 weeks (full year)

Examination: Local and AP Calculus exam

Prerequisite: **Passing Pre-Calculus, teacher recommendation**

## COMPETITIVE MATHEMATICS

This course is designed to prepare students for various regional mathematics contests and examinations such as American Mathematics Competitions (AMC), New York State Mathematics League (NYSML), and/or NYC Interscholastic Math League (NYCIML). Students in the course will learn competition specific problem-solving techniques, push their limits in mental math as calculators are generally not allowed in competitions, take practice competition exams, and create and host an in-district math competition as the final class project. Students enrolled in this course should be motivated to extend the topics discussed in their Regents level math classes.

Credit: 1 unit

Examination: Local exam/project

Prerequisite: **Passing the Algebra Regents course and exam**

## Requirements for Students to enter Honor's Math Sections:

### Honors Algebra Regents:

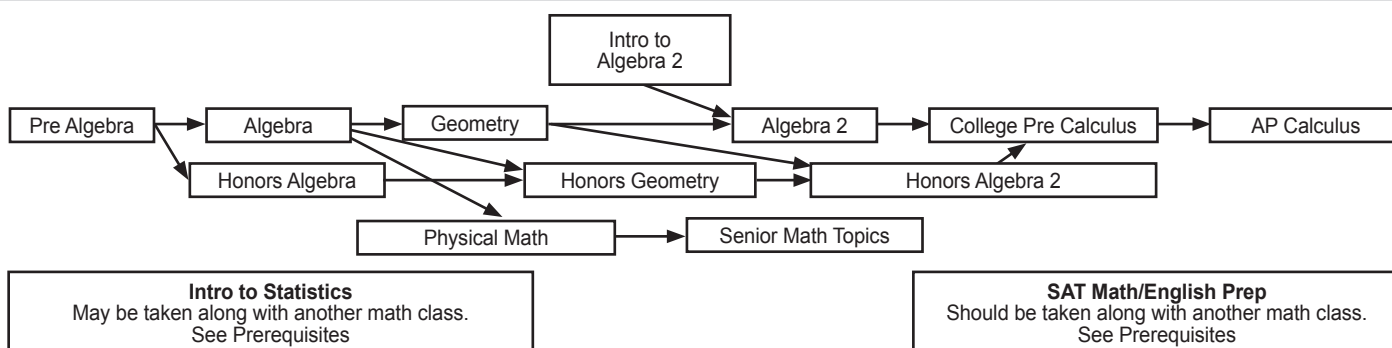
- Passing Accelerated 8th grade math with at least an 85 final average OR achieving a 3 or 4 on the 8th grade math assessment
- Recommendation from 8th grade math teacher
- 92% attendance rate in 8th grade (in school 165/180 days)

### Honors Geometry Regents:

- Achieving mastery grade on Algebra Regents exam (>85)
- Recommendation from Algebra Regents teacher
- 92% attendance rate in Algebra Regents (In school 165/180 days)

### Honors Algebra 2 Regents:

- Final grade in Geometry Regents course (must be >90)
- Course recommendation from Geometry Regents teacher
- 92% attendance rate in Geometry Regents (In school 165/180 days)





North Tonawanda City School District is achieving excellence in Arts Education through a steadfast commitment to our Fine Arts Department. Through the Visual/Media and Performing Arts programs, students are not only able to earn the graduation required credit in Fine Arts, but can explore many avenues under our dedicated Fine Arts expert faculty.

## **VISUAL/MEDIA ARTS**

### **ART IN THE MIDDLE SCHOOL**

#### **GENERAL ART 7, 8**

The art curriculum for seventh and eighth grade is designed to nurture each student's potential while developing awareness, sensitivity, perception and appreciation of visual and media arts.

Using the concepts listed above students will be encouraged to use and develop their innate creativity to produce drawings, paintings, prints, sculpture, ceramic pieces, craft items and computer graphics. All students shall be provided instruction designed to enable them to achieve, by the end of grade 8, State intermediate learning standards in the arts, including one-half unit of study in the visual arts.

Implementing the new 2018 visual and media arts standards students will also explore; creating, presenting, responding and connecting as outlined by New York State.

Credit: 0                                      Time: 10 weeks  
Examination: Local  
Prerequisite: None

#### **STUDIO IN ART**

Studio in Art at the middle school level is an introductory and basic art course with a student earning high school credit in art at the middle school level. This course explores the major areas of art and art history. The principles of art and the elements of design are stressed so that students learn how to create more successful artwork. This course includes working in drawing, painting, three dimensional art, computer generated art and collage. This course is a prerequisite for advanced courses and continuation of Art Sequence courses.

Credit: 1 unit                                      Time: 5 periods per week, full year  
Examination: Local  
Prerequisite: Teacher recommendation

### **ART IN THE HIGH SCHOOL**

One unit of credit in the Arts is required for high school graduation.

#### **MAJOR SEQUENCE**

An Art Sequence for Regents credit consists of the completion of Studio in Art plus two more units of art. An Art Sequence consisting of any three units of art fulfill the requirements for a school diploma. A five credit sequence in Technical Drawing can be achieved by including DDP and Studio in Art plus three other credits in Technical Drawing.

#### **STUDIO IN ART**

This is an introductory and basic art course which explores the major areas of art and art history. The principles of art and the elements of design are stressed so that students learn how to create more successful artwork. This course includes working in drawing, painting, three-dimensional art, computer generated art and collage. This course is a prerequisite for advanced courses and continuation of Art Sequence courses.

Credit: 1 unit                                      Time: 5 periods per week, full year  
Examination: Local  
Prerequisite: None

#### **STUDIO DRAWING AND PAINTING**

This course further explores the concepts learned in Studio in Art. Students continue to learn the elements and principles of art and design as they apply to the development of drawing skills. As the course progresses, students will also explore the history of art through a variety of lessons. They will also begin to prepare work for their portfolio, which may be needed as part of the college application. Experience will be given in a variety of media beginning with dry, (pencil and charcoal) developing basic drawing skills; working towards wet (acrylic and watercolor paint).

Credit: 1 unit                                      Time: 5 periods per week,  
Examination: Local                                      (full year)  
Prerequisite: **Studio in Art**



## STUDIO ADVANCED DRAWING AND PAINTING

Students will build on the skills that they developed in previous art courses and continue growing both technically and conceptually as artists. Students will develop proficient skill in the use of media such as charcoal, watercolor, and acrylic painting. Experimental and self-study will also be explored and encouraged. The finished works will further the student's understanding of the elements and principles of art and use and application of a variety of media on an advanced level. All work will be included in the student's portfolio and may be used as part of the Advanced Placement Portfolio.

Credit: 1 Unit                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: **Studio in Art, Drawing & Painting**

## STUDIO ADVANCED PAINTING

After completion of Drawing and Painting, students will study the advanced Techniques used with a wide variety of different medium. This included painting, collage, and printing. Students will develop proficient skill in the use of media such as watercolor, oil paint and acrylic painting.

Experimental and self-study will also be explored and encouraged. The finished works will further the student's understanding of the principles and elements of art and use and application of a variety of media on an advanced level.

All work will be included in the student's portfolio and may be used as part of the Advanced Placement Portfolio.

Credit: 1 Unit                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: **Studio In Art, Drawing & Painting**

## COMPUTER GRAPHICS

Computer Graphics courses provide students with the opportunity to explore the ways in which computers can produce visual imagery that communicates information and ideas effectively to multiple audiences using a variety of media and formats. Course topics may include principles and elements of design, image creation, image manipulation and image types.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: **Studio in Art** (*unless you are Participating in The Academy of Information and Technology in which case you must take Principles of Information Technology, Computer Systems.*)



## STUDIO CREATIVE CRAFTS

This course introduces the foundations of design as students investigate a variety of contemporary, historical and multicultural crafts. Examples of activities that students will become involved in may include: textiles, jewelry, painting, printmaking, ceramics, glass and metal.

Credit: 1/2 unit                      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: Studio in Art

## DESIGN DRAWING FOR PRODUCTION

The style of presentation for this course evolved from the way industrial, engineering and architectural firms solve their design problems and communicate their solutions. The syllabus emphasizes critical thinking, creative problem-solving and the decision-making processes by requiring the student to examine past solutions, learn technical drawing processes, experience design techniques and become critically active in the evaluation of his/her work and that of others. The students will also be introduced to design problems that real life engineers and architects are involved with. This includes skyscraper design/technical illustration and site plan development. The course is designed with the New York State Standards in Art and fulfills the 1 credit of Art needed for high school graduation. Some purchase of equipment is required.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: None

## INDUSTRIAL DRAWING

In general, this course is designed to introduce the student to careers in design and drafting. Such careers include Graphic Design, Architecture, Toy Design, Landscape Architecture, Civil Engineering and Interior Design. Students will produce drawings and blueprints that would be found in each of these fields.

