

# PITTSBURG SCHOOL

HOME OF THE MIGHTY PANTHERS



PROGRAM OF STUDIES

2022-2023

# **PITTSBURG SCHOOL**

*Guidance Department*

*Dawn A. Pettit, School Counselor*

Dear Parent/Guardian

Once again it is time for scheduling at Pittsburg School. This Program of Studies booklet is designed to help you with the scheduling process. I urge all students to sit down with their parents and review the information presented here. Our **GRADUATION REQUIREMENT** is 25 credits, which means that every student must pass the following:

**English** - 4 credits

**Mathematics** – 4 credits (must include 1 credit of Algebra & 1 credit of a class with math components)

**Science** – 3 credits (must include 1 credit of Biology and 1 credit of Physical Science)

**Social Studies** – 3 credits (must include ½ credit of Economics, 1 credit of NH History / Civics, ½ credit of World History, and 1 credit of US History)

**Consumer Science / Health** (Healthy Living) – 1 credit

**Physical Education** – 1 credit

**Arts Education** – 1 credit

**Business Education** (Personal Finance ½ credit) – 1 credit

**Technology** – 1 credit

**Humanities** – 1 credit

**Information Communication Technology** – ½ credit

**Electives** – 4 ½ credits

The course of study will be distributed to students in grades 8 through 11. Eighth graders will have a workshop during the school day explaining graduation requirements, courses being offered, and career paths. Students in grades 9 through 11 will meet individually with the guidance counselor to discuss appropriate course selections. Evening appointments will be available for parents and students who wish to meet with the guidance counselor to discuss course selection. A letter will be sent notifying you of this option.

The registration form in the back of this book will be used to indicate the courses your son or daughter would like to take. We will use the recommendations of the sending teachers, and achievement testing, to help us learn if the levels chosen are those in which the student would be correctly placed. All forms will need your approval.

If you have any questions or would like some help in planning your schedule, please see me in the Guidance office. Parents with questions can call me at Pittsburg School (538-6536) or email me at [dpettit@psd.sau7.org](mailto:dpettit@psd.sau7.org) and I will be happy to help in any way.

Sincerely,

Dawn A. Pettit  
School Counselor

## **GUIDANCE AND COUNSELING OVERVIEW**

Guidance at Pittsburg School is a vital part of the total school program with its own curriculum and classroom activities.

- ◆ As an information center, the Guidance Office contains literature relevant to career planning, college selection, financial aid, and emotional concerns. Begin planning early for your future!
- ◆ The school guidance service offers pupil assistance in making appropriate choices of an academic, vocational, or personal nature. With this objective in mind, the Guidance Department maintains individual cumulative record folders containing such items as biographical data, grades, test scores, career survey results, etc., and assists the faculty in administering a comprehensive testing program. Sources of information on schools, occupations, financial aid, and the military are provided as well as assistance in selecting courses, occupations and post-secondary training. Students receive individual and group assistance regarding academic and vocational planning.
- ◆ Students planning to attend college should select their programs carefully and seek the aid of the guidance counselor. Capable students should look upon further education after high school graduation as possible as there are various kinds of financial aid available such as scholarships or tuition grants, loans, and work-study programs.
- ◆ The School Counselor is here, also, to assist students whom have encountered a situation in which they need support or assistance. Students desiring assistance should see the guidance counselor to make an appointment. Every effort will be made to schedule appointments within 48 hours of the initial request.
- ◆ The Guidance Department cooperates with parents, teachers, and local community agencies to help provide an appropriate education for each child. Referral services are also provided to the proper agencies when further assistance is deemed necessary.
- ◆ The Guidance Department is responsible for the formulation of the master schedule and the scheduling of the student body.
- ◆ Students making up failed course work with correspondence courses or credit recovery must register for these through the Guidance Department where progress will be monitored. Students will have the opportunity to take courses through our Virtual Learning Academy Charter School (VLACS). Students need to be able to work independently and be responsible for their time. Previous grades will also be taken into consideration.
- ◆ The Guidance Department is responsible for student academic records and transcripts.

# **PITTSBURG HIGH SCHOOL COURSE OFFERINGS**

Level of difficulty: **Bold Print** – Challenging *Italic Print* – Challenging or General Basic Print - General

## **BUSINESS**

Accounting I  
**Advanced Accounting**  
**College Accounting** (Project Running Start)  
**Business and Personal Law** (Project Running Start)  
Entrepreneurship/Hospitality  
Economics  
Personal Finance  
21<sup>st</sup> Century Business  
Multimedia  
Information and Communication Technology (ICT)  
Introduction to Humanities  
Business Ethics

## **CONSUMER SCIENCE**

Healthy Living  
World Foods  
Costume Design  
Life Skills  
On Your Own  
Early Childhood Development  
Parenting and Families Today  
Careers With Youth and In Education

## **ENGLISH**

**English 9**  
**English 10**  
**English 11**  
**English 12**  
English 9  
English 10  
English 11  
English 12  
Creative Writing  
Film Studies

## **FINE ARTS**

Introduction to Art  
Intermediate Art  
**Independent Study Art**  
**Advanced Art**  
**Sculpture**  
Chorus  
Band

## **FOREIGN LANGUAGE**

**French I**  
**French II**  
**French III**  
**Spanish I**  
**Spanish II**  
**Spanish III**

## **MATHEMATICS**

**Algebra I**  
**Algebra II**  
**Geometry**  
**Advanced Math**  
**Pre-Calculus**  
**Calculus**  
Applied Math  
Essential Algebra  
Construction Math  
Math Makes The World Go Around

## **PHYSICAL EDUCATION**

Physical Education  
Fitness  
Team Development

## **SCIENCE**

**Principles of Physical Science**  
**Forensic Science**  
**Principles of Biology**  
**Principles of Chemistry**  
**Principles of Physics**  
**Human Anatomy/Physiology**  
Everyday Biology  
General Physical Science  
Earth Science  
Conceptual Chemistry / Conceptual Physics  
Student Research  
Ecology

## **SOCIAL STUDIES**

*World Geography*  
*US History*  
*NH History*  
*Civics*  
*Modern World History*  
**Psychology**

## **TECHNOLOGY**

Woodworking I  
Woodworking II  
Woodworking III  
Introduction to Drawing / CAD  
Introduction to CAD  
**Advanced CAD**

## **SCHOOL TO WORK**

School To Work

## **HOW TO CHOOSE YOUR COURSES**

The Program of Studies has a lot of information that is important for students to know and remember as they go through high school. We recommend that students talk with different people in their life to help them understand all of the information in the Program of Studies. Parents, guidance counselors, current and former teachers, and friends can all be helpful. What do you need to know to make decisions about the courses to take and create a great transcript?

There are three basic steps you need to go through when making decisions about what courses to choose:

1. Review and learn what the Graduation Requirements for you are.
2. Review the Recommended Course Sequence, Course Expectations, and Grade Level Promotion Requirements to help you determine which classes to take each year.
3. Consider your interests and think about what you might want to study or pursue for employment after high school.
4. Use the Career Pathways Guide in this booklet to assist you.

If students and parents consider these things when making course decisions, they will see the four years students spend in high school as the stepping stone to their future, whether going to college, into the military, or right into the workforce.

## **ACADEMIC EXPECTATIONS**

### **TRANSCRIPT**

When students move to high school, they start to build a transcript. A transcript is simply a record of all the courses a student took in high school and what their grades were in those classes. A transcript follows students for life. Transcripts also include information about scores from SAT testing, rank in class, grade point average, etc. In some cases, SAT scores may be omitted from the transcript when a student applies to a college which does not require it. A transcript tells the people who see it how a student performed in high school. Any kind of college a student applies to will ask the high school to send them a copy of a transcript. Many employers also like to see a copy of a transcript because it can help them tell what kind of an employee a student might be. A transcript is a very important document and only by taking high school seriously will a transcript best reflect a student's skills, talents, and abilities.

### **GRADUATION REQUIREMENTS**

The graduation requirements listed on the following table refer to “**earning credits**” in various subject areas. A credit represents the total amount of time during the school year a class meets. One-credit classes at Pittsburg School meet for one block a day for one semester. There are also half-credit courses, which meet for half a block for one semester. Refer to the Course Description section of the Program of Studies to learn the number of credits each class is worth.

### **GRADE LEVEL PROMOTION CREDIT REQUIREMENTS**

Freshman	Less than 6 credits
Sophomore	6 or more credits
Junior	12 or more credits
Senior	18 or more credits
Graduation	25 or more credits

## **INDEPENDENT STUDY**

Pittsburg School will be offering some independent study classes during the 2019-2020 school year. Priority will be given to any student that needs a certain class to graduate with. In order for a student to participate in an independent study program, permission from the Principal, guidance counselor and teacher must be obtained in advance.

## **COURSE LOAD**

Unless scheduling prevents this, each student is required to carry a minimum of **seven** credits per academic year.

## **DROP/ADD PROCEDURES FOR COURSES**

Changing a class, unless caused by extenuating circumstances, will not be allowed. "Not liking" a class or teacher is not sufficient reason for changing classes. Students considering a schedule change need to follow the steps listed below in order to drop and or add a class:

- The student meets with the guidance counselor to discuss consequences and options and check credits.
- If add/drop is still an option, the student must get the necessary signatures from teachers and parents on a drop/add form. Once completed, the form must be returned to the guidance counselor to finalize the change in the computer. A student must continue attending and participating in the original class until notified by the guidance counselor.
- There is a designated drop/add period. No classes will be dropped beyond that time period. Students have three days from the start of the course to drop/add it.

## **CLASS RANK (Weighted)**

In determining rank in class, courses will be weighted as follows: College preparatory course grades will be multiplied by 1.25, General courses will be multiplied by 1.0. Courses graded with a Pass/Fail are not included.

## **GRADING**

There are four grading periods during the year. Parents may expect to receive warning notices if their children are not performing at an acceptable level at the middle of each quarter. Numerical and letter grades are associated as follows:

A = 93 – 100

B = 85 - 92

C = 75 – 84

D = 70 – 74 F = 69 and below

## **HONOR ROLL**

In order to be eligible for honor roll, a student must have a numerical grade for at least three classes. All grades must be an average of 85 or above with no more than one C to be named on the honor roll. For High Honors all grades must be an average of 93 with no more than one B. Effort Honors is given out for outstanding effort. To be eligible for effort honors a student must carry four courses, must receive positive comments in at least three of the four courses, receive no negative comments in any course and not fail any course.

## **NATIONAL HONOR SOCIETY / NATIONAL JUNIOR HONOR SOCIETY**

Sophomore, Juniors, and Seniors are eligible for induction into the National Honor Society, while 8<sup>th</sup> graders and Freshmen are eligible for induction into the National Junior Honor Society. Induction into both the National Honor Society and the National Junior Honor Society is based on scholarship, leadership, character, citizenship, and service. Eligibility for scholarship will be determined by a cumulative average of 85 (unweighted) and carrying at least 4 college prep courses. Leadership, character, citizenship, and service will

be evaluated by the faculty on a form developed by the Faculty Council. The issue of any member who fails to maintain standards will be dealt with by the Faculty Council.

### **RECOMMENDED COURSE SEQUENCE**

- Subjects should be taken in the year they are offered. If they are not, there is the risk that they cannot be taken in later years because of conflicts. In other words, freshmen should take freshmen courses in their freshmen year, etc. **Failing a course may limit the student's ability to graduate on time.**
- Level of difficulty: **Bold Print – Challenging** *Italic Print – Challenging or General* Basic Print - General

#### **Freshman Year**

English – English 9 & 10 / **English 9 & 10**  
Math – Essential Algebra / **Algebra I**  
Science – General Physical Science / **Principles of Physical Science** / *Earth Science*  
Social Studies – *World History*  
World Languages – **Spanish I** / **French I**  
Health – Healthy Living  
Electives – Art, Consumer Sciences, Technology, Music, etc.

