Public education is designed to prepare students to become contributing members of our society. A School Counselor helps students preserve their individuality as they work toward this goal.

A counselor attempts to help each student identify his/her unique strengths, interests and abilities. He aids students in development of the skills necessary to achieve educational and personal success. He encourages students to recognize their potential and to set realistic educational and occupational goals.

At the middle school level, the counselor works with students to develop career goals and tentative four-year plans that will enable each student to fulfill his/her goals.

Throughout middle and senior high school, the counselor meets with students annually to review and update educational and career goals.

The ultimate goal of the school counselor is to prepare our students to experience personal and occupational success and satisfaction.

Please feel free to access the Guidance Department link on the Panama Central School District web site at www.pancent.org. The list of high school courses and their descriptions is available online. Please feel free to peruse the Guidance link and begin exploring all of the courses that are offered to students in grades 9-12. Mr. Simmons will be meeting with 8th grade students to develop a tentative four (4) year plan soon.

PCS Counseling and Guidance Office Staff

Dane Simmons
School Counselor
(716) 782-2455

Ann Schnars
Guidance Secretary
(716) 782-4448

SUMMARY

The Counseling and Guidance Office performs a number of functions that are not covered elsewhere in the curriculum. The counselor helps students with personal problems, suggests new study habits for those who are in need, provides crisis counseling, and makes referrals to appropriate community agencies to help a student or his/her family cope with an issue. The Guidance Office is a busy place and the counselor always welcomes visits from students and calls from parents.
LEARNING STANDARDS FOR HIGH SCHOOL STUDENTS

Students must pass five (5) required State Regents Exams with a 65% in addition to earning 22 credits to receive their New York State High School Diploma:

• English Language Arts: Comprehensive Regents Exam (taken in Grade 11)
• Integrated Algebra Regents Exam (Grades 9 or 10)
• Global History & Geography Regents Exam (taken in Grade 10)
• U.S. History & Government Regents Exam (taken in Grade 11)
• Living Environment or Physical Setting Regents Exam (Grades 9/10)

We realize that these standards could prove to be challenging for a number of our students. In response, our teachers will be expecting a higher level of performance from students on a daily basis. Based on a student’s scores on the state assessments and program needs, he/she may be put in an Academic Intervention Service (AIS) class for the appropriate subject. It is vital that students enter high school with a serious attitude and a willingness to put in 100% effort so that they can meet these standards.
REQUIREMENTS FOR GRADUATION

A. Regents Diploma with **Advanced Designation:**

- 4 Units of English
- 4 Units of Social Studies
- 3 Units of Science (2 units must include lab)
- 3 Units of Mathematics
- 1 Unit Art and/or Music
- 1/2 Unit of Health
- 2 Units of Physical Education
- 3 Units of a Foreign Language***
- 1.5 Units of Sequence Courses/Electives

***Or a sequence of 5 units in any of the below Career and Technical Education subjects plus 1 unit foreign language (may be earned in Grade 8 by passing the Proficiency Exam in Spanish)

Occupational Education
Technology
CTE

NOTE: This is the only method of getting a Regents Diploma with Advanced Designation without completing 3 years of Spanish.

In order to obtain a Regents Diploma with Advanced Designation, a student must pass the required Regents examinations as follows:

1. The Regents Comprehensive examination in English Language Arts
2. The Regents Comprehensive examination in Spanish (if completing the sequence)
3. The Regents examination in U.S. History and Government
4. The Regents examination in Global History and Geography
5. The three (3) Regents examinations, Integrated Algebra, Geometry and Algebra II/Trigonometry
6. Science Regents examinations, (1) Living Environment and (1) Physical Setting Course

Students who complete all course work and testing requirements for the Regents Diploma with Advanced Designation in mathematics and/or science and take and pass three Regents examinations in both mathematics and/or science with a score of 85 or better will earn a Regents Diploma with Advanced Designation, with an annotation on the diploma that denotes mastery in mathematics and/or science.
B. Requirements for a **Regents Diploma**:

- 4 Units of English
- 4 Units of Social Studies
- 3 Units of Science (2 units must include a lab)
- 3 Units of Mathematics
- 1 Unit of Art or Music
- 1/2 Unit of Health
- 1 Foreign Language (may be awarded by passing the local exam in 8th grade)
- 2 Units of Physical Education
- 3.5 Units of Sequence Courses/Electives

In order to obtain a Regents Diploma, a student shall pass the following combination of Regents examinations with a minimum grade of 65 as follows:

1. The Regents Comprehensive Examination in English Language Arts
2. The Regents Examination in Integrated Algebra
3. A Regents Examination in Science (Living Environment or Physical Setting)
4. The Regents Examinations in Global History & Geography and U.S. History
5. The Regents Examination in U.S. History & Government

**ALTERNATIVES TO SPECIFIC AND LOCAL DIPLOMA REQUIREMENTS**

A student may earn a maximum of 6 1/2 units of credit for either a Regents or local diploma without completing units of study for such units if:

A. Based on the student's past academic performance, the superintendent of a school district or the chief administrative officer of a nonpublic school, or his or her designee, determines that the student will benefit academically by exercising this alternative;

B. The student achieves a score of at least 85 percent, or its equivalent as determined by the commissioner, on a State developed or State approved examination,

C. The student passes an oral examination or successfully completes a special project to demonstrate proficiency, as determined by the principal, in the subject matter area, and

D. The student attends school, or receives substantially equivalent instruction elsewhere, in accordance with section 3204(2) of the Education Law, until the age of sixteen pursuant to sections 3204 and 3205 of the Education Law.
DISTANCE LEARNING

The distance-learning network is a fully interactive, full-motion video and audio system using fiber optic cable and telecommunications equipment to connect specially designed classrooms in participating school districts.