Credit: 1-unit                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: Design Drawing for Production

## ARCHITECTURE

This class builds upon the drafting and problem-solving skills learned in Design Drawing for Production and introduces the students to the areas of architecture, blueprint development, model building and architectural rendering. Students will develop and work on drawings used in residential housing construction as well as learn model making skills, architectural history and construction methods.

Credit: 1 Unit                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: Design Drawing for Production

## STUDIO CERAMICS

This course is designed to involve students with creative problem-solving, using clay as the medium. Students will learn to handle clay, using hand-building methods, such as pinch, coil, slab, drape and mold. Glazing and decorating techniques will be taught. Students will also learn ceramic history, criticism and aesthetics.

Credit: 1/2 unit                      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: Studio in Art



## STUDIO ADVANCED CERAMICS

This course develops creative ability and artistic skills through manipulation of clay. Students are taught to develop quality in craftsmanship and design through an understanding of the craft. A study of design in ceramic works is made in conjunction with actually working in clay. Functional pottery projects such as cups, bowls and teapots will be completed in this course. Some purchase of materials may be required.

Credit: 1/2 unit                      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: **Ceramics I**

## FINE ARTS APPRECIATION

The course is designed for students who wish to gain a historical perspective as well as be able to make critical judgments about specific art works. It is set up to help students gain knowledge and understanding needed to develop abilities to make aesthetic decisions.

Students will become acquainted with the principles and elements of art by means of various hands on creative activities to add to their understanding of the how and why of art. Field trips will be arranged whenever possible as a teaching tool to illustrate the importance and influence of art in our lives.

Credit: 1/2 unit                      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: None

## AP STUDIO ART

A college level course designed for the student who is seriously interested in the practical experience of art and has demonstrated exceptional ability in previous art courses. AP Studio Art is not based on a written examination; instead students submit a portfolio for evaluation at the end of the school year.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: AP, and each student is required to complete a portfolio and group project under the AP specifications.

Prerequisite: **Completion of a sequence in Fine Art** (*Studio in Art, Drawing and Painting, Advanced Drawing and Painting and/or Painting Technique*), presentation of an art portfolio demonstrating developed skills and ability and teacher recommendation.

## PHOTOJOURNALISM

This course is designed to provide students with beginner to advanced skills in several areas of publication development. Students will learn skills in theme layout, content and coverage, business related information, typography, editorial duties, photography and digital imaging that is essential to photojournalism. Students will gain an understanding of Adobe Photoshop, Publisher and designing the yearbook pages and spreads.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: Studio in Art

# PERFORMING ARTS

## MUSIC AT THE MIDDLE SCHOOL LEVEL

### GENERAL MUSIC 7,8

In seventh and eighth grade, students who do not participate in Band or Chorus take 10 weeks of General Music. The Middle School portion of the K-12 General Music curriculum builds on prior knowledge of the elements of music using popular music. Through the implementation of the NYS Standards for the Arts students demonstrate music concepts learned through active participation, performance, creation and analysis of music. A strong focus is placed on creating music using current music technology including Garage Band and other applications.

Credit: 0

Time: 10 weeks

Examination: Local

### MIDDLE SCHOOL CHORUS

Chorus at the middle school level is a full year, elective course that meets for one period daily. Chorus is open to any interested student in grades 7 and 8. Chorus members develop a knowledge of different song styles, forms, composers, arrangers, and vocal techniques. They learn to understand conducting gestures, their own vocal capabilities, and the value of teamwork in a musical ensemble. They develop skills in reading music, as well as proper voice production and diction. Public performances are held at least twice a year where students showcase the learning and work that has been achieved in daily rehearsals. Students are required to attend and participate in all performances.

Credit: 0 Time: 40 weeks (full year)

### MIDDLE SCHOOL BANDS

Band at the middle school level is a full year, elective course that meets one period daily. Band is open to any interested student in grades 7 & 8 (previous study of a band instrument is suggested). Band members will develop knowledge of different styles and musical genres throughout the wind band repertoire. The "lab" experience for band is a weekly rotating lesson where students learn techniques and skills necessary to excel at their instrument. The students will work together to build self-confidence and teamwork as they work together for a common goal. The public performances of the band are a showcase for the work done within these daily rehearsals. Students are required to attend all performances.

Credit: None

Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Teacher recommendation**



## MUSIC AT THE HIGH SCHOOL

### MAJOR SEQUENCE

A major three-unit sequence in music may be achieved by successfully completing a combination of two years of a performing ensemble and one year of a music theory course. A five-unit sequence is also available, by successfully completing three years in a performing ensemble and two years of music theory.

### THE HIGH SCHOOL CHORUSES

The Choral Department at the high school prides itself by offering a place for anyone who wants to sing. Our ensembles are both talented and disciplined. Every group rehearses daily and performances throughout the year showcase the work accomplished in class. Students are required to attend all performances. Singers are encouraged to extend their musical skills outside of school by participating in All-County, NYSSMA Solo and Ensemble Festivals, National Music Festivals, solo competitions, local community ensembles, as well as private voice instruction.

**TREBLE TONES**

(High School General Women's Chorus)

This is the High School's General Chorus and is intended for those females who have no previous experience in choral singing at the high school level or have chosen to participate in a non-auditioned singing ensemble. All freshman girls will be placed in Treble Tones. Students will continue to develop knowledge in song styles, forms, composers, vocal techniques, sight-reading, and gain a solid foundation in vocal music. There are voice lessons available for students who choose to be involved in outside vocal experiences such as All-County and NYSSMA. Members of Treble Tones will demonstrate their developing knowledge of, understanding, and skill in choral singing at required public performances, at least twice a year.

Credit: 1 unit

Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Teacher recommendation****HIGH SCHOOL CHORALE**

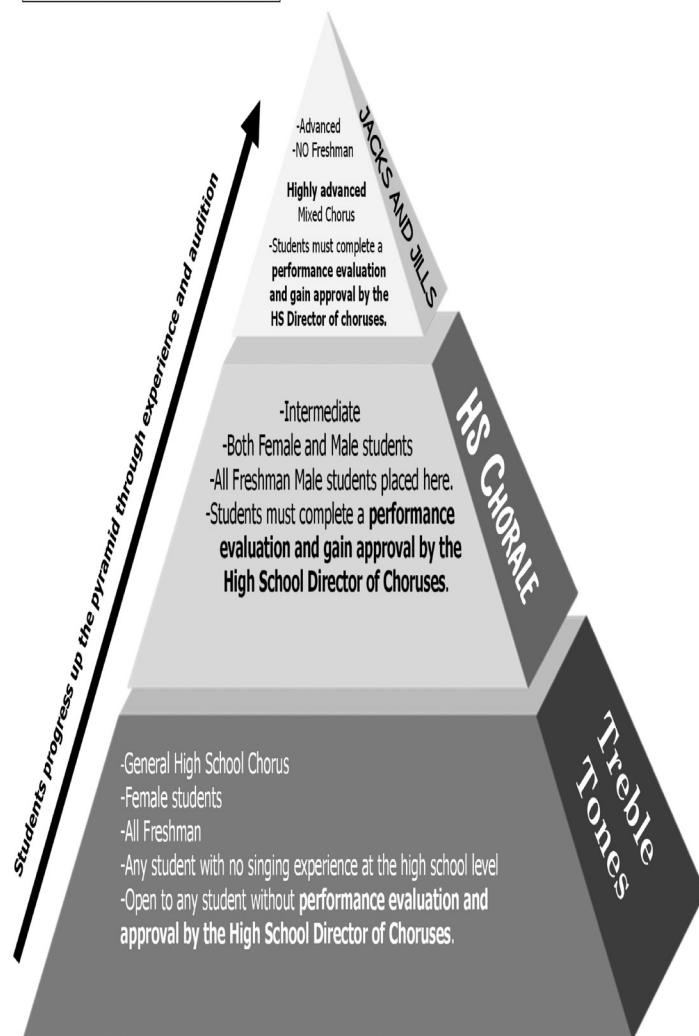
(Intermediate Mixed Chorus)

This is the High School's Intermediate Chorus and is intended for those males who have no previous experience in choral singing at the high school level and female singers who have successfully completed a performance evaluation. All freshman boys will be placed in HS Chorale. Members of Chorale must demonstrate a higher degree of choral singing skills, techniques, understandings, and a sense of dedication and commitment to be considered for the group as well as remain a member. Students will continue to develop knowledge in song styles, forms, composers, vocal techniques, sight-reading, and gain a solid foundation in vocal music. There are voice lessons available for students who choose to be involved in outside vocal experiences such as All-County and NYSSMA. Members will demonstrate their developing knowledge of, understanding, and skill in choral singing at required public performances, at least twice a year.