#### **Sophomore Year**

English – English 9 & 10 / **English 9 & 10**  
Math – Math Makes the World Go Around / **Algebra II or Geometry**  
Science – Everyday Biology / **Principles of Biology**  
Social Studies - *US History* / *World Geography*  
World Languages – **Spanish II** / **French II**  
Electives – Art, Consumer Sciences, Technology, Music, etc.

#### **Junior Year**

English – English 11 & 12 / **English 11 & 12**  
Math – Construction Math / **Trigonometry** / **Pre-Calculus**  
Science – Conceptual Chemistry/Conceptual Physics / **Principles of Chemistry**  
Social Studies – *New Hampshire History/Civics* / Economics  
World Languages – **Spanish III** / **French III**  
Physical Education – Physical Education / Fitness  
Electives – Art, Consumer Sciences, Technology, Music, etc.

#### **Senior Year**

Business – Humanities / Personal Finance / Information Communication Technology  
English – English 11 & 12 / **English 11 & 12**  
Math – **Pre-Calculus** / **Calculus** / Applied Math  
Science – **Principles of Physics**  
Social Studies – Elective  
World Languages – **Spanish III** / **French III**  
Electives – Art, Consumer Sciences, Technology, Music, etc.



## **COURSE EXPECTATIONS TABLE**

The following table lists the course expectations normally required for the different classification of courses. This table can help you decide which courses are most appropriate.

<b>Criteria</b>	<b>Challenging</b>	<b>General</b>
Expectations of The student	<p>The ability to:</p> <ul style="list-style-type: none"> <li>--think critically</li> <li>--understand abstract concepts</li> <li>--learn independently with some modeling</li> <li>--read quickly with solid comprehension of main concepts</li> </ul> <p>The commitment to:</p> <ul style="list-style-type: none"> <li>--sustain quality performance for the entire year</li> <li>--actively participate in class</li> </ul> <p>The motivation and interest to:</p> <ul style="list-style-type: none"> <li>--engage challenging course material</li> </ul>	<p>The ability to:</p> <ul style="list-style-type: none"> <li>--read and write at grade level</li> <li>--become an independent learner</li> <li>--follow directions and take notes</li> <li>--participate in discussions</li> </ul> <p>The commitment to:</p> <ul style="list-style-type: none"> <li>--come to the class prepared to participate</li> <li>--sustained effort on skill improvement</li> <li>--respect others' contributions</li> </ul> <p>The motivation and interest to:</p> <ul style="list-style-type: none"> <li>--possess good organizational skills</li> <li>--ask questions and seek extra help</li> </ul>
Course Expectations	<ul style="list-style-type: none"> <li>--homework is often assigned over weekends and vacations</li> <li>--daily homework is assigned</li> <li>--long and short-term projects</li> </ul>	<ul style="list-style-type: none"> <li>--homework is assigned over weekends with some class time for practice</li> <li>--more short term than long term projects</li> </ul>
Assessment	<ul style="list-style-type: none"> <li>--students are assessed on both content knowledge and on skills of communication and critical thinking</li> <li>--students are assessed frequently throughout the term</li> <li>--assessments are on a variety of outcomes, e.g. homework, quizzes, tests, oral presentations, short and long-term writing assignments, lab reports, etc.</li> </ul>	<ul style="list-style-type: none"> <li>--students are assessed on comprehension, application, synthesis and analysis</li> <li>--assessments are on a variety of outcomes, e.g. homework, quizzes, tests, oral presentations, short and long term papers, lab projects, etc.</li> <li>--longer assignments have checkpoints</li> <li>--frequent assessments include daily or weekly quizzes, monthly tests</li> </ul>
Pacing  Pacing may change based on when the course is offered.	<ul style="list-style-type: none"> <li>--the course is very rigorous and therefore, fast paced to cover the curriculum</li> <li>--students are expected to master the material at key points during the year</li> </ul>	<ul style="list-style-type: none"> <li>--students are expected to master the material at key points during the year, but the pace may vary depending on the level of abilities in any given class</li> </ul>
Level of Independence	<ul style="list-style-type: none"> <li>--course is directed primarily by the teacher, but the students are expected to do independent work</li> </ul>	<ul style="list-style-type: none"> <li>--course is directed primarily by the teacher</li> <li>--students are expected to move towards independence</li> </ul>

## **PLANNING A COURSE OF STUDY**

### **MEETING COLLEGE ADMISSION REQUIREMENTS**

College entrance requirements may vary, yet follow a rather consistent pattern. In general, most four-year colleges prefer applicants in the top one-third of their class, with a “B” average or better in college preparatory subjects. However, there are many fine colleges that will accept students with average grades who have demonstrated particular skills and/or exceptional qualities of leadership and character.

### **4-YEAR COLLEGE REQUIREMENTS**

ENGLISH	4 years
SOCIAL STUDIES	3 – 4 years
MATH (College Prep.)	3 – 5 years
SCIENCE	3 – 5 years
WORLD LANGUAGES	2 – 4 years (most colleges required 3+ years in one language)
ELECTIVES	Electives should be taken from those available based upon personal interests and educational goals, i.e. Art, Business, Consumer Science, Technology Education, Music, etc.

### **2-YEAR COLLEGE REQUIREMENTS**

ENGLISH	4 years
SOCIAL STUDIES	3 years
MATH	3 – 4 years (Algebra I & II and Geometry – minimum)
SCIENCE	2 – 4 years
WORLD LANGUAGES	1 – 3 years depending upon college/major
ELECTIVES	Same as above

# New Hampshire Scholars Program

New Hampshire Scholars is a community-based program that encourages students to take a more rigorous Core Course of Study in high school. It is based on a partnership between a community’s local business leaders and its school district. New Hampshire Scholars is coordinated through a partnership between the New Hampshire College and University Council, Campus Compact for New Hampshire and the New Hampshire Department of Education. New Hampshire Scholars is part of the National State Scholars Initiative Network. Twenty-five states across the country participate in this

**NEW HAMPSHIRE  
SCHOLARS**  
College Ready, Work Ready, Ready for Life







national initiative.

The New Hampshire Scholars Program has four initiative pathways:

1. New Hampshire Scholars;
2. New Hampshire Scholars with a Science, Technology, Engineering, and Math (STEM) Emphasis
3. New Hampshire Scholars with an Arts Emphasis
4. New Hampshire Scholars Career Pathway

In the Course Catalog, all courses approved as part of the NH Scholars Program are indicated with the symbol:

New Hampshire Scholars Initiative Pathways		
All NH Scholars complete the requirements in English, Math, Social Science, World Language and Lab Science		
4 years of English		
4 years of Math		
3 ½ years of Social Science		
2 years of a World Language (not required for Career Pathways Emphasis)		
3 years of Lab Science		
Students are also encouraged to seek experiential learning opportunities & community partnerships/business mentorships		
NH Scholars may also earn the following designations by completing additional requirements		
 NH Scholars with STEM Emphasis	 NH Scholars with Arts Emphasis	NH Scholars  Career Pathway
1 additional year of Lab Science 1 year (or more) chosen from Technology, Engineering, Computers, Advanced Manufacturing, etc.  Minimum 3.2 GPA (weighted, end of 11 <sup>th</sup> grade)	2 years chosen from Visual Arts, Fine Arts, Performing Arts, Music,  Graphic Design, etc.   Minimum 3.2 GPA (weighted, end of 11 <sup>th</sup> grade)	Completion of one of the following: <ul style="list-style-type: none"> <li>• Approved NH CTE Program</li> <li>• Industry-aligned or career-driven Extended Learning Opportunity</li> <li>• CCSNH Industry cert. sequence</li> <li>• Formal career pathway</li> </ul> Successful engagement in a work-based experience  Earned college credits or an industry-valued recognized certificate

## **CAREER CLUSTERS**

Just the facts....for students and parents

“What do you want to do when you leave high school?” If you ask a lot of high school students that question, you will get a lot of different answers, but the one you hear most often is, “I don’t really know.” Many students want to go onto some kind of post-secondary education such as attending a four-year college or university or a two-year community college, but are not sure what they want to study. Some want to go into the military and others are ready to join the work force. There are so many different options, but how do you decide which one is right for you? The Career Cluster information included in the Program of Studies can help you make some of those decisions by showing you the type of courses you can take in high school to help you make decisions about what kind of career you would like in the future.

### **WHAT IS A CAREER CLUSTER?**

A **Career Cluster** is simply a group of related careers or jobs. Nationally, there are sixteen different Career Clusters that cover practically every career and job available. Outlined for you in the Program of Studies are all of those Career Clusters. The Career Clusters included are:

- Agriculture and Natural Resources
- Architecture and Construction
- Art, Audio/Visual Technology and Communications
- Business, Management, and Administration
- Education and Training
- Finance
- Government and Public Administration
- Health Sciences
- Hospitality and Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections, and Security
- Manufacturing
- Marketing
- Science, Technology, Engineering and Mathematics
- Transportation, Distribution, and Logistics

### **WHO BENEFITS FROM USING THE CAREER CLUSTERS INFORMATION?**

Everyone does. Whether you decide to go to college first or go right into the workforce, using the Career Cluster information can help ALL students make informed decisions about what career area they want to pursue, what high school courses they should take and what kind of post-secondary education they will need to pursue after high school.

### **WHAT KIND OF INFORMATION WILL I FIND ON A CAREER CLUSTER PAGE?**

Each Career Cluster page will give you the suggested courses that you should take during your 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> grades to help you be prepared to go into your chosen Career Pathway. These classes are based on what Pittsburg School offers on a regular basis. A complete Career Cluster / Pathways booklet is in the guidance office, is with each high school teacher, and is in the main office. If you want more information on any of these pathways, please stop by the guidance office.

**AGRICULTURE, FOOD, AND NATURAL RESOURCES Career Cluster**  
Post-secondary Options and College Majors

<b>Career Paths</b>	<b>Certificate Program</b>	<b>Two-Year College</b>	<b>Four-Year College</b>
Agriculture and Animal Management, Production and Operations	Agribusiness, Agriculture Production, Equine Studies	Animal Breeding, Animal Sciences, Equine Studies, Vet Technician	Animal Health & Nutrition, Pre-Veterinary, Agriculture Engineering
Agriculture Science Processes & Support Services		Agriculture Science	Soil Sciences, Agricultural Science, Agricultural Engineering
Conservation and Natural Resources		Forestry, Nat. Resources Mgt	Forestry, Conservation/ Renewal Resources Mgt., Natural Resources Mgt.
Horticulture, Landscaping & Groundskeeping	Horticulture Services, Landscape Management	Plant Pathology & Physiology, Landscape Management	Landscape Architecture, Horticulture Science, Plant Pathology & Physiology
Power, Structural and Technical Systems	Mechanics, Agricultural Mechanization	Mechanics, Agricultural Mechanization	

**ARTS, A/V TECHNOLOGY, AND COMMUNICATIONS Career Cluster**  
Post-secondary Options and College Majors

<b>Career Paths</b>	<b>Certificate Program</b>	<b>Two-Year College</b>	<b>Four-Year College</b>
Audio/Visual Technology		Technical Computer Support, Audio Systems Technician	Digital Media
Journalism and Broadcasting			English, Journalism, Desktop Publishing
Performing Arts			Dance, Theatre, Music, Set Design
Printing Technology	Website Design, Webmaster Technology		Desktop Publishing
Telecommunications Technology		Broadband Networking, Communications Tech.	
Visual Arts		Floriculture, Interior Design	Graphics Design & Printing, Commercial Design, Fine Arts, Floriculture

**ARCHITECTURE AND CONSTRUCTION Career Cluster**  
Post-secondary Options and College Majors

<b>Career Paths</b>	<b>Certificate Program</b>	<b>Two-Year College</b>	<b>Four-Year College</b>
Construction	Building Construction, Electrician, Plumbing	Building Construction, Construction Mgt. Construction Science	
Maintenance and Operations	Heating, Ventilation, Air Conditioning (HVAC)	Heating, Ventilation, Air Conditioning (HVAC)	
Design/Pre-Construction	Drafting, Computer Aided Drafting, Computer Aided Machining, Landscape Design	Computer Aided Drafting Computer Aided Machining, Surveying Technology, Landscape Design	Architecture, Architectural Tech. Engineering, Civil Engineering, Electrical Engineering, Environmental Engineering, Landscape Architecture, Mech. Eng.