The distance-learning network uses real-time interactive full-motion video and telecommunications technology to enable a teacher and students in a distance-learning classroom in one school to see, hear and talk to students in a comparably equipped classroom in other schools on the network. The simultaneously interactive environment means that the teacher and students remain in visual and verbal communication at all times during a class.

JCC Calculus (Math 1710/1720)
Hosted by: Dunkirk High School

JCC Calculus is a college level class that consists of an in-depth look at objectives including analytic geometry, functions, graphs, limits and continuity, derivatives, and integrals. This is an intense class that focuses on the rules of calculus, the applications of these rules, and the use of technology with these applications. In the second semester, topics will include applications of the definite integral such as volume, surface area and arc lengths, logarithmic and exponential functions, trigonometric and hyperbolic functions, techniques of integration, polar coordinates, parametric equations, improper integrals, and sequences and series including power series and Taylor series. An approved graphing calculator is required. A computer algebra system such as DERIVE is incorporated into the course.

8 College Credits (2 semesters)
JCC Final Exam
Prerequisite: PreCalculus

JCC Accounting (Bus 1410)
Hosted by: Dunkirk High School

Student will gain an understanding of the accounting principles and procedures used to record, classify and summarize financial data. Students will become familiar with accounting terminology and many of the financial records, forms and statements used in an electronic environment.

3 College Credits
Final Exam
1 Credit
ART

STUDIO ART

This is the high school art course that students take for their art requirement for graduation, or their first art course towards their art major.

Studio Art involves working with various materials, objectives and problems. It is designed to introduce students to Art at the High School Level.

Example materials students are exposed to: pencil, pastels, ink, clay, watercolors, tempera paint, and acrylics.

Sketchbooks are a part of the Studio Art curriculum, and sketchbook drawings will be assigned regularly as homework.

Projects are expected to be handed in on the date that they are due. Credit is lost with each late day.

1 Unit or ½ Unit

STUDIO ART II

Studio Art is a prerequisite for this course. Some of the mediums are the same as they were in Studio Art, but taken to a higher level. Some of the mediums are new.

Many of the assignments include personal problem solving.

Sketchbooks are a part of the Studio II curriculum, in the form of Visual Journaling. Visual Journal assignments will be assigned regularly as homework.

Some students will desire to take Independent Advanced Art their Senior Year. Taking and passing Studio Art II is a prerequisite for Independent Advanced Art.

1 Unit or ½ Unit

CERAMICS & SCULPTURE

Studio Art is a prerequisite for this course.

The main concept of this course is to work in 3D. Students will create with clay, as well as other sculpting materials such as paper, styrofoam, wire and fibers.

1 Unit
PUBLICATION DESIGN

The main source of this curriculum comes from A Guide to Yearbook Journalism by Herff Jones. The yearbook serves as the main project for the class; however, it is not the only project.

This course involves design basics within publication, including theme, coverage, copy, design and photography. The students will learn about photography basics, which include resolution, composition, point of view and rule of third.

Photography and Design concepts are applied to the current year’s Panorama Yearbook.

In addition to the Yearbook, students will learn editing techniques using Photoshop Elements, and they will create various design projects with this knowledge.

1 Unit or ½ Unit

INDEPENDENT ADVANCED ART

Studio Art and Drawing and Painting are prerequisites for this course.

This is a course where the student makes up his/her curriculum. Each project must be approved. A student may strengthen his/her strong points, or work on weak points. A student may use materials and processes they are familiar with from past Art courses, or they may wish to work in an area not normally covered in the typical classroom environment.

1 Unit or ½ Unit

Communication Studio

This class will produce the PCS Announcements for broadcast throughout the school building. Students will demonstrate mastery in the use of a variety of equipment, including video cameras, microphones, computers, audio mixer, video mixer and character generator. Students will also demonstrate mastery in video editing, script writing, graphics production and public speaking. This class will meet 1st period for a full year.

1 Unit
PHOTOGRAPHY

This is a ½ year black and white film course and a ½ year digital color course. Students will learn to:

- Compose good pictures
- Manipulate the camera
- Incorporate a flash where needed
- Develop black and white film
- Make prints
- Use filters
- Mount photographs
- Use Photoshop Elements

Students do not need their own 35 mm film camera or digital camera, but it can be helpful and allow them more flexibility as to when they take pictures as compared to sharing a camera. Students are given film and paper for each film assignment.

1 Unit
TECHNOLOGY

The technology program at Panama Central School is designed to provide students with an opportunity to develop a sense of self while they grow as individuals. Technology courses are set up to spend the majority of time learning through hands-on activities helping students discover their talents and interests.

The program also provides occupational education. Students gain knowledge of occupations and the specific needs for further education and training in the area they are studying. Technology courses include basic learning related to becoming an employable individual. Students are taught about desirable work habits and classes foster attitudes and understandings that reflect the discipline of the work place.

Technology courses are intended to encourage individuals to develop a long-range plan in pursuing an educational or occupational goal.

HIGH SCHOOL TECHNOLOGY COURSES

"Foundational" Technology Courses: Design and Drawing for Production serves as a foundation for later Technology courses. This course is often taken in the 9th grade.