Credit: 1 unit

Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Teacher recommendation****NTHS CHORAL ENSEMBLES****JACKS AND JILLS**

(High School Advanced Mixed Chorus)

This mixed ensemble is intended for an advanced choral singer. Students must show a solid foundation in vocal music as well as all aspects of High School Chorus Level 1 to gain membership in this group. The ensemble rehearses daily with a weekly music lab for all students. The lab experience is a lesson where students learn the skills necessary to excel at vocal performance. Members of Jacks and Jills must demonstrate a higher degree of choral singing skills, techniques, understandings, and a sense of dedication and commitment to be considered for the group as well as remain a member. Jacks and Jills will demonstrate their developing knowledge of, understanding, and skill in choral singing at public performances, at least twice a year. Students are required to attend all performances. Membership is by teacher/counselor recommendation, performance evaluation and approval by the High School Director of Choruses.

Credit: 1 unit

Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Teacher recommendation****NTHS INSTRUMENTAL ENSEMBLES**

Instrumental Ensembles at North Tonawanda High School provide opportunities to study wind and percussion instruments. Students are encouraged to continue the study of their instrument at the high school level, by participating in one of the following curricular ensembles. All students are encouraged to participate in the Musical Pit Orchestra, Pep Band or North Tonawanda High Jazz Ensemble. These ensembles are extra-curricular and rehearse and perform outside of school.



**CONCERT BAND**

(High School Band—Level 1)

The Concert Band is a unique mixture of musicians from all grade levels at NTHS. This band provides an excellent opportunity for participants to refine their musical skills while continuing to make music at a high level. The Concert Band performs music from the traditional band and wind repertoire, representing many genres and stylistic periods. The bands rehearse daily. The “lab” experience for band is a weekly lesson where students learn skills necessary to excel. The public performances of the bands are a showcase for the work done within the daily rehearsals. Students are required to attend all performances. All-County participation is open to all recommended students. Students are encouraged to participate in outside of school musical activities such as community bands and jazz groups, solo festivals and private instruction on their instrument. All freshmen should expect to be placed into Concert Band.

Credit: 1 unit Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Teacher recommendation****WIND SYMPHONY**

(High School Band—Advanced)

The NTHS Wind Symphony consists of the top level wind and percussion players at the school and is dedicated to presenting the finest repertoire from all musical periods to its audiences. This group draws from contemporary and historical wind works, orchestral transcriptions, as well as standard band literature. The ensemble rehearses daily with a weekly music “lab”. The “lab” is a weekly lesson where students learn skills necessary to excel on their particular instrument. A number of public performances are scheduled outside of the school day and are required for all participants. Students are encouraged to extend their musical skills by participating in All-County, NYSSMA solo/ensemble festivals, national music festivals, solo competitions, local community bands and jazz groups and private instruction. Participation in this ensemble is based on teacher recommendation, performance evaluation, and high school director approval. Freshmen placement in the Wind Symphony will be very limited and at the discretion of the needs of the ensemble.

Credit: 1 unit Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Noted above****MUSIC THEORY I**

This course is an introduction to the mechanics of music. Students will learn the basic principles of music composition and ear training. Some time will also be spent on beginning conducting techniques and music history. This course is recommended for students who are planning advanced studies in music, and is a requirement for a major sequence in music.

Credit: 1 unit

Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Ensemble Experience and/or Teacher Recommendation****MUSIC THEORY II**

This course is a continuation of Theory I. Advanced composition and analysis will be emphasized. Also covered will be orchestration, music history, aural skills, advanced conducting skills and piano skills. Independent study will also be provided for those students working at the Music Theory III level.

Credit: 1 unit

Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Successful Completion of Music Theory I as well as recommendation of Theory I Teacher****MUSIC THEORY III**

A continuation of Theory II, with an emphasis on advanced composition and analysis. Students have the option to take the Advanced Placement Music Theory Exam.

Credit: 1 unit

Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Successful completion of Music Theory II as well as recommendation of Theory II teacher.****MUSIC IN OUR LIVES**

This course will fulfill part of the high school Fine Arts credit necessary for graduation. The course will develop an awareness and appreciation of music through the study of performers, composers, and major musical works in various different styles of music. Students study the role of music in American culture and the impact of the Fine Arts in Western and non-Western cultures. A large portion of the course deals with developing listening skills and analysis.

Credit: ½ unit

Time: 20 weeks (half year)

Examination: Local

Prerequisite: None

**THEATRE ARTS 1**

NTHS offers an experience in theatre for all high school students. Our English Department has this full year elective course that explores all aspects of theatre. Interested students should see the course listing under English.

# SCIENCE

## SCIENCE AT THE MIDDLE SCHOOL

### SCIENCE 7

Science 7 is a course in PHYSICAL SCIENCE intended to meet the NYSSLS. Science 7 covers topics in Chemistry and Physics including Measurement, Structure of Matter, Chemical Reactions, Motion and Energy and Electricity and Magnetism.

Credit: None                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: None

### SCIENCE 8

Science 8 focuses on Life Science aligning with the NYSSLS. Major units of study include Metric Measurement, Characteristics of Living Things and Classification, Cells and Cell Processes, Human Body Systems, Genetics and Evolution, Human Impact and Ecology. Emphasis is on laboratory work and the use of science as engineering practices in problem solving. The curriculum fulfills the NYSSLS requirements. This course also includes preparation for the NYS Performance and Written Assessment in Science.

Credit: None                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: None

### GRADE 8 ACCELERATED SCIENCE: Regents Living Environment

This course of study focuses on the living world. Students will learn about important biological concepts such as the living cell, human physiology, reproduction, genetics, and ecology. Students are required to complete 1200 minutes of laboratory experiences and submit satisfactory reports to be considered eligible to take the Regents exam.

Credit: 1 Unit                      Time: 40 weeks (full year)  
Examination: NYS Regents  
Prerequisite: **Teacher recommendation**

## SCIENCE AT THE HIGH SCHOOL

Regents Diploma - 3 science credits representing both the Living Environment and the Physical Setting with one passing Regents exam score.

Advanced Designation Regents Diploma - 3 science credits representing both the Living Environment and the Physical Setting, with a passing Regents exam grades in each.

### CORE COURSES

(Regent's Courses)

- Living Environment: Biology
- The Physical Setting: Earth Science
- The Physical Setting: Chemistry
- The Physical Setting: Physics

### ADVANCED PLACEMENT COURSES

(College Credit Courses)

- AP Biology
- AP Chemistry
- AP Physics C Mechanics
- AP Physics C Electricity & Magnetism

### ELECTIVE COURSES

(Local Courses)

- Introduction to Botany/Horticulture
- Environmental Issues
- Human and Natural Disasters
- Forensics
- Human Biology

### THE LIVING ENVIRONMENT: BIOLOGY

This course is designed to increase the students' understanding of the living world in which they live. Students will be able to explain and contrast important biological concepts such as the living cell, human physiology, reproduction, genetics, and ecology. Students will become adept at generating and running scientific experiments, and must have successfully completed 30 laboratory experiences (1200 minutes) with satisfactory reports on file to be eligible to take the Regents exam.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: NYS Regents                      8 meetings/6 day cycle  
Prerequisite: **Science 8**

### THE PHYSICAL SETTING: EARTH SCIENCE

This course presents a modern view of Earth Science, including the study of Astronomy, Meteorology, Climatology, and Geology. Major concepts studied include: the conservation of mass-energy; the sun earth energy system; dynamic equilibrium; cyclic changes; the principle of uniformitarianism—the present is the key to the past and future. Critical to understanding science concepts is the use of scientific inquiry to develop explanations of the natural phenomena. Students must have successfully completed 30 laboratory experiences (1200 minutes) with satisfactory reports on file to be eligible to take the Regents exam.

