**Cover Art:**

**Top Left:** A. Turk, class of 2021  
*Digital Photographic Abstraction • Digital Photography*

**Top Right:** B. Warden, class of 2022  
*Line and Shape Design • Studio in Art*

**Bottom Left:** T. Phillips, class of 2021  
*Wood and Paper Sculpture • Foundation in 3D Design*

**Bottom Right:** A. Snyder, class of 2020  
*Charcoal Abstraction • Drawing 1*
Click on the subject or page number to go to that page.

A link at the bottom of the pages will bring you back to this page.

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## CONTACT US

### Administrators

<table>
<thead>
<tr>
<th>Title</th>
<th>Name</th>
<th>Email</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>Dr. Leslie Maloney</td>
<td><a href="mailto:lmaloney@penfield.edu">lmaloney@penfield.edu</a></td>
<td>(585)249-6701</td>
</tr>
<tr>
<td>Associate Principal</td>
<td>Mr. Howard Henick</td>
<td><a href="mailto:hhenick@penfield.edu">hhenick@penfield.edu</a></td>
<td>(585)249-6776</td>
</tr>
<tr>
<td>Assistant Principal (2023)</td>
<td>Ms. Terry Febrey</td>
<td><a href="mailto:tfebrey@penfield.edu">tfebrey@penfield.edu</a></td>
<td>(585)249-6740</td>
</tr>
<tr>
<td>Assistant Principal (2022)</td>
<td>Dr. Charlie Roods</td>
<td><a href="mailto:croods@penfield.edu">croods@penfield.edu</a></td>
<td>(585)249-6745</td>
</tr>
<tr>
<td>Assistant Principal (2021)</td>
<td>Ms. Michele Sick</td>
<td><a href="mailto:msick@penfield.edu">msick@penfield.edu</a></td>
<td>(585)249-6702</td>
</tr>
<tr>
<td>Assistant Principal (2020)</td>
<td>Mrs. Teri Marsh</td>
<td><a href="mailto:tmarshal@penfield.edu">tmarshal@penfield.edu</a></td>
<td>(585)249-6818</td>
</tr>
<tr>
<td>Special Education</td>
<td>Mrs. Chris Brown</td>
<td><a href="mailto:cbrown@penfield.edu">cbrown@penfield.edu</a></td>
<td>(585)249-6777</td>
</tr>
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</table>

### School Counselors

<table>
<thead>
<tr>
<th>Alpha/Grade</th>
<th>Name</th>
<th>Email</th>
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</tr>
</thead>
<tbody>
<tr>
<td>A-E (2021)</td>
<td>Mrs. Teresa Kneezel</td>
<td><a href="mailto:tkneezel@penfield.edu">tkneezel@penfield.edu</a></td>
<td>(585)249-6712</td>
</tr>
<tr>
<td>TBD (2023)</td>
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<tr>
<td>A-Gi (2020)</td>
<td>Mrs. Bea Lynch</td>
<td><a href="mailto:blynch@penfield.edu">blynch@penfield.edu</a></td>
<td>(585)249-6714</td>
</tr>
<tr>
<td>A-Gi (2022)</td>
<td></td>
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<tr>
<td>F-Map (2021)</td>
<td>Mr. Nate Miller</td>
<td><a href="mailto:nmiller@penfield.edu">nmiller@penfield.edu</a></td>
<td>(585)249-6710</td>
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<tr>
<td>TBD (2023)</td>
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<td></td>
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</tr>
<tr>
<td>Go-J (2020)</td>
<td>Mrs. Heide Talone</td>
<td><a href="mailto:htalone@penfield.edu">htalone@penfield.edu</a></td>
<td>(585)249-6774</td>
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<tr>
<td>GI-I (2022)</td>
<td></td>
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<tr>
<td>K-Po (2020)</td>
<td>Ms. Amy Williams</td>
<td><a href="mailto:awilliams@penfield.edu">awilliams@penfield.edu</a></td>
<td>(585)249-6753</td>
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<tr>
<td>J-P (2022)</td>
<td></td>
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<tr>
<td>Pr-Z (2020)</td>
<td>Mrs. Leslie Rowe</td>
<td><a href="mailto:lrowe@penfield.edu">lrowe@penfield.edu</a></td>
<td>(585)249-6713</td>
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<td>Q-Z (2022)</td>
<td></td>
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<tr>
<td>Mar-Sh (2021)</td>
<td>Mr. Brandon Fox</td>
<td><a href="mailto:bfox@penfield.edu">bfox@penfield.edu</a></td>
<td>(585)249-6717</td>
</tr>
<tr>
<td>TBD (2023)</td>
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<tr>
<td>Si-Z (2021)</td>
<td>Mrs. Stephanie Dana</td>
<td><a href="mailto:sdana@penfield.edu">sdana@penfield.edu</a></td>
<td>(585)249-6715</td>
</tr>
<tr>
<td>TBD (2023)</td>
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COURSE SELECTION

This course selection guide includes information about the courses that will be available to Penfield High School students who will be in grades 9 through 12 in 2019-2020. Course selection should be an exciting process for students and parents but also a process that involves careful planning. Students are encouraged to take advantage of the many academic opportunities available at Penfield High School.

- Consider your course selection carefully. Choose courses to fill graduation requirements but remember to take advantage of the many opportunities available.
- Colleges often consider the academic strength of a student’s program. Admissions representatives like to see students who have taken challenging courses and exceeded the minimum number of credits in math, science, and languages other than English.
- While it is important to have a challenging schedule, it is equally important to do well in your classes. Do not select more than you can handle. Earning a mastery grade (85 or higher) is a goal that students should use when selecting course levels.
- Look into the vast elective program that is offered. There are electives in technology, art, music, business, science, and social studies.
- Senior year should be used to continue to take advantage of academic opportunities. Included with a student’s college application is a listing of senior year courses and can impact admission decisions.

COURSE SELECTION PROCESS

Since course selection is such an important process, every year a significant amount of time and effort is invested. Course offerings, staffing and budget for the high school are developed as a result of the course selection process outlined below. The offering of any courses is contingent on enrollment.

- **Teacher advisement** – **Tuesday, December 4, 2018** – **Tuesday, December 11, 2018**
  During this week students converse with their current teachers about course selections. Teachers make recommendations for selections in Infinite Campus.

- **Student input period** – **Tuesday, December 18, 2018** – **Wednesday, January 2, 2019**
  During this time period students and parents can view teachers’ recommendation in Infinite Campus and add input regarding courses. *Please note, these are not final selections; simply recommendations.*

- **Individual student meetings with school counselor** – **January 2, 2019** – **February 15, 2019**
  School counselors will meet individually with each student to finalize course selections.

  - Class of 2020 (juniors) – During Study Halls
  - Class of 2021 (sophomores) – During Study Halls
  - Class of 2022 (freshmen) – Freshman Seminars
  - Class of 2023 (8th graders) – January 22 – January 24, 2019

- **Parent/guardian communication** – parents/guardians receive a copy of student selections and can make changes during the specified time.
DIPLOMA TYPES

Regents Diploma

22 credits required, including:
• 4 credits English
• 4 credits Social Studies
• 3 credits Math
• 3 credits Science
• 2 credits P.E.
• 1 credit LOTE
• .5 credit Health I, .5 credit Health II
• 1 credit Commencement Art/Music

5 Regents exams ≥ 65 or “4+1” pathway option*
• 1 Math
• 1 Science
• English
• Global History
• U.S. History

With Honors:
Average of ≥ 90 on the 5 required Regents exams

* “4+1” pathway option: Permits a student to take four Regents exams and a comparably rigorous technical, arts, or other assessment for the fifth examination required for graduation. Students eligible for this must have also passed four required Regents exams (or department-approved alternative assessments) in English, mathematics, science and social studies.

-or-

“4+CDOS” pathway option: Beginning June 2016 and thereafter, a student may graduate with a high school diploma if the student meets the graduation course and credit requirements; passes four required Regents exams or department-approved alternative assessments (one in each of the following subjects: English, mathematics, science and social studies) and successful completion of at least 216 hours of Career and Technical Education (CTE) course work and/or work-based learning experiences (of which at least 54 hours must be in work-based learning experiences). Work-Based Learning (WBL) includes activities which collaboratively engage employers and schools in providing structured learning experiences for students. [http://www.p12.nysed.gov/ciai/multiple-pathways/](http://www.p12.nysed.gov/ciai/multiple-pathways/)
Regents with Advanced Designation Diploma

22 credits required, including:
- 4 credits English
- 4 credits Social Studies
- 3 credits Math
- 3 credits Science
- 2 credits P.E.
- 3 credits LOTE (or a 5 unit sequence**)
- .5 credit Health I, .5 credit Health II
- 1 credit Commencement Art/Music

9 exams ≥ 65
Regents exams:
- 3 Math (Algebra, Geometry, Algebra 2)
- 2 Science (Living Environment, 1 Physical Setting)
- English
- Global History
- U.S. History

Local exam:
- LOTE Checkpoint B

** A five-unit sequence in art, music, occupational education, business or technology may be substituted for the two additional units of LOTE needed.

See NYSED General Education & Diploma Requirements website for more information.
## FOUR YEAR PLAN OF ROTATING COURSES

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<tr>
<th>Discipline</th>
<th>Course Name</th>
<th>2019-2020</th>
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<td>Business</td>
<td>Entrepreneurship Honors</td>
<td>X</td>
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<tr>
<td></td>
<td>Sports Management Honors</td>
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<td>Music</td>
<td>Popular Music</td>
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<tr>
<td>Technology</td>
<td>CIM</td>
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<td></td>
<td>Civil Engineering and Architecture</td>
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</tbody>
</table>

## ADVANCED PLACEMENT COURSE OFFERINGS

See course details in each subject area for thorough course descriptions
Please note: There is a fee associated with the AP Exam taken in May. Students who qualify for free/reduced lunch are eligible for a fee reduction.

**ART**
- AP Art History

**ENGLISH**
- AP Language and Composition
- AP Literature and Composition

**MATHEMATICS**
- AP Calculus AB
- AP Calculus BC
- AP Statistics

**SCIENCE**
- AP Biology
- AP Chemistry

**LANGUAGE OTHER THAN ENGLISH**
- AP Spanish

**MUSIC**
- AP Music Theory

**SOCIAL STUDIES**
- AP Government and Politics
- AP Psychology
- AP United States History
- AP World History
DUAL CREDIT COURSES

Courses with dual credit opportunities are marked with this symbol

- It is the decision of the receiving institution to determine whether they will accept transfer credits from another college or university and how those credits will be applied.
- It is strongly recommended that students check with the college or university of their choice for acceptance of transfer credit before registering for college credit for a course.
- Students who receive free/reduced lunch, will be eligible for scholarships to lessen the cost of tuition. Please see your school counselor for more details.

<table>
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<tr>
<th>PHS Course Title</th>
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<th>College Course Title</th>
<th>Credits</th>
<th>18-19 Tuition*</th>
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<tbody>
<tr>
<td>Accounting H</td>
<td>Syracuse University</td>
<td>ACC 151 Introduction to Financial Accounting</td>
<td>4 (sem)</td>
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<td>Microsoft Office</td>
<td>MCC</td>
<td>CRC 125 Microsoft Office</td>
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<td>Entrepreneurship H</td>
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<td>EEE 370 Introduction to Entrepreneurship</td>
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<td>Introduction to Business</td>
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<td>BUS 104 Introduction to Business</td>
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<td>Career &amp; Financial Management</td>
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<td>ECO 103 Personal Money Management</td>
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<td>SPM 205 Principles &amp; Contemporary Issues in Sport Management</td>
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<th>PHS Course Title</th>
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<td>Creative Nonfiction H</td>
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<td>Gender and Literary Texts</td>
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<th>Credits</th>
<th>18-19 Tuition*</th>
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<td>German 4 R</td>
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<td>GER 102 Elementary German II</td>
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<td>German 5R</td>
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<td>GER 203 Elementary German III</td>
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<td>French 5 H</td>
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<td>FRE 201 Intermediate French</td>
<td>4 (sem)</td>
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<thead>
<tr>
<th>PHS COURSE TITLE</th>
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<td>Calculus III H</td>
<td>MCC</td>
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<td><strong>SCIENCE</strong></td>
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<td>Insights into Optics</td>
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<td>CHE 113 Forensic Science</td>
<td>4 (sem)</td>
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<td><strong>SOCIAL STUDIES</strong></td>
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<td>Economics H</td>
<td>Syracuse University</td>
<td>ECN 203 Economic Ideas and Issues</td>
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<td>Sociology H</td>
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<td>SOC 101 Introduction to Sociology</td>
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<td>Civil Engineering &amp; Architecture</td>
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<td>06 08 200 Civil Engineering/Architecture</td>
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<td>Computer Integrated Manufacturing (CIM)</td>
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<td>Principles of Engineering</td>
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</table>

**National Collegiate Athletic Association (NCAA)**

The NCAA Eligibility Center certifies the academic and amateur credentials of all college-bound student-athletes who wish to compete in NCAA Division I or II athletics. It is the responsibility of each individual student-athlete to make sure that their courses are approved by the NCAA. This should be done on a yearly basis.

The Penfield School District has a list of NCAA-approved courses on the Eligibility Center website (https://web3.ncaa.org/ecwr3/). Students can access this list by doing the following:

- Click the “NCAA College-Bound Student-Athlete” link to enter the site
- Navigate to the Resources tab and select US Students where you will find the link for the list of NCAA courses.
- Complete the registration process and then request a copy of your transcript be sent to the Eligibility Center by the counseling office (if you have attended more than one high school you will need one from each school).
- A final transcript will be sent to the NCAA once the student graduates.
ART COURSES AND SEQUENCE

5 Unit Sequence in Art

Students may earn a Regents Diploma with Advanced Designation by completing one unit of LOTE and five credits in Art.

This sequence replaces the additional two units of LOTE requirement.

To complete the 5-unit sequence in Art, a student must take:

- At least 1 of the foundation courses: Foundation in 3D Design, Studio in Art or Studio in Media Arts
- 4 credits that can be made up of ½ year or full year courses
- Portfolio Preparation

FOUNDATIONS COURSES: FULL YEAR

- Foundation in 3D Design
- Studio in Art
- Studio in Media Arts

ELECTIVE COURSES: ½ YEAR (EXCEPT AP ART HISTORY)

There are a number of electives that extend concepts introduced in each of the foundation courses. Students can take any of these electives regardless of the foundation course that began their sequence.

3D Electives
* Studio in Ceramics 1
* Studio in Ceramics 2
* Studio in Sculpture
* Jewelry & Metalsmithing
* Advanced Jewelry & Metals

2D Electives
* Drawing 1
* Painting 1
* Advertising Design

Digital Electives
* Digital Photography
* Advanced Digital Photography
* Digital Filmmaking
* Animation
* Game Design

Portfolio Presentation – ½ year

Students completing an Art sequence are required to take Portfolio Preparation during the 1st semester of their senior year. This course will help the Art sequence student in preparing the required portfolio of 12-20 pieces of artwork for sequence credit.

AP Art History – full year

Explore major forms of artistic expression including architecture, sculpture, painting and other media from across a variety of cultures. Learn about the purpose and function of art as you develop your ability to articulate visual and art historical concepts in verbal and written form.
Art Course Descriptions

Full Year Art Courses

Studio in Art (0710)
PREREQUISITE: NONE
EXAMINATION: NONE  •  CREDIT: 1 UNIT (MEETS 1 UNIT COMMENCEMENT CREDIT)
Studio in Art is a one-year foundation course in the visual arts required by NYS to satisfy the one unit commencement level credit in art towards graduation. This course also satisfies the one-credit foundation-level course requirement for any student wishing to complete a 3 or 5 unit sequence in art. Studio in Art offers a wide variety of art experiences, such as drawing, painting, ceramics, sculpture, and printmaking. Fine art and commercial applications will be introduced. The elements of art, principles of design, color theory, the language of art criticism and the history of art are incorporated into all units.

Studio in Media Arts (0705)
PREREQUISITE: NONE
EXAMINATION: NONE  •  CREDIT: 1 UNIT (MEETS 1 UNIT COMMENCEMENT CREDIT)
Studio in Media Arts is a foundation course in the visual arts that satisfy the NYS commencement-level art requirement. This course also satisfies the one credit foundation-level course requirement for any student wishing to complete a 5 unit sequence in art. The computer, scanner, Adobe Creative Cloud and 3D animation software will be the primary tools used for image making in this course. Students will learn how to composite photographic images, design and publish web material, animate and manipulate objects in a three-dimensional virtual environment, and produce interactive multimedia programs. The elements of art, principles of design, color theory, the language of art criticism and the history of art are incorporated into all units. This course provides an excellent foundation for the student interested in pursuing a career in media arts and technology.

Foundation in 3-Dimensional Design (0704)
PREREQUISITE: NONE
EXAMINATION: FINAL PROJECT  •  CREDIT: 1 UNIT (MEETS 1 UNIT COMMENCEMENT CREDIT)
Students will work 3-dimensionally in a variety of media. The materials may include: paper, clay, plaster, metal, fibers, wire, wood, mixed media, and found objects. The approach for each assignment ranges from sculptural to functional and explores contemporary crafts. This course introduces and applies the elements of art and principles of design, color theory, the language of art criticism, and a foundation level of art history to all work. Projects include multiple step processes/techniques and the use of tools and equipment. This course satisfies the NYS requirement for one unit of art or music for commencement level. This course also satisfies the one credit foundation-level course requirement for any student wishing to complete a 5-unit sequence in art.
Elective Art Classes

Drawing 1 (0720)
PREREQUISITE: NONE
EXAMINATION: NONE  ♦  CREDIT: ½ UNIT
Students will be introduced to a variety of media, themes, and ways to create and think about art. The structural elements of art, such as, line, value, color, space, and composition are taught. While drawing from direct observation is highlighted, all forms of realism and abstraction are explored. Students will develop the necessary skills to grow technically and creatively through the study of art history, current trends, and each other. Pencils, colored pencils, charcoal, pastels, markers, and conte crayon are media that may be covered. This class is highly recommended for any student who wishes to pursue a career in art, illustration and architecture. The work from this course will provide a strong foundation for a college admission portfolio.

Painting 1 (0721)
PREREQUISITE: DRAWING 1
EXAMINATION: NONE  ♦  CREDIT: ½ UNIT
This course is a continuation of the skills learned in Drawing 1. Students are introduced to a variety of painting media: oil paint, oil sticks, acrylic paint, the technical properties of each and how to achieve various effects with each process. Art history, composition, and color theory are incorporated into every painting. Students explore personal ideas and develop a series of paintings built around a common theme. This class is highly recommended for any student who wishes to pursue an art sequence or a career in art and design.

Jewelry & Metals (0719)
PREREQUISITE: NONE
EXAMINATION: FINAL PROJECT  ♦  CREDIT: ½ UNIT
Jewelry & Metals allows students to plan and execute wearable and non-wearable objects from metal. Students will create unique rings, pendants or brooches, and small sculptures using a variety of techniques including sheet and wire fabrication, lost-wax casting, bezel stone setting, forming, and surface applications like etching, roll printing, piercing, enamel, patinas, and overlay. We investigate the work of contemporary and historical metalsmiths. The application of design and communicating personal inspiration are addressed for each assignment. Students may incur additional costs for materials used beyond course requirements. Silver and semiprecious stones may be purchased through the instructor.