DESIGN AND DRAWING FOR PRODUCTION (DDP)

Design and Drawing for Production is the foundational technology course to prepare students for future technology electives. The course content is a combination of Manufacturing and Technical Drawing concepts where a student will design graphically in the technical drawing lab then move into the manufacturing lab to convert the drawing into a product. To learn about drawing project plans and safe operation of machines, the course begins with a specific product. When the student completes the required product, they will implement problem-solving techniques to design and construct products of individual design. Due to the artistic nature of the course, the State recognizes DDP as an option to fulfill the art or music requirement for graduation.

1 credit

Technology Electives (10th - 12th grade):

RESIDENTIAL STRUCTURES/ARCHITECTURAL DRAWING

Residential Structures is a course designed to present concepts and hands on application of home construction. Lessons and films will focus on the resources and processes of home construction, financial aspects, zoning, and other concerns. Activities will include scale model framing techniques, full size framing exercises, plumbing and electrical activities, computer assignments, etc. Upon completion, students will be familiar with modern home building techniques. The course is intended to flow into a second semester of Architectural Drawing and Design.

1 credit
MEDIA PRODUCTION TECHNOLOGY

Media Production is a form of electronic communication. Students will become involved in the production of media assisted presentations with the predominate medium being video production. Using analog and digital camcorders, computer graphics, and electronic editing (using i movie software) students will create a number of video productions.

Productions will be produced individually as well as part of a team. Students must be able to participate and contribute as a member of a production team to reach a common goal.

As a result of this class, students will have the ability to develop presentations, have a working knowledge of different media equipment, and understand the appropriate technology and terminology as it applies to media communication.

1/2 credit

ENERGY AND POWER

The Energy and Power course, designed as a half –unit, 18 week course, is intended to acquaint students with the sources and forms of energy available now and what may be available in the future. Students will learn that there are often choices to be made about the most appropriate energy form to use. The energy conversion systems, which change energy forms to meet human needs, will also be studied. This course stresses the importance of identifying the issues and problems associated with the use of each energy form and conversion system. Identifying the consequences of choices is also an important aspect of the course.

The first module identifies the forms of energy, the conversion techniques used to make energy more useful, the availability of each type of energy and the uses made of each type in each major sector (residential, commercial, industrial, and transportation). Historical conversion systems and power use, measurement, and the theory are included. The second module deals with the major sources of energy and the problems and issues surrounding their use. Module three explores internal combustion, external combustion, and fluid power theory and systems. Module four emphasizes the conversion processes that make energy available in more usable forms. Module five provides opportunities for students to make decisions about the most effective use of energy in each sector of society.

1/2 credit

PRODUCT DESIGN

This course involves research of product design and production for the purpose of manufacturing. Through the construction of prototypes, students will identify suggestions for the manufacturing of those products. Field trips will be taken to local industries to broaden the manufacturing perspective. The course is an elective that will serve as an upper level course. It is preferred that Manufacturing Systems and Technical Drawing are taken as a foundation to the course.

1 credit
Information Technology (IT) consists of three CELLs (Computer-Enhanced Learning Location). They are **Computer Architecture**, **Network Systems** and **Web Development**. Students work in teams of two and complete a variety of activities in each CELL.

The **Computer Architecture** CELL provides the foundation for installing, configuring, implementing, maintaining and documenting a variety of computer technologies. Students learn troubleshooting and help-desk techniques to identify and resolve a variety of common PC problems. This CELL first presents the history of computers and components, common terminology, safety and preventive-maintenance procedures. Students learn about basic electricity, various types of storage technologies, diagnostic programs, how hardware components work and are installed, BIOS and CMOS, DOS commands, types of printers and associated software, and maintenance. They gain experience formatting hard drives; installing the Windows Me operating system, Windows driver, video and sound cards, and a modem; troubleshooting computers and printers; and researching computer components on the Internet.

The **Network Systems** CELL prepares students for careers as network technicians, administrators or system designers. Students learn how to design, analyze, operate, administer, maintain, test and implement the network interconnections of devices, systems software and communication services to meet business objectives. This CELL is rich in hands-on learning experiences, including making, testing and connecting cables; planning and troubleshooting cable installation; inspecting internal components; developing and implementing network plans; documenting network performance using various diagnostic commands; creating an emergency repair disk; designing a physical network map and a logical network map; creating workgroups and connecting them to expand a LAN. Students also research the process for registering domain names, and address issues involving file and software sharing, and network security.

The **Web Development** CELL begins with an introduction to the World Wide Web, the definition of a web page and elements of instructional design that are necessary to make it attractive, functional and effective for a business. Students use this knowledge to create and enhance web pages, using professional-level software. Students learn about the history, rules and trends of the Internet and web site design, perform searches and critique various web pages. They develop and practice website-design skills, including typography, digital photography, computer graphics, HTML programming, animation and interactive features. Students also plan and develop the foundation for an e-commerce web site, and learn techniques for publishing and maintaining websites.

1 credit
INFORMATION TECHNOLOGY II

Information Technology II consists of two CELLs (Computer-Enhanced Learning Location). They are Software Development & Applications and Communications. Students work in teams of two and complete a variety of activities in each CELL.

The Software Development & Applications CELL prepares students to pursue careers that involve creation and programming of computer software. Students develop skills to analyze, design, develop, test and debug software programs. The CELL also covers documentation of work, with an emphasis on producing documents that are easy for others to follow. Students begin by learning about computer programs and how they function, and the system-development cycle. They investigate a business’ existing system and use their findings to develop simple and relational databases. With the simple database, students use filters and queries to sort and retrieve information. For the relational database, students design the structure to meet the programming language specifications and the user's requirements. The CELL concludes with instruction on using Visual Basic, including the creation of a user interface, construction of a Visual Basic program, identification of errors and implementation of simple codes.