Credit: 1 unit                      Time: 40 weeks, full year,  
Examination: NYS Regents                      8 meetings/6 day cycle  
Prerequisite: **Science 8**

### THE PHYSICAL SETTING: CHEMISTRY

This NYS Regents course deals with the study of matter and its properties. The thrust of the course is the hands-on investigations approach to learning through laboratory experiences. The student will spend an additional 2 days per 6 day cycle in the laboratory. The course is primarily intended for college bound students. There is a minimum of 30 lab periods required to be able to write the final exam in June.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: NYS Regents  
Prerequisite: **Minimum 80% course average and Regents Examination Scores in Living Environment Biology, Algebra and the Physical Setting of Earth Science (if taken).**



**THE PHYSICAL SETTING: PHYSICS**

This course is open to any student who meets the prerequisite. This course is a survey course of many physics topics including Mechanics, Waves, Electricity and Magnetism. The focus of the class is on problem solving skills, personal responsibility and development of healthy work habits. Students spend an extra 2 days per 6 day cycle in the laboratory.

Credit: 1 unit                      Time: 40 weeks (full year)  
 Examination: NYS Regents  
 Requirement: **One year of Integrated Algebra**

**THE PHYSICAL SETTING: HONORS CHEMISTRY**

This course presents a modern view of chemistry designed for the college bound student who plans to major in science and or is planning to take AP Biology and or AP Chemistry.

This course and lab differ from Regents Chemistry in the depth of topics covered, including a stronger emphasis on mathematical formulation.

Credit: 1 unit                      Time: 40 weeks (full year)  
 Examination: NYS Regents  
 Requirement: 85% or higher on both the Living Environment Regents exam and Integrated Algebra Regents Exam

**AP PHYSICS C ELECTRICITY & MAGNETISM**

This course is an option for students that have successfully completed AP PHYSICS C MECHANICS. It is equivalent to a second semester college course in Static Electricity, Electric Circuits and Magnetism.

Credit: 1 unit/ possible college credit  
 Time: 40 weeks (full year)  
 Examination: AP and Local exam  
 Prerequisite: **Pre-Calculus and/or teacher recommendation**

**AP BIOLOGY**

AP Biology is a college level course designed for the science-oriented student who has demonstrated exceptional ability in previous science courses. Students will take both the Advanced Placement and local exam. The course goes into great detail on concepts such as evolution, biological systems, genetics and ecology. AP Biology is a lab based course where students do a great deal of formulating their own questions and then developing a lab to answer those questions.

Credit: 1 unit/possible college credit  
 Time: 40 weeks (full year)  
 Examination: AP and local exam/project  
 Prerequisite: **Living Environment, Regents Chemistry and teacher recommendation**

**HUMAN BIOLOGY (CAP)**

This course is a College Acceleration Program (CAP) course that aligns with NCCC's BIO 117. A survey course designed to meet the needs of a college introductory course in anatomy and physiology of the human body. Those preparing for a health oriented career or desire basic knowledge in structure and function of the human body will find this course both

interesting and stimulating. Topics may include the cell, DNA, the body as a whole, biomechanics, integration and control, exchange and transport, metabolism and reproduction. All students will earn high school credit for the course and have the option to earn 4 college credits.

Credit: 1 High School unit/4 NCCC credits  
 Time: 40 weeks (full year)  
 Examination: Local exam  
 Prerequisite: Passing of **LIVING ENVIRONMENT** course and one (1) **PHYSICAL SETTING Science and/or teacher recommendation**

**FORENSICS**

Introduces students to different aspects of forensic science, which involve all areas of science, with an emphasis on critical thinking and complex reasoning. Topics include: observation/ evidence collection techniques, trace evidence analysis, hair and fiber analysis, determining the cause and time of death, fingerprinting, DNA evidence, toxicology, hand writing analysis, and blood spatter analysis. In addition to classroom instruction, there is a separate laboratory component to the course which will include case studies and an opportunity to perform many of the laboratory techniques that are discussed in class.

Credit: 1 unit                      Time: 40 weeks (full year)  
 Examination: Local Exam  
 Prerequisite: Passing **LIVING ENVIRONMENT** and one (1) **PHYSICAL SETTING Science and/or teacher recommendation**

**AP CHEMISTRY**

This is a college level course designed for students who have demonstrated exceptional ability in previous science courses, where they investigate the fundamental concepts of chemistry in great depth. Labs and related activities will require precision and accuracy.

Credit: 1 unit                      Time: 40 weeks (full year)  
 Examination: AP and Final Project  
 Prerequisite: **Honors Regents Chemistry and Regents Algebra 2/Trigonometry, and teacher recommendation**

**AP PHYSICS C MECHANICS**

This can be either a first year or second year physics course (following Regents Physics). The course gives in-depth treatment to the topic of Mechanics and is Calculus based. Successful completion of the course may grant the student up to 5 college credits in University Physics. The principal focus of this course is the application of mechanics concepts to problem solving. Good mathematical skills and diligent work habits are essential for success. Critical thinking is promoted and laboratory investigations are an ongoing part of the course.

Credit: 1 unit                      Time: 40 weeks (full year)  
 Examination: Advanced Placement  
 Prerequisite: **PRE-CALCULUS and/or teacher recommendation**

**ENVIRONMENTAL ISSUES**

This is a full year science elective focusing on issues surrounding current science policy, conservation, and ecology. Units of study include Biodiversity, Populations, Energy Sources, Urbanization, Global Warming, and Pollution.

Credit: 1 unit Time: 40 weeks (full year)

Examination: Local Exam

Prerequisite: **Living Environment** and one (1) **Physical Setting Science** and/or **Teacher Recommendation**

**INTRODUCTION TO BOTANY/HORTICULTURE (CAP)**

Botany is a full year science elective for students interested in studying plants. The units of study are Plant Diversity, Composting & Trees, Anatomy & Physiology, Food, Beverage & Health, Reproduction and Ecology. Students will use the grounds of the high school campus to identify wild flowers and trees and to learn the basics of composting. Botany is designed to be a hands-on course incorporating many projects and laboratory activities. This course may also be taken as a CAP course.

The College Acceleration Program (CAP) course aligns with NCCC's HRT 100. Students may take this course for 3 college credits (tuition paid to NCCC at a reduced rate) and for high school credit.

Credit: 1 unit/3 NCCC credit Time: 40 weeks (full year)

Examination: Final Project

Prerequisite: **Living Environment** and One (1) **Physical Setting Science** and/or **teacher recommendation**

**HUMAN AND NATURAL DISASTERS**

This full year elective covers such topics as: earthquakes, volcanic eruptions, tsunamis, hurricanes, meteorite impacts, and global climate change. It explores the physical causes, effects and social consequences of such events. Recent natural disasters are examined in depth to analyze the processes responsible for them and how that understanding translates into public policy and governmental response, including that of first responders.

Credit: 1 unit Time: 40 weeks (full year)

Examination: Local exam

Prerequisite: Passing **LIVING ENVIRONMENT** and **EARTH SCIENCE** course and/or **teacher recommendation**

## COLLEGE CREDIT COURSES

**College Acceleration Program (CAP Courses are accepted at NCCC) and Advanced Placement Courses (AP Courses)**

Available at the North Tonawanda High School, an additional fee is necessary for college credit.

<u>Title</u>	<u>Available Credits from NCCC</u>	<u>Title</u>	<u>Available Credits from NCCC</u>
<b>Business/Computers</b>		<b>Science</b>	
Introduction to Accounting	3	AP Biology	
Business Law	3	AP Chemistry	
Business Ownership	3	Human Biology	
Computer Applications	3	Introduction of Botany/Horticulture	
Sports/Entertainment Marketing	3* Tech Prep no cost to student	AP Physics	
<b>English</b>		<b>Social Studies</b>	
AP English		AP European History	
CAP English	3	AP US History	
<b>World Language</b>		AP Government	
German 4	up to 6	AP Economics	
French 5	up to 6	<b>Technology</b>	
Spanish 5	up to 6	CAD 1	2* Tech Prep no cost to student
<b>Math</b>		CAD 2	2* Tech Prep no cost to student
AP Calculus			
College Pre-Calculus	4		
Introduction to Statistics	3		

# SOCIAL STUDIES

Students must earn four units of Social Studies at the high school for graduation. The fourth unit consists of one semester of Participation in Government and one semester of Economics. Students must pass competency tests in Global History, and U.S. History and Government in order to be eligible for a diploma. A five-unit sequence in Social Studies is also possible by taking the two additional electives of Psychology and Sociology.

## SOCIAL STUDIES – 7

This course covers United States and New York State history beginning with the pre-Columbian era and concluding with the Civil War. It is based on the New York State K-12 Social Studies Framework and the New York State Learning Standards for Social Studies. The curriculum utilizes a cultural, geographical and historical investigative approach focusing on the dynamic individuals and groups who shaped the values and policies of the events and issues from each historical period. The course culminates with a local assessment of the 7th grade curriculum featuring stimulus-based multiple choice questions and stimulus-based question sets.