Advanced Jewelry & Metals (0722)
PREREQUISITE: JEWELRY & METALS
EXAMINATION: FINAL PROJECT  ♦  CREDIT: ½ UNIT
This course is designed for the student who wishes to further explore jewelry and metal sculpture. A series of more advanced design problems and techniques will be presented to students to solve independently with an emphasis on personal expression. Techniques may include advanced casting, enameling, soldering, stone setting, form, and construction. Current and contemporary issues in metalsmithing will be investigated. Students may incur additional costs for materials used beyond course requirements. Silver and similar materials may be purchased through the instructor.
Art Course Descriptions

Studio in Ceramics 1 (0715)
PREREQUISITE: NONE
EXAMINATION: NONE  ♦  CREDIT: ½ UNIT
Students will become familiar with basic techniques and processes associated with creating ceramic artworks. Contemporary potters, ceramic sculptors, historical movements and cultures will be used as a basis for many of the studio projects explored in this class. Quality design is crucial in ceramics and will be stressed equally with building techniques. Students will become familiar with vocabulary and tools associated with the ceramic medium. Approaches will be both functional and sculptural and incorporate additive and subtractive techniques. Basic hand building techniques (pinch, coil, slab) will be explored individually and in combination in the construction of finished artwork. Functional forms (cylinders, bowls, small plates) will be created using the potter’s wheel. Work on the wheel will culminate with the design & production of a functional set of mugs with pulled handles.

Studio in Ceramics 2 (0716)
PREREQUISITE: STUDIO IN CERAMICS 1
EXAMINATION: NONE  ♦  CREDIT: ½ UNIT
Students will continue their exploration of the versatile medium of clay. They will review ceramic terms, tools and techniques covered in Ceramics 1. In Ceramics 2, there will be an emphasis on creative idea development by combining personal expression with construction techniques. Students will become familiar with creating multiples through the use of molds, forms and stamps. Advanced wheel throwing techniques, including creating lidded forms, teapots, and large forms with handles will be explored. Advanced surface decoration and firing techniques, such as, burnishing, and Raku firing will be a component of this course. Independent research including sketching and resource image collection will be an important preliminary stage for each assignment. There will be a continuation of the history of ceramics from Ceramics 1. Ceramics 2 culminates with a student exhibition and reception at a local coffee shop.

Studio in Sculpture (0713)
PREREQUISITE: NONE
EXAMINATION: FINAL PROJECT  ♦  CREDIT: ½ UNIT
Students will work with a variety of materials such as plaster, clay, wax, wire, and plastic to develop three-dimensional works in relief and in-the-round. Building techniques will include additive and subtractive methods and design objectives will relate to the exploration of form. The work of historical and contemporary sculptors will be investigated and how sculpture is exhibited and installed will be considered. This class is highly recommended for any student who wishes to pursue an art sequence.

Digital Photography (0709)
PREREQUISITE: NONE
EXAMINATION: FINAL PROJECT  ♦  CREDIT: ½ UNIT
This course is an exploration into digital photography. Images are created using a SLR digital camera. Students will learn about the composition of photographs, understanding light, camera operation, editing images using Adobe Photoshop and how to apply these technical components to best communicate their ideas. A survey of both the history of photography and contemporary issues will be explored. Images will be printed using a high quality photographic inkjet printer. There are SLR digital cameras available for loan.
Art Course Descriptions

Advanced Digital Photography (0727)
PREREQUISITE: DIGITAL PHOTOGRAPHY
EXAMINATION: NONE  ♦  CREDIT: ½ UNIT
This course is a continuation of the skills learned in Digital Photography. Students will expand their understanding of photographic history, idea development, design, and technique. This course explores various photographic careers, alternative approaches to image capture, and advanced lighting, shooting and editing techniques. Students will leave this course with an extensive photographic portfolio in a variety of formats. There are SLR digital cameras available for loan.

Digital Filmmaking (0726)
PREREQUISITE: NONE
EXAMINATION: NONE  ♦  CREDIT: ½ UNIT
Students in this course will learn the different techniques and styles used by professionals in the movie-making industry. They will learn how to set up the scene, compose, and shoot with digital video cameras and then import their footage to edit on the computer using Adobe Premiere Pro. Students will explore different approaches to storytelling through short fiction, commercials, music video, and documentaries. Studio and production techniques including lighting, green screen effects, digital compositing will also be introduced. Filming can take place in and outside of class, depending on the assignment’s needs. By the completion of the course, students will have created a number of short films, and will be responsible for a final, longer 3-minute project. This course is an excellent pairing with the English Film Studies courses.

Advertising Design (0700)
PREREQUISITE: NONE
EXAMINATION: NONE  ♦  CREDIT: ½ UNIT
Students will develop a knowledge and understanding of the principles of design and psychology as they relate to advertising. Students will explore past, as well as current trends in advertising. Experiences similar to those found in advertising agencies will be simulated in the classroom. This class offers students the opportunity to extend concepts introduced in Media Arts. Students will have the opportunity develop the skills and expertise needed in typography, graphic design and Adobe software to produce advertising materials. Students will create advertising projects, such as packaging design, logo design, graphics, print ads, and illustrations. This class is an excellent elective for students interested in careers in graphic design, advertising, and marketing.

Studio in Animation (0703)
PREREQUISITE: NONE
EXAMINATION: NONE  ♦  CREDIT: ½ UNIT
This course explores the styles, creativity, and techniques of producing animations. Students will learn how animations are created, from the hand-drawn techniques that Walt Disney used, to the modern methods of 2-dimensional and 3-dimensional computer animation. Students will select from the various traditional and digital animation techniques and apply them to their individual ideas and personal style. Emphasis is placed on learning how to tell a story using the tricks of illustrating and showing motion. This class includes watching and analyzing animations from the past 100 years, and learning how modern technology has changed the animation process. By the end of this course, students will have created several short animations that explore a personal storyline and apply the various techniques presented in the course.
Art Course Descriptions

Game Design (0686)

Advanced Game Design (0687)

PREREQUISITE: NONE  ❗️  GRADE LEVEL: 10-12
EXAMINATION: NONE  ❗️  CREDIT: ½ UNIT IN ART  ❗️  CREDIT: ½ UNIT IN TECHNOLOGY
Interested in finding out how game designers make games like Call of Duty and League of Legends games? This course introduces students to the development of game design. This is a full-year course in which the student will be exploring the skills of both the animator and the programmer to create interactive games. The visual components of this course focus on design, color, character development, story boarding and 3D animation. Students will learn about the basic elements of game software development, including some basic programming skills, the design and implementation of games, and testing/debugging.

AP Art History (0735)

PREREQUISITE: NONE  ❗️  GRADE LEVEL: 10-12
EXAMINATION: AP EXAM IN MAY  ❗️  CREDIT: 1 UNIT
SPECIAL NOTE: This course is offered every other year and will be offered in 2020-2021.
Advanced Placement Art History students explore works of art from the ancient world through the 21st century. The course is organized into ten cultural/chronological units from around the globe, and offers students the same content as a college course in art history. The central questions in this course are: What is art and how is it made? Why and how does art change? How do we describe our thinking about art? Through these essential questions, student learn of an artwork’s content, context, form, and function. This will enable students to develop critical thinking and visual literacy skills with which they can find meaning from any artwork they encounter throughout their lives. Activities in the class will include readings, viewing images from a variety of media sources, comparisons, discussions, research projects, and gallery/museum visits. Students will be prepared and encouraged to take the AP Exam in the spring for college credit.

Portfolio Preparation (0717)

LOCAL PREREQUISITE: STUDIO IN ART, FOUNDATION IN 3 DIMENSIONAL DESIGN OR STUDIO IN MEDIA ARTS. AT THE END OF A 3 OR 5 UNIT ART SEQUENCE.  ❗️  GRADE LEVEL: 12 (SEMESTER 1)
EXAMINATION: FINAL EXHIBIT PREPARATION AND INSTALLATION  ❗️  CREDIT: ½ UNIT
This course is designed for students at the end of their high school visual arts experience who wish to have a permanent record of what they have achieved. This class is for the advanced student, and is designed to aid art students in completing a portfolio of work to satisfy college entrance and/or NYS graduation requirements for a high school art sequence. Students will be given the opportunity to review college application requirements, learn how to choose the right college art program and explore the variety of career options in the visual arts. This course is offered only during the fall semester to facilitate the presentation of student portfolios for college applications. Students will produce artwork based on their individual portfolio needs and media strengths. A student’s past work will be assessed and an individual semester plan will be drawn up for each student. Students will have their strongest, most recent artwork photographed and digitally prepared for college submission. Each student will install an exhibit of his or her portfolio at PHS.
**Accounting Honors (0603)**

- **PREREQUISITE:** NONE
- **GRADE LEVEL:** 11-12
- **CREDIT:** 1 UNIT

Syracuse University Project Advance (SUPA) Accounting introduces the student to financial accounting concepts that aid entrepreneurs, managers, investors and creditors in planning, operating and analyzing a business. Emphasis in this course is on the interpretation of financial statements. In addition to the use of a traditional textbook, lectures, quizzes and exams to deliver basic accounting skills, students are required to complete a comprehensive project that demonstrates their ability to analyze the financial statements of publicly traded companies and make an informed investment decision based on the analysis. By the end of the course, students are expected to understand the basic accounting information system, have the ability to read and understand a set of basic financial statements, have an awareness of the current issues in financial accounting and the impact of these issues on organizational stakeholders, and understand career opportunities available to accounting graduates.

3 Units of Syracuse University credit may be earned through a dual credit program; there is a tuition cost associated with the Syracuse University credit.

**Career & Financial Management (Personal Finance) (0609)**

- **PREREQUISITE:** NONE
- **GRADE LEVEL:** 9-12
- **CREDIT:** 1/2 UNIT

This course is required as part of every career and technical education program (CTE) including five-unit CTE programs used as a substitution for the additional two units of foreign language needed for a Regents Diploma with Advanced Designation. Personal Finance introduces students to the world of money management and finance. Students will learn what to do with their money by learning about their financial options and their responsibilities, and they will learn about the consequences of mismanaged finances.

3 MCC credits may be earned through a dual credit program. There is a tuition cost associated with MCC credit.

**Math & Financial Applications (0605)**

- **PREREQUISITE:** NONE
- **GRADE LEVEL:** 11-12
- **CREDIT:** 1 UNIT (MAY COUNT AS A 3RD UNIT OF MATH – IF INTEGRATED ALGEBRA REGENTS EXAM WAS PASSED)

This New York State-approved course is designed to prepare students for both college level business programs and the complex financial world they will encounter upon graduation. Topics covered will include: payroll, interest, budgeting, banking, loans, annuities, credit, investments, and financial statement analysis.

**Microsoft Office (0635)**

- **PREREQUISITE:** NONE
- **GRADE LEVEL:** 9-12
- **CREDIT:** 1/2 UNIT

This course is a practical, hands-on business course that develops Microsoft Office 2016 skills. Students will learn advanced features and apply them to realistic business-related activities. Students will become skilled in Word, Excel, PowerPoint, and Access. Students have the opportunity to obtain Microsoft Office Specialist (MOS) certification in Word. MOS certification is the industry-standard measurement for mastery of digital documentation creation and use. Microsoft certifications provide a valuable tool in advancing both academic
Business Course Descriptions

and career prospects in a competitive market.
3 MCC credits may be earned through a dual credit program; there is a tuition cost associated with MCC credit

Business Management (0623)
PREREQUISITE: NONE • GRADE LEVEL: 10-12
EXAMINATION: LOCAL • CREDIT: ½ UNIT
This course provides an understanding of how business organizations work and are managed, their goals, strategies, structures, technologies, environments, and the motivations and interests of the people involved. Through the use of internet technology, students will be able to research company financial data, management profiles, code of ethics, and social responsibility. An emphasis will be placed on small business ownership.

Introduction to Business (0627)
PREREQUISITE: NONE • GRADE LEVEL: 9-12
EXAMINATION: LOCAL • CREDIT: ½ UNIT
This course will emphasize some of the major challenges facing businesses in today’s highly competitive, fast-paced, and changing environment. Topics to be discussed include; producing quality products, business strategies, forms of business ownership, diversity in the workplace, international business, business ethics, case studies, careers in business, technology and e-commerce.
3 MCC credits may be earned through a dual credit program; there is a tuition cost associated with MCC credit

Entrepreneurship H (0625)
PREREQUISITE: NONE • GRADE LEVEL: 11-12
EXAMINATION: LOCAL • CREDIT: 1 UNIT
SPECIAL NOTE: This course is offered every other year and will be offered in 2019-2020.
During this course, we will assess, explore, critique, and celebrate the trend of entrepreneurship.
Entrepreneurship is approached as a way of thinking and acting, as well as an attitude and behavior. Our emphasis is on entrepreneurship as a manageable process that can be applied in virtually any organizational setting. Moreover, our interest is in sustainable entrepreneurship or entrepreneurship over the life cycle of a person’s entire career, of organizations as they evolve from start-up enterprises to sizeable corporations, and of societies as they move from underdeveloped to post-industrial. However, our principal focus will be on the creation of new ventures, the way they come into being, and factors associated with their success.
3 Units of Syracuse University credit may be earned through a dual credit program; there is a tuition cost associated with the Syracuse University credit

Sports Management H (0620)
PREREQUISITE: NONE • GRADE LEVEL: 11-12
EXAMINATION: LOCAL • CREDIT: 1 UNIT
SPECIAL NOTE: This course is offered every other year and will be offered in 2020-2021.
SPM 205: Principles and Contemporary Issues in Sport Management is an introductory course offered through the Syracuse University David Falk College of Sport and Human Dynamics through Syracuse University Project
**Business Course Descriptions**

Advance (SUPA). Students looking for a career in sport management, this course is an essential introduction to the field’s concepts through an examination of problems and issues faced by contemporary sport managers. You will learn to identify and describe the unique characteristics of sport; examine some of the major problems facing sport managers; develop a knowledge of what is involved in problems and solutions; apply the foundation and principles of sport management to various aspects of the industry; understand the social and ethical responsibilities involved in managing sport organizations and events; and identify career opportunities and how to prepare for them.

Get in the game!
3 Units of Syracuse University credit may be earned through a dual credit program; there is a tuition cost associated with the Syracuse University credit.

**Sports Marketing (0626)**

**PREREQUISITE: NONE † GRADE LEVEL: 9-12**

**EXAMINATION: LOCAL † CREDIT: ½ UNIT**

One of the fastest growing career interests in Business is Sports Marketing. This industry is focused on using the latest research and marketing methods to help promote their product, but also identify new related products to increase overall revenue.

This course is designed to introduce the student to the role of marketing in the sports industry. There will be an emphasis on employing the basic marketing concepts and strategies as they apply to these two specific areas of study. Particular attention will be focused on the marketing of products and services through sports.

Other areas that will be covered include: careers in sports marketing, marketing recreational sports, and legal issues for sports.

**Career Exploration Internship Program (CEIP) (0630)**

**PREREQUISITE: COMPLETED APPLICATION (SEE COUNSELOR) † GRADE LEVEL: 11-12**

**EXAMINATION: NONE † CREDIT: ½ UNIT – 54 WORKSITE HOURS/1 UNIT – 108 WORKSITE HOURS**

The Career Exploration Internship Program (CEIP) allows students to explore potential career options through an unpaid internship experience and earn school credit (based on worksite hours) towards graduation.

Students will be paired with a professional mentor in a field of interest in order to explore the discipline as a potential career. Additionally, students will participate in a seminar class one or two times per five-day cycle.

Seminar class provides related classroom instruction that will teach how academic knowledge and skills can be applied in the workplace. Students also maintain a journal of their experience.

**Work Study (0634)**

**PREREQUISITE: COMPLETED APPLICATION (SEE COUNSELOR) † GRADE LEVEL: 11-12**

**EXAMINATION: NONE † CREDIT: ½ UNIT – 150 WORKSITE HOURS/1 UNIT – 300 WORKSITE HOURS**

The Work Study Program allows students to simultaneously work their part-time, afterschool job and earn school credit (based on hours worked) towards graduation. Students learn valuable workplace skills at their job that are transferrable to college and the world of work. In addition to on-the-job learning experiences, students will participate in a seminar class one or two times per five-day cycle. Seminar class provides related classroom instruction that will teach how academic knowledge and skills can be applied in the workplace.

Students also maintain a journal of their experience.
Cooperative Work Experience (CO-OP) (0631)

PREREQUISITE: COMPLETED APPLICATION (SEE COUNSELOR) AND CURRENTLY ENROLLED IN A CLASS THAT RELEVANT TO THE CO-OP EXPERIENCE  
GRADE LEVEL: 11-12 (MUST BE AT LEAST 16 YEARS OF AGE)
EXAMINATION: NONE  
CREDIT: ½ UNIT – 150 WORKSITE HOURS/1 UNIT – 300 WORKSITE HOURS

The Cooperative Work Experience (CO-OP) program provides an important link between the classroom and the workplace. It is a real-life, hands-on experience that focuses on employability skills and is related to the student’s program of study and career interest. It is a real-world learning experience that develops marketable skills and abilities, positive work habits, and attitudes. In addition to on-the-job learning experiences, students will concurrently be enrolled in a course related to the Co-op experience. Students will participate in a seminar class one time per five-day cycle to plan and monitor the experience.
Each student must take four years of English.

As **ninth graders**, students may select English 9R or 9H. The program introduces the student to the literary skills necessary for success at the high school and provides opportunities for growth in the areas of writing, speaking, listening, and reading. A research paper is required.

As **tenth graders**, students may select English 10 R or 10 H. In addition, students may choose from several English electives, including Creative Writing, Shakespeare, Introduction to Public Speaking, and Collaborative Theater Production and Journalism.

The **eleventh-grade** program is a study of American literature. Several research projects are required. AP English Language and Composition is an alternative for interested juniors. Students may also select from a variety of electives in addition to English 11 R or AP Language. These electives include Creative Writing, Shakespeare, Introduction to Public Speaking, and Collaborative Theater Production and Journalism.

The requirement of the **senior year** is met through the elective program or AP literature and composition. Each student selects a minimum of two 20-week electives. All electives provide a strong base in reading, writing, and speaking with the major focus on a specific area of study. The elective program is designed to strengthen student skills in all the areas of language arts while allowing the student to choose an area of special interest. AP English Literature and Composition, a full-year course, is an alternative for interested, motivated seniors. Four 20-week electives are available that offer college credit: College Composition (MCC credit), Academic Writing H (SUPA), Creative Nonfiction H (SUPA), and Gender and Literary Texts (SUPA).

In grades 10-12, an honors or AP program is available for students who elect to challenge themselves at a high level. An Advanced Placement course in Language and Composition is available to juniors and an Advanced Placement course in Literature and Composition is available to seniors who are able to do college level work and who are interested in acquiring college credit in English through the Advanced Placement examination. In addition, seniors may take one or two 20-week Syracuse University Project Advance writing courses for Syracuse University credit.

All students entering ninth, tenth, and eleventh grade will be expected to complete a summer reading project. Please refer to the English Department web page for English project selections.
Full Year English Courses

English 9 R (0003)
PREREQUISITE: NONE   GRADE LEVEL: 9
EXAMINATION: LOCAL   CREDIT: 1 UNIT
A required course for all incoming ninth grade students, English 9 R promotes analytical assessment of all major literary genres: novel, drama, short story, poetry and nonfiction through thematic study that provides opportunities for both independent and collaborative work. Students develop their writing skills through varied writing tasks, including the literary essay and research paper. Students gain speaking confidence through class discussion, oral presentation and other authentic assessment activities. A summer reading assignment is required.