The Communications CELL focuses on creating understandable and interesting representations of technical information, including both written and graphical documentation for technical applications, products, web-site training and services. Students develop skills in research, analysis, graphical design and development, technical writing, editing and publishing. This CELL first addresses the meaning of communication, the development and impact of mass communication, and advantages and disadvantages of electronic publishing. Students develop and practice techniques for researching, outlining, writing and editing technical documents, and developing spreadsheets and charts. They learn and apply the principles of graphic design and layout, and use Help Authoring Software to develop a topic with a link in their online manuals.

1 credit

COMMUNICATION STUDIO

This class will produce the PCS Announcements for broadcast throughout the school building. Students will demonstrate mastery in the use of a variety of equipment, including video cameras, microphones, computers, audio mixer, video mixer and character generator. Students will also demonstrate mastery in video editing, script writing, graphics production and public speaking. This class will meet 1st period for a full year.

1 credit
HOME ECONOMICS

FOOD PREP AND NUTRITION

The content of the course includes nutritional awareness, meal management and food purchasing, food preparation, meal service and related career exploration. Students enrolled in the class will learn to read and follow recipe directions.

Students must follow safety procedures introduced by the instructor. Students must learn and practice proper sanitation and clean-up techniques. Teamwork and time management skills must be utilized and are requirements for the class.

Students are expected to taste all foods prepared in class; those students with medical dietary needs or voluntary diets may not be suited for this class.

The recommended grade levels are 11 and 12.

1 Unit
Local Exam
CAREER AND TECHNICAL EDUCATION PROGRAMS

When a student enters the 11th grade, he/she will be given the opportunity to attend a career and technical program. Students would spend half a day at Panama and half a day at the Career and Technical Center. Participation in this program would limit the courses taken at Panama to the required subjects: English, Social Studies, Math, Science and Physical Education.

COURSES OF INSTRUCTION AT THE CAREER AND TECHNOLOGY CENTER

| Diesel/Heavy Equipment Repair | Small Animal Science | Information Tech./ Computer Systems |
| Auto Body Repair | Culinary Arts | Auto Technology |
| Health Careers | Construction Technology | Cosmetology |
| Criminal Justice/Public | Grahpics Technology |

Conservation/Natural Private Security Resource Mgmt.
ENGLISH 9

The 9th grade English Language Arts course includes integrated studies of literary and informational reading, language, writing, speaking and listening, collectively aimed toward college and career readiness for the student as detailed in the Common Core State Standards for NYS Grades 9-10. Students will read from a variety of genres and cultures, designed to introduce elements of structure and style that will be reinforced as the student progresses through high school, and to prepare the student to comprehend and evaluate complex text of different types. Students will produce written and spoken communication with regard to audience, task and purpose, and be able to apply text-based support for that communication when applicable. Vocabulary and conventional standards of English grammar and usage are also integrated into each year’s course of study. Students will also engage in active research and will compose a three to four page MLA style paper based on a chosen topic. Research will enable students to comprehend, analyze, evaluate, and communicate complex information.

1 Unit
Local Exam

ENGLISH 10

The 10th grade English Language Arts course includes integrated studies of literary and informational reading, language, writing, speaking and listening, collectively aimed toward college and career readiness for the student as detailed in the Common Core State Standards for NYS Grades 9-10. Students will read from a variety of genres and cultures, designed to introduce elements of structure and style that will be reinforced as the student progresses through high school, and to prepare the student to comprehend and evaluate complex text of different types. Students will produce written and spoken communication with regard to audience, task and purpose, and be able to apply text-based support for that communication when applicable. Vocabulary and conventional standards of English grammar and usage are also integrated into each year’s course of study.

1 Unit
Local Exam
ENGLISH 11

English 11 prepares students not only for the Common Core Regents Exam in ELA, but also for college and career readiness. Lessons focus on learning strategies, techniques, and processes to help students gain life-long learning tools. A chronological study of American literature explores a rich heritage found in the writings of American authors. Writing focuses on various rhetorical modes with an emphasis on writing modes found on the regents exam. All units incorporate speaking and listening skills. Students will also engage in active research and will compose a five to six page MLA style paper based on a chosen topic. Research will enable students to comprehend, analyze, evaluate, and communicate complex information. This major analytical research paper is required in order to complete this course.

1 Unit
Regents Exam

ENGLISH 12

English 12 is based on the Common Core State Standards. Students will read, write, listen, and speak for information and understanding, literary response and expression, critical analysis and evaluation, and social interaction. English 12 includes a survey of British and world literature with a focus on writing in preparation for college-level as well as real-world writing. A final project is required in order to complete this course.

1 Unit
Project

JAMESTOWN COMMUNITY COLLEGE ENGLISH 1510/English 11

English 1510 (Composition I) prepares students for future academic work by teaching well-focused, well-structured, and well-developed essays. Emphasis will be placed on critical reading, thinking and writing skills appropriate for college level courses. This is a full year course and is combined with English 11 studies during the Junior year of high school.

3 College Credits
JCC Final Exam and Regents Exam

JAMESTOWN COMMUNITY COLLEGE ENGLISH 1530/English 12

English 1530 (Composition II) emphasizes writing precise, clear, substantial, and logical essays. Students will develop critical thinking and writing skills required in higher education, employment, and life. Students will also learn to conduct research and write a research paper.