Credit: None                      Time: 40 weeks (full year)  
Examination: Local

## SOCIAL STUDIES – 8

This course covers United States and New York State history from the Civil War through present day. It is based on the New York State K-12 Social Studies Framework and the New York State Learning Standards for Social Studies. The curriculum utilizes instructional and investigative approaches that emphasize the American political process, geography, dynamic individuals/groups and the social history accompanying the major historical events of the nation. The course culminates with a local assessment of the 8th grade curriculum featuring stimulus-based multiple choice questions, stimulus-based question sets and an extended essay question.

Credit: None                      Time: 40 weeks (full year)  
Examination: Local Exam

## GLOBAL HISTORY & GEOGRAPHY I REGENTS

This is the first half of the required NYS course. It is a chronological study of Global History and Geography beginning with 4000 B.C. and ending during the 1700's. Students will use a variety of skills to develop an understanding of ancient civilization of the world through to the age of absolutism of the 1700's. All major parts of the world will be included in this chronological study.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: None

## GLOBAL HISTORY & GEOGRAPHY I HONORS

This course is designed to help students develop a greater understanding of the evolution of global themes and interactions between different types of human societies. The course advances this understanding using a combination of Global History knowledge and analytical skills. This course is followed by Advanced Placement World History which is designed to approximate college level course work. Emphasis is placed on developing the students' analytical skills and factorial knowledge in such a way as to allow the student to deal critically with topics, problems and materials of World History.

Credit: 1 unit                      Time 40 weeks (full year)  
Examination: Local  
Prerequisite: **Teacher recommendation and grade of 85 or better**

**Note:** *Summer work may be required before the fall semester begins.*

## GLOBAL HISTORY & GEOGRAPHY II REGENTS

This is the second half of the required NYS course. It is a chronological study of Global History and Geography from the 1700's to the present. Students will use a variety of skills to develop an understanding of Global topics such as the Age of Revolutions; Industrialism and Imperialism; the World at War and; Global connections and Interactions; the World since 1945. All major parts of the world will be included in this chronological study.

Credit: 1 unit                      Time 40 weeks (full year)  
Examination: Regents  
Prerequisite: **Passing Global History & Geography I**

## ECONOMICS & ECONOMIC DECISION MAKING

This course is the local adaptation of the Regents mandated course including micro and macro economics. The topics in this course consist of economic systems; scarcity; factors of production; circular flow; supply and demand; roles of consumer, business, labor, and the functions of money. This course will provide knowledge and skills necessary to enable students (as adults) to make rational, individual, family and public policy decisions on economic issues.

Credit: ½ unit                      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: **Passing U.S. History & Government exam**

**AP WORLD HISTORY**

This course will study major themes of World History with a great emphasis on the cultural, social, historical and political development from the colonial period through the twentieth century. Examination of pertinent documents will be used to present varied opinions of cause and effect in World history.

Credit: 1 unit                      Time: 40 weeks (full year)  
 Examination: AP and Regents  
 Prerequisite: **Honors Global I is recommended, but not required.**

**PARTICIPATION IN GOVERNMENT**

This course is a required Social Studies course for graduation. The study of civics, citizenship, and government involves learning about political systems; the purposes of government and civic life; and the differing assumptions held by people across time and place regarding power, authority, governance and law. Students will use a variety of skills to demonstrate understanding of the necessity for establishing governments; the governmental system of the U.S. and other nations; the U.S. Constitution; the basic civic values of American constitutional democracy; and the roles, rights and responsibilities of citizenship. Attendance at two public policy making meetings are required of all students.

Credit: 1/2 unit                      Time: 20 weeks (half year)  
 Examination: Local  
 Prerequisite: **Passing U.S. History & Government**

**U.S. HISTORY/GOVERNMENT REGENTS**

This course is a required course of study for all high school graduates. This course, through a chronological approach, emphasizes major concepts as they appear in U.S. History from the Constitution to the present. The conceptual approach will be interwoven with chronological treatment of U.S. History.

Credit: 1 unit                      Time: 40 weeks (full year)  
 Examination: Regents  
 Prerequisite: **Passing Regents Global History & Geography II**

**ADVANCED PLACEMENT ECONOMICS**

AP Macroeconomics is a full year course that meets every other day. It may be taken in lieu of the half year course Economics & Economic Decision Making. Topics explored include the ideas of Scarcity, Choice, and Opportunity Cost. Macroeconomic issues such as the business cycle, types of unemployment, and inflation are explored as they relate to the economy as a whole. Gross Domestic Product, CPI and others are explored and compared to other countries. The role of banks and comparing foreign economies are also covered.

Credit: 1/2 unit each              Time: 20 weeks (half year)  
 Examination: AP  
 Prerequisite: **U.S. History/Government Regents, Integrated Algebra and teacher recommendation**

**AP AMERICAN STUDIES**

This course will study major themes of American History with a great emphasis on the cultural, social, historical and political development from the colonial period through the twentieth century. Examination of pertinent documents will be used to present varied opinions of cause and effect in American history.

Credit: 1 unit                      Time: 40 weeks (full year)  
 Examination: AP and U.S. History Regents exam  
 Prerequisite: **Passing Global History & Geography II Regents, and 85 or better on the Global History & Geography II exam and teacher recommendation**

**Note:** *Summer work may be required before the fall semester begins*

**ADVANCED PLACEMENT GOVERNMENT**

The Advanced Placement course in U.S. Government and Politics will give students an analytical perspective on government and politics in the United States. The course includes both the study of general concepts used to interpret U.S. politics and the analysis of specific examples. It will also require familiarity with the various institutions, groups, beliefs and ideas that constitute U.S. politics. This course can be taken in place of Participation in Government which is a graduation requirement. It meets every other day for the full school year.

Credit: 1/2 unit  
 Time: Every other day for entire school year  
 Examination: AP  
 Prerequisite: **Global History & Geography II and teacher recommendation**

**INTRODUCTORY PSYCHOLOGY**

This elective course of study will allow students the capability of much more growth and self-actualization, than their normal environment allows. They will be able to understand that the study of psychology is a science, measured and evaluated through controlled experimentation. Through this elective, students will develop a better understanding of those who surround them and to better cope with life's pressures as they begin to identify and develop their roles in society, especially important to the adolescent in today's complex and stressful world. This course is recommended for the Academy of Health Sciences.

Credit: 1/2 unit                      Time: 20 weeks (half year)  
 Examination: Local  
 Prerequisite: **Global History & Geography II**

**INTRODUCTORY SOCIOLOGY**

This elective course of study will allow students to study society as a whole. This elective will focus on social groups, social interaction, and the socialization process.

Credit: ½ unit                      Time: 20 weeks (half year)  
 Examination: Local  
 Prerequisite: **Global History & Geography II Regents**



**CONTEMPORARY ISSUES**

This elective course examines current social, political, and economic issues facing our community, country, and the world we live in. Topics will vary based on current news cycles. This class encourages students to be informed citizens and to make intelligent decisions. There is a wide range of topics and includes field trips and guest speakers.

Credit: ½ unit

Time: 20 weeks (half year)

Examination: Local

# TECHNOLOGY

## Sequence Option

*Students may substitute five units of technology (including 1/2 credit of Career & Financial Management) for the third unit of foreign language to receive a regents diploma.*

### FIVE-UNIT SEQUENCES

Computer Aided Drawing	
Career & Financial Mgt.	.5
Career Exploration Internship	.5 or 1
Design & Drawing for Production	1.0
CAD I	1.0
CAD II	1.0
Engineering Design (CAD III)	1.0

Engineering	
Career & Financial Mgt.	.5
Career Exploration Internship	.5 or 1
Design & Drawing for Production	1.0
CAD I	1.0
CAD II	1.0
Principles of Engineering & Energy Systems	1.0

Construction Systems	
Career & Financial Mgt.	.5
Career Exploration Internship	.5 or 1
Construction Systems & Electricity/Electronics	1
Manufacturing & Materials Processing	1.0
Design & Drawing for Production	1.0
Principles of Engineering & Energy Systems	1.0

### ACADEMY OF ENGINEERING AND ARCHITECTURE

Twenty eighth grade students will be selected to attend “the school within a school.” A traditional curriculum is enhanced with a career theme of relevant courses and experiential activities. The students will work together in a cooperative learning situation for four years to promote career knowledge and interest of engineering and architectural skills. Courses are designed for students to develop their creative problem-solving and critical thinking skills. They will learn the basic skills of drafting, design and the most widely used computer software programs and be challenged creatively, technically and artistically. Projects are based on numerous design, engineering, and architectural occupations directly related to real world applications.