## BUSINESS MANAGEMENT & ADMINISTRATION Career Cluster

### Post-secondary Options and College Majors

Career Paths	Certificate Program	Two-Year College	Four-Year College
Admin. & Information Support	Adm. Assistant, Word Processor	Office Manager, Data Entry Specialist	Business Administration and Management
Business Analysis			Cost Analysis, Investment Analysis (master of Business Administration required)
Business Financial Management and Accounting	Accounting	Accounting	Accounting, Financial Mgt.
Human Resources Management	Human Resources Mgt.	Human Resources Mgt.	Human Resources Mgt.
			Chief Financial Officer, Controller, Hospital Mgr. Risk Manager
Marketing	Wholesale/Retail Buyer, Web Designer		Advertising, Marketing

## EDUCATION AND TRAINING Career Cluster

### Post-secondary Options and College Majors

Career Paths	Certificate Program	Two-Year College	Four-Year College
Administration & Administrative Support			School Administration (requires Post-graduate study)
Professional Support Services		Alcohol & Addiction Counseling, Speech/Language Pathologist Assistant	Guidance Counselor (requires post-graduate study), Speech/Language Pathologist
Teaching and Training	Early Childhood Education	Early Childhood Education	Art Education, Early Childhood Education, Elementary Ed., Health Ed., Mathematics Ed., Music Ed., Physical Education, Special Ed., World Language Ed.

## HEALTH SCIENCES Career Cluster

### Post-secondary Options and College Majors

Career Paths	Certificate Program	Two-Year College	Four-Year College
Biotechnology Research & Development	Biotechnology, Bio-processing, Pharmacy Assistant	Research Asst., Pharmacy Technician	Pharmacist, Biostatistician (requires post-graduate study)
Diagnostic Services	Phlebotomy, Medical Lab Technology	Medical Lab Technology, Diagnostic Medical Sonography	Pathology, Genetics, Radiologic Technology, Clinical Hematology & Immunohematology
Health Informatics	Medical Coding, Office Technology	Office Technology, Medical Billing, Medical Transcription	Hospital Administrator and Health Care Administrator (requires post-graduate study)
Support Services	Dietary Technician		Biomedical Sciences/Technology, Nutrition
Therapeutic Services	Massage Therapy, Licensed Nursing Assistant (LNA), EMT	Respiratory Therapy, Nursing, Surgical Technology, Dental Hygiene	Physician (requires post-graduate study), Physical Therapy, Occupational Therapy, Nursing, Athletic Training, Speech/Language Therapy

**HOSPITALITY AND TOURISM Career Cluster**  
Post-secondary Options and College Majors

<b>Career Paths</b>	<b>Certificate Program</b>	<b>Two-Year College</b>	<b>Four-Year College</b>
Lodging Mgt. & Services	Hospitality Mgt.	Hospitality Mgt.	Hotel & Resort Mgt., Marketing, Advertising, Hospitality Admin.
Recreation, Amusement & Attractions/Property Mgt.	Horticulture Services, Landscape Mgt., Small Engine Mechanics	Horticulture Services, Landscape Mgt., Small Engine Mechanics	Landscape Architecture, Ski Resort Mgt., Adventure-based Recreation, Outdoor Recreational Mgt., Turf Mgt.
Restaurant, Food & Beverage Services	Culinary Arts, Beverage Services	Culinary Arts	Culinary Arts, Restaurant & Food Service Mgt.
Travel & Tourism Services	Travel & Tourism	Travel & Tourism	Travel & Tourism, Convention Management

**HUMAN SERVICES Career Cluster**  
Post-secondary Options and College Majors

<b>Career Paths</b>	<b>Certificate Program</b>	<b>Two-Year College</b>	<b>Four-Year College</b>
Consumer Services	Real Estate, Customer Service, Sales	Accounting, Business	Accounting, Business Admin., Financial Planning
Counseling & Mental Health Services	Addiction Counseling	Addiction Counseling, Career Counseling	Psychologist, Mental Health Counselor, School Counselor, Social Worker (all require post-graduate study)
Early Childhood Development & Services	Childcare Assistant, Parent Educator, Teacher Assistant	Early Childhood Education, Early Childhood Admin.	Early Childhood Education
Family & Community Services	Human Services	Human Services, Gerontology, Behavioral Science	Rehabilitation Services, Grief Counseling, Social Services Worker (requires post-graduate study)
Personal Care Services	Cosmetology, Mortuary Science	Mortuary Science, Personal Fitness Trainer	

**INFORMATION TECHNOLOGY Career Cluster**  
Post-secondary Options and College Majors

<b>Career Paths</b>	<b>Certificate Program</b>	<b>Two-Year College</b>	<b>Four-Year College</b>
Information Support & Services	Oracle Certification, Microsoft Database Administration	Technical Support, Desktop Support Specialist	Information Science
Interactive Media	Web Design	Geographic Information Systems, Web Design	Multimedia Communications, Graphic Design
Network System	Cisco Systems Networking, Network Administration, PC Support Specialist	Cisco Systems Networking, Network Administration, PC Support Specialist	
Programming/Software Engineering	Microsoft Certified Solutions Developer	Interactive Simulation Computer Science	Computer Science, Information Science, Operating Systems Design

**SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS Career Cluster**  
**Post-secondary Options and College Majors**

<b>Career Paths</b>	<b>Certificate Program</b>	<b>Two-Year College</b>	<b>Four-Year College</b>
Engineering & Technology	CAD Technician, CAM Technician, Machine Tool Certificate, Machine Tool Technology, Production & Inventory Control	Aviation Operations, Computer Science, Computer Engineering Technology, Civil Engineering, Computer Science Programming, Electronic Engineering Technology, Mechanical Technology, Mechanical Engineering Technology, Waste Water Treatment	Aerospace/Aeronautical Engineering, Civil Engineering, Computer Science, Electrical/Electronics/Communications Engineering
Science and Mathematics			Archeology, Biology, Chemistry, Genetics, Geology, Hydrology, Mathematics, Meteorology, Pre-Med, Pre-Veterinary Medicine



PITTSBURG SCHOOL  
PROGRAM OF STUDIES  
GENERAL COURSES

## GENERAL ART PROGRAM

**Introduction to Art #109/110 Grade: 9-12 Credit: .5/1**

**Prerequisites:** None

**Description:** Art will allow students the opportunity to gain a general knowledge of the basic elements and principles of art. Students will use various media to apply the elements and principles to their creative experiences. The creative experiences will include; painting, printmaking, cartooning, sculpture, and independent assignments. Students should plan on 2 weekly homework assignments. Various artists and art movement will be explored.

Course Outcome: Students will learn skills/techniques of the arts and be able to execute them. Art history and problem solving, will be experienced and learned.

**Intermediate Art #120/121 Grade: 9-12 Credit: 1**

**Prerequisites:** Introduction to Art with a grade B or better.

**Description:** This course will continue to research ways in which to communicate. There will be an expected increase in the implementation of the multiple intelligence's, as a vehicle for learning.

Course Outcome: Students will learn skills/techniques of the arts and be able to execute them. Art history and problem solving, will be experienced and learned.

## GENERAL MUSIC PROGRAM

**MUSIC THEATRE #102 Grades 7-12 Credit .250 (grades 9-12 only) Semester I**

**Prerequisites:** Interest in the various aspects of a theatrical production; and willingness to learn and work hands-on to produce the annual fall event. Must be willing and able to be involved in producing a show, including how to be more confident in front of other people. Must be willing to be actively involved in some aspect of the actual production.

**Description:** Be part of learning about and producing a show. All students learn first-hand about behind-the-scenes and on-stage roles, responsibilities, and rewards of the 5 crews which comprise the whole "Pittsburg Players" Company; and work on at least one of these: Cast & Chorus; Stage & Tech; Public Relations; Set & Props; Costumes & Character Effects. All students participate in class with learning portions of the show and/or related music. Course concludes with "striking" and reviewing the show. Each crew also works with a faculty advisor.

Course Outcomes: Students will...

- Learn about the history, creation, & production of a Broadway musical
- Develop understandings and skills in the tasks and considerations of each aspect
- Improve public speaking, presenting, & "people" skills
- Contribute to increasing school & community pride
- Produce a show for the public
- Have fun

**"PERFORMING ARTS" #101 Grade 7-12 Credit .250 (grades 9-12 only) Semester II**

**Prerequisites:** Desire to learn more about a variety of performing arts, including: music theatre, singing, acting & the movies, drumming, even student-driven topics such as Music & Media.

**Description:** What would your life or media be like without music? Music is for Life! This active class will include a variety of music skills and appreciation content. Students will be part of selecting, exploring, and sharing a variety of music, topics and talents; and ultimately creating a student-initiated performance project. This could include writing or producing a play, songs, singing, creating choreography or visual elements, using music technology...

Course Outcomes: Students will...

- Explore & develop understandings of a variety of performance genres; including vocal, instrumental, vocal, theatrical, dance, and film
- Pursue an individual or small group performing arts project, and contribute to a collective production
- Develop skills, knowledge, and talent in at least one area of performance
- Develop an understanding of the impact of the Arts on all aspects of life and learning
- Sing, play, watch, listen, try, create, present... have fun!

**GUITAR #104****Grade 7-12 Credit: no credit***Semester I & II*

**Prerequisites:** Desire to learn how to play guitar. School guitars provided; quantity may be limited during Semester II. Student-owned guitars also welcomed.

**Description:** Students will learn the essentials of playing guitar, learn how to read basic music notation, charts, and rhythms; tuning, stringing, strumming and picking; and pursue skills at their own pace following group instruction.

Course Outcomes: Students will...

- Understand the fundamentals of the instrument's history, styles, and techniques
- Learn a basic set of chords for countless and common songs, and pursue a personal choice
- Develop skills and understandings in the basics of theory, rhythm, and chord structures
- Pursue skills at their own pace
- Have the opportunity to try a variety of instruments

**PIANO/KEYBOARD #105****Grade 7-12 Credit: no credit***Semester I and/or II*

**Prerequisites:** Desire to learn how to play piano. Access to a keyboard outside of school is beneficial; practice strips may be provided initially.

**Description:** Students will learn the basics of playing keyboard instruments; Reading treble & bass clef music and rhythms. Instruction will vary between individual, pairs, and group; students may be paired according to ability and progress. If practice at home is not possible, students may also sign up for brief practice sessions in the music room as time permits.

Course Outcomes: Students will...

- Understand the fundamentals of the instrument's history, styles, and techniques
- Learn to read and play basic set of common songs, and pursue personal choice
- Develop skills and understandings in the basics of theory, rhythm, and chord structures
- Pursue skills at their own pace
- Students may have the opportunity to try a variety of instruments and applications

**"INSTRUMENT LESSONS" #106**  
*SEMESTER I and II (formerly "BAND")***Grade 7-12****Credit .250 (Grades 9-12 only)**

**Prerequisites:** Desire to learn how to play a common instrument. Some instruments are available for loan; personally owned instruments are also welcomed. Parental permission required for use of school instrument.