English 9 H (0004)
PREREQUISITE: NONE   GRADE LEVEL: 9
EXAMINATION: LOCAL   CREDIT: 1 UNIT
This challenging program is intended for students who excel in written communication skills and who are willing to read extensively beyond the realm of the Regents English program. Students will develop critical and analytical reading, writing, speaking, and listening strategies through intensive study as well as independent and collaborative work. Students engage extensively in the writing process. The challenging reading load includes texts representative of different cultures and time periods. A summer reading assignment is required. Some literature may contain sensitive content.

English 10 R (0005)
PREREQUISITE: ENGLISH 9R   GRADE LEVEL: 10
EXAMINATION: LOCAL   CREDIT: 1 UNIT
This course provides students with a developmental program in reading, writing, listening, and speaking. A variety of novels, plays, poetry, and short stories serve as the basis for literary study. Grammar, vocabulary, and spelling skills are incorporated into the curriculum. Various writing experiences allow for analysis and skill improvement. A summer reading assignment is required.

English 10 H (0006)
PREREQUISITE: ENGLISH 9   GRADE LEVEL: 10
EXAMINATION: LOCAL   CREDIT: 1 UNIT
This course fosters the development of independent learners as students explore more difficult reading selections and develop specific writing styles. The enrichment activities offer the challenge of critical thinking, writing, and speaking at a very high level. Teachers provide mini-lessons that engage students in the writing process. A summer reading assignment is required.

English 11 R (0007)
PREREQUISITE: ENGLISH 10R   GRADE LEVEL: 11
EXAMINATION: REGENTS   CREDIT: 1 UNIT
This course is a survey of American literature. Students read plays, poems, short stories, novels and nonfiction that reflect the trends in the development of American society. The curriculum closely adheres to the
English Course Descriptions

Common Core Reading and Writing Standards, and the coursework prepares students for the Regents exam given in June. The writing program covers literary, persuasive, research, narrative, and comparison writing. A summer reading assignment is required.

**AP English Language & Composition (0019)**

**PREREQUISITE: ENGLISH 10R OR ENGLISH 10H ➤ GRADE LEVEL: 11**

**EXAMINATION: REGENTS, AP EXAM STRONGLY ENCOURAGED ➤ CREDIT: 1 UNIT**

Advanced Placement Language and Composition engages students to become skilled readers of both fiction and nonfiction and skilled writers who compose for a variety of purposes. Through their reading and writing students will learn to analyze the interdependence between a writer’s purpose, audience expectations, organizational modes, and effective style. Students write in both informal and formal contexts. Students also study graphics and images as visual rhetoric. The informed use of research materials and the ability to synthesize varied sources are integral to the course. All juniors are required to take the New York State ELA Regents Exam in June. AP Language & Composition students also take the AP Language and Composition exam in May. 

A summer reading assignment is required.

**AP Literature & Composition (0020)**

**PREREQUISITE: AP ENGLISH LANGUAGE & COMPOSITION, AMERICAN STUDIES/ENGLISH 11R OR ENGLISH 11H ➤ GRADE LEVEL: 12**

**EXAMINATION: LOCAL, AP EXAM STRONGLY ENCOURAGED ➤ CREDIT: 1 UNIT**

Advanced Placement English Literature and Composition is a college-level course that engages students in the careful reading and critical analysis of literature. Through the close reading of selected texts, students deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. Students consider a work’s elements, structure, and stylistic techniques such as figurative language, imagery, symbolism, and tone. The course presents a thematic approach to the intensive study of representative works from various genres, periods, and nationalities, concentrating on works of recognized literary merit but also including contemporary fiction. Writing tasks focus on analytical essays. Students should plan on taking the Advanced Placement examination administered by the College Board in May and as a result may receive placement and credit in college for advanced work completed in high school. A summer reading assignment is required.

**English Electives**

The following electives may be taken by students in grades 10-12 for elective credit or may be taken by students in grade 12 as their senior English credit (see noted exceptions).

**Collaborative Theater Production (0037)**

**PREREQUISITE: ENGLISH 9 ➤ GRADE LEVEL: 10-12**

**EXAMINATION: LOCAL ➤ CREDIT: ½ UNIT**

This theater class had been designed to provide students with a unified vision of theater through both technical theater and acting. Students will be exposed to the history of theater, basic acting techniques through improvisation and structured acting in scenes with other students, set design and hands on building of set pieces. Live theater is an essential part of this course so students will have the opportunity to join
English Course Descriptions

others for a weekend in Stratford, Ontario (at their own expense) to experience Shakespeare live as well as at least one local production. The course culminates in a student one-act production that is directed, designed and acted by the class participants.

Attention student athletes: This course is not an NCAA approved core course

Creative Writing (0023)
PREREQUISITE: ENGLISH 9  •  GRADE LEVEL: 10-12
EXAMINATION: LOCAL  •  CREDIT: ½ UNIT
Creative writing focuses on prose writing and how professional writers create stories. Pre-writing, drafting, revising, and peer review are part of the creative writing process and are required as students learn to hone their craft. Although students may write in various genres, the focus is primarily on short story writing. Students are encouraged to publish in a variety of sources. A final project is required. Individual student skills are a focus of the course as each student learns to find his or her literary voice.

Journalism (0028)
PREREQUISITE: ENGLISH 9  •  GRADE LEVEL: 10-12
EXAMINATION: IN CLASS PROJECT  •  CREDIT: ½ UNIT
This interactive writing course provides students with an overview of the types of experiences and issues a journalist faces. This includes instruction and guided practice in the major types of writing: headlines, leads, news stories, features, editorials and sports stories, and in the production concerns of page design and layout. Students gain experience with word processing and desktop publishing as the class is conducted in the computer lab. Practical experience with school and community newspaper publications provides authentic audience for student work. Students write for The Pendulum, Penfield High School’s official school newspaper and produce an entire issue of the school newspaper as their final project. Students in grades 10 and 11 may also take this course for elective credit.

Public Speaking (0044)
PREREQUISITE: ENGLISH 9  •  GRADE LEVEL: 10-12
EXAMINATION: FINAL SPEECH  •  CREDIT: ½ UNIT
Public Speaking is a semester-long course that focuses on many aspects of public speaking. Students will engage in both formal and informal speaking activities and come to understand the value of quality verbal communication in the world beyond high school. The course challenges students to convey their ideas to an audience in clear, concise, and accurate terms while practicing the physical aspects of speech delivery in order to maintain the audience’s interest. In essence, the course aims to answer the question: What is effective communication? Coursework includes formal speech assessments, reading and writing homework, and a final speech as the final exam.

Shakespeare (0032)
PREREQUISITE: ENGLISH 9  •  GRADE LEVEL: 10-12
EXAMINATION: LOCAL  •  CREDIT: ½ UNIT
Can you speak Shakespearean? Why is Shakespeare’s language so tough and yet so beautiful? Is it possible to have fun with Shakespeare? Students who take this interactive course will discover the thrills and the curiosities of the world’s greatest literary figure. From a study of the life and times of Shakespeare to a thematically organized array of plays, sonnets, and films, students will investigate the fanciful and profound
worlds created by the Bard of Avon. Some of these may include Shakespeare’s Hamlet, Othello, King Lear, Julius Caesar, The Merchant of Venice, Much Ado About Nothing, Twelfth Night, The Taming of the Shrew, Henry V, and The Tempest. Student activities will consist of seminar discussions, class dramatizations of plays, student and small group presentations and investigations, film dramatizations of plays, and field trips to live productions, featuring The Stratford Experience, a fun-filled weekend in Stratford, Ontario, including tickets to two plays, theater class and tour, and fine dining, coach transportation, and overnight accommodations. Participation in The Stratford Experience is voluntary and at student expense. Students will complete a final paper or project. Some literature may contain sensitive content.

Leadership Seminar (0049)
PREREQUISITE: NONE  ♦  GRADE LEVEL: 11-12
EXAMINATION: NONE  ♦  CREDIT: ½ UNIT
The Leadership Seminar is designed to provide a basic understanding of leadership through individual and collaborative learning, practical application of skills, evaluation, and feedback. The goal of the course is to foster the intellectual, social, moral, and emotional development of student leaders and potential student leaders. Students enrolled in the course are expected to prepare thoroughly to maximize group and individual reflection and analysis, participate vigorously in group activities, personally maintain and base decisions on high ethical standards, and bring a positive attitude to class.
Course Objectives:
* Identify leadership skills through selected reading, reflection, and class discussion.
* Analyze leader role models.
* Develop a personal leadership philosophy.
* Engage in problem-based learning to practice leadership skills.
* Implement leadership skills effectively to enhance the PHS community.
Service learning opportunities are available for seminar participants.
Attention student athletes: This course is not an NCAA approved core course

Senior English Electives
Students must choose two semester-long electives if not enrolled in AP literature and composition.

College Composition (ENG 101) (0021)
PREREQUISITE: ENGLISH 11
EXAMINATION: NONE  ♦  CREDIT: ½ UNIT
This composition course concentrates on skills, usage, and the types of writing a prospective college student should know. Students will learn to make decisions based on rhetorical concerns of writer’s purpose, readers’ needs, and the context in which documents are read. Using sources effectively is one of the goals in this course, so research will be interwoven into pieces as a way to support ideas and connect with an audience. The course emphasizes process-based writing and reflection of individual student’s learning progress. Instead of sitting for a formal exam, students will submit a Final Portfolio. Students will read various professional and student-written essays and study the modes of writing and techniques used in each. These essays will serve as springboards to help students write pieces in which they reflect, inform, and analyze. Students will also learn how to incorporate description, narration, and exposition as they develop their writing. Three MCC credits may be earned through a dual credit program. There is a tuition cost associated with MCC credit.
English Course Descriptions

Collaborative Theater Production (0037)
(See description in English Electives Section)

Creative Writing (0023)
(See description in English Electives Section)

Current Problems (0024)
PREREQUISITE: ENGLISH 11
EXAMINATION: LOCAL  CREDIT: ½ UNIT
This course is designed for students who have an interest in the exploration of contemporary issues and problems. Course material addresses issues such as: drugs, racism, violence, violations of human rights, and an examination of aspects of the human condition in today's society. Units include the reading of newspaper articles and laws, as well as watching documentaries that are related to the topics under discussion. Expository writing, oral presentations, creative responses and other performance measurements are the means by which pupils are evaluated. This course is an excellent choice for those interested in the social sciences. Some literature may contain sensitive content. At the culmination of this course students will complete a final paper.

Introduction to Film Studies (0030)
PREREQUISITE: ENGLISH 11
EXAMINATION: RESEARCH PROJECT  CREDIT: ½ UNIT
This course provides an introduction to film studies and concentrates on film form, elements of style, and genre-based approaches to film analysis. The course spans silent and sound eras and offers examples from the Hollywood motion picture industry. In analyzing film, students will examine elements of plot, setting, style, and point of view. Class activities include viewing, listening to, researching and analyzing film. A variety of class and independent assignments emphasize original critical thinking and analysis in discussion and writing. The course includes short papers, quizzes, and tests. Students will complete a final project.
Attention student athletes: This course is not an NCAA approved core course

Film Studies: Fundamentals of Film Production (0038)
PREREQUISITE: NONE
EXAMINATION: FINAL VIDEO PROJECT (INCLUDES A WRITTEN ANALYSIS)  CREDIT: ½ UNIT
This course provides an introduction to film production through the entire creative process, including screenwriting, introduction to technologies and techniques of filmmaking, screenwriting, story-boarding, digital video camera techniques, staging, lighting, sound recording, post-production sound, and image editing. Techniques of film studies (mise-en-scene, shot analysis) are studied. Students read film theory and director biographies as a basis for film development. Students are required to work in groups and alone on several video products through all phases of development, including learning Final Cut Pro (editing) software. A special unit on documentary film making is included.
Attention student athletes: This course is not an NCAA approved core course
English Course Descriptions

Humanities (0027)
PREREQUISITE: ENGLISH 11
EXAMINATION: LOCAL  CREDIT: ½ UNIT
From ancient Greece to the counter-culture of the 1960s, the evolution of humanity as reflected in the arts is the focus of this course. Students explore the basic concerns of humanity and the development of humanity through an historical approach dealing with four major periods of time in humanity’s evolution. These include the Ancient Greeks, the Renaissance, Romanticism, and the Modern World. Mankind's perspectives and accomplishments in literature, art, music, theater, history, and philosophy are interwoven with each unit. Such period literature as Antigone, The Merchant of Venice, Frankenstein, and Slaughter House—Five are options during this course. Student-centered learning through student presentations and seminars is integral to this course. A culminating project/paper is required in lieu of a final exam.

Science Fiction & Fantasy (0068)
PREREQUISITE: ENGLISH 11
EXAMINATION: PROJECT  CREDIT: ½ UNIT
This twenty-week course serves as a critical examination of the science fiction and fantasy genres. Selections from celebrated sci-fi and fantasy authors including Orson Scott Card, J.R.R. Tolkien, as well as many others will serve as the subjects for in-depth literary analysis and as opportunities for creative expression. This reading-intensive course affords the student the opportunity to examine authors’ craft and how the themes that pervade the surreal literature are invariably connected to contemporary society. A culminating project that utilizes critical literary skills and creativity is required in lieu of a final exam.

Journalism (0028)
(See description in English Electives section)

Modern War through Literature (0067)
PREREQUISITE: ENGLISH 11
EXAMINATION: LOCAL  CREDIT: ½ UNIT
Students will examine and explore various themes and concepts of war, including but not limited to the issues of war, the men and women involved in war, the families left behind, the innocent victims of war, and war itself. In addition, students will explore social and historical issues pertaining to war. The course will include the reading and discussion of non-fiction, fiction, poetry and drama, as well as oral histories and some film study. Students will write in a variety of forms for diverse purposes and audiences, including narrative, expository, descriptive, analytic, argumentative, and persuasive. Students will develop an appreciation of literature as a study of the human condition, and establish a foundation for the study of literature in college, as well as living as a contributing member of a democratic society. Student-centered learning through presentations and seminars are the basis for discussions. A culminating project/paper is required in lieu of a final exam. Some literature may contain sensitive content.

Shakespeare (0032)
(See description in English Electives Section)
English Course Descriptions

Public Speaking (0044)
(See description in English Electives Section)

Mosaics: Literature of Diversity (0093)
PREREQUISITE: ENGLISH 11  •  GRADE LEVEL: 12
EXAMINATION: LOCAL  •  CREDIT: ½ UNIT
In Mosaics, students address issues of race and ethnicity affecting the global, national, local, and school community. Students will be pressed to think critically about issues related to discrimination, racism, racial stereotyping, affirmative action, racial and cultural identity, and other related topics. Units will include analysis of current news articles and relevant literature (including novels, historical works, play, and films), discussion of local and national current events, community service and active involvement within the school district. Students will be evaluated through expository writing, oral presentations, creative responses, seminar discussions, and other performance measurements. Members of the Mosaic’s course are not expected to be active members of the Mosaic’s club at Penfield High School, which works in tandem with the members of the course.

Sports Literature (0034)
PREREQUISITE: ENGLISH 9  •  GRADE LEVEL: 12
EXAMINATION: LOCAL  •  CREDIT: ½ UNIT
Most Americans probably either participate actively in some sport or watch their favorite sporting event without being aware in any real sense of the wide application sports can have to their lives. In this course, students will read and analyze a variety of sports literature, engage in essay and creative writing about sports, and discuss and debate topics relating to sports. Novels, biographies, short stories, essays, newspaper columns, magazine articles, TV and radio broadcasts, movies, the Internet, and any other medium communicating the topic of sports will be studied. Units of study include: the sports fan, sports heroes and hall of famers, America’s pastime, sports controversy and hoops. Students complete a final project.

Academic Writing H (0069)
PREREQUISITE: ENGLISH 11
EXAMINATION: LOCAL  •  CREDIT: ½ UNIT
Academic Writing H is a college-level course taught through the Project Advance program at Syracuse University.
Each section is a community of writers who meet together with the specific purpose of developing as critical readers, writers, and thinkers. Students learn strategies of critical academic writing in various genres, including analysis, argument, and researched writing. Students learn to develop ideas through the choices they make as writers, from invention to making and supporting claims, to sentence-level editing, to designing finished print and digital texts.
The course challenges students to understand that effective communication requires people to be aware of the complex factors that shape every rhetorical context, including issues of power, history, difference, and community.
Three Syracuse University credits may be earned through a dual credit program. There is a tuition cost associated with Syracuse University credit.
Creative Nonfiction H (0072)
PREREQUISITE: ENGLISH 11
EXAMINATION: LOCAL  CREDIT: ½ UNIT

Creative Nonfiction H is a college-level course taught through the Project Advance program at Syracuse University. Students explore varieties of creative nonfiction, such as memoir; biography; the personal essay; travel, science, and food writing; and “new journalism.” As its name suggests, creative nonfiction borrows elements from fiction and poetry (e.g., description, scene construction, dialogue, etc.) yet still aims to tell the truth. For a writer to “tell it slant,” however, is to acknowledge the ways in which one’s subjective viewpoint shapes what counts as “the truth” in telling a story about one’s own or another’s experiences. Students will have the opportunity to experiment with style, genre, and subject in a writing studio environment and to read varied examples of contemporary creative nonfiction. Three Syracuse University credits may be earned through a dual credit program. There is a tuition cost associated with Syracuse University credit.

Gender and Literary Texts H (0092)
PREREQUISITE: ENGLISH 11
EXAMINATION: LOCAL/PROJECT  CREDIT: ½ UNIT

Gender & Literary Texts is a college-level course taught through Project Advance Program at Syracuse University. It explores the “construction and representation of ‘gender’”, especially as it affects the production and reception of literary and other cultural texts. The course foregrounds readers’ interpretive practices, i.e., how we read and make meaning in texts, particularly if we interpret them using the premise that gender is a social construct – rather than a natural, ahistorical “essence” that somehow “expresses” our true “selves”. To examine the ways in which literature participates in the social reproduction of gender, as well as the difference that gender makes in the production and reception of literary texts, students will practice extensive close reading, evidence-based analysis and argumentation, and independent-inquiry. Raising awareness of how meanings are created through acts of critical reading, students will thus learn to analyze the ways texts construct categories of difference, including differences on gender, race, and social class. Three Syracuse University credits may be earned through a dual credit program. There is a tuition cost associated with Syracuse University credit.
Health Course Descriptions

**Health I (0902)**
PREREQUISITE: NONE ♦ GRADE LEVEL: 10-12 (PREFERENCE GIVEN TO STUDENTS IN GRADES 11&12)
EXAMINATION: NONE ♦ CREDIT: ½ UNIT
Students will have the opportunity, to explore real-life, contemporary health topics and information. These learning experiences will help to develop a foundation of skills that will reduce risks and empower students to begin to positively impact their life-long health and wellness. In addition, students will receive CPR certification.
The curriculum covers the mandated New York State Education Department skills and standards. Successful completion of Health I is required for graduation.

**Health II (0903)**
PREREQUISITE: HEALTH I ♦ GRADE LEVEL: 11-12 ONLY
EXAMINATION: NONE ♦ CREDIT: ½ UNIT
Students will participate in advanced learning experiences which will enhance the foundation of skills introduced in Health I. Using an active approach students will participate in challenging themselves with topics such as parenting, relationships, mental health, risky behaviors and contemporary issues. Students will also have the opportunity to contribute to their school and community while participating in this course.
The curriculum covers the mandated New York State Education Department skills and standards. Successful completion of Health II is required for graduation.