This four year program is a comprehensive and challenging pre-university course. It encompasses careers related to the design fields in high demand and some of the highest paid professions in the country. This curriculum covers a wide range of academic subjects in the fields of science, math, art, and technology. The Academy of Engineering and Architecture will provide scholarship opportunities, Tech Prep (2+2 transfer program) where students obtain college credit, and obtain potential college savings for high demand careers.

## TECHNOLOGY IN THE MIDDLE SCHOOL

### **INTRODUCTION TO TECHNOLOGY – 7**

A state mandated course of study designed to enable 7th grade students to understand the concepts that underlie technological systems. Students will learn about the influence of technological systems on their total lifestyle, including home, school, and the world of work.

This course of study has been developed with the expectation that instruction will be provided through hands-on laboratory-based activity. The use of modern tools and machines is an excellent method of providing children with the successful, creative experiences that help build the skills and confidence needed to live and work in an ever-changing environment. Students will explore coding through the use of Sphero Mini robots.

Credit: None

Time: 20 weeks (half year)

Examination: Local

Prerequisite: None

### **INTRODUCTION TO TECHNOLOGY - 8**

A state mandated course of study designed to enable eighth graders to understand the concepts that underlie technological systems. Students learn about the influence of technological systems on their total lifestyle including home, school, and the world of work.

This course has been developed with the expectation that instruction will be provided through hands-on, laboratory-based activity. The use of modern tools and machines is an excellent method of providing children with the successful, creative experiences that help build the skills and confidence needed to live and work in an ever-changing world. Students will expand their coding and problem solving skills with the Woz U STEAM Sphero Mini robots and drones.

Credit: None

Time: 40 weeks (half year)

Examination: Local

(every other day)

## TECHNOLOGY IN THE HIGH SCHOOL

### INTRODUCTION TO DRONES AND ROBOTICS

This 8th grade technology class focuses on the types, purposes and uses of drones, both as a commercial pilot and as a hobbyist. Participants will gain experience using a variety of drone types as well as a flight simulator program to improve their skills as a pilot. Proper safety and knowledge of FAA standards regulating commercial flight will be emphasized. Students in this class will also explore the areas of coding and robotics, using the GoPiGo robotics system to complete programmed tasks and to automate functions. Students will gain an understanding of robots as programmable machines with interconnected parts and systems. Throughout the modules, students explore the attributes of robots and discover how roboticists design, engineer, and program robots with the features and functionality to behave a certain way, accomplish a specific task, and/or solve a problem.

Credit: None

Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Teacher recommendation**

### CAREER AND FINANCIAL MANAGEMENT (TECHNOLOGY)

Career and Financial Management is a one semester course that will be required as part of every career and technical education program including five-unit programs used as a substitution for the additional two units of foreign language needed for a Regents diploma with advance designation.

The course has been developed to provide students with the opportunity to learn about the features of our economy, explore a variety of careers, learn the skills and competencies needed for success in the workplace and to begin to become financially literate.

Credit: 1/2 unit

Time: 20 weeks (half year)

Examination: Local

Prerequisite: None

### COMPUTER SYSTEMS

This class walks students through the intricacies of setting up hardware, installing software, connecting to a network, and connecting to the Internet. Students receive practice assembling and disassembling computer hardware including peripherals, motherboards, FRUs, and connectors. Students also learn troubleshooting techniques. Finally, students get a chance to explore careers for computer systems professionals. This is a required course for first-year students in the Academy of Information Technology.

Credit: 1/2 unit

Time: 20 weeks (half year)

Examination: Local

Prerequisite: None



### CONSTRUCTION SYSTEMS & ELECTRICITY/ELECTRONICS

This full year introductory course is designed as a hands-on activity based program for students interested in the construction field. The focus of the course will be on residential structures. Students will be engaged in designing and building a scale model house using the tools and machines in the technology room. The electronics segment works with numerous devices and kit building. The students will learn the properties and uses of many elements pertaining to electronics including identification of components and understanding the functions of each part. They learn about different types of circuits and their practical applications. The kit building comprises real world applications, safety in the electrical lab, and safety in the home. Topics include, but are not limited to: safety, tools/machines used on a job site, foundations, framing, plumbing and wiring, basic theories of electricity such as Ohm's Law electrical construction and fabrication, including the use of simple tools, schematic diagrams, power and energy, drywall, roofing, siding, and insulating. Some financial and contracting areas will be explored as well.

Credit: 1 unit

Time: 40 weeks (full year)

Examination: Local

Prerequisite: **None**

### HOME MAINTENANCE AND REPAIR

Home maintenance and repair is a half-year elective course for students who want to learn how to do their own repairs and maintenance around the house. The program will show the students how to save time, money and avoid frustration when making household repairs. After learning about tools, the course will provide knowledge, skills and hands-on activities in the care and repair of plumbing, doors and windows, concrete, electrical, heating systems, insulation and many other household areas.

Prerequisites: None

Grade Requirement: None

### MANUFACTURING AND MATERIALS PROCESSING

This full year technology course gives the student an opportunity to explore the manufacturing and materials processing industry. Learning about materials through hands-on experience is both effective and fun. Students will build several projects throughout the year as 75 percent of the student's time will be devoted directly to hands-on application of course materials. This course will focus on current manufacturing methods and fabrication techniques used in industry today. Students will gain an understanding of why various materials are chosen for specific applications in industry. With the hands-on experience of building projects, students will be exposed to many manufacturing methods. Past projects have included Adirondack chairs and tables, sheet metal tool boxes, small cabinets with drawers, clocks, remote controlled wrestling robots, and fold-up tables. A lab fee is required.

Credit: 1 unit

Time: 40 weeks (full year)

Examination: Local

Prerequisite: None

## TECHNICAL DRAWING

This is a 1/2 year introductory course for any student interested in technical drawing. Students taking this course will be given an opportunity to develop fundamental drawing concepts, basic skills, and good work habits in the technical drawing field. These basic drawing skills can be transferred to other technology courses such as CAD and DDP. Course contents includes, but is not limited to: drawing tools and equipment, free hand sketching, measuring, 1, 2 and 3 view orthographic projection, pictorial (3D) drawings, traditional dimensioning, geometric dimensioning, geometric design, and basic blueprint reading. This course fulfills 1/2 unit of the art requirement. A lab fee may be required for this course.

Credit: 1/2 unit                      Time: 20 weeks (half year)  
Examination: Local  
Prerequisite: None

## PRINCIPLES OF ENGINEERING & ENERGY SYSTEMS

This full year course will give students an opportunity to explore basic principles of engineering and energy systems in industrial use today. Learning principles of engineering and energy systems through hands-on experiences is both fun and effective. Students will build several projects in class designed to stress and demonstrate the fundamental principles of engineering and energy systems. Students will gain an understanding of why certain designs and structural systems are in use today. With the hands-on experience of building projects, students will be able to design, construct and test different engineering and energy system methods right in the classroom (tech lab). Past projects have included electric motors, solar voltaic, hovercrafts, rocketry, buoyancy, cranes, catapults, gliders, Rube Goldberg designs, magnetic levitation vehicles, model bridges, and more. Lab fee is required.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: Local or Final Project  
Prerequisite: **Good Math and Science background**

## CDOS EXPOSURE

This is a full year class with each semester having a different focus. The first semester has a technology focus while the second semester has a FACS focus. The first semester introduces the student to basic home repair such as painting, how to sand wood, hammer a nail, tighten a screw. In addition, students will learn safety in the workshop along with basic skills on how to use power tools. Careers will be introduced such as painter, construction, carpentry, maintenance. During the second semester in the FACS portion, students will learn the basic skills of working in the kitchen. Students will learn basic cooking and baking skills, safety in the kitchen, nutrition, planning meals, and budgeting. In addition, students will develop sewing skills learning how to use a sewing machine, fix clothes (sew on a button), and household skills such as cleaning. Careers introduced chef, baker, restaurant manager, baker.

Note: For students who need extra support developing these skills before being enrolled in more independent classes. Smaller class size with additional support in the classroom.

Credit: 1 unit                      Time: 40 weeks  
Prerequisite: None

## CREATIVE ENGINEERING

Gain new engineering and problem solving skills as you design and create solutions to real world problems. Employ your new skills as part of the engineering process to construct, test, and modify devices of your own creation. Tinker with existing systems to give them a new function, and acquire the skills sought out by STEM employers.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: Local or Final Project  
Prerequisite: **Good Math and Science Background**

## DESIGN DRAWING FOR PRODUCTION

The style of presentation for this syllabus evolved from the way industrial, engineering and architectural firms solve their design problems and communicate their solutions. The syllabus emphasizes critical thinking, creative problem-solving and the decision-making processes by requiring the student to examine past solutions, learn technical drawing processes, experience design techniques and become critically active in the evaluation of his/her work and that of others.