**Description:** Student lesson times vary, and may be held after school, during open periods, or as agreed upon with other subject teachers. Students will learn about their chosen instrument, its family, construction, care, and famous players; how to read music; and playing techniques. Students will be expected to practice regularly to build muscle memory, strength, and dexterity; and improve playing. Students playing same or similar instruments may have lessons together; and all student musicians will also learn to play together.

Course Outcomes: Students will:

- Develop skills and playing abilities, including reading, rhythm, range, and tone
- Develop musicianship qualities
- Develop a repertoire of common songs, and pursue at least one special performance piece
- Enrich their independence, time management, self-discipline, and pride

# GENERAL ENGLISH PROGRAM

**9th Grade English** #221 Grade: 9 Credit: 1

**Prerequisites:** None

**Description:** Students will explore ideas and assumptions about their own culture and values and the cultures of others. At the same time, they will read novels, short stories, plays, folk tales, and legends from America and a variety of countries. Using the writing process, oral reports, and journals, students will experiment with different kinds of writing. Grammar, spelling, punctuation, and other English mechanics will be stressed. The emphasis will be on students using all these different components to write a variety of clear, thoughtful, and mechanically correct papers.

**Course Outcome: Students will:**

- Have a greater appreciation and understanding of our culture and others.
- Be able to write detailed and organized papers.

**English 10: British Literature** #231 Grade 10 Credit: 1

**This class will be available every year, but with two curriculums offered on a rotating basis**

**Prerequisites:** English 9

**Description:** This course will explore classic and contemporary British Literature. Students will read and interpret novels, poetry, drama and film. Students will also write papers including research projects using proper forms of documentation, etc. Grammar, spelling, punctuation, and other English mechanics will be stressed. The emphasis will be on students using all these different components to write a variety of clear, thoughtful, and mechanically correct papers.

**Course Outcome: Students should:**

- Relate literature to themselves and the world around them
- Write to a higher-quality level
- Participate in meaningful discussions and deal in literary analysis

**English 11: American Literature** #241 Grades 11-12 Credit: 1

**This class will be offered on alternating years**

**Prerequisites:** English 9 and 10

**Description:** Students explore classic and contemporary works of American Literature through novels, short stories, poems, plays, and films. The writing component of this class includes journal exercises and other writing projects. Authors to be read include Arthur Miller, Steinbeck, Hemingway, and others. Grammar, spelling, punctuation, and other English mechanics will be stressed. The emphasis will be on students using all these different components to write a variety of clear, thoughtful, and mechanically correct papers. Active participation is required.

**Course Outcome: Students will:**

- Have a greater appreciation of American literature and how it has evolved as our country has changed
- Have written several academic papers using proper techniques
- Become more familiar with techniques of literary analysis

**English 12: Ancient and Historical Literature** Grades 11-12 Credit: 1

**This class will be offered on alternating years**

**Prerequisites:** English 9 and 10

**Course Description:** Students explore classic works throughout novels, short stories, poems, plays, and films. The writing component of this class includes journal exercises and other writing projects. Stories to be read include *The Odyssey*, *The Canterbury Tales*, *Beowulf*, and units on Greek, Roman, and Norse mythology. Grammar, spelling, punctuation, and other English mechanics will be stressed. The emphasis will be on students using all these different components to write a variety of clear, thoughtful, and mechanically correct papers. Active participation is required.

**Course Outcomes: Students will:**

- Have a greater appreciation of ancient and historical literature and how storytelling has evolved over time
- Have written several academic papers using proper techniques
- Become more familiar with techniques of literary analysis

**Creative Writing Workshop #245 Grade: 9-12 Credit: .5**

**This class will be available on alternating years.**

**Prerequisites:** None

**Description:** Teacher directed writing assignments open the semester, building and strengthening the foundations necessary for writing creatively for school and pleasure. Self-directed projects complete the class, allowing individual exploration in creative areas of choice. Active participation is required. This class may be repeated for credit. **Note:** Students enrolled for Challenging credit must complete an author study project and write reviews/analyses/responses of material read.

Course Outcome: Students will:

- Gain a better understanding of and appreciation for the writer's craft.
- Gain a more complete and intimate knowledge/understanding of their field of interest (fiction, poetry, nonfiction, etc.).
- Develop and expand creative writing skills.
- Learn (and create) various techniques for generating plot and character.
- Develop strategies to combat writer's block
- Read articles based on the writer's craft.

**Film Studies #246 Grade: 9-12 Credit: .5**

**This class will be available on alternating years.**

**Prerequisites:** None

**Description:** Students enrolling in Film as Literature will view and analyze a variety of films that have made a lasting impression on America's society. Students will explore what literature and film mean in the context of a multicultural society, and use films to study differing social, historical, and economic views.

Course Outcomes:

- Instilling in students a passion for writing
- Providing students with a voice in society
- Teaching students how to analyze films as texts and modern non-fiction
- Preparing students to be active, critical thinkers in our modern American society.

## GENERAL MATH PROGRAM

**Essential Algebra #: 421 Grade: 9/10 Credit: 1**

**Prerequisites:** 8<sup>th</sup> Grade Math

**Description:** This course will expand to more advanced topics. Basic math skills at an 8<sup>th</sup> grade level, the ability to problem solve, and critical thinking skills are necessary as this class is meant to capture the main points of both Algebra I and parts of Algebra 2.

Course Outcome: Students will:

- Solve and graph simple equations, linear equations, inequalities, and systems
- Perform operations with real numbers and polynomials / factor polynomials
- Solve and graph quadratic functions
- Work with rational expressions and functions

**Math Makes The World Go Round #411 Grade: 10-11 Credit: 1**

**Prerequisites:** 8<sup>th</sup> Grade Math

**Description:** This course is designed to teach students the math skills they will need for everyday living. This course will be beneficial to any student regardless of their future academic plans or plans to enter the workforce after High School.

Course Outcome: Students will:

- Know how to budget their expenses
- Maintain and reconcile checking accounts / Calculate interest
- Understand differences between renting and buying homes, leasing and buying cars.

**Construction Math #425 Grade: 10-12 Credit: 1**

**Prerequisites:** Either Essential Algebra or Algebra I

**Description:** This course is designed to teach students the types of math used with construction and engineering. Students will get to see how that math is involved with leveling, angle measurements, topographic surveys, earthwork, GPS, remote sensing and image interpretation.

Course Outcome: Students will:

- Demonstrate knowledge of the types of leveling, equipment used, and leveling calculations
- Demonstrate azimuth and bearing calculations
- Demonstrate how to calculate contour lines and scales
- Demonstrate how to calculate area and fill
- Demonstrate use of coordinates in correspondence with GPS

**Applied Math #426 Grade: 11-12 Credit: 1**

**This course will be available on alternating years.**

**Prerequisite:** At least two math credits achieved in High School

**Description:** This course is designed to help students develop and refine job related math skills. Units focus on arithmetic operations, problem solving techniques, estimation of answers, measurement skills, algebra, geometry, data handling, and statistics. Emphasis is on the ability to apply functional mathematics to solve problems in the world of work. It will include a focus on topics such as measuring in metric and English units, ratios and proportions, volume, area, and perimeter, and collecting and organizing data.

Course Outcome: Students will:

- Be able to solve problems encountered in many trades and fields of work that involve the above mentioned topics.

**Engineering Math #427 Grade: 11-12 Credit: 1**

**Prerequisites:** Either Essential Algebra or Algebra I, Applied Math or Math Makes the World Go 'Round, Geometry preferred

**Description:** This course is designed to provide an overview of fields of engineering and the types of math that are necessary in each one. It will aim to work closely with the Science and Business departments in order to pull in as much co-curricular material as possible. This class will cover topics in civil, mechanical, computer, aeronautical, astronautical, and electrical engineering.

Course Outcome: Students will:

- Demonstrate basic principles of each type of engineering covered
- Identify where these principles are in use in everyday life
- Solve real world problems utilizing various pieces of their mathematics backgrounds

## **GENERAL SCIENCE PROGRAM**

**General Physical Science #509 Grades: 9-10 Credit: 1**

**This class will be available on alternating years.**

**Prerequisites:** None

This course is designed to provide the student with a general overview of various concepts in chemistry and physics. The focus of the course will be conceptual understanding of the concepts and how they are applied to our everyday lives.

Course Outcome: Students will:

- Continue and expand upon existing lab report writing skills
- Gain Introductory comprehension of electricity, magnetism, forces, motion, energy, sound, the periodic table, and chemical reactions.
- Develop problem solving and engineering design process skills.
- Develop 21st century skills including critical thinking, collaboration, digital and technological literacy, and communication.

**Everyday Biology #511 Grade: 10-12 Credit: 1**

**This class will be available on alternating years.**

Prerequisites: None

Description: In this course students will focus on the study of living organisms and the processes that keep them alive. Students will study how living systems are structured and function, how the study of DNA is transforming our understanding of the living world, the diversity and interdependence of life on Earth, and how humans are impacting the world around us.

Course Outcome: Students will:

- Investigate the impacts past, current, and future biological research on the world.
- Develop scientific arguments based on claims, evidence, and reasoning.
- Analyze relationships between living things and their environments.
- Develop 21st century skills including critical thinking, collaboration, digital and technological literacy, and communication

**Conceptual Chemistry #513 Grade: 11-12 Credit: .5**

**This class will be available on alternating years.**

Prerequisites: None

Description: This course will investigate the composition of substances and the changes they undergo with a minimum involvement of mathematics. A hands-on student centered approach with the student as the scientist will be the emphasis. Topics included in this study will be the nature of atoms, physical and chemical properties of substances, chemical bonding, chemical names, and formulas as well as types of chemical reactions. Students will design and perform experiments to demonstrate the relevancy of chemistry in their lives.

Course Outcome: Students will:

- Gain a basic understanding of atomic structure, chemical reactions, the periodic table and basic standard International units for measuring substances
- Perform experiments to reinforce and visualize lecture topics

**Conceptual Physics #514 Grade: 11-12 Credit: .5**

**This class will be available on alternating years.**

Prerequisites: None

Description: This course deals with the relationships between matter and energy with a minimum involvement of mathematics. Students will use a hands-on approach to study such topics as motion, forces, energy, matter, heat, sound, light, and the insides of atoms. Students will be encouraged to design and execute experiments to investigate each topic.

Course Outcome: Students will:

- Gain a basic understanding of the laws of motion, forces, and energy relationships
- Be able to design and execute an experiment that demonstrates the topics discussed in class

**Earth Science #519 Grade: 9-12 Credit: 1**

**This class will be available on alternating years.**

Prerequisites: NoneDescription: This course will provide the student with an understanding of topics in earth and space sciences. Focus will be given to topics such as climate and weather, composition of the Earth, plate tectonics, changes over geological time, energy sources, and features of the universe including stars, galaxies, planets, and moons. Students will participate in hands-on inquiry and experimentation to develop scientific process skills and reinforce topics.

Course Outcome: Students will:

- Apply the scientific method problem solving.
- Conduct experiments, collect data and write a formal lab report.
- Demonstrate understanding of the natural and physical world with focus on the topics above.
- Use models and observations to explain observations.
- Explain the impact of technology on our understanding of the universe.

**Ecology #521 Grade: 9-12 Credit: 1**

**This class will be available on alternating years.**

Prerequisites: None Description: This course is the study of how organisms interact with each other and their environment at the population, community, and ecosystem levels. The goal of this course is to familiarize you with ecological theory and its applications.

Course Outcome: Students will:

- Gain an understanding of the broad biological significance of ecological theory
- Gain an understanding of the questions that ecologists study, the methods they use, and the questions that remain unanswered
- Develop your ability to apply quantitative skills to analyze and interpret ecological data
- Investigate local ecological issues and propose solutions to mitigate problems or improve habitats

**Student Research #520 Grade: 9-12 Credit: 1**

**This class will be available on alternating years.**

Prerequisites: None

Description: Student Research is a student driven course to develop science, technology, engineering and math process skills. Whole class activities will be designed to build student skills in designing and carrying out research projects, experiments, and the engineering design process. Following whole class activities individuals or small groups will design and carry out their own research and projects to practice these skills. Students will be exposed to various technological resources including robotics and 3D printing.