**Reconnecting Youth (0906)**
PREREQUISITE: COUNSELOR RECOMMENDATION ♦ GRADE LEVEL: 9-12
EXAMINATION: NONE ♦ CREDIT: ½ UNIT
A Peer Group Approach to Building Life Skills (RY) is a school-based prevention program for students ages 14-19 years that teaches skills to build resiliency against risk factors and control early signs of substance abuse and emotional distress.
Potential participants are identified using a school’s computer records or are referred by school personnel if they show signs of any of the above risk factors. Eligible students may show signs of multiple problem behaviors, such as substance abuse, aggression, depression, or suicidal ideation.
RY also incorporates several social support mechanisms for participating youth: social and school bonding activities to improve teens' relationships and increase their repertoire of safe, healthy activities; development of a crisis response plan detailing the school system's suicide prevention approaches; and parent involvement, including active parental consent for their teen's participation and ongoing support of their teen's RY goals.
The course curriculum is taught by an RY Leader, a member of the school staff or partnering agency who has abilities as a "natural helper," has healthy self-esteem, is motivated to work with high-risk youth, and is willing to comply with implementation requirements.
Languages Other Than English Course Descriptions

Spanish 1 R (0218)
PREREQUISITE: NONE  †  GRADE LEVEL: 9-12
EXAMINATION: 4 MARKING PERIODS AND/OR LOCAL EXAM  †  CREDIT: 1 UNIT
This beginning-level language course emphasizes vocabulary acquisition, pronunciation, and sets the foundation for grammar. This course introduces students to Spanish culture. Basic conversation patterns are taught in contrived "real-life" situations such as greetings, school, weather, telling time, clothing, family, food, friends, sports, numbers, and travel. Speaking, listening, reading, and writing skills are introduced. Spanish I R is designed as the introductory course in the NYS LOTE sequence. Class enrollment determines whether the class is offered.

French 2 R (0201)
German 2 R (0210)
Spanish 2 R (0220)
PREREQUISITE: LANGUAGE 8 OR LEVEL I  †  GRADE LEVEL: 9-12
EXAMINATION: LOCAL  †  CREDIT: 1 UNIT
Skills including listening, reading, writing, and speaking are emphasized at this level. Grammar and vocabulary are reviewed and extended from level 1. Students will further develop language skills through guided practice, role-playing, skits, and conversation. Listening and reading comprehension are enhanced through the use of authentic text, news reports, and short stories. Students will also develop an increased awareness of the cultures of those who speak the language.

French 2 H (0202)
Spanish 2 H (0221)
PREREQUISITE: LANGUAGE 8  †  GRADE LEVEL: 9-12
EXAMINATION: LOCAL  †  CREDIT: 1 UNIT
The ability to understand and speak the foreign language is further developed through the introduction of additional vocabulary and grammar with emphasis on refining and establishing control of the language. French and Spanish 2 H build upon and rapidly expand the foundation of vocabulary and grammar taught in Level 1, as a result, vocabulary to be mastered for each topic is significantly increased. Grammatical structures are incorporated into frequent speaking and writing activities. A high emphasis is placed on the student’s ability to master grammatical structures in all skill areas: reading, speaking, writing and listening. Students will learn to write and perform their own skits and dialogues, write essays, and speak on a variety of themes based on the NYS curriculum.

French 3 R (0203)
German 3 R (0212)
Spanish 3 R (0222)
PREREQUISITE: FRENCH, GERMAN, SPANISH 2  †  GRADE LEVEL: 10-12
EXAMINATION: LOCAL  †  CREDIT: 1 UNIT
In this course, students further develop communication skills through speaking and listening practice, vocabulary development, short readings and writings, and grammatical studies. Students work independently

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Languages Other Than English Course Descriptions

and in groups to use the language more proficiently and with confidence. Level 3R prepares students for the regionally-developed Checkpoint B Examination. This course is the third course in a sequence which is required for a Regents Diploma with Advanced Designation.

French 3 H (0204)
Spanish 3 H (0223)
PREREQUISITE: FRENCH/SPANISH 2 ♦ GRADE LEVEL: 10-12
EXAMINATION: REGENTS ♦ CREDIT: 1 UNIT
This course assumes mastery of the vocabulary, grammatical structures, and reading and writing skills learned in 2 H. There is continued emphasis on in-depth study of grammatical structures, language use, and vocabulary development. Instruction is given mainly in the target language. Students are expected to write frequently, make oral presentations, and read and interpret longer written selections. Numerous resources from authentic materials and classroom texts will provide topics for discussion, reading, and composition. A research paper, written in the target language, is also required at this level. Level 3 H prepares students for the regionally-developed Checkpoint B Examination.

French 4 R (0205)
German 4 R (0214)
Spanish 4 R (0224)
PREREQUISITE: FRENCH/GERMAN/SPANISH 3 ♦ GRADE LEVEL: 11-12
EXAMINATION: PROJECT/MCC ASSESSMENTS ♦ CREDIT: 1 UNIT
Students use and further develop the 3 R reading, writing, listening, and speaking skills in creative situations with thematic units related to the foreign culture. These may include units on sports, immigration, environment, xenophobia, careers, education, recreation, music, poetry, videos, travel, or other contemporary issues. Reading, writing, and class discussions focus on short literary texts, articles from current magazines, newspapers and the internet.
3 MCC credits may be earned through a dual credit program. There is a tuition cost and required assessments associated with MCC credit. The MCC curriculum is incorporated throughout the year.

French 4 H (0206)
Spanish 4 H (0225)
PREREQUISITE: FRENCH/SPANISH 3 ♦ GRADE LEVEL: 11-12
EXAMINATION: PROJECT ♦ CREDIT: 1 UNIT
The 4 Honors level course builds upon the curriculum and the skills developed in 3 H. It is an intensive study of language in the context of historical and contemporary readings, literary excerpts, and relevant topics. The emphasis is on the refining of oral and written expression, idiomatic use of language, and intricacies of grammar, reading and discussion of literary works, exposure to authentic movies, and the continued study of culture and lifestyle. This course is a precursor to the AP Spanish and French 5 H (Syracuse University Project Advance) classes.
Languages Other Than English Course Descriptions

**German 5 R (0216)**
**Spanish 5 R (0226)**

**PREREQUISITE: GERMAN/SPANISH 4 • GRADE LEVEL: 12**
**EXAMINATION: PROJECT/MCC ASSESSMENTS • CREDIT: 1 UNIT**

The goal of this course is to guide the students to achieve fluency in the foreign language. In this final year, students maintain and continue to develop their language proficiency through creative group and independent projects. These may include poetry, short stories and essays, newspapers and journalism, story writing, and reactions to real-life situations. Instructional materials include a variety of authentic audio and video selections that further develop students' listening abilities.

3 MCC credits may be earned through a dual credit program. There is a tuition cost and required assessments associated with MCC credit. The MCC curriculum is incorporated throughout the year.

**AP Spanish (0227)**

**PREREQUISITE: SPANISH 4 • GRADE LEVEL: 12**
**EXAMINATION: PROJECT • CREDIT: 1 UNIT**

The AP course is a rigorous academic curriculum with a learning experience equivalent to that of a third-year college course. The goal of this course is to guide students to achieve fluency in Spanish and the course is taught almost exclusively in the foreign language and students are expected to use the language in class. Instructional materials include a variety of authentic audio and video selections that further develop students' listening abilities. Authentic written texts such as newspaper, magazine and internet articles, literary texts, and other non-technical writings are used to develop students' reading abilities. There is extensive training in the organization and writing of compositions. Students have frequent opportunities to develop their speaking skills in various conversational situations. Students are strongly encouraged to take the AP exam in May.

**French 5 H (0211)**

**PREREQUISITE: FRENCH 4 • GRADE LEVEL: 12**
**EXAMINATION: LOCAL • CREDIT: 1 UNIT**

The focus of this course is the systematic development of advanced-level skills. By the end of the course, students should be able to sustain understanding of main ideas and details over long stretches of connected discourse. They should be able to create with the language; to initiate, sustain, and close basic communicative tasks. Students can be expected to read with increased comprehension texts dealing with a variety of factual topics and to write well enough to meet practical needs.

To reach these goals, activities will involve the use of film and video to develop note taking skills and summarizing and organizing what was seen and heard. Oral skills will be honed in extended discourse, paragraph-length accounts, role playing, and interviews. Activities will focus on understanding the facts and details of narration and description. Production of texts such as letters, journals, summaries and reports will be systematically developed.

4 Units Syracuse University credits may be earned through a dual credit program. There is a tuition cost associated with Syracuse University credit.
Mathematics Course Descriptions

Algebra I Extended (0408)
PREREQUISITE: MATH 8/TEACHER/COUNSELOR RECOMMENDATION ♦ GRADE LEVEL: 9-12
EXAMINATION: ALGEBRA I REGENTS EXAM IN JUNE ♦ CREDIT: 1 UNIT
Students are scheduled in Algebra I Extended to provide additional support through extended instruction. Students receive an additional 80 minutes of instruction per week. Students are recommended by their middle school teacher and counselor. The material contained in Algebra I Extended is the same as Algebra I. A TI-84+ graphing calculator is required for this course. If there is concern about purchasing a graphing calculator, please contact your teacher.
See Algebra I for further information

Algebra I (0406)
PREREQUISITE: NONE ♦ GRADE LEVEL: 9-12
EXAMINATION: ALGEBRA I REGENTS EXAM IN JUNE ♦ CREDIT: 1 UNIT
Algebra I provides a formal development of the algebraic skills and concepts for students to succeed in advanced mathematics courses. Students develop a strong foundation in working with linear equations in all forms, extending solution techniques to simple equations with exponents. Students explore functions, including notation, domain and range, multiple representations, and modeling. Through the comparison of linear and exponential functions, students contrast the concepts of additive and multiplicative change. Students then apply what they have learned to linear models of data, analyzing scatterplots and using lines of best fit to apply regression techniques. During the course students also explore rational exponents, quadratic and exponential expressions, and receive an introduction to non-linear functions, with a heavy emphasis on quadratics. A TI-84+ graphing calculator is required for this course. If there is concern about purchasing a graphing calculator, please contact your teacher.

Algebra I Honors (0407)
PREREQUISITE: NONE ♦ GRADE LEVEL: 9
EXAMINATION: ALGEBRA I REGENTS EXAM IN JUNE ♦ CREDIT: 1 UNIT
This course provides enrichment of the topics covered in Algebra I with an extensive amount of rigor. A TI-84+ graphing calculator is required for this course. If there is concern about purchasing a graphing calculator, please contact your teacher.
Recommended achievement level: score of a high 3 level on NYS Math 8 assessment and teacher recommendation

Geometry (0411)
PREREQUISITE: NONE ♦ GRADE LEVEL: 9-12
EXAMINATION: GEOMETRY REGENTS EXAM IN JUNE ♦ CREDIT: 1 UNIT
This course formalizes what students have learned about geometry in the middle grades, with a focus on reasoning and making mathematical arguments. Mathematical reasoning is introduced with a study of triangle congruency, including exposure to formal proofs, and geometric constructions. Afterward, students extend what they have learned to other essential triangle concepts, including similarity, right triangle trigonometry, and the Laws of Sine and Cosine. Moving on to other shapes, students justify and derive various formulas for circumference, area, and volume, as well as cross-sections of solids and rotations of two-dimensional objects. Students then make important connections between geometry and algebra, including special triangles, slopes of parallel and perpendicular lines, and parabolas in the coordinate plane, before
Mathematics Course Descriptions

Mathematics delving into an in-depth investigation of the geometry of circles. During the course students also apply theoretical and experimental probability to make decisions informed by data analysis. A TI-84+ graphing calculator is required for this course. If there is concern about purchasing a graphing calculator, please contact your teacher.

Geometry Honors (0412)
PREREQUISITE: ALGEBRA I  GRADE LEVEL: 9-10
EXAMINATION: GEOMETRY REGENTS EXAMS IN JUNE PLUS LOCAL FINAL EXAM  CREDIT: 1 UNIT
This course spirals from the topics in Algebra I Honors. Geometry Honors corresponds to Geometry with many of the topics addressed in greater detail. Enrichment is done in all areas with special emphasis on the development of more advanced proof writing. A TI-84+ graphing calculator is required for this course. If there is concern about purchasing a graphing calculator, please contact your teacher.
Recommended achievement level: Grade of 90 or higher in Algebra I or 85 or higher in Algebra I Honors and teacher recommendation.

Math & Financial Applications (0605)
PREREQUISITE: NONE (MUST HAVE PASSED THE ALGEBRA I REGENTS EXAMS TO USE AS A 3RD UNIT OF MATH)  GRADE LEVEL: 12
EXAMINATION: LOCAL  CREDIT: 1 UNIT (MAY COUNT AS A 3RD UNIT OF MATH)
This New York State-approved course is designed to prepare students for both college level business programs and the complex financial world they will encounter upon graduation. Topics covered will include: payroll, interest, budgeting, banking, loans, annuities, credit, investments, and financial statement analysis.
Attention student athletes: This course is not an NCAA approved core course.

Math III (0410)
PREREQUISITE: ALGEBRA I AND GEOMETRY  GRADE LEVEL: 11-12
EXAMINATION: LOCAL  CREDIT: 1 UNIT
This course is designed to help students (that need a slower pace in math) pass the Algebra II Regents Exam in two years. After successful completion of this course, students wishing to obtain a Regents Diploma with Advanced Designation must take Algebra II or Algebra II Extended the following year. Students who enroll in Math III will build a strong algebraic foundation by studying linear, quadratic, and rational functions. This course also fulfills one out of the three math credits needed for a Regents Diploma. A TI-84+ graphing calculator is required for this course. If there is concern about purchasing a graphing calculator, please contact your teacher.

Algebra II Extended (0442)
PREREQUISITE: GEOMETRY  GRADE LEVEL: 9-12
EXAMINATION: ALGEBRA II REGENTS EXAMS IN JUNE  CREDIT: 1 UNIT
Students are scheduled in Algebra II Extended to provide additional support through extended instruction. Students receive an additional 80 minutes of instruction per week. This course is for students that are willing to work hard, and want/need the extra time for practice with guidance from the teacher. The material contained in Algebra II Extended is the same as Algebra II. A TI-84+ graphing calculator is required for this course. If there is concern about purchasing a graphing calculator, please contact your teacher.
Recommended Achievement Level: 75 or higher on the Algebra I Regents Exam and teacher recommendation.
Mathematics Course Descriptions

Algebra II (0440)
PREREQUISITE: GEOMETRY ◆ GRADE LEVEL: 9-12
EXAMINATION: ALGEBRA II COMMON CORE REGENTS EXAM IN JUNE ◆ CREDIT: 1 UNIT
Students continue to build on their work from Algebra I with linear, quadratic, and exponential functions. They also extend their repertoire of functions to include polynomial, rational, and radical functions. Students continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. The last two units introduce Statistics and gives students the foundation for a college level course in data analysis.

A TI-84+ graphing calculator is required for this course. If there is a concern about purchasing a graphing calculator, please contact your teacher.
Recommended Achievement Level: 75 or higher on the Algebra I Regents Exam and teacher recommendation.

Algebra II Honors (0441)
PREREQUISITE: GEOMETRY ◆ GRADE LEVEL: 9-12
EXAMINATION: ALGEBRA II REGENTS EXAM IN JUNE ◆ CREDIT: 1 UNIT
This course extends the topics in Geometry Honors. Algebra II Honors corresponds to Algebra II with many of the topics addressed in greater detail. Enrichment is done in all areas. A TI-84* graphing calculator is required for this course. If there is concern about purchasing a graphing calculator, please contact your teacher.
Recommended achievement level: 90 or higher on Integrated Algebra I Regents exam, 85 or higher in Algebra and Geometry courses and teacher recommendation.

Algebra II Honors Accelerated (0443)
Pre-Calculus Honors Accelerated (0414)
PREREQUISITE: GEOMETRY H◆ GRADE LEVEL: 9-12
EXAMINATION: LOCAL ALGEBRA II EXAM IN JANUARY, LOCAL PRE-CALCULUS H EXAM IN JUNE; ALGEBRA II REGENTS EXAM IN JUNE ◆ CREDIT: 2 UNITS
This two-credit course will provide a double period class in math every day. The first semester's work is that of Algebra II H; the second semester will be Pre-Calculus Honors. Please look at the course descriptions for these courses separately for more information. Students will be expected to take the Algebra II Regents Exam in January and a local Pre-Calculus H final in June. By taking this course, students will be prepared to take a Calculus course the next year.
Recommended achievement level: 90 or higher on Algebra I Regents exam, 85 or higher in Algebra and Geometry courses and teacher/counselor recommendation.

College Prep Math (0451)
PREREQUISITE: ALGEBRA II AND MATH III ◆ GRADE LEVEL: 12
EXAMINATION: LOCAL ◆ CREDIT: 1 UNIT
A study of the properties and graphs of polynomial, piecewise, absolute value, rational, logarithmic, exponential and trigonometric functions. There is an introduction to coordinate geometry, including the study
Mathematics Course Descriptions

of circles, parabolas, ellipses and hyperbolas. This course is intended to prepare students for the study of calculus. A TI-84 graphing calculator is required for this course. If there is concern about purchasing a graphing calculator, please contact your teacher.

Attention student athletes: This course is not an NCAA approved core course

Pre-Calculus (0416)
PREREQUISITE: ALGEBRA II  •  GRADE LEVEL: 11-12
EXAMINATION: LOCAL  •  CREDIT: 1 UNIT
This is a full-year course that is the capstone of the NYS High School Math Common Core curriculum. Completion of this course will provide the student with “college and career readiness” for their post-graduate work. Topics include: complex numbers, vectors, matrices, polynomial and rational expressions, trigonometric functions, and probability.
This course is designed for students with a serious interest in math and/or science and who intend to take calculus as a college freshman. A TI-84+ graphing calculator is required for this course. If there is concern about purchasing a graphing calculator, please contact your teacher.

Pre-Calculus Honors (0417)
PREREQUISITE: ALGEBRA II  •  GRADE LEVEL: 10-12
EXAMINATION: LOCAL  •  CREDIT: 1 UNIT
This is a full-year honors-level pre-calculus course which includes many of the same topics as Pre-Calculus. Although the topics are the same, the student work will feature a deeper investigation and enrichment.
This course is designed for students with a serious interest in math and/or science and who intend to take calculus as a college freshman. A TI-84+ graphing calculator is required for this course. If there is concern about purchasing a graphing calculator, please contact your teacher.
Recommended achievement level: 90 or higher on the Algebra II exam and teacher recommendation

Calculus H (SUPA) (0433)
PREREQUISITE: PRE-CALCULUS  •  GRADE LEVEL: 12
EXAMINATION: LOCAL  •  CREDIT: 1 UNIT
The mathematical content of this program is typical of most traditional first-year calculus courses. The concepts of limit, continuity, derivative, anti-derivative, and definite integral are developed in the usual way, and are then applied to the traditional collection of functions: polynomial, rational, trigonometric, and exponential, together with their inverses, compositions, and algebraic combinations. The results are then applied to a wide variety of problems from geometry, physics, and other sciences. These include maximum and minimum problems, related rates, areas, volumes and surfaces of revolution, arc length, work, fluid pressure, velocity and acceleration, and exponential growth and decay. Curve sketching is introduced at the very beginning and emphasized throughout, as it is strongly believed that this is an important skill for any calculus student to acquire.
This course is a full year honors course and is the same as Math 295 at Syracuse University. A student who is successful in this course will receive 1 unit of credit at the high school level and, if paying for the course, 4 units of credit with Syracuse University.
## AP Calculus AB (0419)
## AP Calculus BC (0420)
**PREREQUISITE:** SUCCESSFUL COMPLETION OF FOUR YEARS OF SECONDARY MATHEMATICS FOR COLLEGE-BOUND STUDENTS • **GRADE LEVEL:** 11-12 (TYPICALLY)
**EXAMINATION:** LOCAL, AP EXAM STRONGLY ENCOURAGED • **CREDIT:** 1 UNIT

Both are honors college-level calculus courses which include the study of differential and integral calculus. Both classes are rigorous and require a large amount of outside work. Calculus AB is of the same rigor as Calculus BC. The difference is that Calculus BC is an extension of Calculus AB. It covers all of the topics in Calculus AB plus the study of sequences and series, polar and parametric equations, and advanced integration techniques. The pace of Calculus BC is faster than that of Calculus AB. A separate nationwide exam is given for each course to students who elect to take it. AP exams are given in May. There is a fee associated with the exam. Depending on the exam score and the college attended, advanced placement in college math courses may be earned.