Starting with the presentation of a Design Activity Brief, you are provided with descriptive information in each of the following seven constants: technical drawing area; design activity; research and critical analysis; historical references; skills, linkage; evaluation. This descriptive information should be the basis for the development of any Design Activity Brief. The seven constants are organized in a holistic manner. You may begin from any one and continue in any order. To complete a Design Activity Brief, all seven constants are to be investigated. A lab fee is required for drafting equipment.

Credit: 1 unit                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisite: None

## INTRODUCTION TO COMPUTER AIDED DRAWING (CAD 1)

This course is a one-year, introductory hands-on technology course, which develops drawing skills using a Computer Aided Drafting (CAD) system. Having mastered basic drawing skills from Design and Drawing for Production, your goal will be to become more knowledgeable drafters while becoming CAD competent, applying the power of the Auto CAD and Auto CAD inventor software system. This course will also emphasize critical thinking, creative problem solving, 3D Printing, and the decision making process. The style of presentation for this course evolved from the way industrial, engineering and architectural firms solve their design problem and communicate their solutions.

This computer course is designed in conjunction with Niagara County Community College. The student will be prepared for post secondary CAD competency and receive 2 credits to NCCC at no charge.

Credit: 1 unit (MST)                      Time: 40 weeks (full year)  
Examination: Local  
Prerequisites: None



**ADVANCED COMPUTER AIDED DRAWING (CAD 2)**

The students will continue to investigate the computer software as a tool. The course will expand on the two-dimensional Auto CAD software program and reinforce their knowledge with isometric, metric conversions, electronics and extensive design of architectural projects.

The students will also become experienced with an AutoDesk three-dimensional software program called Inventor. This unit will encourage visual creative thinking by analyzing a problem, examining the ramifications, and presenting a solution to that problem through design and drawing. The class helps to develop an understanding of three-dimensional forms of space through CAD, Model Construction and 3D Printing. A state of the art 3-D Architectural program called REVIT will be used during CAD 2 and CAD 3. It is the most widely used software in Architectural companies. Students can receive 2 credits at NCCC.

Credit: 1 unit (MST) Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Intro to Computer Aided Drawing (CAD1)**

**ENGINEERING DESIGN (CAD 3)**

The Computer Aided Drawing and Design course teaches more problem-solving skills using a design development process. Models are created, 3D Printed, analyzed and communicated using solid modeling computer design software, starting with Inventor. Students work more in teams to research, design and construct a solution to open-ended engineering problems. They will apply engineering principles developed in class to draw and build scaled models of their solutions. The CAD III students will also be introduced to another three-dimensional software program called SolidWorks that is the most widely used program in the Western New York area. This hands-on, project based approach to learning better prepares students for the rigors of college.

Credit: 1 unit (MST)

Time: 40 weeks (full year)

Examination: Local

Prerequisite: **Advanced Computer Aided Drawing (CAD 3)**

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## CAREER AND TECHNICAL EDUCATION

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Career and Technical Education programs are available to North Tonawanda students at the Niagara West Center operated by the Board of Cooperative Educational Services (BOCES) for students in grades 11 and 12. A variety of programs are available, each requiring approximately one-half of the student's school day. The other half-day\* is spent attending classes in the home school. The goals of the program include providing the skill development needed for basic entry jobs as well as a good high school experience for students who choose a work-oriented environment. In the vocational-technical courses, students are directly involved in skills of the trade. Students earn 3 credits per year in each year of their occupational education program.

**\*Note:** Juniors attend NTHS for 5 periods per day (periods 1-5) and BOCES for 4 periods per day (periods 6-9), whereas Seniors attend BOCES for 4 periods only (periods 1-4) and NTHS for 5 periods per day (periods 5-9).

**ANIMATION, FILM AND VISUAL EFFECTS**

This program is comprised of two one-year courses designed to help students gain valuable media creation experience, and move to the next stage of their career path. The media production facilities include digital film and audio equipment, a green screen studio space, and Macintosh workstations. Students use the same industry-standard software as professional filmmakers and animators, including Adobe Photoshop, Premiere Pro and After Effects, Toon Boom Harmony and Autodesk Maya. This program is open to juniors and seniors in the morning and afternoon sessions. The courses are non-consecutive, so students may take one or both courses, in either order, if scheduling or enrollment allows.

**AUTO BODY**

This course is for students who want to learn to repair, refinish, and paint automobile bodies, fenders, and frames. Students will also learn about body trim, hardware, door locks, remote controls, and glass window regulators. This program is NATEF, I-CAR, and ASE certified.

**AUTOMOTIVE TECHNOLOGY**

The Automotive Technology program is a two year course open to all students in their junior and senior year. The program is designed to prepare the students who expect to enter the automotive field in an independent repair facility, a new or used car dealership, a fleet of maintenance repair shops, or a parts distribution facility. This program is NATEF certified and AYES certified.

**BUILDING MAINTENANCE MANAGEMENT**

This curriculum prepares students to assume key positions in fields of facility operations and property management. Students will gain knowledge in the following areas: operation of a building's mechanical system; overview of the building trades; and managerial/supervisory skills and business practices. The program aims to develop skills which are needed for planning, scheduling and controlling efficient operation and repair of state-of-the-art equipment and buildings.

The facilities operations and property management fields will require a thorough understanding of the construction and maintenance process. The curriculum provides hands-on activities to augment and complete the education of the student.

**CERTIFIED PERSONAL TRAINER**

This course is designed for the individual seeking competency in health, fitness, and exercise instruction. Students will perform fundamental health and fitness programs for the healthy population. During the course, students are provided with the most relevant scientific information regarding safe, effective, and efficient personal exercise instruction.



## COMPUTER TECHNOLOGY

Students will learn about all aspects of computer technology including standard software packages, operating systems and hardware architecture. During the first and second semesters, the curriculum will cover fundamentals of computer hardware and software as well as advanced concepts. The students will be able to describe the internal components of a computer and laptops, assemble a computer system, install an operating system, and troubleshoot using system tools and diagnostic software. Also students are introduced to basic and advanced Microsoft Office, and basic computer concepts, including the Internet.

## CONSERVATION

This program deals with environmental development, operation and management of our wildlife, forestry, water and other natural resources. Students learn conservation techniques and use of large and small equipment involved in all phases of earth beautification.

## COSMETOLOGY

This is a two-year program in which students learn the latest techniques and apply them in our full-service salon which is open to the public. After students have successfully completed 1,000 hours of cosmetology instruction they will be prepared to apply for licensing through New York State.

## CULINARY ARTS

Students in this program will be exposed to the variety of careers available within the food service and commercial baking field. By actual participation, students will become familiar with the workings of a modern kitchen while preparing foods of various cuisines. The training will prepare them for future employment in both preparation and service and quality students for acceptance at post-secondary schools specializing in training necessary to become master chefs, restaurant managers, owners, or to gainful employment in our industry. The program follows a Pro Start curriculum and offers a national test certification.

## EARLY CHILDHOOD EDUCATION

This program has several options open to all students in their junior and senior years. Students spend a portion of their time teaching preschool children and gain hands-on experiences working in the on-site preschool program. Students completing this program will gain experience working with children 2 to 5 years of age. The curriculum includes several professional development opportunities such as Disabilities Awareness training: *Identification and Reporting of Child Abuse for Mandated Reporters; Adult, Infant & Child CPR and Standard First Aid*. Students interested in teaching and/or working with children and families would benefit from this program.

## ELECTRICITY/ELECTRONICS

Two-year students are given the opportunity to gain entry level job skills and/or prepare for additional in-depth training in the electricity/Electronics field. Classes may work on wiring on a modular on-site home or on an off-site project. Students will be given job-seeking skills and assisted in finding jobs near the end of their second year.

## EMERGENCY MEDICAL SERVICES

This program focuses on the skills required for certification and advancement in the field of Emergency Health Care providing prehospital care. Multiple certifications are offered including New York State Certified First Response and New York State Emergency Medical Technician.

## FASHION DESIGN/INTERIOR DECORATING

This is a one or two year program designed to prepare students for education or careers in Fashion Design and Interior Decorating. Juniors and seniors who have a creative artistic vision are welcome to enter the program. Students will use state of the art computer software, sewing machines, and equipment related to the Fashion and Interior Design Industry.

This program combines both theory with hands-on projects. During the two year program, students focus on fashion design and illustration, apparel construction, fashion show production, and the world of design and construction for the interior environment.