Course Outcome: Students will:

- Students will be expected to perform many tasks including: designing and carrying out experiments, collecting and organizing data, analyzing data and constructing appropriate graphs, and communicating research in writing, posters, and digital formats.
- Additional engineering design practices expected of students include: identifying problems, brainstorming and designing a solution to the problems, evaluating and improving designs based on given criteria, building and testing prototypes.
- Students will recognize the connections between the 4 STEM fields and be able to apply mathematical reasoning and use technological resources to solve science and engineering problems.
- Develop 21st century skills including critical thinking, collaboration, digital and technological literacy, and communication

## **GENERAL SOCIAL STUDIES PROGRAM**

**Modern World History #609 Grade: 9 Credit: 1**

Prerequisites: None

Description: This course will explore the time period from the “Age of Revolution” to the Present. Students will study topics stemming from the revolutionary period, world conflict, and the contemporary world. Topics will include Civil Rights and Liberties, Economic Development, Conflict and Cooperation, Geography and Environment, Technology, The Individual and Family Life, Humanities and Religion, and Cultural Diversity.

Methodology: The methodology of this course will differ greatly from that of a challenge course, students will be provided more guidance and help in understanding concepts and completion of coursework. Instruction will focus on giving students a general understanding of events in addition to developing skills associated with social studies. Assessment will be based on materials associated with social studies. Assessment will be based on materials associated with the text, tests, and frequent small projects.

Course Outcomes: Course outcomes will be as determined in the New Hampshire grade 10 state frameworks for social studies.



**US History #615 Grade: 11 Credit: 1**

Prerequisites: None

Description: This course discusses the whole of U. S. History from its European origins through the present. Students will study several areas, including but not limited to American Democracy, Civil Rights, and Liberties, Economic Development, Conflict and Cooperation, Geography and the Environment, Technology, The Individual and Family Life, Humanities and Religion, Cultural Diversity, and the US Role in World Affairs..

Course Outcomes: There are several outcomes associated with each unit identified in the description but some sample outcomes would be:

- Understanding the economic, cultural, and geographic factors that contributed to differences between the North and South which contributed to the Civil War.
- Identifying the power structure in American politics and society and to see how that balance of power shifts with the personality of people. This area would also include how the Americans developed a method of the effective transition of power seldom seen in the world.
- Determining the source of individual wealth and how that wealth was used to create our nation.
- Establishing relationships between immigrants, politics, culture, and geography.
- Understanding how the U.S. Constitution and Bill of Rights transitioned from mere ideals to reality.
- Assessing how society changed through the Ages to include the opening and closing of the frontier, the development of the modern factory system and big business, and the dynamics brought forth through the many wars the United States has participated in during the 20<sup>th</sup> century.
- Understanding the causes and effect of various forms of discriminations and its impact on our government and society.

**World Geography #617 Grade: 9-12 Credit: 1**

**This class will be available on alternating years.**

Prerequisites: None

Description: This course concentrates on developing geographic skills and concepts so that students can ask questions about the world and then gather, organize, analyze and apply the geographic information. For example, students will study world population growth and distribution, patterns of migration, how climate affects human habitation and distribution and how people use resources. Students will develop research and writing skills as they work on individual and group projects throughout the course. Students will also refine analytical skills as they interpret and explore data pertaining to different cultures both locally and globally.

Course Outcome: Students will:

- Build map skills
- Learn about the earth and its people
- Appreciate the importance of wise use of the earth's resources
- Learn why understanding geography helps us to manage our world

**NH History/US & NH Civics and Government #612 Grade: 10 Credit: 1**

Prerequisites: None

Description: Students will spend one quarter studying the rich history of New Hampshire while drawing parallels to the local history of Pittsburg, New Hampshire. Students will spend the second quarter studying the US Government, its structure, and the populations' role in its functioning. Connections will be made to the development and function of the NH State Government.

Course Outcomes: Students will:

- Be in line with the New Hampshire State Standards and National Standards

**GENERAL TECHNOLOGY PROGRAM**

**Woodworking I #711 Grade: 9-12 Credit: 1**

Prerequisites: None

Description: This hands-on course is designed to give students the basic skills and knowledge necessary to create a project out of wood. Through a series of projects and lessons, students will learn the use of hand and power tools and finishing methods. Maximum of 8 students.

Course Outcome: Students will:

- Shop safety
- Machine/Tool safety
- Fraction and ruler skills
- Creativity

**Woodworking II #711 Grade: 9-12 Credit: 1**

Prerequisites: A student must pass Woodworking I with an 85% or better to move to this level or have teacher approval

Description: This hands-on course is a continuation of Woodworking I. In this class students will learn basic drafting skills to help them read prints and sketch a basic design to create a project out of wood. Students will be required to design and construct their own project. The projects will require more difficult construction methods such as doors and drawers. Maximum of 8 students.

Course Outcome: Students will:

- Shop safety
- Machine/Tool safety
- Fraction and ruler skills
- Basic drafting skills
- Creativity

**Introduction to Technical Drawing and Computer Aided Design (CAD) #709 Grade: 9-12 Credit: 1**

Prerequisites: Geometry or Geometry concurrently would be helpful.

Description: This course will be an introduction to computer-aided design. Good drawing practices for mechanical and architectural drawing will be covered. File systems, printing, efficient and common computer practices, and planning computer use will be introduced. AutoCAD software will be used and its basic features explored and practiced. There is a limit of 6 students for this course.

Course Outcome: Students will:

- Become familiar with the terminology, tools, and techniques of computer-aided design
- Become efficient and accurate in their drawing practices
- Begin to realize the computer as a design tool

**Introduction to Computer Aided Design #712 Grade: 10-12 Credit: 1**

Prerequisites: Introduction to Drawing/CAD or permission; Computer Literacy, and Geometry would be helpful.

Description: We will expand upon drawing tools learned in the introductory course. This will include more powerful features. Simple shapes will be encoded and processed on computer-aided milling machines. There is a limit of 6 students for this course.

Course Outcome: Students will:

- Be able to draw basic figures with AutoCAD
- Develop an interest in and understanding of these systems
- Understand how computer-aided machining works

## **GENERAL BUSINESS PROGRAM**

**Marketing & Production #751 Grade: 10-12 Credit: 1**

Prerequisites: None

Description: Students will learn the basics of marketing concepts through an overview of marketing, management, selling, buying, advertising and promotion, distribution, financing, product planning, pricing, and entrepreneurship. Students will also have the opportunity to learn hands-on marketing skills through the daily operation of the Pittsburg School Store.

Course Outcome:

- Students will experience a true-to-life situation, incorporating teamwork, responsibilities, management, and tangible results using business, advertising, and accounting skills.
- The store will be run by the students, with teacher supervision providing a wonderful learning opportunity promoting academics and social interaction.
- Students are able to understand simple economics through hands-on activities.
- Students learn about the ordering process.
- Students understand the difference between wholesale and retail.

In addition, students will be required to work in the technology department creating projects made from wood to sell in the school store. This hands-on experience is designed to give students the basic skills and knowledge necessary to create projects out of wood. Through a series of projects and lessons, students will learn the use of hand and power tools and finishing methods.

**Personal Finance**

#728

**Grades 10-12****Credit: .5 Required for graduation**

Prerequisites: None

Description: *Personal Finance* is designed to prepare high school students to make wise financial decisions in personal situations. The program helps students realize that they are already making financial decisions and shows them how their decisions affect their future. **This course** promotes critical thinking skills and links finance to other fields of study. Students will analyze and make recommendations on information from the leaders in financial information such as Standard & Poor's.

Course Outcome: After successfully completing this course students will be able to:

- Appreciate the importance of personal financial planning and how that finances guide career planning.
- Develop money management strategies.
- Understand consumer purchasing and protection, banking and consumer credit.
- Understand the finances of housing.
- Develop an understanding of investment strategies, stocks, bonds, mutual funds, real estate and other investments.
- Plan an appropriate tax strategy.
- Understand the intricacies of home, motor vehicle, health, disability, and life insurance.
- Explain the importance and steps involved in retirement and estate planning.

**21<sup>st</sup> Century Business**

#735

**Grades 10\*-11-12 Credit: 1****This class will be available on alternating years.**Prerequisites: None (10<sup>th</sup> grade with permission of instructor)

Description: This course focuses on several aspects of the business environment in the 21<sup>st</sup> Century. After an initial study of written and oral business communications and careers in business, the student will study five aspects of business: entrepreneurship, records management, hospitality, business law, and marketing. Finally, the student will choose one area of business to learn independently and prepare a capstone project on that area of business.

**Course Outcome:** After successfully completing this course students will have covered the following topics:

- Office Communications – Written, Oral, Interpersonal Skills, Positive Self-Concept and Image, Mail Systems
- Careers – Research and Evaluation of career resources and related information in the business world.
- Entrepreneurship – Characteristics and role of entrepreneurs, marketing, finance, forms of business ownership and business plans.
- Record Management – Filing and indexing procedures and storage of vital records.
- Hospitality & Tourism – Understand the economic importance of travel and tourism, career paths, customer service, management skills and international travel.
- Business Law – Ethics and law, sources of law, structure of the courts, classification of procedural and substantive law, contract law, law of sales, agency and employment law, business classifications and property law.
- Marketing – Elements of the marketing mix, consumer behavior, segmentation and target markets, ethical issues, technology, new product development, place, price and promotion.

**Introduction to Humanities**

#616

**Grade: 12 Credit: 1****Required for graduation**

Prerequisites: Senior Status

Description: All seniors are required to complete Introduction to Humanities/Pittsburg Area Enterprise Project for graduation. The Introduction to Humanities course will be an exploration of art, music, literature, history, religion, and philosophy. The vision of this course is through the humanities. The major themes impacting our world can be tied together to create a sense of where and how we are alike, if you will, the oneness of mankind. Through this endeavor we seek to develop a better understanding of our oneness, first through fostering a better sense of self, then through promoting a unity of the senior class; and finally nurturing an appreciation of our world community. Successes will be performance based. The focus will be on individual growth. This course is about taking responsibility for oneself.

Course Outcome: After successfully completing this course students will be able to:

- Understand how the disciplines of art, music, literature, history, religion and philosophy affect each other.
- Understand how ideas spread throughout the world community.
- Appreciate the relationship between the past, the present and the future.
- Be able to characterize the major cultures, past and present.
- Develop an appreciation for the individual value of every human being.
- Develop an appreciation for the value every individual has as an integral spoke in the community of his or her choice.
- Develop an understanding of the impact a small business or enterprise can have on a community.
- Appropriately prepare and present information in a public forum.

**Entrepreneurship/Hospitality #736 Grade: 10-12 Credit: .5**

**This class will be available on alternating years.**

Prerequisites: None

Description: This course will take the student on a step-by-step journey through the entire process of owning his/her own business. Students learn what skills are needed to become a successful entrepreneur, how to select a product, obtain financing, manage employees, and more. Students will also learn why the hospitality industry is an important part of our modern economy, not only on a national level but also on a state and local level. Consumers spend millions of dollars each year on travel and tourism and in restaurants. You will learn the basic functions of marketing and how these functions are applied to hospitality. In particular this course will focus on the tourism industry of New Hampshire with a strong focus on Pittsburg. Students will visit local businesses and hear from local entrepreneurs giving first hand experiences in the hospitality field.