Recommended achievement level: a grade of 90 or higher in Pre-Calculus Honors

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## College Statistics (0449)
**PREREQUISITE:** SUCCESSFUL COMPLETION OF ALGEBRA II • **GRADE LEVEL:** 10-12
**EXAMINATION:** LOCAL • **CREDIT:** 1 UNIT

The purpose of this course is to introduce the student to Statistics in a way that will make the student aware of the techniques of Statistics as they apply to the solutions of practical problems in various fields. This introduction is presented with particular attention to statistical vocabulary, interpreting statistical formulas and graphs, and representing statistics symbolically, visually, numerically, and verbally. Students gain a foundational understanding from the judicious use of formulas for small data sets, with the focus on the interpretation of the results. Topics of basic probability are included only as needed.

3 MCC credits may be earned through a dual credit program. There is a tuition cost associated with MCC credit.

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## AP Statistics (0425)
**PREREQUISITE:** SUCCESSFUL COMPLETION OF ALGEBRA II • **GRADE LEVEL:** 10-12
**EXAMINATION:** LOCAL, AP EXAM STRONGLY ENCOURAGED • **CREDIT:** 1 UNIT

The purpose of the Advanced Placement course in Statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. This includes exploratory analysis of data using graphing and numerical data, collecting data according to a well-developed plan and using probability for anticipating what the distribution of data will look like. Statistical inference guides the selection of appropriate models. A TI-84+ graphing calculator is required for this course. If there is concern about purchasing a graphing calculator, please contact your teacher.

3 MCC credits may be earned through a dual credit program. There is a tuition cost associated with MCC credit.
Mathematics Course Descriptions

Calculus III H (0432)
PREREQUISITE: AP CALCULUS BC
EXAMINATION: LOCAL  CREDIT: 1 UNIT
This is a rigorous course on the calculus of functions of more than one variable, partial differentiation, multiple integrals, polar coordinates, solid analytic geometry and vectors, and the calculus of vector-valued functions. A TI-84+ graphing calculator is required for this course. If there is concern about purchasing a graphing calculator, please contact your teacher.
4 MCC credits may be earned through a dual credit program (a score of 3 or higher on the AP Calculus BC exam is required to qualify for MCC credit). There is a tuition cost associated with MCC credit.

Principles of Engineering (0661)
PREREQUISITE: MINIMUM SUCCESSFUL COMPLETION OF GEOMETRY CONCURRENTLY AND DDP
GRADE LEVEL: 10-12
EXAMINATION: LOCAL  CREDIT: 1 UNIT
Principles of Engineering is a broad-based survey course designed to help students understand the field of engineering and engineering technology and its career possibilities.
Per Commissioner’s Regulation 100.5(j) Principles of Engineering meets Regents standards for the 3rd unit of credit in Math or Science (but not both)
RIT credit may be earned through a dual credit program. There is a tuition cost associated with RIT credit.

PLTW Computer Science and Software Engineering (CSE) (0690)
PREREQUISITE: NONE  GRADE LEVEL: 10-12
EXAMINATION: LOCAL  CREDIT: 1 UNIT
In the CSE course, students work to understand and solve problems with programming. The course does not aim to teach mastery of a single programming language but aims instead to develop computational thinking and computational tools that foster creativity, and to practice problem solving with structured activities that would progress to open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. Problems aim for ground-level entry with no ceiling so that all students can successfully engage the problems. Students with greater motivation, ability, or background knowledge will be challenged to work further.
5 Unit Sequence in Music

Students may earn a Regents Diploma with Advanced Designation by completing one unit of LOTE and five credits in Music.

This sequence replaces the additional two units of LOTE.

To complete the 5-unit sequence in Music, a student must take:

- At least 2 units from the area of Skill Development
- At least 2 units from the areas of Musical Knowledge/Attitude Development
- 1 additional unit from any of the areas

**SKILLS DEVELOPMENT**

- Voice
- Concert Choir
- Concert Band
- Philharmonia
- Chorale
- Wind Ensemble
- Symphony Orchestra

**MUSICAL KNOWLEDGE/ATTITUDE DEVELOPMENT**

- Music in Our Lives
- Music Theory I
- Popular Music
- AP Music Theory
Music Course Descriptions

Vocal Music

**Concert Choir (0804)**
PREREQUISITE: STUDENTS MUST BE ABLE TO MATCH PITCH  ♦  GRADE LEVEL: 9-12
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT
Concert Choir is open to all students in grades 9-12 who wish to participate in a vocal ensemble. Concert Choir is a full-year course that meets daily. Students learn and apply the fundamentals of healthy vocal production through physical, breathing, and vocal exercises. Students are given the tools to develop greater clarity, freedom, maturity and consistency in their tone quality, while learning how to balance and blend their voices in a choral setting. Musicianship skills are practiced through the study of the musical language and includes daily ear training, musical analysis and sight-singing exercises using solfege syllables. A wide variety of high quality choral literature is studied and performed at our three concerts during the school year. Singers enrolled in Concert Choir are required to attend all scheduled evening performances. Prior choral experience is recommended. *Note: Students wishing to enroll in Concert Choir who cannot match pitch are advised to enroll in Solo Voice Class, where individual vocal skills can be addressed.*

**Chorale (0808)**
PREREQUISITE: PARTICIPATION IN CONCERT CHOIR OR VOICE I CLASS  ♦  GRADE LEVEL: 9-12
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT
Chorale is a vocal ensemble designed for advanced choral students. Enrollment in Chorale is by recommendation and/or one previous year in Concert Choir or Solo Voice Class. Chorale is a full year course that meets daily. Challenging choral literature in a variety of styles from classical to contemporary is studied and performed, therefore it is expected that all members of Chorale are literate musicians. Music analysis, ear training, and sight-reading skills are studied and applied at an advanced level using solfege syllables (including major and minor modes, as well as chromaticism). Students study and develop the skills required to produce a more mature, expressive, balanced, blended, energized choral sound. A strong emphasis is placed on singing with depth, clarity, warmth and consistency throughout the vocal range through the practice of daily physical, breath and vocal exercises. Students who sing in Chorale are required to attend all scheduled evening performances. There are approximately four to five concerts each school year.

**Solo Voice Class (0800)**
PREREQUISITE: NONE  ♦  GRADE LEVEL: 9-12
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT
All of the Voice Classes are full year courses that meet on a daily basis. * Seniors who have had at least one year of Voice Class are invited to perform in the annual “Evening of Vocal Music” Senior Recital*. Students are given the tools to develop a more mature, consistent, resonant vocal quality, genuinely express emotions through singing and gain a better knowledge of the musical language through ear training, music analysis and sight-singing using solfege syllables. Students also develop the skills to analyze a musical performance (i.e. tone production, characterization and expressive elements). Daily physical, breath and vocal exercises are studied as well as the following units of study for solo performance: American Folk Song Literature, Musical Theatre Literature composed before 1960, Italian Art Song Literature I, English Duet
Music Course Descriptions

Literature, Level 5 English NYSSMA Manual Literature and Disney Song Literature. Self and peer analysis fosters a deeper understanding of vocal technique and performance skills. Written song and character analysis and performance assessments are incorporated throughout the year.

* Seniors who have had at least one year of Voice Class are invited to perform in the annual “Evening of Vocal Music” Senior Recital”.

Intermediate Voice Class (0801)
PREREQUISITE: VOICE I ♦ GRADE LEVEL: 10-12
EXAMINATION: LOCAL ♦ CREDIT: 1 UNIT
Intermediate Voice Class is a continuation of the fundamentals studied in Solo Voice Class. Students will focus on extending their vocal range while maintaining consistency, clarity and freedom in their tone quality. Students will develop more maturity and flexibility in the voice as well. Sight-singing and music literacy skills will be further developed. More advanced vocal solo literature will be studied and performed, including the following units of study: Old English Literature, Italian Art Song Literature II, Musical Theatre Literature written between 1961-1190, Level 6 NYSSMA Manual Literature, Duet Literature, and Disney Song Literature. The analysis of each individual’s performance becomes more in-depth as singers gain a greater understanding of their instrument, musical form, musical styles, character development and performance skills. Performance projects and assessments are incorporated throughout the year.

* Seniors who have had at least one year of Voice Class are invited to perform in the annual “Evening of Vocal Music Senior Recital”.

Advanced Voice Class (0802)
PREREQUISITE: VOICE I AND II (UNLESS RECOMMENDED FOR THIS CLASS BY THE VOICE TEACHER) ♦ GRADE LEVEL: 11-12
EXAMINATION: LOCAL ♦ CREDIT: 1 UNIT
Advanced Voice Class builds on the vocal technique established in Solo Voice Class and Intermediate Voice Class, with greater concentration on expanding repertoire and developing more conscious control, fluidity, and evenness of their voice and delving deeper into the nuances of character development. Students continue internalize greater theoretical and music literacy skills using chromatic solfege syllables and minor modes. They will incorporate more detailed research in their assigned solos (including more historical, stylistic and character studies). Advanced Voice Class students will strive to complete a balanced repertoire of solos in a variety of styles and languages through the following units of study: Classical English Literature of the 20th/21st centuries, German Art Song Literature, French Art Song Literature, Musical Theatre Literature from 1991 through the present, PRISM Concert Literature and Level 6 NYSSMA Solo Literature/Senior Solo Literature. Special projects, performances and assessments are incorporated throughout the year.

* Seniors who have had at least one year of Voice Class complete their senior year by performing a solo in the annual “Evening of Vocal Music Senior Recital.”
Jazz Choir (0812)
PREREQUISITE: STUDENTS MUST PARTICIPATE IN CONCERT CHOIR OR CHORALE, AS WELL AS AUDITION IN JUNE OF THE PREVIOUS SCHOOL YEAR  ♦  GRADE LEVEL: 9-12
EXAMINATION: NONE  ♦  CREDIT: ½ UNIT
Jazz Choir is a select vocal ensemble for students who possess independent musicianship, a high level of vocal technique, and strong music reading skills. Challenging repertoire is selected from a variety of jazz styles with a focus on “classic jazz standards” and an emphasis on vocal improvisation. Students study and apply stylistic techniques and jazz articulations within the Jazz Choir repertoire. Although the Jazz Choir is an auditioned ensemble that meets after school, it is an elective course for which students receive a grade and .5 credit. Three to four performances are scheduled throughout the school year, including the annual Jazz Fundraiser concerts in February. A concert calendar will be provided to students at the first Jazz Choir rehearsal in September. Students are expected to participate in all scheduled rehearsals and performances.

Course Schedule:
Jazz Choir rehearses from 2:30 PM – 3:30 PM every Tuesday and Thursday.

Select Women’s Choir (0832)
PREREQUISITE: STUDENTS MUST FIRST BE ENROLLED IN CHORALE OR CONCERT CHOIR. AS WELL AS AUDITION IN JUNE OF THE PREVIOUS SCHOOL YEAR  ♦  GRADE LEVEL: 9-12
EXAMINATION: LOCAL  ♦  CREDIT: ¼ UNIT
Select Women’s Choir is an auditioned ensemble for female voices who possess independent musicianship, a secure vocal technique and strong music reading skills. Singers study a variety of advanced choral literature specifically written for women’s voices. Although Select Women’s Choir is an auditioned ensemble that meets before school, it is an elective course for which students receive a grade and ¼ credit. Consistent attendance and participation in all rehearsals and performances are requirements for membership in this ensemble.

Course Schedule: Select Women’s Choir rehearses from 6:50-7:25 AM every Tuesday and Thursday during the school year.

Classroom Music Courses

Music Theory I (0846)
PREREQUISITE: LIMITED MUSICAL EXPERIENCE PREFERRED (IN OR OUTSIDE OF SCHOOL)  ♦  GRADE LEVEL: 9-12
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT
Music Theory I is required for a three credit sequence in music. Designed for students in grades 9-12, Music Theory I covers primary elements of the language of western tonal music: rhythm, melody, and harmony. Students will learn the basics of musical notation and composition, ear training, analysis of music for four voices in traditional SATB chorale style, conducting, rhythmic, melodic, and harmonic dictation, and functional skills on keyboard, guitar, and percussion instruments. Additionally, the learning and application of several music software programs is an integral component of the curriculum.
Music Course Descriptions

AP Music Theory (0847)
PREREQUISITE: SUCCESSFUL COMPLETION OF MUSIC THEORY I, OR TEACHER RECOMMENDATION
♦ GRADE LEVEL: 9-12
EXAMINATION: LOCAL, AP EXAM STRONGLY ENCOURAGED ♦ CREDIT: 1 UNIT
In addition to Music Theory I, this course is required for a five credit sequence in music. AP Music Theory is designed to take students with initial music theory experience through the equivalent of a freshman year of college music theory. Students build on Music Theory I content through the rigorous study of western tonal music practices. Reading for conceptual understanding and vocabulary building, musical composition, dictation, structural analysis, and ear training and sight-singing for aural skill development are emphasized. Extensive focus is given during the third quarter to practice and prepare for taking the AP Music Theory Exam in May.

Popular Music (0848)
PREREQUISITE: SUCCESSFUL COMPLETION OF MUSIC IN OUR LIVES, MUSIC THEORY I, OR TWO YEARS OF PERFORMING ENSEMBLES AT THE HIGH SCHOOL LEVEL. CONCURRENT REGISTRATION OF THE PREREQUISITE IS ACCEPTABLE ♦ GRADE LEVEL: 10-12
EXAMINATION: LOCAL ♦ CREDIT: 1 UNIT
SPECIAL NOTE: This course is offered every other year and will be offered in 2019-2020.
Popular Music is a full-year offering that builds on curricular elements from Music Theory I and Contemporary Music Fundamentals. A comprehensive understanding of popular music is accomplished through study of popular music history, reading about and discussing music in relation to culturally contextualizing factors and the music business, musical listening and analysis, songwriting, performance on instruments relevant to current popular music idioms, use of computer-based music technologies including MIDI sequencing, and audio recording and production. Projects include written and oral reports and presentations demonstrating critical thought and informed musical analysis, as well as small group performance of popular music arrangements and original student compositions.

Music In Our Lives (0827)
PREREQUISITE: NONE ♦ GRADE LEVEL: 9-12
EXAMINATION: LOCAL ♦ CREDIT: 1 UNIT (MEETS 1 UNIT COMMENCEMENT CREDIT)
Music in Our Lives is a full-year course that covers the basic musical skills and information that will enable students to become functionally and knowledgeably musical both in and out of school, now and throughout their lives in ways that are relevant to them. The focus of course content is based on student interests so shifts slightly from year to year. Core course components include critical musical listening and analysis, exposure to a variety of artists and styles for discussion and research, playing instruments such as guitar, keyboard, and percussion, studying basic elements of music theory and literacy, and musical composition/songwriting. Various technologies (music software programs, online resources and applications, and multi-track recording equipment) will be learned and used extensively.
Music Course Descriptions

Band and Jazz Ensembles

Concert Band (0820)
PREREQUISITE: STUDENT SHOULD HAVE PREVIOUS SUCCESSFUL BAND EXPERIENCE ♦ GRADE LEVEL: 9-12
EXAMINATION: LOCAL ♦ CREDIT: 1 UNIT
The Concert Band is the intermediate level band at the high school, performing a varied repertoire and presenting several concerts throughout the year. Auditions are not required. All members participate in the high school rotating group lesson program and are required to work toward developing a high skill level. As part of the band unit of credit, students are encouraged to sing one day a week in Concert Choir. Attendance in all Concert Band concerts is a requirement of the course.

Wind Ensemble (0823)
PREREQUISITE: MEMBERSHIP BY AUDITION ♦ GRADE LEVEL: 9-12
EXAMINATION: LOCAL ♦ CREDIT: 1 UNIT
The Wind Ensemble is the most advanced band at the high school, performing difficult repertoire and presenting several concerts throughout the school year. Selection to the Wind Ensemble is by audition. Advanced incoming freshmen may audition for the group in the spring of 8th grade, by recommendation only. All members participate in the high school rotating group lesson program and are required to maintain a high skill level. Some members of the Wind Ensemble are selected to comprise the wind and percussion sections of the Symphony Orchestra. As part of the band unit of credit, students are encouraged to sing one day a week in Chorale. Attendance in all Wind Ensemble concerts is a requirement of the course.

Jazz Ensemble (0823)
Jazz Democracy (0829)
PREREQUISITE: SELECTION TO THE MOST ADVANCED JAZZ ENSEMBLE, THE MONDAY-WEDNESDAY JAZZ ENSEMBLE, IS BY AUDITION. SELECTION TO JAZZ DEMOCRACY IS OPEN EXCEPT THAT ALL RHYTHM SECTION MUSICIANS MUST AUDITION FOR EITHER JAZZ ENSEMBLE. AUDITIONS ARE HELD THE FIRST WEEK OF SEPTEMBER ♦ GRADE LEVEL: 9-12
EXAMINATION: LOCAL ♦ CREDIT: ½ UNIT
The Penfield High School Jazz Ensembles provide opportunities for musicians of all ability levels to perform jazz and contemporary music. Assignment to one of the jazz ensembles is based on director recommendation and/or audition. The Jazz Ensembles perform several concerts throughout the year including the annual Jazz Fund Raiser Concerts. Students may sign up for Jazz Ensemble in September. Attendance in all Jazz Ensemble concerts is a requirement of the course. Students must be enrolled in one of these ensembles to be considered for membership in Jazz Ensemble: Concert Band, Wind Ensemble, Philharmonia Orchestra, or Symphony Orchestra. Exceptions to this rule include pianists, guitarists, drum set players and electric bassists.

Musician’s Forum (0833)
PREREQUISITE: GROUPINGS WILL BE DETERMINED BY INFORMAL AUCTION AND STUDENTS’ EXPRESSED INTERESTS ♦ GRADE LEVEL: 9-12
EXAMINATION: LOCAL ♦ CREDIT: ¼ UNIT
Participants in Musicians’ Seminar will meet after school for one hour, one day per week. Different Seminar sections will meet various days during the week, so students will need to sign up indicating their
Music Course Descriptions

availability and previous musical experience in order for groupings to be determined at the beginning of the year, as well as perform an informal audition. As a credit-bearing course, attendance at all scheduled meetings, rehearsals, and/or performances is mandatory. The primary goal of Musicians’ Seminar is to develop collaborative music-making skills in a variety of genres with a focus on popular music styles. Opportunities for original composition and songwriting, arranging, studio recording, and performance are also emphasized. Musicians’ Seminar is open to all Penfield High School musicians regardless of instrument (acoustic or electric, traditional or non-traditional) or previous involvement in the PHS music program.