## GRAPHIC COMMUNICATION

This program was developed for the creative student, as well as the technical student, by combining art, design, technology, and production. Students learn the skills involved in the creation and production of graphics projects from print to the web. This may be taken as a 1-year or a 2-year program.

## HEALTH OCCUPATIONS TECHNOLOGY

The Health Occupations Technician [H.O.T.] program is A two-year program geared toward preparing the student for a career in the health professions. Students will have experiences in multiple clinical settings including local nursing homes, hospitals, rehabilitation facilities with physical therapy, pediatrics, and many more. Our students will work with healthy as well as ill or injured clients at all stages of the life cycle. Students will gain skills in a career that offers opportunities in over 400 job titles. Some areas of employment may include long term care nurse assistant, geriatric aide, pediatric aide, occupational therapy aide, physical therapy aide, dietary aide, central supply aide, operating room aide, and recreational therapy aide.

## HEATING/VENTILATION/AIR CONDITIONING AND REFRIGERATION

HVAC is a two-year course designed to provide students with employable skills in the service and installation of residential and commercial air condition, heating, and refrigeration units.

## HEAVY EQUIPMENT/DIESEL TECHNOLOGY

Students will learn to work on various pieces of equipment such as: heavy duty trucks (pickups and semis), tractors, forklifts, backhoes, bulldozers, skid steers and hydraulic excavators. Students will work in groups on projects like engine teardown, overhaul and failure analysis.

## PROJECT BASED ENGINEERING

Students will be engaged in team-based projects while being responsible for directing their own curriculum concentration, projects, and areas of exploration within the engineering sciences. Active learning techniques make the learning process an active one. Units of study include Introduction to Engineering Design, Principles of Engineering, Computer Integrated Manufacturing, Engineering Design and Developments, and Advanced Manufacturing.

## SECURITY/LAW ENFORCEMENT

Students in this program are given a general background in the court system and law. Students interact with many guest speakers from the criminal justice field and visit numerous agencies to learn about this career field.

## WEB DEVELOPMENT/GAME PROGRAMMING

This program is geared toward students interested in computer programming, web technologies, and game design. Students will develop skills in coding, interactive design, game theory and development, and mobile app creation using industry– standard programming languages and development tools. The program consists of one year of Web Development and one year of Game Programming.

## WELDING AND METAL FABRICATION

The Welding course is designed to develop skills in all areas of welding and metal fabrication but most specifically those areas where there is the greatest employment potential. Students practice and gain experience with several welding techniques that enable them to cut and fabricate steel, aluminum and stainless steel. Students may expect to be working in the welding process for the majority of class time.



## TECHNICAL MATH/SCIENCE/ENGLISH CAREER AND FINANCIAL MANAGEMENT

These courses are offered at the Niagara Educational Center for students unable to complete Math, Science and/or English at NTHS. Students earn one credit towards graduation upon completing this course.

**Technical Math:** Students need to have two math credits to be eligible to take this class. The majority of the math in this course includes math that is used in the various trade areas, thus helping the student comprehend their chosen vocational field. Also included are life skills such as banking, mortgaging, insurance, income tax, and other various fields of consumer math.

**Technical Science:** One course credit must have been earned in order for a student to be eligible for this class. This course deals with the sciences related to the various vocational areas.

**Technical English:** This course may be used to replace English 12 for those who cannot fit it into their schedule at NTHS. Skill development focuses on building proficiency in technical writing, note-taking, listening, essay writing, and composing business letters.

## VOCATIONAL INDIVIDUALLY PACED SERVICES (3 credits)

Automotive Services is a full year course that focuses on auto services, auto maintenance and auto repair. It is designed to give students the knowledge and ability to succeed in the workplace. Students will become knowledgeable about the automotive industry, will explore career options, and will develop the personal skills needed for this career.

Building and Grounds is an exploratory course that includes an overview of trades in carpentry, plumbing, electrical wiring, drywall hanging, repairs, finishing, masonry design, layout, maintenance repairs and cleaning up and landscaping. Students learn interviewing skills and how to work well with others.

Food Service gives students an overview of food preparation, global and gourmet foods, commercial foods, food science, and food service operations. Students gain experience for employment in offices, nursing homes, pre schools and individual living situations. In addition, students learn job interviewing skills and how to work well with others.

# NOTIFICATION OF CLASS OR EXAM FAILURE

Students are responsible for coming to the North Tonawanda High School to see if they failed an exam and/or a class. Student's results are listed by student number, which is readily available on report cards, progress reports and student schedules. Parents and students need to regularly check the lists throughout the exam period. Lists are posted on the Library windows.

# SUMMER SCHOOL

Summer School provides remedial and new/advanced courses for middle and high school students in Math, Science, Social Studies, English, Health, Art and Physical Education. The principal of North Tonawanda High School or his designee must sign the Summer School registration form. Any students who are at risk of failing a class or who wishes to attend summer school should discuss options with his/her school counselor in advance, particularly if a class is in jeopardy. Parents are also encouraged to contact their child's counselor to discuss options and to insure that their child is on track to graduate. Summer School information is available in mid June on our website and information is sent home with students on Moving Up Day in June.

Students who wish to retake exams to raise their grades may do so. Failing students are advised to retake the entire course in summer school.

**Note:** A parent's signature is required on the registration form, and the fee is paid by the student or their family.

## INFORMATION FOR DETERMINING NCAA FRESHMAN ATHLETICS ELIGIBILITY

*You can also visit or call the NCAA at [www.ncaaclearinghouse.net](http://www.ncaaclearinghouse.net) or 1-877-262-1492*

The NCAA initial-eligibility rules have changed that impact the class of 2016 and beyond, and whether college-bound student-athletes will be eligible for practice, competition and financial aid in their first year at an NCAA Division I or II college or university.

### Division I Changes – Overview – Starting with the class of 2016

1. Increase in the minimum required core-course grade-point average (GPA) from 2.000 to 2.300
2. Ten of the 16 required core courses must be completed before the beginning of the seventh semester (senior year)
  - A. Seven of these ten required courses must be English, Math, or Natural/Physical Science.
3. Increase in the overall core-course GPA as it relates to the ACT or SAT score, which results in a new sliding scale.

DIVISION I		DIVISION II	
16 CORE COURSES		16 CORE COURSES	
16 Core Courses:		16 Core Courses:	
4	years of English	3	years of English
3	years of mathematics (Algebra I or higher).	2	years of mathematics (Algebra I or higher).
2	years of natural/physical science (1 year of lab if offered by high school).	2	years of natural/physical science (1 year of lab if offered by high school).
1	year of additional English, math, or natural/physical science	3	years of additional English, math, or natural/physical science
2	years of social science	2	years of social science
4	years of additional courses (from any area above, foreign language or Comparative religion/ philosophy)	4	years of additional courses (from any area above, foreign language or comparative religion/ philosophy)

Please note: Computer-science courses may only be used for initial-eligibility purposes if the course receives graduation credit in mathematics or natural/physical science and is listed as such on the high school's list of NCAA-approved core courses. **\*\*\*21st Century Communications and Intro to Algebra 2 and Physical Math are NOT NCAA-approved classes.**

### Test Scores

- **Division I** uses a sliding scale to match test scores and core grade-point averages (GPA).
- **Division II** requires a minimum SAT score of 820 or an ACT sum score of 68.
- The SAT score used for NCAA purposes includes only the critical reading and math sections. The writing section of the SAT is not used.
- The ACT score used for NCAA purposes is a sum of the following four sections: English, mathematics, reading, and science.
- **When registering for the SAT or ACT, use the NCAA Eligibility Center code of 9999 to ensure all SAT and ACT scores are reported directly to the NCAA Eligibility Center from the testing agency. Test scores that appear on transcripts will not be used.**

### Grade-Point Average

- Only courses that appear on the NTHS approved NCAA courses will be used in the calculation of the core GPA.
- **Division II** core GPA requirement is a minimum of 2.000.

For more information regarding the new rule, please go to [www.ncaa.org](http://www.ncaa.org). Click on "Student-athletes and Parents" in the "Custom Home Pages" section. You may also visit the clearinghouse Web site at [www.ncaaclearinghouse.net](http://www.ncaaclearinghouse.net).

IF YOU HAVE QUESTIONS ABOUT NCAA ELIGIBILITY, PLEASE CALL THE NCAA INITIAL-ELIGIBILITY CLEARINGHOUSE TOLL FREE AT 877/262-1492. YOU MAY ALSO CALL THE NCAA AT 317/917-6222.

**NORTH TONAWANDA  
CITY SCHOOL DISTRICT**

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[www.ntschoools.org](http://www.ntschoools.org)