Course Outcome: Students will:

- Be able to identify the skills necessary to become an entrepreneur
- How to develop a successful business plan
- Understand the process of obtaining financing, insurance, and to otherwise protect your business
- Have a basic understanding of record keeping and accounting
- Meet legal, social, and ethical obligations
- Understand the importance of hospitality and marketing
- Identify the various types of hospitality markets
- Be able to sell hospitality
- Identify the career opportunities in the hospitality industry

**Economics #618 Grade: 10-12 Credit: .5 Required for graduation**

Prerequisites: None

Description: This course provides a broad view of economics. It builds on real-world economic applications to create a basic understanding of economic concepts and our economic system. It includes a range of both macro and microeconomic concepts with an emphasis on the American Free Enterprise System.

Upon completion of Economics, students should be able to:

- Explain the basic concepts of economics.
- Compare and contrast four economic systems.
- Analyze principles of the American Free Enterprise System.
- Evaluate how supply and demand work together to set prices in the market.
- Describe economic factors involved in business and labor.
- Apply concepts of consumer economics.
- Explain ways to measure economic performance.
- Discuss components of the U.S. economy.
- Evaluate the global impact of the U.S. economy.

**Information Communication Technology (ICT) #737 Grade 10-12 Credit: .5 Required for graduation**

Prerequisites: None

Description: ICT is designed to give students a comprehensive Google Apps, Introduction to Lego Robotics, Using Drones for Work and Pleasure, and a review of Microsoft Office Suite. This course covers concepts of the technological world in which we live.

Students will:

- Gain a basic knowledge of the computer industry: History, careers and ethics.
- Demonstrate a basic understanding of computer knowledge and ethics on the topics of computer equipment components, operating system, file management and computer ethics and security.
- Perform systems utility tasks such as managing files, data storage and retrieval.
- Review the school's various software applications and determine appropriate applications for tasks.
- Demonstrate proficiency in word processing skills, basic spreadsheet applications, presentation software and basic database management using Microsoft Office Suite 2010.
- Demonstrate an understanding of the ethical use of the Internet, basic concepts of Internet searches, copyright principles and analyze the effectiveness of online information.
- Demonstrate the basic principles of computer programming.

# GENERAL FAMILY AND CONSUMER SCIENCE PROGRAM

**Introduction to Baking** #724 **Grade: 10-12** **Credit: 1**

**This class will be available on alternating years.**

Prerequisites: None

Description: Students will learn about the science of baking and its ingredients. They will learn and practice making breads, pastries, pies, cookies, tarts, and cake decorating.

Course Outcome: Students will be able to:

- Basic skills will be reinforced such as measuring, kitchen safety, and sanitation
- They will explore the history behind each baked product and use natural ingredients, making everything from scratch.
- They will learn how to use a variety of baking tools such as a mixer, rolling pin, pastry blender, etc.

**Healthy Living** #722 **Grade: 9-12** **Credit: 1** **Required for graduation**

Prerequisites: None

Description:

Students will study the three aspects of health: mental, physical and social health. Areas to be addressed: Healthy Lifestyles (eating and exercise) eating disorders and positive body image, managing stress, effective communications, media and the messages we are being sent, RTR (Reducing the Risk curriculum) Preventing STDs HIV/AIDS, Family values/culture, Parenting, Human Development and theorist, Physical, emotional, social and academic development of children at different stages. budgets and managing money, Drugs, Alcohol and tobacco use, long and short term effects, refusal skills and how to effective use them in connection to peer pressure. Self-respect, violence prevention and healthy relationships. LGBT

Course Outcome: Students will be able to:

- Effectively use refusal skills and delay tactics
- Recognize warning signs of eating disorders
- Make more informed choices about pregnancy and sex related issues
- Explain the social, emotional, and physical development of children from birth to age five

**World Foods** #723 **Grade: 9-12** **Credit: 1**

Prerequisites: None

Description: Students will explore different cultures and customs through foods of the world. They will explore their own heritage. They will explore job opportunities in food service. Students will learn standard measurements and cooking tools. They will understand food safety and reading labels. They will study food related health issues and how to cook using whole foods and food substitutes. Through the study of geography students will discern cultural differences and how geography impacts customs and practices. Students will learn about planning for a party; decorations and food. Students will plan healthy balanced meals and how to handle meals on the go.

Course Outcome: Students will:

- Identify customs and foods of different countries
- Become familiar with different methods of food preparation
- Understand family traditions, customs, and heritage
- Understand the many careers connected with food service

**Introduction to Cooking** #727 **Grade: 9-12** **Credit: 1**

**This class will be available on alternating years.**

Prerequisites: None

Description: Students will be introduced to basic

Course Outcome: Students will be able to:

- Formulate a plan to create a healthy living environment
- Analyze their personal finances
- Make informed choices of consumable products
- Construct basic meals
- Safely use food, tools, and household equipment
- Apply safety and sanitary procedures

**On Your Own**                    **#728**                    **Grade: 10-12**                    **Credit: 1**

**This class will be available on alternating years.**

Prerequisites: None

Description: On Your Own is study of culture when on you venture out into the world on your own.

Course Outcome:

- Topics to be covered will include Health Studies: STDs/HIV, Preventions: pregnancy and STDs, Healthy Relationships, Diet and Exercise, Party Safe: drug, alcohol and tobacco study and prevention, Nutrition: balanced diet and special diets, when to see a doctor.
- Student will explore effective communications including delaying tactics and refusal skills.
- We will explore Finances: how to make and use a budget, starting a checkbook and maintaining, keeping track of important documents.
- The last topic to explore is household responsibilities: Laundry, shopping and making meals, how to shop on a budget, using coupons and quick meals.

**Early Childhood Development**                    **#717**                    **Grade: 10-12**                    **Credit: 0.500/1.000**

Prerequisites: None

Description: Early childhood development is the study of the development of a child through his/her early years.

Course Outcome:

- Provide information on prenatal development, normal growth, and development as well as birth defects.
- Students will explore topics on discipline, guidance, and play.

**Farm To Table**                    **#718**                    **Grade: 10-12**                    **Credit: 0.500/1.000**

Prerequisites: None

Description: A hybrid of nutrition and cooking with a focus on gardening and growing your own food.

Course Outcome:

- The basics of home fruit and vegetable gardening, including starting class seedlings
- Different kinds of gardens and gardening zones
- Growing food around the world
- How farming, harvesting, and distribution work
- Greenhouses and growing our own vegetable garden in the school greenhouse
- Cooking using fresh, whole, and local ingredients in cooking
- Studying nutrition and how it should influence what we cook and eat

## **GENERAL SCHOOL-TO-WORK PROGRAM**

**School-to-Work**                    **#726**                    **Grade: 11-12**                    **Credit: 1**

Prerequisites: Students must have a license, be able to drive alone, and have a dependable vehicle. Also students and parents must sign and agree to follow the criteria as stated in the school-to-work contracts.

Description: School-to-Work combines learning and work experience. It provides opportunities for students to apply and learn both theoretical and practical knowledge. At the end of this course, students will have acquired the skills, abilities, and knowledge necessary to make good career choices. Students will spend one full block daily at a work site. One block/week will be in the classroom.

Course Outcome: Students will be able to:

- Complete job applications and set up job interviews
- Create a resume and make good career choices

# GENERAL PHYSICAL EDUCATION PROGRAM

## **Team Development #811 Grade: 9-12 Credit: .5/1**

Prerequisite: None

This class is to work on skills and to develop team building strategies that can carry over to team sports.

Description: Students will learn concepts, rules and techniques to various sports and activities. Students will quickly review skills and then move into game play where they will learn rules and strategies to the sport. Warm-up, stretching, and circuits are a part of the class to maintain a healthy level of fitness.

- Some examples of sports/activities are fitness, archery, flag football, floor hockey, volleyball, and ultimate frisbee.
- Students will be graded on their **effort and attitude, performance (skill assessment), quizzes/projects, midterm, and a final exam.**

## **Fitness 101 #809 Grade: 9-12 Credit: .5/1**

Prerequisite: None

Description: Emphasis on healthy living through fitness to help students to understand that fitness is a very important part of their development. This class will show students how to maintain a healthy level of fitness throughout their lives.

- Some examples of activities are; ladders, exercise ball, aerobics, circuits, exercise machines, and free weights.
- Students will be graded on their **effort and attitude, performance (skill assessment), quizzes/projects, midterm project, and a final exam.**

## **Physical Education #810 Grade: 9-12 Credit: .5/1**

Prerequisite: None

Description: Students will learn concepts, rules, and techniques to various sports and activities. Students will quickly review skills and then move into game play where they will learn rules and strategies to the sport. Warm-up, stretching, and circuits are a part of the class to maintain a healthy level of fitness.

- Some examples of sports/activities are fitness, Archery, Flag Football, Basketball, and Volleyball.
- Students will be graded on their **effort and attitude, performance (skill assessment), quizzes projects, midterm project, and a final exam.**

**PITTSBURG SCHOOL**  
**PROGRAM OF STUDIES**  
**CHALLENGING COURSES**



## CHALLENGING ART PROGRAM

**ADVANCED ART #124 Grade: 9-12 Credit: 1**

Prerequisites: Intermediate Art with a grade of B or better

Description: This course has the same goals as Intermediate Art; but will have a serious beginning of creating a professional portfolio. A written research paper of an artist/art movement will also be incorporated.

Course Outcome: Students will learn skills/techniques of the arts and be able to execute them. Art history and problem solving, will be experienced and learned.

**SCULPTURE #124 Grade: 9-12 Credit: 1**

**This class will be available on alternating years.**

Prerequisites: Completion of Introduction to Art with a grade of B or better

Description: Students will explore various forms and materials of sculpture including clay, cardboard, paper, plaster, and wood.

Methods of sculpture will include modeling and assembling.

Course Outcomes: Sculpture will allow students the opportunity to gain an understanding of the basic forms and materials used to create 3 dimensional art.

**INDEPENDENT STUDY ART #125 Grade: 9-12 Credit: .5/1**

Prerequisites: Advanced Art with a grade of B or better

Description: This course has the same goals as Advanced Art. There will be added goals of completing a portfolio and learning how to create an illustrated children's book.

Course Outcome: Students will learn skills/techniques of the arts and be able to execute them. Art history and problem solving, will be experienced and learned.

## CHALLENGING ENGLISH PROGRAM

**9th Grade English #221 Grade: 9 Credit: 1**

Prerequisites: None

**Description:** Students will explore ideas and assumptions about their own culture and values and the cultures of others. At the same time, they will read novels, short stories, plays, folk tales, and legends from America and a variety of countries. Using the writing process, oral reports, and journals, students will experiment with different kinds of writing. Grammar, spelling, punctuation, and other English mechanics will be stressed. The emphasis will be on students using all these different components to write a variety of clear, thoughtful, and mechanically correct papers.

**Course Outcome: Students will:**

- Have a greater appreciation and understanding of our culture and others.
- Be able to write detailed and organized papers.

**English 10: British Literature #231 Grade 10 Credit: 1**

**This class will be available every year, but with two curriculums offered on a rotating basis**

Prerequisites: English 9

**Description:** This course will explore classic and contemporary British Literature. Students will read and interpret novels, poetry, drama and film. Students will also write papers including research projects using proper forms of documentation, etc. Grammar, spelling, punctuation, and other English mechanics will be stressed. The emphasis will be on students using all these different components to write a variety of clear, thoughtful, and mechanically correct papers.

**Course Outcome: Students should:**

- Relate literature to themselves and the world around them
- Write to a higher-quality level
- Participate in meaningful discussions and deal in literary analysis

**English 11: American Literature** #241 Grades 11-12 Credit: 1

**This class will be offered on alternating years**

**Prerequisites:** English 9 and 10

**Description:** Students explore classic and contemporary works of American Literature through novels, short stories, poems, plays, and films. The writing component of this class includes journal exercises and other writing projects. Authors to be read include Arthur Miller, Steinbeck, Hemingway, and others. Grammar, spelling, punctuation, and other English mechanics will be stressed. The emphasis will be on students using all these different components to write a variety of clear, thoughtful, and mechanically correct papers. Active participation is required.