Orchestra

Philharmonia Orchestra (0821)
PREREQUISITE: STUDENTS SHOULD HAVE PREVIOUS SUCCESSFUL ORCHESTRA EXPERIENCE  ♦  GRADE LEVEL: 9-12
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT
The Philharmonia Orchestra is the intermediate orchestra at the high school. Students prepare and perform five to seven concerts during the school year. Auditions are not required. Fundamental orchestral performance skills and techniques are emphasized through the study of classical, pop, and contemporary music. All members participate in the high school rotating group lesson program and are required to work towards a high skill level. As part of the orchestra unit of credit, students are encouraged to sing one day a week in choir. Attendance in all Philharmonia concerts is a requirement of the course.

Symphony Orchestra (0822)
PREREQUISITE: MEMBERSHIP BY AUDITION  ♦  GRADE LEVEL: 9-12
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT
The Symphony Orchestra is the most advanced orchestra at the high school, performing difficult repertoire and presenting five to seven concerts a year. Selection to the Symphony Orchestra is by audition. Advanced incoming freshmen may audition for the group in the spring of the 8th grade, by recommendation only. All members participate in the high school rotating group lesson program and are required to maintain a high skill level. As part of the orchestra unit of credit, students are encouraged to sing in choir one day a week. Attendance in all Symphony concerts is a requirement of the course.
Physical Education Course Descriptions

**Advanced Weight Training (0978)**
CREDIT: ¼ UNIT
This course is designed to introduce students to a personal training program that will promote over-all body fitness. The student will be exposed to activities that may include but are not limited to weight training, resistance training methods, functional training, water fitness, sport-specific exercises, knowledge of correct form, proper breathing, and safety factors involved with spotting. In addition, students will develop and implement a personal fitness plan including physical activity, nutritional analysis and goal-setting strategies. Meets Fitness Elective Requirement

**Adventure Learning (0972)**
CREDIT: ¼ UNIT
Adventure Learning is a course in which the student will Integrate Challenge by Choice into their lives, understand how goal setting impacts behavior, use their social group to support goal attainment, learn the technique of giving and receiving feedback, Practice giving and receiving feedback with peers, manage a group problem-solving methodology and Understand the value of reflecting on and transferring lesson content.

**Dance / Personal Defense: (0980)**
CREDIT: ¼ UNIT
This course is designed to further develop the student’s technical skill, creative capabilities and understanding of rhythmic and dance activities. In addition, it will instruct students on basic self-defense with practical application to everyday life.

**Fitness for Life (0955)**
CREDIT: ¼ UNIT
Fitness for Life is structured around the 5 Components of Physical Fitness. You will learn about each type of fitness (Cardiovascular, Muscular Strength, Muscular Endurance, Flexibility, and Body Composition) components as well as what types of activities are best for developing them. You will also learn how physical activity and other healthy lifestyle choices can improve your health and wellness. Our activities include functional training, game play, rollerblading, cycling, water fitness, Zumba, yoga, Pilates and various fitness workouts.
Meets Fitness Elective Requirement

**Golf and Racquet (0959)**
CREDIT: ¼ UNIT
Golf and Racquet is a course based on teaching competencies for students’ future use, focusing on individual sports such as tennis, golf, badminton, Frisbee golf, pickleball, and racquetball. Students will learn skill development, teaching and coaching strategies, and lifetime fitness benefits.

**Lifeguarding (0975)**
PREREQUISITE: 500-YARD SWIM
CREDIT: ¼ UNIT
This full semester course certifies students in American Red Cross Lifeguarding. Students need to be strong swimmers and must be able to do the breaststroke with whip kick, sidestroke with inverted scissors, and
Physical Education Course Descriptions

Freestyle with rotary breathing. The students must be able to tread water using egg beater kick and surface dive and retrieve a 10 pound brick. This course includes CPR for the Professional Rescuer and standard first aid.

Based on American Red Cross training requirements, students will need to purchase a pocket mask. With the successful completion of course requirements, students will have the option to earn American Red Cross Lifeguard Certification at the cost of $35.

Outdoor Experience (0974)
CREDIT: ¼ UNIT
This course is designed to give the students the opportunity to learn a variety of outdoor recreational skills as well as experience and enjoy the environment in which we live. Activities may include orienteering, GPS systems, mountain biking, backpacking, kayaking, cross-country skiing, snowshoeing, camping and archery. Students will have the opportunity to participate in an overnight camping trip.

Sport Education (0964)
CREDIT: ¼ UNIT
The sport education elective has several distinctive characteristics: seasons: a season involves a series of consecutive lessons (for example, 14 to 20), and involves pre-season activities, practice and competition; and team affiliation: students become members of teams for the duration of the season and assume roles of coach, manager, trainer, official, or equipment manager, as well as being players; formal competition: the competition involves pre-season preparation, in-season competition, and a culminating event or festival that provides an appropriate climax to the end of the competitive season; keeping records: records may include outcomes of matches and player performance.

Sport Education Combine (0966)
CREDIT: ¼ UNIT
The sport combine is a sequence of specific drills determining speed, strength and skill level depending on the activity. Participants will have a team affiliation when participating in this elective with the culminating event of “The Patriot Iron Man Challenge”. This is a suggested pre-requisite for Sport Ed.
Meets Fitness Elective Requirement

Team Games A (0981)
CREDIT: ¼ UNIT
This course is designed for students who want to participate in a variety of team games and develop cardiovascular conditioning and advanced skills in soccer, basketball, flag football, ultimate Frisbee, water polo and speedball.

Team Games B (0970)
CREDIT: ¼ UNIT
This course is designed for students who want to participate in a variety of team games and develop cardiovascular conditioning and advanced skills in softball, lacrosse, floor hockey, volleyball and team handball.
Science Course Descriptions

Physical Setting: Earth Science Regents (0300)
PREREQUISITE: NONE   ♦   GRADE LEVEL: 9 STRONGLY RECOMMENDED
EXAMINATION: REGENTS   ♦   CREDIT: 1 UNIT
Physical Setting: Earth Science is a laboratory-centered course, which includes the study of important scientific concepts in the fields of Geology, Meteorology and Astronomy. Students will improve their scientific literacy while investigating the physical environment in which they live. This course meets for six periods per week.
A minimum of 1200 minutes of laboratory work, with successfully written lab reports, is required for admission to the Regents final examination.

Physical Setting: Earth Science Honors (0301)
PREREQUISITE: NONE   ♦   GRADE LEVEL: 9
EXAMINATION: REGENTS   ♦   CREDIT: 1 UNIT
The honor’s level of Physical Setting: Earth Science incorporates the Regents syllabus into a course involving greater depth of content and skills at an accelerated instructional pace.
There is a significant amount of rigorous mathematics, independent study, advanced-level reading, scientific/technical writing and higher order critical thinking associated with this course. This course is designed to prepare students for the challenges presented by advanced high school/college level coursework.
A minimum of 1200 minutes of laboratory work, with successfully written lab reports, is required for admission to the Regents final examination.

The Living Environment Regents (0308)
PREREQUISITE: PHYSICAL SETTING EARTH SCIENCE STRONGLY RECOMMENDED   ♦   GRADE LEVEL: 9-12
EXAMINATION: REGENTS   ♦   CREDIT: 1 UNIT
The Living Environment course has been developed in accordance with the National Science Education Standards and Benchmarks of Science Literacy and is one of the core courses required for graduation. The course follows the New York State Standards for Mathematics, Science, and Technology which state: "Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science."
In order to meet these demanding criteria, the Living Environment curriculum was designed with a hands-on student based approach. Assessments will test students’ ability to explain, analyze, and interpret biological processes and phenomena more than their ability to recall specific facts. The course affords the student the opportunity to express more creative original thought through written expression of ideas, class discussion, and analysis of key ideas. It is our goal to instill upon our students self-confidence, independent initiative, and academic achievement.
A minimum of 1200 minutes of laboratory work, with successfully written lab reports, is required for admission to the Regents final examination.
Link to an informational letter explaining New York State Education Law 809 regarding dissection in science.

The Living Environment Honors (0309)
PREREQUISITE: PHYSICAL SETTING EARTH SCIENCE STRONGLY RECOMMENDED   ♦   GRADE LEVEL: 9-12
EXAMINATION: REGENTS   ♦   CREDIT: 1 UNIT
Living Environment Honors incorporates the Regents syllabus required for graduation into a course involving an extended in-depth study of life. It meets the graduation requirement for the Living Environment core
course. Class and lab work are characterized by a high degree of independent study. In addition to Regents level work, the course includes: extended class and laboratory work in human physiology; outside readings which supplement syllabus topics; use of technology; and more rigorous evaluations. A minimum of 1200 minutes of laboratory work, with successfully written lab reports, is required for admission to the Regents final examination.

Link to an informational letter explaining New York State Education Law 809 regarding dissection in science.

AP Biology (0305)

PREREQUISITE: THE SUCCESSFUL COMPLETION OF THE LIVING ENVIRONMENT AND PHYSICAL SETTING CHEMISTRY • GRADE LEVEL: 10-12

EXAMINATION: LOCAL, AP EXAM STRONGLY ENCOURAGED • CREDIT: 1 UNIT

This course, designed as a college freshman course, follows the Advanced Biology Syllabus, and is accredited by the College Board. The format of the course includes lecture, group work, projects, independent reading, laboratory sessions (emphasizing experimental procedures, inquiry lab design, analyzing data, and formulating conclusions), problem-based learning units, student presentations, and understanding social-historical aspects of research in the field, centered around the four big ideas in AP Biology. Laboratory work, from meeting six periods per week, includes areas suggested by the AP syllabus, as well as instructor-based areas. Students will be responsible for a comprehensive field project in research in the last quarter of the year. Projects include live animal training, animal behavior, animal dissection and pond water analysis. An AP exam will be given in May.

Link to an informational letter explaining New York State Education Law 809 regarding dissection in science.

AP Environmental Science (0307)

PREREQUISITE: A MINIMUM COMPLETION OF TWO SCIENCE CORE COURSES, ONE FROM THE LIVING ENVIRONMENT AND ONE FROM THE PHYSICAL SETTING (PREFERABLY EARTH SCIENCE) • GRADE LEVEL: 10-12

EXAMINATION: LOCAL, AP EXAM STRONGLY ENCOURAGED • CREDIT: 1 UNIT

AP Environmental Science is based on a three-credit college course in contrast to other AP Science courses, which are equivalent to eight credit college courses. Therefore, Environmental Science offers a college level science course that is not forced to move at the rapid pace of other AP sciences. Environmental topics discussed in the course include energy, eco-systems, limited resources (land, water, etc.), biodiversity, agriculture, pollution, and environmental ethics and policy. Students will learn through direct instruction, laboratory exercises, field experience, inquiry and other methods. The course includes field trips to a variety of local and regional destinations of environmental importance. In addition, we will take a longer trip to a marine ecosystem. This course meets five periods per week and meets the requirements of the syllabus for AP Environmental Science. An AP exam is offered in May. This course will include summer assignments.

Physical Setting: Chemistry Regents (0311)

PREREQUISITE: SUCCESSFUL COMPLETION OF ALGEBRA AND EARTH SCIENCE IS STRONGLY RECOMMENDED • GRADE LEVEL: 10-12

EXAMINATION: REGENTS • CREDIT: 1 UNIT

This course requires consistent study, quantitative reasoning, and application of concepts. The study of Physical Setting: Chemistry Regents curriculum involves in-class work, supported by laboratory experiences
and reinforced with homework. A significant portion of the laboratory program provides opportunities for students to discover or apply fundamental laws and principles. The course is concerned with bonding, energy effects, composition of substances, changes in structure, and the submicroscopic structures of atoms and molecules. Students should have an advanced level of mathematical understanding as it applies to manipulating equations and solving for unknown variables. Other topics studied are equilibria, reaction rates, oxidation-reduction, and an introduction to Organic Chemistry. A minimum of 1200 minutes of laboratory work, with successfully written lab reports, is required for admission to the Regents final examination.

Physical Setting: Chemistry Honors (0312)
PREREQUISITE: THE SUCCESSFUL COMPLETION OF ONE SCIENCE CORE COURSE. STRONG ALGEBRA SKILLS ARE RECOMMENDED ♦ GRADE LEVEL: 10-12
EXAMINATION: REGENTS ♦ CREDIT: 1 UNIT
The content of the course is derived from the Physical Setting: Chemistry core standards and incorporates mathematics skills, scientific reasoning and application of chemistry concepts. An expanded curriculum and challenging laboratory experiences offer students an enriched program stressing problem solving and comprehension of ideas as well as mastery of facts. Self-motivation is encouraged in the class and laboratory. A minimum of 1200 minutes of laboratory work, with successfully written lab reports, is required for admission to the Regents final examination.

AP Chemistry (0313)
PREREQUISITE: THE SUCCESSFUL COMPLETION OF PHYSICAL SETTING CHEMISTRY. STRONG ALGEBRA SKILLS ARE RECOMMENDED ♦ GRADE LEVEL: 10-12
EXAMINATION: LOCAL, AP EXAM STRONGLY ENCOURAGED ♦ CREDIT: 1 UNIT
This course is designed to be a college freshman chemistry course with greater scope and depth than Physical Setting: Chemistry Regents. The nature of matter is explored through a normal sequence of topics with particular emphasis on mass relations, atomic structure, bonding, gases, equilibrium, thermo-dynamics, electrochemistry, acid-base theory, and redox chemistry. The class meets 6 periods per week. An AP exam will be given in May.

Physical Setting: Physics Regents (0315)
PREREQUISITE: SUCCESSFUL COMPLETION OF ALGEBRA II OR CONCURRENT ENROLLMENT IN ALGEBRA II ♦ GRADE LEVEL: 10-12
EXAMINATION: REGENTS ♦ CREDIT: 1 UNIT
Regents Physics is designed for the college-bound science student. This course covers topics in mechanics, waves, light, and electricity. A major emphasis is on laboratory work, and basic concepts are developed through laboratory investigations. Mathematical ability is required as problem solving and critical thinking skills are emphasized both through homework problems and the laboratory work. The class meets six periods per week.
A minimum of 1200 minutes of laboratory work, with successfully written lab reports, is required for admission to the Regents final examination.
Recommended: The successful completion of Algebra II
Physical Setting: Physics Honors with Optics (0319)
PREREQUISITE: SUCCESSFUL COMPLETION OF ALGEBRA II OR CONCURRENT ENROLLMENT IN ALGEBRA II ♦ GRADE LEVEL: 10-12
EXAMINATION: REGENTS ♦ CREDIT: 1 UNIT
This course includes the study of motion, forces, momentum, energy, heat, waves, light, optics, electromagnetism, models of the atom, and topics in nuclear physics. Emphasis is placed on optics, its applications, and local industries related to optics. Laboratory work using modern scientific techniques such as interactive physics software, photocells and lasers constitutes a major portion of the course. Problem solving is emphasized and mathematical ability is necessary. The class meets 6 periods per week. A minimum of 1200 minutes of laboratory work, with successfully written lab reports, is required for admission to the Regents final examination. Recommended: The successful completion of Algebra II

AP Physics C (0320)
PREREQUISITE: THE SUCCESSFUL COMPLETION OF PHYSICAL SETTING: PHYSICS AND CONCURRENT ENROLLMENT IN CALCULUS ♦ GRADE LEVEL: 11-12
EXAMINATION: AP EXAM STRONGLY ENCOURAGED ♦ CREDIT: 1 UNIT
Class work and laboratory work combine to derive the basic physical laws in the correct mathematical form rather than the approximation used for the Regents courses. The areas that will be explored are mechanics, electricity, and magnetism. The “C” program is more demanding mathematically and may result in college credit for the potential Physics major. It is the equivalent of one semester of Mechanics and one semester of Electricity and Magnetism. Each part may be taken separately for a semester’s worth of college credit. Since calculus is used extensively, advanced study in mathematics is highly recommended. The course concludes with the completion of the Advanced Placement College Board exam, and all other assignments through the end of the school year. Many colleges award advanced placement status, credit, or both on the basis of the examination results.

Astronomy (0345)
PREREQUISITE: THE SUCCESSFUL COMPLETION OF ONE SCIENCE COURSE ♦ GRADE LEVEL: 10-12
EXAMINATION: LOCAL ♦ CREDIT: ½ UNIT (DESIGNED AS A ONE-SEMESTER ELECTIVE)
Astronomy is a course that will expand student understanding of the physical nature of space. Topics may include the Big Bang, black holes, worm holes, quasars, and the structure and evolution of planets, stars, galaxies, and the Universe. Additional topics may encompass recent newsworthy events such as primitive life on other planets, governmental priorities in resource allocation (SETI, Moon colonization, manned missions to Mars, satellites, and telescopes), and the discovery of planets orbiting with stars other than our Sun. This course is intended to fulfill a minimum three-year science sequence in conjunction with Forensics. Mathematics required for the course include basic algebra and geometry.
Science Course Descriptions

Forensic Science (0341)
PREREQUISITE: SUCCESSFUL COMPLETION OF LIVING ENVIRONMENT OR CONCURRENT ENROLLMENT IN LIVING ENVIRONMENT  ♦  GRADE LEVEL: 10-12
EXAMINATION: LOCAL  ♦  CREDIT: ½ UNIT (DESIGNED AS A ONE-SEMESTER ELECTIVE)
Forensic science is one of the fastest growing fields in the country and is a vital part of the criminal justice system. Forensic science examines biological and non-biological evidence, crime scene investigation, and data analysis. We will examine the roots of forensic science in the pure sciences and employ critical thinking skills. Topics of study will include: Biological (blood and genetic markers, dentistry, fingerprints, insects and immunoserology) and non-biological evidence (bullets, fiber analysis, microscopy, spectroscopy, and toxicology), historical cases, applications (missing persons, homicide, and paternity cases), and the future of forensics (development of biotechnology, DNA profile banks, and digital image processing). Students will be involved in mock crime scene investigations and laboratory exercises.

Forensic Science Honors (0342)
PREREQUISITE: SUCCESSFUL COMPLETION OF PHYSICAL SETTING CHEMISTRY OR CONCURRENT ENROLLMENT IN CHEMISTRY OR ONE OTHER SCIENCE CORE COURSE  ♦  GRADE LEVEL: 11-12
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT
Project Advance, through Syracuse University, allows us to teach this full year, upper level course which may earn college credits through Syracuse University. Forensic Science (Chemistry 113 at S.U.) is focused upon the application of scientific methods and techniques to crime and law. Recent advances in scientific methods and principles have had an enormous impact on law enforcement and the entire criminal justice system. This course provides an introduction to the science behind crime detection. Scientific methods specifically relevant to crime detection and analysis will be presented with emphasis on the techniques of analyzing physical evidence. Topics included are blood analysis, organic and inorganic evidence analysis, microscopic investigations, hair analysis, DNA, drug chemistry and toxicology, fiber comparisons, fingerprints, behavior profiling, and arson investigations, among others. Laboratory exercises will include techniques commonly employed in forensics investigations. 4 Syracuse Univ. credits may be earned through a dual credit program. There is a tuition cost associated with Syracuse University credit.