3 College Credits
JCC Final Exam
In English 1540 (Writing About Literature), students will explore multicultural forms of literature (novels, short stories, poems, and plays) that speak to issues of identity with regard to race, class, gender, sexual identity, ability, and language. In doing this, students will further develop research skills while being introduced to different critical reading approaches such as feminist, reader response, postmodern, and psychoanalytic criticism. This course serves as both an introduction to literature as well as an opportunity to refine reading and writing skills developed in this composition sequence, concluding in a major paper due in June about an author of the student's choice.

3 College Credits
JCC Final Exam

MEDIA PRODUCTION (English Elective)

In Media Productions, students will learn what it means to be media literate. They will learn to think critically about media, in order to become educated consumers of mass media information. Students will explore and learn to recognize media's influence on beliefs, attitudes, values, behaviors, and the democratic process. Applying their knowledge of media literacy, students will use technology to produce various media for different purposes, including persuasion, information, and creative self-expression.

1 Unit

JAMESTOWN COMMUNITY COLLEGE PUBLIC SPEAKING CMM 1610

Public Speaking Students will learn effective strategies for researching, preparing, and delivering informative and persuasive speeches to small groups. Students will be able to demonstrate methods for building confidence in speech delivery, supporting points with evidence, analyzing the audience, using media aids effectively, and refining delivery style.

1 Unit
GLOBAL HISTORY AND GEOGRAPHY I

The Global History and Geography I course involves a comprehensive, interdisciplinary approach to the study of world history and geography. Global History I is the first half of a two-year, chronological survey, course. The scope of Global Studies I is extensive and covers trends, eras, and events from prehistoric times to approximately the political revolutions of the late 1700s. The course is aligned with the New York State Standards for Social Studies and also emphasizes the Common Core Standards for Literacy and Writing through reading and writing activities, assignments, lessons, and assessments. The curriculum content and standards are outlined in detail in the New York State Common Core Grades 9-12 Social Studies Framework.

1 Unit
Local Exam

GLOBAL HISTORY & GEOGRAPHY II

The Global History and Geography II course involves a comprehensive, interdisciplinary approach to the study of world history and geography. Global History II is the second half of a two-year, chronological survey, course. The scope of Global Studies II is extensive and covers trends, eras, and events from the political revolutions of the late 1700s to modern times. The course is aligned with the New York State Standards for Social Studies and also emphasizes the Common Core Standards for Literacy and Writing through reading and writing activities, assignments, lessons, and assessments. The curriculum content and standards are outlined in detail in the New York State Common Core Grades 9-12 Social Studies Framework. The Global History and Geography Regents Exam will only cover the content learned in Global History and Geography II.

1 Unit
Regents Exam
UNITED STATES HISTORY & GOVERNMENT

Overview Statement
The curriculum is mandated by the State of New York and in June every student must pass the New York State Regents. A student cannot graduate from high school without successfully passing this course and the state examination.

Course Content
Unit I The Constitutional Foundations (pre 1776-1865)
Unit II Industrialization of the U.S. (1865-1919)
Unit III The U.S. as a World Power (1867-1953)
Unit IV A World in Transition (1954-Present)

This course requires a substantial amount of subject specific knowledge including actual content and application of the Constitution, Supreme Court cases, Congressional legislation, foreign and domestic policy documents. Modifications are continually made to meet new Board of Regents Standards. The course is aligned with the New York State Standards for Social Studies and also emphasizes the Common Core Standards for Literacy and Writing through reading and writing activities, assignments, lessons, and assessments. The curriculum content and standards are outlined in detail in the New York State Common Core Grades 9-12 Social Studies Framework.

1 Unit/Regents Exam

U.S. HISTORY AND GOVERNMENT (JCC HIS 1530 & 1540)

Panama Central School is participating in a college level distance-learning course in United States History. This course is offered in conjunction with Jamestown Community College via the Erie-2-Chautauqua-Cattaraugus Board of Cooperative Education Distance Learning Network. The distance-learning classroom is an interactive environment with full motion video and audio utilizing fiber optic cable and telecommunications technology. Students at Panama and other receiving school sites will communicate with each other in a real time technological environment.

Participation is limited to the top ten students per receive site.

First Semester: HIS 1530: U.S. History to 1877 – Will focus on the roots and growth of the American nation in a world setting. Begins with the original settlement of the Western Hemisphere and ends by stressing the westward movement, industrialism and the Civil War era in the 19th century.

Second Semester: HIS 1540: U.S. History 1877 to present – Studies the making of modern American in the 20th century. Events such as the two world wars, the Cold War, the Great Depression and contemporary happenings since Watergate, in relation to future trends in the country will be covered.
Prerequisites: Students must complete and pass the reading and writing examinations required of all incoming freshmen at JCC. The student must receive a grade of 4 or above on the writing portion and an 80 or above on the reading portion of the test.

- Regents scores in Global History and Geography.
- Regents scores in U.S. History and Government (if applicable).
- Course grades in Global History and Geography.
- Course grade for U.S. History and Government (if applicable).

1 Unit
6 College Credits (two semesters)
JCC Final Exam

GOVERNMENT/ECONOMICS

Participation in Government is traditionally given to students in their senior year of school. The course begins with looking at the need for governments in general. The course then moves into an examination of the political system established by the United States. This includes an emphasis on the Constitution and the Supreme Court of the United States. Time will also be taken to look at other established forms of government.

As in the title of the course, participation in the United States government will be stressed. Constant reminders are given as to how students can become involved as citizens of the United States.