**Course Outcome: Students will:**

- Have a greater appreciation of American literature and how it has evolved as our country has changed
- Have written several academic papers using proper techniques
- Become more familiar with techniques of literary analysis

**English 12: Ancient and Historical Literature** Grades 11-12 Credit: 1

**This class will be offered on alternating years**

**Prerequisites:** English 9 and 10

**Course Description:** Students explore classic works throughout novels, short stories, poems, plays, and films. The writing component of this class includes journal exercises and other writing projects. Stories to be read include *The Odyssey*, *The Canterbury Tales*, *Beowulf*, and units on Greek, Roman, and Norse mythology. Grammar, spelling, punctuation, and other English mechanics will be stressed. The emphasis will be on students using all these different components to write a variety of clear, thoughtful, and mechanically correct papers. Active participation is required.

**Course Outcomes: Students will:**

- Have a greater appreciation of ancient and historical literature and how storytelling has evolved over time
- Have written several academic papers using proper techniques
- Become more familiar with techniques of literary analysis

## CHALLENGING MATH PROGRAM

**ALGEBRA I** #413 **Grade: 9** **Credit: 1**

**Prerequisites:** 8<sup>th</sup> Grade Math

**Description:** How well do you really understand the arithmetic you've been doing for the last 8+ years? Learn to generalize mathematical procedures you've used over and over. Solve equations. Think "algebraically". (Daily homework)

**Course Outcome: Students will:**

- Solve and graph linear equations and inequalities
- Add, subtract, multiply, and divide polynomials
- Work with properties of Real Numbers and of Equality
- Write and use linear equations to model real world examples
- Model and manipulate linear inequalities and systems of the same

**GEOMETRY** #422 **Grade: 9/10** **Credit: 1**

**Prerequisites:** Algebra I

**Description:** Geometry is everywhere! Go beyond just being able to recognize shapes. Really analyze them. Test your spatial perception and visual awareness. Develop your reasoning skills. Investigate geometrical relations. Look for patterns. Prove your point.

**Course Outcome: Students will:**

- Use geometric notation and terminology
- Sort, classify, and analyze shapes
- Solve problems involving geometric relationships (e.g. similarity, congruence)
- Make conjectures from geometric investigations in order to follow, create, and justify mathematical proofs
- Use compass and straightedge for constructions
- Enhance their understanding of logic and how it applies to the field of mathematics (and more)
- Understand the basics of Trigonometry and how it is connected to Geometry

**ALGEBRA II                    #431                    Grade: 10-12                    Credit: 1**

Prerequisites: Algebra I (or Essential Algebra at the discretion of the Guidance Office and classroom teacher, with Principal Approval)  
Description: Use the “algebraic” thinking you developed in Algebra I. This course includes the study of exponential, rational, quadratic, and radical equations and functions. Polynomials will be explored more in depth. Computer activities and graphing calculators will be used.

Course Outcome: Students will:

- Write equations for and graph relations
- Determine if a given relation is a function
- Become familiar with quadratic functions and the quadratic formula
- Recognize exponents and how to handle and apply exponential functions
- Solve problems involving more complicated polynomials
- Work with rational equations and functions
- Explore radicals and their connections to Geometry

**TRIGONOMETRY                    #432                    Grade: 11-12                    Credit: 1**

Prerequisites: Algebra I, Algebra II, Geometry

Description: This course is a continuation into the basic overview that students receive about Trigonometry in their prior Geometry class. It will explore the unit circle, degrees and radians as units of measurement, involve graphing trig functions, and rely on the rules of Trigonometry to explain real world problems.

Course Outcome: Students will:

- Be able to recognize when trig is the best and easiest way to get an answer to a real world problem
- Model real world problems with trig functions
- Improve logical problem solving and proof skills
- Graph Trigonometric functions
- Know the Trigonometric ratios and how they are derived from the principles learned in Geometry
- This course will also cover topics such as Sound and Motion

**PRE-CALCULUS                    #441                    Grade: 11-12                    Credit:1**

Prerequisites: Algebra I, Algebra 2, Geometry, Trigonometry preferred

Description: Pre-Calculus is a bridge between all prior mathematics classes and the start of Calculus. In this class, students will explore all of the forms of equations and expressions that they have seen in past classes and become adept at recognizing, solving, simplifying, and using logic to understand math problems and pursue the simplest answer. Students need to feel confident with all math covered prior to Pre-Calculus before starting Calculus and this class is intended to reinforce all of those skills while building on to them.

Course Outcome: Students will:

- Demonstrate the ability to recognize and solve linear, quadratic, cubic, trigonometric, exponential, rational, and radical functions
- Build on prior mathematical knowledge such that algebraic questions will not hinder their ability to learn concepts in Calculus
- Improve their logical problem solving and proof skills
- Be introduced to Calculus

**CALCULUS                    #442                    Grade: 12                    Credit: 1**

Prerequisites: Algebra I, Algebra 2, Geometry, Trigonometry, Pre-Calculus,

Description: Combine all Algebra, Geometry, and Trigonometry skills to go one step further. Explore limits, derivatives, and integrals. Use graphing calculators throughout the course. Problem-solving oriented.

Course Outcome: Students will:

- Find and apply limits
- Find and apply derivatives
- Find and apply integrals
- Solve problems involving limits, derivatives, and integrals

**STATISTICS** # **Grades 10-12** **Credit: 1**

Prerequisites:

Descriptions: This course builds on material learned in previous courses in order to prepare students for more advanced college mathematics.

Course Outcome: Students will:

- Use frequency distributions and graphs,
- Use counting techniques
- Use discrete probability distribution
- Use the normal distribution, central limit theorem, confidence intervals and sample size.
- Use hypothesis testing, correlation and regression, and analysis of variance.

## **CHALLENGING SCIENCE PROGRAM**

**PRINCIPLES OF PHYSICAL SCIENCE #510** **Grade: 9/10** **Credit: 1**

**This class will be available on alternating years.**

Prerequisites: 85 final average in Middle School Science, Challenging Biology, or permission of Instructor

Description: This course will provide the student with a foundation of concepts in chemistry and physics. Students will explore matter and its properties, the periodic table, chemical bonding, carbon chemistry, acid and base chemistry, forces and motion, work and machines, sound, light, and electricity and magnetism. This course is challenging and the students will take a mid-term and final exam. Students will be assigned numerous projects to reinforce and expound on lecture topics. There is a great emphasis placed on laboratory experimentation and hands-on activities in this class.

Course Outcome: Students will:

- The student will gain insight into various concepts and principles of chemistry and physics
- Develop problem solving engineering design process skills
- Continue to use experimentation to reinforce lecture topics and write formal lab reports

**PRINCIPLES OF BIOLOGY** #512 **Grades: 9-10** **Credit: 1**

**This class will be available on alternating years.**

Prerequisites: Middle School Science or Challenging Biology completed with at least an 85 average or higher or permission from the instructor.

Description: In this course students will focus on the study of living organisms and the processes that keep them alive. Students will study how living systems are structured and function, how the study of DNA is transforming our understanding of the living world, the diversity and interdependence of life on Earth, and how humans are impacting the world around us.

Course Outcome: Students will:

- Investigate the impacts past, current, and future biological research on the world.
- Engage in scientific argumentation about controversial scientific topics.
- Analyze diverse and complex living systems to identify relationships between living things and their environments.
- Make connections about structure and function between the levels of organization of living things.
- Develop 21st century skills including critical thinking, collaboration, digital and technological literacy, and communication

**PRINCIPLES OF PHYSICS** #516 **Grade: 12** **Credit: 1**

Prerequisites: Advanced Math but preferably Trigonometry. A scientific/graphing calculator is required.

Description: This course involves the use of Algebra and Trigonometry to study the quantitative comparison of matter, motion, and energy. These three main topics of Physics are developed around systems and the nature of science. A hands-on student centered approach with the student as a scientist will be emphasized.

Course Outcome: Students will:

- Be able to make basic calculations involving motion and vectors
- Use a variety of analytical procedures to answer relevant problems in physics
- Will differentiate processes involved in energy changes
- Use interactive software to reinforce lecture topics

**PRINCIPLES OF CHEMISTRY #515 Grade: 11-12 Credit: 1**

Prerequisites: Algebra II or currently enrolled. A scientific or graphing calculator is required.

Description: Three topics are central to the study of this course. The first topic presents ideas intended to give the student an understanding of the atom as a complete and functioning entity; second, the study of chemical systems and factors, affecting these systems. Finally, chemical analysis is used to have students design and perform experiments and determine the relevancy of chemistry in their lives. A hands-on student centered approach with the student as the scientist will be the emphasis of instruction.

Course Outcome: Students will:

- Be able to solve problems using dimensional analysis, write formulas for chemicals, name compounds, balance chemical reactions and have an understanding of the periodic table
- Use a variety of analytical procedures to answer relevant problems in chemistry
- Develop laboratory techniques and skills through experimentation

**FORENSIC SCIENCE #559 Grades: 11-12 Credit: 1**

**This class will be available on alternating years.**

Prerequisites: None

Description: Forensic Science is the application of science to criminal and civil laws that are enforced by police agencies in the criminal justice system. In this course, the student will learn the techniques, skills, and limitations of the modern crime laboratory. The student will also study the nature of physical evidence along with the limitations that technology and knowledge imposes on its individualization and characterization. Actual case studies will be used to reinforce lecture topics and concepts.

Course Outcome: Students will:

- Develop an understanding and appreciation of the wide scope of forensic science
- Gain an insight into crime scene reconstruction and evidence collection
- Explore various laboratory techniques and procedures used in forensic science

**HUMAN ANATOMY/PHYSIOLOGY #560 Grades: 11-12 Credit: 1**

**This class will be available on alternating years.**

Prerequisites: Principles of Biology

Description: The student will learn basic anatomical and directional terminology; Concepts and principles of cellular biology; histology, and the various organ systems that make up the human body. Laboratory and dissection are an essential component of this course. Students will dissect the frog, fetal pig, and organ sets. Students will be given a written practical exam after each stage of dissection.

Course Outcome: Students will:

- Gain an insight into the human body and its systems on a cellular and molecular level
- Develop dissection techniques
- Distinguish between gross anatomy and physiology of tissues, organs, and organ systems

**ECOLOGY #521 Grade: 9-12 Credit: 1**

**This class will be available on alternating years.**

Prerequisites: None

Description: This course is the study of how organisms interact with each other and their environment at the population, community, and ecosystem levels. The goal of this course is to familiarize you with ecological theory and its applications.

Course Outcome: Students will:

- Gain an understanding of the broad biological significance of ecological theory
- Gain an understanding of the questions that ecologists study, the methods they use, and the questions that remain unanswered
- Develop your ability to apply quantitative skills to analyze and interpret ecological data
- Investigate local ecological issues and propose solutions to mitigate problems or improve habitats

# CHALLENGING HISTORY PROGRAM

## **MODERN WORLD HISTORY #610 Grade: 9 Credit: 1**

Prerequisites: None

Description: This course will explore the time period from the “Age of Revolution” to the Present. Students will study topics stemming from the revolutionary period, world conflict, and the contemporary world. Topics will include Civil Rights and Liberties, Economic Development, Conflict and Cooperation, Geography and Environment, Technology, The Individual and Family Life, Humanities and Religion, and Cultural Diversity.

Methodology: Instruction will be commensurate to the expectations of a college prep class. Students will be expected to have the motivation and intellect to read and understand material appropriate for the 9<sup>th</sup> grade. Specific focus will be placed on writing and speaking skills as well as the ability to grasp broad concepts associated with the development of the modern world. Very little leeway will be given in matters of late work and lack of motivation.