Insights into Chemistry (0346)
PREREQUISITE: SUCCESSFUL COMPLETION OF TWO SCIENCE CORE COURSES  ♦  GRADE LEVEL: 10-12
EXAMINATION: LOCAL  ♦  CREDIT: ½ UNIT
Topics will come from real-world applications such as automobiles, fireworks, neon signs, halogen lights, fish tanks, swimming pools, acids/bases in the home, making ice cream, scuba diving, making polymers, and nuclear reactors. Provides students with a physical science experience that is primarily built on:

- Hands on activities  ♦  Developing decision making skills
- Real-world applications  ♦  Potential career applications
- Inquiry-based investigations  ♦  Science in literature
- More qualitative than quantitative applications  ♦  Safety issues in everyday life
- Historical and current events in society

Attention student athletes: This course is not an NCAA approved core course
## Science Course Descriptions

### Optics (0347)
**PREREQUISITE:** SUCCESSFUL COMPLETION OF ONE SCIENCE COURSE  
**GRADE LEVEL:** 10-12  
**EXAMINATION:** LOCAL  
**CREDIT:** ½ UNIT

Optics is the field of science and engineering that deals with the origin, propagation, and detection of light. Emphasis in this course is placed on optics, its applications, and local industries related to optics. This course is designed to help students appreciate its influence in our world and familiarizes students with the important aspects of technical optics. The class meets 5 times per week. 3 MCC credits may be earned through a dual credit program. There is a tuition cost associated with MCC credit.

### Anatomy & Physiology (0335)
**PREREQUISITE:** THE SUCCESSFUL COMPLETION OF TWO SCIENCE CORE COURSES  
**GRADE LEVEL:** 10-12  
**EXAMINATION:** LOCAL  
**CREDIT:** 1 UNIT

This course involves the study of human anatomy and physiology, including anatomical terminology, basic biochemistry, cells and tissues, and the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic/immune, respiratory, digestive, urinary, and reproductive systems. In addition it presents an introduction to common human disease processes. This course is designed for upper-level students interested in medicine, sports therapy, and physical therapy.

[Link to an informational letter explaining New York State Education Law 809 regarding dissection in science.](#)

### Principles of Engineering (0661)
**PREREQUISITE:** MINIMUM SUCCESSFUL COMPLETION OF GEOMETRY CONCURRENTLY AND DDP  
**GRADE LEVEL:** 10-12  
**EXAMINATION:** LOCAL  
**CREDIT:** 1 UNIT

Principles of Engineering is a broad-based survey course designed to help students understand the field of engineering and engineering technology and its career possibilities.

Per Commissioner’s Regulation §100.5(b)(7)(iv)(j), Principles of Engineering meets Regents standards for the 3rd unit of credit in Math or Science (but not both)

RIT credit may be earned through a dual credit program. There is a tuition cost associated with RIT credit.

### PLTW Computer Science and Software Engineering (CSE) (0690)
**PREREQUISITE:** NONE  
**GRADE LEVEL:** 10-12  
**EXAMINATION:** LOCAL  
**CREDIT:** 1 UNIT

In the CSE course students work to understand and solve problems with programming. The course does not aim to teach mastery of a single programming language but aims instead to develop computational thinking and computational tools that foster creativity, and to practice problem solving with structured activities that would progress to open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. Problems aim for ground-level entry with no ceiling so that all students can successfully engage the problems. Students with greater motivation, ability, or background knowledge will be challenged to work further.

The course covers the College Board’s new CS Principles framework.

Per Commissioner’s Regulation §100.5(b)(7)(iv)(j), Computer Science and Software Engineering meets Regents standards for the 3rd unit of credit in Math or Science (but not both).
Social Studies Course Descriptions

Global History and Geography I Regents (0100)
PREREQUISITE: NONE  ♦  GRADE LEVEL: 9  
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT
This is the first of four required Regents courses in social studies. The chronological course divides world history into seven eras sandwiched between an introduction to global history and a unit that focuses on global connections. The chronological divisions in Global History I are: The Ancient World: Civilizations and Religions (4000 BCE-AD 500); Expanding Zones of Exchange and Encounter (500-1200); Global Interactions (1200-1650), and the First Global Age (1450-1770).

Global History and Geography I H (0131)
PREREQUISITE: NONE  ♦  GRADE LEVEL: 9  
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT
This class parallels the Global History I curriculum (described above) but is taught at the Honors level. A strong work ethic, effective time management and organizational skills are essential for success at the honors level. Honors students will also develop historical research skills by learning how to analyze information for its reliability and accuracy. In-depth examination of primary and secondary historical sources are essential in the completion of essay and research assignments at the honors level.  
*The Global Honors curriculum DOES NOT correspond, nor does it prepare students for AP World curriculum in 10th grade.  
Recommended Achievement Level: Teacher recommendation, 90 or better in 8th grade social studies, and completion of summer reading assignment.

Pre-AP World History (0116)
PREREQUISITE: NONE  ♦  GRADE LEVEL: 9  
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT
This is the first half of a two-year course (Course 0115 - AP World History in 10th grade) which culminates at the close of sophomore year with an AP exam in May and the New York State Regents Exam in Global History in June.  
The Pre-AP World History course is a college-level course designed to explore human history from 8000 B.C.E. to 1750 C.E. This accelerated course requires students to complete reading and writing assignments beyond the scope of a traditional Regents Global History course. There is an emphasis on the development of collegiate-level analytical and writing skills. The course devotes considerable time to the critical evaluation of primary and secondary sources, analysis of historiography (the principles, theories, or methodology of scholarly historical research and presentation) and inquiry into global connections that have shaped our present world. Students will be exposed to AP Global History skills and practice assessments. Pre-AP World History offers an approach that lets students “do history” by guiding them through the steps a historian would take in critically analyzing world-wide events and documents. Recommended Achievement Level: Teacher recommendation, 90 or better in 8th grade social studies, and completion of summer reading assignment. Recommended to take AP World in 10th grade.
Global History and Geography II Regents (0101)
PREREQUISITE: GLOBAL HISTORY AND GEOGRAPHY I REGENTS ♦ GRADE LEVEL: 10
EXAMINATION: REGENTS ♦ CREDIT: 1 UNIT
Global History and Geography II R is the second year of the two-year Global History course. It is based upon Social Studies standards and utilizes a chronological format organized around concepts and themes. Global History II students will learn about the world through four major units of study: An Age of Revolutions (1750-1914), A Half-Century of Crisis and Achievement (1900-1945), The 20th Century After 1945; and Global Connections and Interactions.

Global History and Geography II H (0132)
PREREQUISITE: GLOBAL HISTORY AND GEOGRAPHY I ♦ GRADE LEVEL: 10
EXAMINATION: REGENTS ♦ CREDIT: 1 UNIT
This class parallels the Global History II curriculum (described above) but is taught at the Honors level. It is important to note that a strong work ethic, effective time management and organizational skills are essential for success at the honors level. Honors students will also develop historical research skills by learning how to analyze information for its reliability and accuracy. In-depth examination of primary and secondary historical sources are essential in the completion of essay and research assignments at the honors level.
Recommended Achievement Level: Teacher recommendation, 90 or better in Global History R or H/Pre AP World History, and completion of summer reading assignment.

AP World History (0115)
PREREQUISITE: NONE ♦ GRADE LEVEL: 10
EXAMINATION: REGENTS, AP EXAM STRONGLY ENCOURAGED ♦ CREDIT: 1 UNIT
Penfield High School offers this course for students who are willing to accept the challenge of a rigorous academic curriculum. The AP World History Exam presumes at least one year of college-level preparation, as is described here: The purpose of the AP World History course is to develop greater understanding of the evolution of global processes and contacts, in interaction with different types of human societies especially non-European societies. Course content focuses primarily on world history since the year 1750. This understanding is advanced through a combination of selective factual knowledge and appropriate analytical skills. The course highlights the nature of changes in international frameworks and their causes and consequences, as well as comparisons among major societies. AP World History offers an approach that lets students “do history” by guiding them through the steps a historian would take in analyzing historical events and evidence worldwide. The course makes demands upon the student equivalent to those made by full-year introductory college courses. This course requires students to spend extensive time outside of the classroom to complete the larger amount of reading and writing assignments than is normally assigned in Global History and Geography Regents. Students are required to take the New York State Global History and Geography Regents Exam, and all students are strongly encouraged to take the AP World History Exam in May. This course is the second part of a two-year sequence in world history instructed at the Advanced Placement level and prepares students for the AP World Exam. Therefore it is strongly suggested that students enrolling in this class have taken Pre-AP World History I in ninth grade.
Recommended Achievement Level: Successful completion of Pre-AP World in 9th grade and completion of summer reading assignment.
US History/Government Regents (0102)  
PREREQUISITE: NONE  ♦  GRADE LEVEL: 11  
EXAMINATION: REGENTS  ♦  CREDIT: 1 UNIT  
This is a chronologically-organized course in United States history following New York State curriculum guidelines and standards. There is an emphasis on geography, understanding of the basic principles of the constitutional and legal issues, identity of the nation, and the emergence of the United States as a world power. Students will work with primary and secondary source materials so as to enhance their understanding and analysis of American History. In addition, students are exposed to writing tasks with DBQs and Thematic Essays in preparation for the Regents exam in June. All students will be required to take a Regents examination at the end of the course.

AP United States History (0104)  
PREREQUISITE: NONE  ♦  GRADE LEVEL: 11  
EXAMINATION: REGENTS, AP EXAM STRONGLY ENCOURAGED  ♦  CREDIT: 1 UNIT  
Penfield High School offers this course for students who are willing to accept the challenge of a rigorous academic curriculum. The AP United States History Exam presumes at least one year of college-level preparation, as is described here: The AP U.S. History course is designed to provide students with analytic skills and factual knowledge necessary to deal critically with the problems and materials in U.S. history. The course makes demands upon the students equivalent to those made by full-year introductory college courses. This course requires students to spend extensive time outside of the classroom to complete reading and writing assignments in greater or larger amount than is normally assigned in United States History and Government Regents. Students will learn to assess historical materials – their relevance to a given interpretive problem, reliability, and importance – and to weigh the evidence and interpretations presented in historical scholarship. Students will have many assignments that require them to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in essay format. Students are required to take the New York State United States History and Government Regents Exam. This course includes a summer reading assignment.  
Recommended Achievement Level:  Teacher recommendation, 90 or better in Global History II or AP World History, and completion of summer reading assignment

Participation in Government (0110)  
PREREQUISITE: NONE  ♦  GRADE LEVEL: 12  
EXAMINATION: LOCAL AND PROJECT  ♦  CREDIT: ½ UNIT  
Participation in Government is a one-semester grade 12 course. This course emphasizes the interaction between citizens and government at all levels: local, state, and federal. The development of student participation in the processes of government is encouraged. A public policy research paper and class presentation are an integral part of the course. Students will also take a final exam in the course. This course is required for graduation except for students who successfully complete AP United States Government and Politics/Economics.
Social Studies Course Descriptions

Economics (0111)
PREREQUISITE: NONE  ♦  GRADE LEVEL: 12
EXAMINATION: LOCAL  ♦  CREDIT: ½ UNIT
Economics is a senior semester course that introduces students to economic language and practices. Students study the elements of supply and demand, credit and financial applications, business organization and practices, economic policy and government actions to gain a better understanding of money and the economy. Students will complete a culminating final project which reflects all major aspects of the economics course. This course is required for graduation except for students who successfully complete AP United States Government/Politics/Economics or Economics H.

Economics H (0128)
PREREQUISITE: NONE  ♦  GRADE LEVEL: 12
EXAMINATION: LOCAL  ♦  CREDIT: ½ UNIT
Economics H is a college-level course taught through the Project Advance program at Syracuse University and can replace Economics as part of the four-year requirement for graduation. Economics 203, Economic Ideas and Issues, is an introduction to mainstream economic thought designed for students with a liberal arts interest. The goals of this course are to introduce students to the ideas that form the foundation of modern Western economic thought, to examine the basic framework that economists have built on this foundation and to show how this model is applied to current issues facing individuals and society. The course is rigorous, but not heavily mathematical. The course promises to enable the student to not only understand modern economic theory, but to predict and explain current economic developments.
Credit: 1/2 Unit
3 Units Syracuse University credit may be earned through a dual credit program. There is a tuition cost associated with Syracuse University credit.

AP United States Government and Politics/Economics (0122)
PREREQUISITE: NONE  ♦  GRADE LEVEL: 12
EXAMINATION: AP US GOVERNMENT POLITICS & ECONOMICS RESEARCH PAPER/PROJECT, AP EXAMS STRONGLY ENCOURAGED  ♦  CREDIT: 1 UNIT
This is a one-year elective course for students who are willing to accept the challenge of a rigorous academic curriculum. It may be taken in place of the two required courses of Participation in Government and Economics. This course aims to give students an analytical perspective on government and politics in the United States. This course includes both the study of general concepts used to interpret U.S. politics and the analysis of specific examples. Students will investigate such topics as: The Constitutional foundations of United States Government; the role of citizens in politics; political parties; special interest groups and lobbies; civil rights and liberties; and intensive looks at the operations of the three branches of the United States government. This course will also integrate a variety of economic subjects (see Economics course description for details). All New York State requirements for Participation in Government and Economics classes will be met. Emphasis is placed on making material presented relevant and up-to-date as possible. The course makes demands upon the students equivalent to those made by full-year introductory college courses. This course requires students to spend extensive time outside of the classroom to complete reading and writing assignments in greater or larger amount than is normally assigned in United States History and Government Regents. This course will include a summer reading assignment.
Social Studies Course Descriptions

Recommended Achievement Level: Teacher recommendation, 90 or better in Regents US History and Government AP US History, or American Studies, and completion of summer reading assignment

Elective Courses for Grades 10-12

Psychology (0113)
PREREQUISITE: NONE  ♦  GRADE LEVEL: 10-12
EXAMINATION: ONLINE PROJECT  ♦  CREDIT: ½ UNIT
This is an elective course which helps students complete a five-unit sequence in Social Studies. This highly interactive, self reflective and engaging course focuses on you — your thoughts, emotions, and behavior. Through our course of study, we will cover topics including mental health and illnesses, biological bases for behavior, social psychology, and emotion and motivation. Along with group projects, presentations and labs, students create a final movie project that reflects the stages of developmental psychology in their own lives. Major parts of this course are in collaboration with the library media specialist.

AP Psychology (0129)
PREREQUISITE: PREVIOUS ENROLLMENT AND SUCCESSFULLY PASSING A HALF-YEAR PSYCHOLOGY COURSE  ♦  GRADE LEVEL: 11-12
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT
AP Psychology is a full-year elective course that is designed to introduce students to the systematic and scientific study of human behavior and mental processes. Students learn about the psychological principles as well as the methods psychologists use in their practices. AP Psychology is a survey course emphasizing the history of psychology as a science, the different explanations of human behavior, and the modern research methods utilized by psychologists. Stress is given, though not limited to, the following areas of psychology: neuroscience, developmental psychology, sensation and perception, personality theory, cognition, motivation and emotion, abnormal psychology and social psychology. Lastly, students will gain understanding of the importance of ethics in both scientific research and the practice of psychology. This course requires students to commit themselves to collegiate level reading and content preparation. Credit and/or placement towards college may be awarded, dependent upon each college’s AP credit acceptance policy, for successful performance on the Advanced Placement Examination in Psychology.

Sociology (0114)
PREREQUISITE: NONE  ♦  GRADE LEVEL: 10-12
EXAMINATION: LOCAL  ♦  CREDIT: ½ UNIT
Sociology is designed to enable students to investigate the sociological spectrum and how individuals relate to society and its effects. The emphasis of the course is on American society. Students will learn the nature of groups, social interactions, and collective behavior. Additional topics will include agents of socialization, deviance, crime, family and issues pertaining to ethnicity. Along with group projects and presentation, students will be required to complete a final project on a sociological topic of their choice. Students may choose to take this course to complete a five-unit sequence in social studies.

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Social Studies Course Descriptions

**Sociology H (0112)**

- **PREREQUISITE:** NONE  
- **GRADE LEVEL:** 11-12  
- **EXAMINATION:** REGENTS  
- **CREDIT:** ½ UNIT

Sociology H is offered through Syracuse University Project Advance. This college-level sociology course is titled: Sociology 101, Introduction to Sociology at Syracuse University. The course is designed as an analytic, skills-based course in introductory sociology. The emphasis is on analytic reading and conceptual analysis. The approach to sociology is to view it as an empirical social science. Most of the readings are either empirically based or are review articles of an area of sociological investigation. It is a writing intensive course. As the course progresses, students should obtain increasing skill in analytic reading, sociological reasoning, empirical investigation, and in the ability to make empirical and conceptual generalizations about self and society in an increasingly global world. There is a final research project for this course, 27 typed analytical synthesis templates to be completed for each of the assigned articles, multiple discussion based seminars and a course portfolio.

3 Units SU credit may be earned through a dual credit program. There is a tuition cost associated with SU credit.

**20th Century War – American Foreign Policy (0117)**

- **PREREQUISITE:** NONE  
- **GRADE LEVEL:** 10-12  
- **EXAMINATION:** FINAL PROJECT  
- **CREDIT:** ½ UNIT

War, conflict, and foreign policy are three perennial issues for the United States. This social studies elective course will offer students the opportunity to study the wars of the 20th century in great depth and evaluate whether America’s foreign policy initiative of “making the world safe for democracy” has been successful in light of our recent involvement in Afghanistan and Iraq. This course will examine the economic, political, social and cultural causes and effects of WWI, WWII, the Korean War, the Vietnam War, and Gulf War I. With each unit of study, students will have the opportunity to make connections over time by researching, analyzing, and deducing how our involvement and goals starting in WWI have either succeeded or failed with each successive war up through today’s current conflicts. Course work will include a foreign policy and/or a War Journal about a self-selected non-fiction book about war.
Engineering Sequence
Project Lead the Way has developed a four-year sequence of courses which, when combined with college preparatory mathematics and science courses in high school, introduces students to the scope, rigor and discipline of engineering and engineering technology prior to entering college. The Technology Education department offers a 5-unit sequence. Many of these courses offer dual college credit.

Core Courses
PLTW Design and Drawing for Production (DDP)
Digital Electronics
Principles of Engineering
Electives (choose one)
Civil Engineering & Architecture
Computer Integrated Manufacturing
Computer Science and Software Engineering
Electricity and Electronics
Building and Repairing Houses II

Capstone Course
Engineering Design and Development

Technology Sequence
Students may earn a Regents Diploma with Advanced Designation by completing one unit of LOTE and five credits in Technology/Business (see below). This sequence replaces the two units of the LOTE requirement.

Foundation Course (required – this is a full year course)
PLTW Design and Drawing for Production (DDP)

Systems Course (pick one from below – these are half year courses)
- Working with Woods
- Woods, Metals, and Plastics
- Building and Repairing Houses

Career and Financial Management (required – this is a half year course. See the Business Section for course description)

Electives (must take three additional credits)
- Choose from any Technology Education courses
Technology Course Description

Technology Education

**Working with Woods (0650)**
PREREQUISITE: NONE  ♦  GRADE LEVEL: 9-12
EXAMINATION: LOCAL  ♦  CREDIT: ½ UNIT
In this class you will watch saw dust fly!! This course is designed to introduce students to the hands-on field of woodworking. Students will design, and build several projects throughout the class. Topics covered in the class will include safety, problem-solving, the design-process, wood types, surfacing lumber, joinery, gluing, machine and tool use, and career opportunities.

**Woods, Metals and Plastics (0651)**
PREREQUISITE: NONE  ♦  GRADE LEVEL: 9-12
EXAMINATION: LOCAL  ♦  CREDIT: ½ UNIT
Have you ever thought about how every-day items are designed and created? Do you ever stare at a product and wonder how it arrived at the final prototype, ready to be sold in stores and purchased by people just like you? Then Woods, Metals and Plastics is the class for you! In this class you will develop skills, knowledge, and understandings, through hands-on activities. Students will learn how materials are manipulated to make our world’s most popular products. Students will be instructed in the safe and proper use of tools, machines and the materials commonly used in the manufacturing and construction industries.