Lastly, a large portion of the material for this class will be drawn from topics affecting us today at the local, state, national, and global levels. Many of the lessons will reflect on our need to know what is happening to the world so watching the news, reading the paper, and using the computer to find news stories are highly encouraged and at times required.

The other semester of Grade 12 will be a course in economics and economic decision-making. This course will include the basic economic concepts and understandings which all persons will need to function effectively and intelligently as citizens and participants in the economy of the United States and of the world. Some of the major concepts which will be dealt with are scarcity, productivity, opportunity, cost, supply and demand, inflation, profit interdependence, capital, competition and the market. The course will not be one in consumer education, but will emphasize a rational decision-making process which should be applied to all economic decisions. The major focus will be on the economy of the United States, but other economic systems will be treated. The course will include topics that examine the basic principles of economics, the elements of an economic system (micro-economics), the overall
operation of an economic system (macroeconomics), and the world economy and international trade. 
The course is aligned with the New York State Standards for Social Studies and also emphasizes the Common Core Standards for Literacy and Writing through reading and writing activities, assignments, lessons, and assessments. The curriculum content and standards are outlined in detail in the New York State Common Core Grades 9-12 Social Studies Framework.

Two 1/2 Units/Local Exams

CHAUTAUQUA COUNTY LEGISLATIVE INTERNSHIP PROGRAM

Overview Statement
This program is offered and supported by the Cornell University Cooperative Extension. This is an opportunity that may be offered as a substitute to taking the senior requirement of government.

Course Requirements
Students attend meetings at the Gerace Office Building in Mayville once a week. Students are assigned a legislator as a mentor with whom they attend local government sessions. Students will also attend Caucus meetings and another class session run by the program coordinator from the Cornell Cooperative Extension.

Grading Process
Students are assessed by the quality of their journals, meeting attendance, feedback from the program coordinator, the information they bring back to share with their high school class, and completion of additional requirements to be decided by their high school teacher.
**Algebra 1 Common Core**

This is a one year course preparing students for the Common Core Algebra Regents exam. The topics include quantities and reasoning with equations and their graphs, descriptive statistics, linear and exponential functions, polynomial and quadratic expressions, equations and functions, and a synthesis of modeling with equations and functions. The Common Core Algebra Regents will be given at the end of the year. Students **MUST** pass this course to move on to Common Core Geometry or Common Core Geometry R. Students must take the Common Core Algebra Regents exam this June. Students must pass the Common Core Algebra Regents exam to earn a NYS Regents diploma.

1 Unit
Regents Exam (must pass for a Regents diploma)

**Algebra 1A/Algebra 1B Common Core**

The content of this course is the same as Algebra 1 (one year) but is spread out over a 2 year period. The intent of this course is to give students a better foundation of Algebra before taking the regents examination.

2 Units
Year 1: Local Exam
Year 2: Regents exam (must pass for Regents diploma)

**Algebra 2 Common Core**

This is a one year course preparing students for the Common Core Algebra 2 Regents exam. The topics include polynomial, rational, and radical relationships, trigonometric functions, functions, and inferences and conclusions from data. Students must pass Common Core geometry to take this class. The students will take the Common Core Algebra 2 Regents examination at the end of this Course.

1 Unit
Regents Exam
Prerequisite: Geometry
GEOMETRY

This is the second of three Regents level courses that present a unified approach to secondary school mathematics. Arithmetic, algebra, geometry and trigonometry are studied in this course, which expands upon what was covered in Algebra. There is a heavy emphasis on proving geometric relationships in a variety of scenarios.

This course is an extension of the basic geometric principles studied in 8th grade mathematics with an emphasis on applications of algebra to geometry. A major focus of the course is to prove geometric relationships for triangles, quadrilaterals, and circles. Transformations will be studied in depth and used as alternate methods for proving congruence of shapes. Trigonometry of right triangles is also studied and expanded to other types of triangles. There is a strong emphasis on vocabulary, properties, and theorems that are needed to solve multi-step problems that incorporate multiple concepts learned throughout the year.

1 Unit
Regents Exam
Prerequisite: Algebra

PRE-CALCULUS

This Pre-Calculus course is an advanced algebra, analytic geometry, and trigonometry class with an emphasis on those areas that lay foundation for calculus such as continuity of functions, summation of intervals and limits of polynomial functions.

Considerable concentration is given to graphing, including the use of graphing calculators and computer graphing software.

1 Unit
Local Exam (Regents difficulty)
Prerequisite: Seq. Math III

JCC STATISTICS (Math 1540)

Students will investigate various topics in both descriptive and inferential statistics including measures of central tendency and spread, graphical analysis of data, probability, random sampling, correlation and regression, hypothesis testing and confidence intervals. Practical applications are emphasized throughout the course. A significant part of the course is taught in a laboratory setting using a software package such as Excel or Minitab.

3 College Credits
Required - Two years of High School Math and JCC Placement Exam
Recommended - Advanced Algebra
JCC Final Exam or Project
JCC PROBLEM SOLVING (MATH 1500)

Students will develop problem solving skills through a detailed study of topics such as financial mathematics, linear and exponential modeling, and geometry, in concert with specific problem solving strategies such as drawing diagrams, making systematic lists, looking for patterns, identifying sub-problems, and working backwards. Solution presentations and communication are emphasized.

3 College Credits
Required – Two years of High School Math and JCC Placement Exam
Recommended – Advanced Algebra
JCC Final Exam or Project

JCC Algebra/Trigonometry (MAT 1590)

Students will learn algebra and trigonometry topics necessary to prepare them for the study of pre-calculus. Topics include one-to-one functions and their inverses and graphs, polynomial and rational functions and their applications, radicals and exponents, complex numbers, and trigonometric functions, including graphs and basic identities. Problem-solving and applications are emphasized. An approved graphing calculator is required.