Course Outcomes: Course outcomes will as determined in the New Hampshire Grade 10 State Frameworks for social studies.

## **NH HISTORY/US & NH CIVICS AND GOVERNMENT #613 Grade: 10 Credit: 1**

Prerequisites: None

Description: Students will spend one quarter studying the rich history of New Hampshire while drawing parallels to the local history of Pittsburg, New Hampshire. Students will spend the second quarter studying the US Government, its structure, and the populations’ role in its functioning. Connections will be made to the development and function of the NH State Government.

Course Outcomes: Students will:

- Be in line with the New Hampshire State Standards and National Standards.

## **INTRODUCTION TO PSYCHOLOGY #616 Grade: 11-12 Credit: 1**

**This class will be available on alternating years.**

Prerequisites: Successful completion of challenging level social studies courses including World History and US History.

Description: This will serve as a basic introduction to the field of Psychology. Students will explore such topics as behavior, the mind and body, development, and modern trends in the field. An emphasis will be placed on research, speaking, and analytical skills. Individual and group projects, labs, etc. will be implemented to broaden students’ knowledge.

Course Outcomes: Students will:

- Gain a general understanding of what psychology is and how it is used
- Learn how various human processes take place such as learning and development
- Learn the various factors, which influence behavioral development

## **ANTHROPOLOGY #617 Grade: 10-12 Credit: 1**

**This class will be available on alternating years.**

Prerequisites: None

Description: Anthropology is defined as the study of humanity from the past to the present. This course will serve as an introduction to the fields within the heading Anthropology, including Paleontology (the study of fossilized animals and plants), Primatology (the study of non-human primates), Paleoanthropology (the study of human evolution), Cultural Anthropology (the study of cultural variation among humans), and Archaeology (the study of humans through material remains).

Course Outcomes:

1. Gain an understanding of the basic facts and theories in physical anthropology, such as evolutionary theory and hominid origins.
2. Gain an understanding of the record of human behavior revealed through the recovery of material and non-material artifacts associated with past peoples.
3. Gain an understanding of the cultural development of past peoples using facts associated with events such as the hunter and gatherer or the origins of agriculture.

**US HISTORY #614 Grade: 11 Credit: 1**

Prerequisites: None

Description: This course discusses the whole of U. S. History from its European origins through the present. Students will study several areas, including but not limited to American Democracy, Civil Rights, and Liberties, Economic Development, Conflict and Cooperation, Geography and the Environment, Technology, The Individual and Family Life, Humanities and Religion, Cultural Diversity, and the US Role in World Affairs. New Hampshire history will also be a major area addressed.

Course Outcomes: There are several outcomes associated with each unit identified in the description but some sample outcomes would be:

- Understanding the economic, cultural, and geographic factors that contributed to differences between the North and South which contributed to the Civil War.
- Identifying the power structure in American politics and society and to see how that balance of power shifts with the personality of people. This area would also include how the Americans developed a method of the effective transition of power seldom seen in the world.
- Determining the source of individual wealth and how that wealth was used to create our nation.
- Establishing relationships between immigrants, politics, culture, and geography.
- Understanding how the U.S. Constitution and Bill of Rights transitioned from mere ideals to reality.
- Understanding the causes and effect of various forms of discriminations and its impact on our government and society.

## **CHALLENGING TECHNOLOGY PROGRAM**

**Woodworking III #712 Grade: 11-12 Credit: 1**

Prerequisites: A student must pass Woodworking II with an 85% or better to move to this level or have teacher approval

Description: This hands-on course is a more detail orientated course in woodworking and a continuation of Woodworking II. Students will be expected to create their own drafted print with sizes and construction methods of an item they will then produce. This item will be a more complex item than in previous courses. Also students may be required to build and display one item that will be auctioned off at the end of the course. Maximum 8 students.

Course Outcome: Students will:

- Shop safety
- Machine/Tool safety
- Fraction and ruler skills
- Basic drafting skills
- Creativity

**ADVANCED CAD #713 Grade: 11-12 Credit: 1**

**This class will be available on alternating years.**

Prerequisites: Introduction to CAD/CAM or permission; Computer Literacy, and Geometry would be helpful. (May be repeated two times for credit, with permission.)

Description: A continuation of Tech 726. Students will be challenged on a one-to-one basis. They will progress to the extent time allows. Three-dimensional drawing will be a goal.

Course Outcome: Students will:

- Further their repertoire of AutoCAD commands and functions

## CHALLENGING BUSINESS PROGRAM

### BUSINESS AND PERSONAL LAW

#732

Grade: 10-12

Credit: 1

**This class will be available on alternating years.**

Prerequisites: None

Description: Students will explore both business law and personal law as they are particularly well-matched themes as a introductory law course. Students will find they are both based upon the same legal concepts. As students become familiar with these underlying concepts, they will better understand the importance of the law in general, become familiar with relevant specific laws, and explore the applications of law both in business situations and in more familiar personal transactions. When students complete this course, they should show insight and appreciation of the legal system, the dynamic nature of law, the social impact of legislation and legal decisions, the legal environment of business and legal transactions, the legal consequences of decision making and the rights and duties of citizens, consumers, workers, and business owners. Students will not only use traditional tools such as textbooks and the like, but efforts to visit actual courtroom trials and have presentations by lawyers will be employed.

Course Outcome: Students will:

- Understand substantive business and personal law
- Understand legal procedures and the range of legal remedies
- Understand the sources and methods of legal research
- Use precise legal language
- Analyze and summarize complex legal situations
- Apply principles to legal situations
- Formulate and argument based on facts and principles
- Express facts, principles, and arguments in writing

### ADVANCED INFORMATION COMMUNICATION TECHNOLOGY (ICT)

#737

Grade 10-12

Credit: 1

Prerequisites: ICT

Description: ICT is designed to give students a comprehensive Google Apps, Introduction to Lego Robotics, Using Drones for Work and Pleasure, and a review of Microsoft Office Suite. This course covers concepts of the technological world in which we live.

Students will:

- Gain a basic knowledge of the computer industry: History, careers and ethics.
- Demonstrate a basic understanding of computer knowledge and ethics on the topics of computer equipment components, operating system, file management and computer ethics and security.
- Perform systems utility tasks such as managing files, data storage and retrieval.
- Review the school's various software applications and determine appropriate applications for tasks.
- Demonstrate proficiency in word processing skills, basic spreadsheet applications, presentation software and basic database management using Microsoft Office Suite 2010.
- Demonstrate an understanding of the ethical use of the Internet, basic concepts of Internet searches, copyright principles and analyze the effectiveness of online information.
- Demonstrate the basic principles of computer programming.

## CHALLENGING FOREIGN LANGUAGE PROGRAM

### FRENCH I

#300

VLACS (online learning) Grade: 9-12

Credit: .5/.5

Prerequisites: None

Description: This course is a high school level introduction to French and features basic structures and vocabulary. The ability to read, write, speak, and comprehend spoken language using the present tense of verbs is emphasized.

Course Outcome: Students will:

- Be able to conjugate common regular and irregular verbs in the present tense
- Be able to tell time, describe the weather, express feelings, express needs, form simple questions, ask for and give directions
- Be able to express themselves verbally and in writing within a vocabulary range of approximately 500 to 1000 words



**FRENCH II** #301 VLACS (online learning) Grade: 9-12 Credit: .5/.5

Prerequisites: French I

Description: This course offers a comprehensive review and reinforcement of basic vocabulary and structures presented in French I. The ability to read, write, speak, and comprehend spoken language using the past tense of common verbs is emphasized.

Course Outcome: Students will:

- Be able to conjugate common regular and irregular verbs in both the present and past tense.
- Be able to express themselves verbally and in writing within a vocabulary range of approximately 1000 to 1500 words

**FRENCH III** #302 VLACS (online learning) Grade: 9-12 Credit: .5/.5

Prerequisites: French II

Description: This is a conversational course which integrates situational French and a textbook. The situational French relates to food service, tourism, hotel operations, law enforcement, border crossings, parks and recreation employees, and other topics relevant to students living and working in the northern part of New Hampshire.

Course Outcome: Students will:

- Be able to speak and comprehend French in a variety of situations and within a vocabulary range of 1000 to 2000 word

**SPANISH I** #303 VLACS (online learning) Grade: 9-12 Credit: .5/.5

Prerequisites: None

Description: This course is a high school level introduction to Spanish and features basic structures and vocabulary. The ability to read, write, speak, and comprehend spoken language using the present tense of verbs is emphasized.

Course Outcome: Students will:

- Be able to conjugate common regular and irregular verbs in the present tense
- Be able to tell time, describe the weather, express feelings, express needs, form simple questions, ask for and give directions
- Be able to express themselves verbally and in writing within a vocabulary range of approximately 500 to 1000 words

**SPANISH II** #304 VLACS (online learning) Grade: 9-12 Credit: .5/.5

Prerequisites: Spanish I

Description: This course offers a comprehensive review and reinforcement of basic vocabulary and structures presented in Spanish I. The ability to read, write, speak, and comprehend spoken language using the past tense of common verbs is emphasized.

Course Outcome: Students will:

- Be able to conjugate common regular and irregular verbs in both the present and past tense.
- Be able to express themselves verbally and in writing within a vocabulary range of approximately 1000 to 1500 words

**SPANISH III** #305 VLACS (online learning) Grade: 9-12 Credit: .5/.5

Prerequisites: Spanish II

Description: This is a conversational course which integrates situational Spanish and a textbook. The situational Spanish relates to food service, tourism, hotel operations, law enforcement, border crossings, parks and recreation employees, and other topics.

Course Outcome: Students will:

- Be able to speak and comprehend Spanish in a variety of situations and within a vocabulary range of 1000 to 2000 words

PITTSBURG SCHOOL  
RUNNING START  
COLLEGE COURSES  
11<sup>th</sup> and 12<sup>th</sup> Grades

**COLLEGE ACCOUNTING (RS) #736 Grade: 10-12 Credit: 1**

**This class will be available on alternating years.**

Prerequisite: None

Description: Students will learn basic double-entry accounting and produce a worksheet, income statement and balance sheet.

Upon completion of this course, students will be able to:

- Describe the purpose of a double entry accounting system and explain its role in making business decisions
- Identify and explain standard accounting terms.
- Explain how accounting transactions affect the accounting equation, income statement, statement of owner's equity, and balance sheet.
- Apply the rules of debits and credits to prepare general and special journal entries for common business transactions of a merchandising business.
- Post transactions from journal to general ledger accounts and subsidiary ledger accounts.
- Prepare a trial balance and subsidiary ledger reports and explain their interrelationships.
- Analyze data and prepare a worksheet for a merchandising business.
- Create an income statement, statement of owner's equity and a balance sheet for a merchandising business.
- Construct adjusting and closing entries for a merchandising business and explain their purpose in the accounting system.

**BUSINESS AND PERSONAL LAW (RS) #732 Grade: 10-12 Credit: 1**

**This class will be available on alternating years.**

Prerequisites: None

Description: Covers the legal system with regard to business, contracts, sales, commercial paper, agency and employment, partnerships and corporations, risk bearing devices and property. When students complete this course, they should show insight and appreciation of the legal system, the dynamic nature of law, the social impact of legislation and legal decisions, the legal environment of business and legal transactions, the legal consequences of decision making and the rights and duties of citizens, consumers, workers, and business owners.

Upon completion of this course, students will be able to:

- Articulate the different types of law and forums for dispute resolution applicable to business.
- Explain and apply issues involving business torts and negligence.
- Define and appreciate the difference between civil and criminal law.
- Evaluate and determine the different forms of business organization.
- Collect and organize information connected with contracts.
- Articulate and apply the definitions involving employment and discrimination law.