**Building and Repairing Houses I (0654)**
PREREQUISITE: NONE  ♦  GRADE LEVEL: 9-12
EXAMINATION: LOCAL  ♦  CREDIT: ½ UNIT
Many people love watching home make-over shows – Tiny Houses, Flip or Flop, Fixer Upper, and Property Brothers just to name a few. Can you imagine buying a house and turning it into your dream home? Then Building and Repairing Houses is the class for you! Students will investigate through hands-on activities the aspects of how a house is designed, constructed, and repaired. Life-long, money-saving skills are just a few of the benefits of this course. Topics include planning, budgeting, building foundations, floors, walls, ceilings, and roofs. Students will also determine impacts of construction on the environment, economy, and society as a whole and ultimately have the foundation of becoming the next, money-making star of a home improvement show!

**Principles of Land, Air and Sea Vehicles (0665)**
PREREQUISITE: NONE  ♦  GRADE LEVEL: 9-12
EXAMINATION: LOCAL  ♦  CREDIT: ½ UNIT
Drive it, Fly It, Launch it, Float it... The development of transportation systems throughout the world has a tremendous impact on the intellectual and economic growth of societies. Transportation systems allow people to move not only themselves, but also goods in increasingly fast and efficient ways. This class will explore the development of transportation systems from three perspectives: land, sea, and air. Students will learn through virtual and realistic problem solving projects that will allow them to better understand the role of transportation in their ever changing world.
Technology Course Description

Computer and Information Technology

**Game Design (0686)**
**Advanced Game Design (0687)**
PREREQUISITE: NONE  ♦  GRADE LEVEL: 10-12
EXAMINATION: LOCAL  ♦  CREDIT: ½ UNIT IN ART, ½ UNIT IN TECHNOLOGY
Interested in finding out how game designers make games like Call of Duty and League of Legends games? This course introduces students to the development of game design. This is a full-year course in which the student will be exploring the skills of both the animator and the programmer to create interactive games. Students will learn about the basic elements of game software development, including some basic programming skills, the design and implementation of games, and testing/debugging. After successfully completing Game Design, you may take the advanced-level course for a second year of credit.

**PLTW Computer Science and Software Engineering (CSE) (0690)**
PREREQUISITE: NONE  ♦  GRADE LEVEL: 10-12
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT
In the CSE course students work to understand and solve problems with programming. The course does not aim to teach mastery of a single programming language but aims instead to develop computational thinking and computational tools that foster creativity, and to practice problem solving with structured activities that would progress to open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. Problems aim for ground-level entry with no ceiling so that all students can successfully engage the problems. Students with greater motivation, ability, or background knowledge will be challenged to work further.

The course covers the College Board’s new CS Principles framework.
Per Commissioner’s Regulation §100.5(b)(7)(iv)(j), Computer Science and Software Engineering meets Regents standards for the 3rd unit of credit in Math or Science (but not both)

**TV Production & Communications I (0682)**
**TV Production & Communications II (0683)**
**Advanced TV Production & Communications I (0684)**
**Advanced TV Production & Communications II (0685)**
PREREQUISITE: NONE  ♦  GRADE LEVEL: 10-12
EXAMINATION: LOCAL  ♦  CREDIT: ½ UNIT
This course is designed to provide students with the opportunities to produce, direct, host, and write programs to be aired on public media, including Penfield High School’s own “Morning Show” as well as the local Penfield community television station PCTV. Students will be introduced to the video production process. The class includes hands-on experience with the techniques and practices of video production. The process, vocabulary and proper use of the video equipment will be emphasized throughout the class. Students will produce LIVE television shows and create video projects for the class. The student will be given an opportunity to participate in all facets of the video production techniques and will be exposed to video technology that includes the use of a computer for animation and video editing. Students will have an opportunity to interact with faculty, staff, and community.

You may take the advanced-level courses for a second year of credit.
Technology Course Description

Project Lead the Way

**Civil Engineering and Architecture (0667)**
- **PREREQUISITE:** NONE
- **GRADE LEVEL:** 10-12
- **EXAMINATION:** LOCAL
- **CREDIT:** 1 UNIT

**SPECIAL NOTE:** This course is offered every other year and will be offered in 2019-2020.

This course provides an overview of the fields of Civil Engineering and Architecture, while emphasizing the interrelationship and dependence of both fields on each other. Students use state of the art software to solve real world problems and communicate solutions to hands-on projects and activities.

RIT credit may be earned through a dual credit program. There is a tuition cost associated with RIT credit.

**Computer Integrated Manufacturing (CIM) (0657)**
- **PREREQUISITE:** DDP
- **GRADE LEVEL:** 10-12
- **EXAMINATION:** LOCAL
- **CREDIT:** 1 UNIT

**SPECIAL NOTE:** This course is offered every other year and will be offered in 2020-2021.

CIM is a course that applies principles of rapid prototyping, robotics and automation. This course builds upon the computer solid modeling skills developed in Design and Drawing for Production. Students will use computer controlled rapid prototyping and CNC equipment to solve problems by constructing actual models of their three dimensional designs. Students will also be introduced to the fundamentals of robotics and how this equipment is used in an automated manufacturing environment. Students will evaluate their design solutions using various techniques of analysis, and make appropriate modifications before producing their prototypes.

RIT credit may be earned through a dual credit program. There is a tuition cost associated with RIT credit. Students planning a full complement of technology electives should be aware of this course offering as they plan their entire high school program of studies.

**PLTW Computer Science and Software Engineering (CSE) (0690)**
See course description on p. 79

**Digital Electronics (0658)**
- **PREREQUISITE:** SUCCESSFUL COMPLETION OF ALGEBRA
- **GRADE LEVEL:** 10-12
- **EXAMINATION:** LOCAL
- **CREDIT:** 1 UNIT

Digital Electronics is a course of study in applied digital logic. Students will be introduced to digital circuits found in video games, watches, calculators, digital cameras, and thousands of other devices. Students will study the application of digital logic and how digital devices are used to control automated equipment. This course is similar to a first semester college course and is an important course of study for a student exploring a career in engineering or engineering technology.

RIT or MCC credit or may be earned through a dual-credit program. There is a tuition cost associated with RIT /MCC credit.

**PLTW Design and Drawing for Production (DDP) (0655)**
- **PREREQUISITE:** NONE
- **GRADE LEVEL:** 9-12
- **EXAMINATION:** LOCAL
- **CREDIT:** 1 UNIT
Technology Course Description

This course intends to provide opportunities in the areas of design and drawing through creative thinking, decision making and problem solving experiences. A shift from the conventional learning methods to this design problem approach is the basis of the syllabus. This course is very similar to a pre-engineering course and is an excellent choice for those students thinking about a career in engineering.

(Any student may use this course to satisfy the 1 Unit art/music commencement requirement)

RIT or MCC credit may be earned through a dual-credit program. There is a tuition cost associated with RIT/MCC credit.

PLTW Design & Drawing for Production (Single Gender Class) (0656)

PREREQUISITE: NONE  ♦  GRADE LEVEL: 9-12
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT

This course is part of Penfield’s initiative to create an environment to encourage more females to explore the field of technology and engineering. The course curriculum is identical to Design & Drawing for Production but additional emphasis will highlight the roles and contributions of women in engineering.

This course intends to provide opportunities in the areas of design and drawing through creative thinking, decision making and problem solving experiences. A shift from the conventional learning methods to this design problem approach is the basis of the syllabus. This course is very similar to a pre-engineering course and is an excellent choice for those students thinking about a career in engineering.

(Any student may use this course to satisfy the 1 Unit art/music commencement requirement)

RIT or MCC credit may be earned through a dual-credit program. There is a tuition cost associated with RIT/MCC credit.

Engineering Design and Development (0666)

PREREQUISITE: FOUR PROJECT LEAD THE WAY COURSES OR WITH DEPARTMENTAL APPROVAL  ♦  GRADE LEVEL: 12
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT

Students will work in teams to design and construct solutions to engineering problems, applying the principles developed in the four preceding courses. Each team will be responsible for delivering progress reports and making final presentations of their project to an outside review panel. Students will maintain a journal as part of a portfolio of their work.

Principles of Engineering (0661)

PREREQUISITE: MINIMUM SUCCESSFUL COMPLETION OF OR CURRENTLY ENROLLED IN GEOMETRY AND DDP  ♦  GRADE LEVEL: 10-12
EXAMINATION: LOCAL  ♦  CREDIT: 1 UNIT

Principles of Engineering is a broad-based exploratory course designed to help students understand the field of engineering and engineering technology and its career possibilities. Students will develop engineering problem solving skills that are involved in post-secondary education programs and engineering careers. They will explore various engineering systems and analysis techniques. They will also learn how engineers address concerns about quality and safety of technological systems.

Per Commissioner’s Regulation 100.5(j) Principles of Engineering meets Regents standards for the 3rd unit of credit in Math or Science (but not both)

RIT credit may be earned through a dual credit program. There is a tuition cost associated with RIT credit.
Eastern Monroe Career Center (EMCC)

**Academic Credit Offerings 2019-2020**
EMCC offers 17 Career and Technical Education programs. [Click here](#) to learn more about the program offerings including high school credits offered, college dual enrollment and industry based exams and certifications.

<table>
<thead>
<tr>
<th><strong>EMCC Course</strong></th>
<th><strong>Credit</strong></th>
<th><strong>Academic Credit Available</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Automated Machining &amp; Manufacturing</td>
<td>1.00</td>
<td>Advanced - English 12</td>
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<td></td>
<td>1.00</td>
<td>Advanced - Technical Science</td>
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<tr>
<td>Auto Services</td>
<td>1.00</td>
<td>Advanced - English 12</td>
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<td></td>
<td>1.00</td>
<td>Basic - Technical Science</td>
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<tr>
<td>Cisco Networking Academy</td>
<td>1.00</td>
<td>English 12 for seniors</td>
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<tr>
<td>Collision Repair Technology</td>
<td>1.00</td>
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<td>1.00</td>
<td>Advanced - Technical Science</td>
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<tr>
<td>Construction Trades</td>
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<td>1.00</td>
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<tr>
<td>Cosmetology</td>
<td>1.00</td>
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<td></td>
<td>1.00</td>
<td>Basic - Technical Science</td>
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<tr>
<td>Criminal Justice</td>
<td>1.00</td>
<td>Advanced - English 12</td>
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<td></td>
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<td>Advanced - Participation in Government</td>
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<td>Advanced - Technical Math</td>
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<td>Early Childhood Education</td>
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<td>Advanced - Technical Science</td>
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<td>Basic - Health</td>
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<tr>
<td>New Vision Medical Careers</td>
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<td>Participation in Government</td>
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<td>Economics</td>
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<td>0.50</td>
<td>Health</td>
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<tr>
<td>Professional Health Careers</td>
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<td>Welding and Fabrication</td>
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</tbody>
</table>
EMCC Course Descriptions

Click on course title to view more thorough description on Eastern Monroe Career Center web page.

Automated Machining & Manufacturing

**Basic 9068**

**Adv 9066**

Students are introduced to the field of precision machining through a hands-on approach. A student completing this two-year program will be able to safely setup and operate various machines such as lathes, mills, grinders, drill presses, band saws, and Computer Numerical Controlled (CNC) mills and lathes. Print reading and shop math is taught and CAD & CAM software will be introduced and used in class. Students will use precision measuring tools to measure and inspect projects. This program is recommended for students interested in pursuing a career in the field of industrial or mechanical engineering or to obtain employment in the advanced manufacturing field after graduating. Employment in both disciplines is very good throughout the country. There are no prerequisites, although a good math background is helpful.

Auto Services

**Basic 9002**

**Adv 9003**

Students learn to repair and maintain a variety of vehicles. They locate mechanical, electronic and computer problems through careful diagnosis and perform the necessary repairs using industry equipment. Units of study are delivered in four 20-week modules aligned to the standards of the National Automotive Technician’s Education Foundation (NATEF) and the Automotive Service Excellence (ASE) requirements. Hands-on experience is attained by servicing actual vehicles in an industry-based work environment.

Dual Credit: Monroe Community College (up to 3 credits)

Articulation Agreements:

Alfred State College

Cisco Networking Academy *(9090)*

Stand-alone one-year course for those with a networking background. Students learn skills in the areas of basic network cabling, network security, wireless implementation and advanced routing and design. Students work independently as they acquire the skills necessary to become CISCO certified. Students need to develop and demonstrate strong personal time-management skills and problem-solving skills.

Dual Credit: Genesee Community College (7 credits)

Collision Repair Technology

**Basic 9000**

**Adv 9001**

Students learn to repair and refinish collision-damaged vehicles. They learn the fundamentals of metal straightening, MIG-welding, detailing, painting, refinishing and customizing, and working with plastic fillers. Students will gain experience with flexible bumper repair, hardware repair and service. Students study and demonstrate competency in writing collision estimates, managing customer paperwork, and tracking jobs. Interactive and professional communication skills are developed.

Articulation Agreements:

Alfred State College

Eric Community College

Pennsylvania College of Technology (credit by evaluation)
EMCC Course Descriptions

Construction Trades

Basic 9080
Adv 9081
Students learn the fundamentals of commercial and residential construction. First-year students learn the principles and theoretical concepts of wall, floor, and roof framing, and exterior finishes including windows, doors, siding and roofing. Second-year students focus on dry wall, kitchens and baths, trim and painting, and form-building for concrete structures. Training in home energy audits and truss and soffit construction is included with practical applications on site. Students work on other related projects including sheds, and decks.

Articulation Agreements:
Alfred State College
Pennsylvania College of Technology (credit by evaluation)
SUNY College of Technology at Delhi

Cosmetology

Basic 9005
Adv 9006
Students learn the latest techniques in hair cutting, styling, and chemical services, as well as nail and skin care. Students practice cuts and styles on mannequins and classmates, before offering services to customers in our school-sponsored salon. The curriculum includes skill development in the areas of communication, organization, and time management, which are essential to success in the industry. Students attend the program for two years, including a summer session between the junior and senior year. Upon accumulating 1,000 hours of theory and practice, students are eligible to take the NYS Cosmetology Licensing Exam.

Articulation Agreement(s):
Bryant and Stratton

Criminal Justice

Basic 9044
Adv 9045
Through a blending of rigorous academics and experiential activities, students explore the history of law enforcement and develop an understanding of civil and criminal law. Students review court cases and outcomes as they relate to law enforcement at the local, state and national level. Students use forensic science as a means to investigate simulated crime scenes. Guest speakers from the criminal justice field and visits to numerous agencies deepen the student’s understanding of this career field.

Dual Credit: Monroe Community College (up to 15 credits)

Culinary Arts

Basic 9027
Adv 9028
Students learn about the fast-paced careers of the food service industry. Students gain experience in both front- and back-of-the-house operations. Students begin by developing their knife skills and using appropriate cooking methods for different foods. Opportunity is provided for students to learn safe methods of food handling and storage through the ServSafe program. Initial food production is small scale. Students graduate to planning and production for a class-run restaurant, Three Seasons. Internships with other professionals in the field extend student’s learning experience. Students develop both individual and team culinary skills.
EMCC Course Descriptions

Dual Credit: Monroe Community College (up to 8 credits)
Articulation Agreement(s):
Alfred State College
Art Institute of Pittsburgh
Johnson & Wales

Early Childhood Education

Basic 9011
Adv 9012
Students explore multiple theories and stages of child development. Cognitive, social, and physical developmental milestones of toddlers and young children are identified. Students conduct observations of staff and children as they visit different early childhood education sites in the community. The opportunity for practical application is provided at Teens-n-Tots Nursery School program at EMCC. Training hours are acquired toward the preschool Child Development Associate (CDA) credential.

Dual Credit: Monroe Community College (up to 6 credits)

Emergency Services

Basic 9023
Adv 9024
This program provides students the opportunity to develop knowledge and skills in fire protection technology, fire safety, emergency medical care, and radio dispatch. Students explore these professions through a variety of guest lecturers and site visitations. In the first year, students earn CPR certification and take the NYS exam for Certified First Responder.
Second-year students participate in an eight-week field internship and take the NYS EMT-Basic certification exam.
Students learn to follow medical direction to provide direct patient care. Students must meet NYS age requirements to work in this field.

Dual Credit: Monroe Community College (16 credits)
Articulation Agreement(s):
Finger Lakes Community College

Engineering & Fabrication Technology

Basic 9063
Precision Machining Adv 9064
Welding & Fabrication Adv 9065
Students develop knowledge and skills in elements of design, blueprint reading, machining and metal fabrication to prepare for employment and/or postsecondary education. In the first year, students rotate every 10 weeks between Precision Machining and Welding. Students visit businesses and complete projects to help understand the interconnections and skills required for working in these fields. In the second year, students select Precision Machining or Welding as an area of focus and sit for the associated industry-based technical assessment.

Dual Credit: Monroe Community College (6 credits)

New Vision Medical Careers (9047)
This one-year program allows high school seniors to explore careers in health care through partnerships with Rochester General Hospital and St. Ann’s Community. Students participate in a rigorous academic program with hands-on experience in medical careers. Students participate in four 10-week rotations in different
medical departments of the health care facility. This placement provides the student with an in-depth look at the responsibilities of patient care in a health care facility.
Dual Credit: Monroe Community College (up to 15 credits)

**PC Repair/Network Cabling (9029)**
Students perform live customer work through a student-operated simulated computer repair business. This program gives students the knowledge, abilities, and customer relations skills needed for entry-level employment in the field. Students develop individual and team skills as they troubleshoot and solve networking issues. Course expectations require online participation. Networking experience prior to program admission would benefit students.
Dual Credit: Genesee Community College (up to 8 credits)

**Professional Health Careers**

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<td>Bas</td>
<td>9038</td>
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<tr>
<td>Adv</td>
<td>9039</td>
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</table>

Students are provided with an exploratory experience of emerging health occupations. Students study the concept of “Life Cycle” and identify factors contributing to positive personal health. The basic course integrates the NYS High School health curriculum. In the advanced year, students develop the skills to obtain entry level employment in the health care field. After successful completion of the program, students will have met the clinical and classroom requirements for the NYS Nursing Assistant exam. This course is also designed to help students enhance their leadership, communication and management skills. Professional behavior is embedded throughout all aspects of the course.

Articulation Agreement(s):
Finger Lakes Community College
Wayne Finger Lakes BOCES LPN Program

**Trade Electricity**

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<td>Bas</td>
<td>9019</td>
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<tr>
<td>Adv</td>
<td>9020</td>
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</table>

Students interested in becoming an electrician participate in this program to learn how to control the power source for much of modern technology. Students develop individual and team skills as they learn the basics of residential and commercial wiring. They learn to work within OSHA regulations, install switches to meet different power needs, troubleshoot issues faced by people at home or work, and investigate emerging power needs and solar/wind technology.

Articulation Agreement(s):
Alfred State College
Pennsylvania College of Technology

**Visual Communication & Photography**

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<tbody>
<tr>
<td>Bas</td>
<td>9077</td>
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<tr>
<td>Adv</td>
<td>9078</td>
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</tbody>
</table>

Students explore the process of design through traditional and digital media. Emphasis is on developing ideas for effective visual communication. Students accept and offer constructive criticism through the critique process and generate creative solutions to client-driven products. Students with experience in studio art, drawing and painting, or advertising design courses are encouraged to pursue this program. Digital SLR Photography is integrated into the program. The Adobe Creative Suite curriculum is integrated throughout.
Dual Credit: Monroe Community College (up to 3 credits)
Articulation Agreement(s):
Art Institute of Pittsburgh
Art Institute of New England
College of Imaging Arts in Boston