½ Unit
Prerequisite: Two years of high school algebra/geometry and placement exam.

JCC Pre-Calculus (MAT 1600)

Students will learn topics necessary for studying calculus and discrete mathematics. Algebra topics include rational and polynomial functions. Trigonometry topics include graphs, identities, half and double-angle identities, and inverse trig functions. Other topics include exponential and logarithmic functions, and an introduction to limits.

½ Unit
Prerequisite: Three years of high school algebra/geometry and placement exam or MAT 1590.
JCC CALCULUS (1710/1720)

JCC Calculus is a college level class that consists of an in-depth look at objectives including analytic geometry, functions, graphs, limits and continuity, derivatives, and integrals. This is an intense class that focuses on the rules of calculus, the applications of these rules, and the use of technology with these applications. In the second semester, topics will include applications of the definite integral such as volume, surface area and arc lengths, logarithmic and exponential functions, trigonometric and hyperbolic functions, techniques of integration, polar coordinates, parametric equations, improper integrals, and sequences and series including power series and Taylor series. An approved graphing calculator is required. A computer algebra system such as DERIVE is incorporated into the course.

8 College Credits (2 semesters)
JCC Final Exam
Prerequisite: PreCalculus

LIVING ENVIRONMENT (BIOLOGY)

This course is offered to 9th grade students. It is a full year course and involves laboratory work both in the lab and the field. The process by which the organisms in nature carry on life functions such as respiration, digestion, growth and reproduction, are investigated. Also included are the recent areas of concern, which are biochemistry, environmental science, genetics, and ecology. An effort is also made to make the student aware of current discoveries and theories in related areas of science.

Thirty laboratory periods are required during the year in order for the student to be admitted to the Regents exam.

1 Unit
Regents Exam (Labs will require an additional class period per week)

EARTH SCIENCE (PHYSICAL SETTING)

Earth Science focuses on the earth and related earth problems. Heavy emphasis is placed on laboratory investigations. Utilizing the principles of chemistry, physics and biology, the course content will also involve topics such as energy, motion, gravity, heat flow and environmental balance.

Each student must show proof of thirty (30) hours of laboratory experience required before being admitted to the Regents Exam.

One science Regents Exam must be passed with a score of 65% to fulfill graduation requirements.

1 Unit
Regents Exam (Labs will require one additional class period per week.)
ADVANCED BIOLOGY

Advanced Biology is a course designed to give students interested in biology a chance to extend into areas of study that are not a part of the Regents Living Environment Course. The main topics covered in Advanced Biology are forestry, limnology, human anatomy and physiology (including detailed study of the skeletal, muscular, and cardiovascular systems), fetal pig dissection, and genetics. The course is especially beneficial to students hoping to major in science in college and/or those planning to enter a healthcare field of study.

1 Unit
Local Exam
PreReq: Pass Earth Science Course and Regents Exam
Pass Biology Course and Regents Exam
Pass either Chemistry or Physics Course
Recommended Grade Level: 12

CHEMISTRY

This course of study presents an approach to the study of chemistry that is most useful to those students desiring to pursue an academic career in advanced science.

The objectives of this course should extend beyond a minimal comprehension of basic facts and principles. The laboratory approach is stressed and understandings should come out of laboratory experiences whenever possible. In addition, the course helps to provide pupils with an increased understanding of the work of the chemist.

Thirty (30) laboratory periods are required during the year in order for the student to be admitted to the Regents exam.

1 Unit
Regents Exam (Labs require one additional class period per four day rotation)

PHYSICS

This course presents a modern view of physics with major emphasis placed on the fundamental concepts underlying this basic science. The objectives of the course should extend beyond a minimal comprehension of basic facts and principles. The appreciation of the scientific method, the ability and willingness to change beliefs and opinions after careful weighing of new evidence are the intangible, but most important outcomes of the study of this science.

Thirty (30) laboratory periods are required during the year in order for the student to be admitted to the Regents exam.

1 Unit
Regents Exam (Labs will require on additional class period per week)
FORENSIC SCIENCE

This course will be a science-based course. It will incorporate biology, chemistry, physics and earth science to investigate the puzzle of a crime scene.

Specific topics in each science will be addressed. Topics such as DNA, serology, fingerprinting, toxicology and drugs, and types of microscopes will be addressed for biology. Topics in chemistry will cover elements and compounds, chromatography, spectroscopy and chemical analysis of samples. Soil sampling will be addressed for earth science. Physics will cover topics of sound, refraction and reflection. Laboratory time will be incorporation during the class period.

Forensic science is an upper-level elective course offered to juniors or seniors with successful completion of two of the following courses: Earth Science, Biology, Chemistry or Physics.
1 Unit
Local Exam

MARINE SCIENCE

Marine Science is offered to juniors and seniors who have an interest in ocean science or plan on majoring in science in college. Marine Science is the study of the ocean. It is composed of biology (the living portion of the ocean) and oceanography (the physical characteristics of the ocean). It encompasses other major scientific fields such as chemistry, physics, earth and space sciences.

Specific topics include the diverse protist, plant and animal phyla under biology. Salinity, temperatures, pH and oxygen levels will be part of the physical aspects of the course. Current events and how the oceans have such a great impact on our life on land as well as in the water will be covered. Laboratory time will be incorporated into the class period.

Marine Science is an upper-level course elective offered to junior or seniors upon successful completion of Earth Science and Biology.

1 Unit
Local Exam
ENVIRONMENTAL SCIENCE

This course is offered to 11th and 12th grade students. It is a full year course that incorporates work in the class and in the field. Students will leave this course with an understanding of how the various science disciplines including biology, earth science, and chemistry effect our environment. Throughout the course, students will explore the various topics of wildlife, aquatics and fisheries, soils, forestry, current issues, human impact on the environment and environmental conservation. No laboratory requirement

Course Overview:

Topic 1: Introduction to the course and an overview of the various classes of invertebrates and vertebrates. (1 week)
Topic 2: Invertebrates (2 week)
Topic 3: Herpetology (3 weeks)
  Biodiversity
  Identification by appearance and call
  Comparative Anatomy
  Conservation
Topic 4: Ornithology (3 weeks)
  Biodiversity
  Identification by appearance and call
  Comparative Anatomy
  Conservation
Topic 5: Mammalogy (4 weeks)
  Biodiversity
  Identification by appearance and call
  Comparative Anatomy
  Conservation
Topic 7: Aquatics and Fisheries (6 weeks)
  Limnology (study of lakes, river, wetlands, and groundwater)
  Biogeochemistry
  Ecology and biodiversity studies
  Field work
Topic 8: Soils (2 weeks)
  Soil fertility
  Soil horizons
  Soil health and importance
Topic 9: Forestry (4 weeks)
  Biodiversity
  Identification of trees and plants
  Invasive species and management
  Field methods for checking biodiversity and forest health
Topic 10: Current Issues in the Environment (3 weeks)
Topic 11: Human Impact on the Environment (3 weeks)
Topic 12: Research project (4 weeks)
Students will choose a topic that interests them and identify an environmental area of concern for that topic. They will research the topic and propose a tentative solution to the problem.

Prerequisites: Successfully passed living environment and earth science. Recommended Grade Level: 11th and 12th grade. 1 credit

Introduction to Emergency Services

Explores the science and history of emergency services. Presents the history of loss of life and property in fire, major medical emergencies, and natural disasters. Covers the responsibility of emergency services in a community, the roles and responsibilities of a paramedic and firefighter, an overview of the ICS system, and the organization and function of emergency services agencies and allied organizations, education and certification. Includes sources of professional literature, awareness and identification of hazardous materials, emergency services apparatus, fire behavior, detection and protection systems, survey of professional career opportunities and requirements, and development of a resume.

Explores the organization, funding, and role of emergency services within the community and government; an overview of emergency medical services and fire protection services; legal and professional considerations regarding emergency response; emergency services personnel; history and trends of emergency services; evaluation and planning; disaster response; and training, leadership, and career development within emergency services.

1 Unit
Local Exam
HEALTH

Overview Statement

To many people the term "health" simply implies the absence of mental or physical disorders. Actually, our health is influenced by issues such as culture, the level of basic health knowledge, values, attitudes, skills, behaviors, and, the relationship that exists between the home and the community in developing and maintaining a healthful environment. Health Education is, therefore, a multi-disciplinary curricular field that draws upon knowledge obtained from the environmental, biological, social, psychological, physical and medical sciences. Quality health education should attempt to assist the individual to establish a positive balance between the self, the environment, and the universe. Health education should focus on risk reduction, preventive programming, and, effective management of health problems. The ultimate goal of health education should be to help each person to build for him/herself a way of living that would maximize the quality of their lives.

Course Units

Course units are a combination of materials and concepts derived from the New York State K-12 Health Education Syllabus, the selected textbook, and materials developed supplementally by the instructor(s). Units are listed alphabetically below:

- Acquired Immune Deficiency Syndrome
- Alcohol Education
- Assertiveness Skills Training
- The Importance of Physical Fitness and B.A.G.A.
- Philosophy Communicable Diseases
- Drug Education
- Hands-only cardiopulmonary resuscitation and the use of an automated external defibrillator
- Personality Development
- Emotions
- Understanding and Solving Personal and Interpersonal Conflicts
- Mental Health/Stress Transactional Analysis
- Problem Solving
- Self-management contracting
- Tobacco Education
- Heart Disease, Cancer, and Stroke
- Violence Education
- Parenting
- Nutrition—with a concentration on eating disorders.

Grading Procedures:

Grades for each ten-week session will be as follows: exams will count for 50%, 15% will be on a current event topic that must be researched, 15% will come from content worksheets participation and quizzes, and the remaining 20% will be derived from a project that must be completed each quarter. Grades will be based upon a combination of the Class Participation, Guided Independent Study, Group Projects, Homework, Quizzes, Unit Examinations, Notebook Evaluation, Current Event from a selected health theme. ½ credit
SENIOR BAND

Senior Band advances the ability to perform band literature of a variety of styles. Students will develop a repertoire over a large range of band literature. This organization performs in concerts, participates in exchange concerts and competes in festivals.

In addition, students participating in Senior Band will be required to take class instrument lessons that are given during school time. For the most part, students must provide their own instruments.

Students may use this course to meet their 1 unit art/music requirement.

1 Unit

SENIOR CHORUS

Senior Chorus allows students to prepare for concert performances of four part arrangements. When possible, major choral works will be developed and students will attend festival competitions and workshops. This group develops sight-reading and vocal performance skills.

In addition, students participating in Senior Chorus will be required to take class voice lessons, which are assigned every other week, to develop individual and small group vocal skills and musical understanding.

Students may use this course to meet their 1 unit art/music requirement.

1 Unit