

To: Students and Parents/Guardians of Villa Maria Academy

This course-offering book is an annotated list of the required program of study and academic courses and policies at Villa Maria Academy.

Every attempt will be made to place a student in the courses requested; however, it must be understood that final course determination depends on final grades, teacher recommendations and available space.

Courses are planned based on student requests. There will be no schedule changes after 2 days of class. The school may need to drop a course offering based on insufficient enrollment and/or teacher availability.

### **ACADEMIC LEVELS FOR COURSES:**

**Advanced Placement (AP)** Courses are offered at Villa Maria Academy. The College Board's Advanced Placement Program enables students to pursue college-level studies while still in high school. Based on their performance on rigorous AP Examinations, students may earn credit, advanced placement, or both, for college. This test is usually given in May.

**Honors (H)** courses are upper level college preparatory courses. The content of these courses is more demanding than Academic courses.

**Academic (A)** courses are college preparatory courses suitable for college and other post high school programs.

**Academic Support** is available for students. The mission of the Academic Support Program at VMA is to meet each student's needs on an individual basis, to support classroom instruction, and to expose students to strategies that will support them across all content areas.

IN THIS BOOKLET, COURSES ARE IDENTIFIED ADVANCED PLACEMENT (AP) OR HONORS (H). ALL OTHER COURSES ARE ACADEMIC (A).

All courses are included in the GPA calculations. Grade points are different for each academic level. The following chart summarizes the grade points. Grades for all classes will be included in the GPA calculations.

	A	B	C	D	F
AP	6	5	4	2	0
H	5	4	3	2	0
A	4	3	2	1	0

## SPECIAL ACADEMIC PROGRAMS

**Edinboro University of Pennsylvania** has an Articulation Agreement with Villa Maria Academy. Up to 12 Edinboro credits can be earned by taking specific English, Mathematics, Social Studies and Science classes at VMA if the student enrolls at Edinboro within two years of graduation. See the individual departments for more details.

**Erie Business Center** has an Articulation Agreement with VMA. EBC will award 18 credits toward completion of the Associate in Specialized Business (ASB) degree programs when students take designated courses in the following departments: Business, English, Math, Science and Social Studies. See the individual departments for more details.

**Erie Institute of Technology** has an Articulation Agreement with VMA. EIT will award 5 credits toward required course work necessary for the award of the Diploma in the Computer Programs. See the Business and Technology Department for more details.

**Gannon University** has an Articulation Agreement with VMA. A maximum of 18 college credits can be awarded by taking specific English, Mathematics, Social Studies, Theology, Science and Language courses if the student enrolls at Gannon within two years of graduation. See the individual departments for more details.

**Gannon University** also offers a Dual Enrollment program that gives juniors and seniors an opportunity to enroll in classes (not offered at VMA) on the Gannon campus for a reduced tuition. Grades from these Gannon classes will be included in the student's transcript but not their GPA.

**Lake Erie College of Osteopathic Medicine** and Villa Maria Academy have an educational partnership to encourage VMA graduates to pursue programs to become physicians or pharmacists. LECOM will partner with VMA to develop educational programs that will challenge the students' science skills and prepare them for health professions.

**LECOM** also hopes to expand a pharmacy technician program that introduces high school students to community pharmacy and opens the door to jobs with local drugstores.

**LECOM** will also reintroduce a summer high school medical education program with the assistance of VMA. This program will show students how physicians diagnose patient cases and allow teams of students to study their own patient cases.

If you are planning to play sports at a Division I or Division II college, go to **NCAA.org** to check core course requirements for eligibility.

## REQUIRED COURSES - CLASS OF 2012 - SOPHOMORE YEAR

UNITS	COURSES
1.0	Catholic Tradition
1.0	English 2
1.0	World History 2
1.0	Geometry, Informal Geometry or Algebra 2
1.0	Biology
1.0	Foreign Language or Academic Support
0.5	Health
0.25	Phys Ed
0.25	Computer Applications 2
1.0	Non-Core Courses
8.0	(TOTAL MUST EQUAL 8 UNITS)

## REQUIRED COURSES - CLASS OF 2011 - JUNIOR YEAR

UNITS	COURSES	
1.0	Morality/Social Justice 1	
1.0	English 3	
1.0	US History	
1.0	Algebra 2, Precalculus-Trig, or Consumer Math	
1.0	Chemistry	
0.5	Fitness/Health or Pool/Health	
0.5	**Computer	
0.5	*Speech	
0.5	*Art Appreciation/Movie History or Music History	
	Non-Core Courses	**Required Grade 10, 11 or 12
		*Required Grade 11 or 12
8.0	(TOTAL MUST EQUAL 8 UNITS)	

## REQUIRED COURSES - CLASS OF 2010 - SENIOR YEAR

UNITS	COURSES	
1.0	Social Justice 2/Christian Lifestyle	
1.0	English 4	
0.5	Government	
1.0	Math or Science	
0.5	Fitness/Health or Pool/Health	
0.5	**Computer	
0.5	*Art Appreciation/Movie History or Music History	
0.5	Speech	**Required Grade 10, 11 or 12
	Non-Core Courses	*Required Grade 11 or 12
8.0	(TOTAL MUST EQUAL 8 UNITS)	



# BUSINESS AND TECHNOLOGY

**REQUIREMENTS:** Computer Applications 1 and Computer Applications 2; Computer Applications 3, or Computer Programming or Web Page Design.

**ERIE BUSINESS CENTER ARTICULATION AGREEMENT:** Students can earn 3 credits when they receive a grade of B or better in Accounting 2H or Economics AP.

**ERIE INSTITUTE OF TECHNOLOGY ARTICULATION AGREEMENT:** Upon matriculation at the Erie Institute of Technology, students can earn 5 credits (CS105) when they earn an "A" or "B" in the following classes: Computer Applications 1, Computer Applications 2, and Computer Applications 3. Students can also earn 1 credit in Keyboarding (SS 104) if they have speed of 50 words a minute with 5 errors or less.

## ACCOUNTING 1

# 5014  
Grade level: 10, 11, 12  
Credit: 1.0

This course will give students a thorough background in basic accounting procedures. The accounting procedures presented will also serve as a background for employment in office jobs and preparation for studying the business core in college. The complete accounting cycle is done manually, with the integration of automated accounting. We will also discuss multicultural issues, careers in the business field as well as professional business ethics.

## ACCOUNTING 2

# 5034  
Grade level: 11, 12  
Credit: 1.0

Accounting 2 improves basic skills learned in Accounting 1 while the student gains a deeper insight into basic accounting and business activities. An overall view of partnership and corporation accounting with the introduction of accrual vs. the cash method for keeping records will be stressed. The student will be introduced into the areas of control accounting throughout the use of a voucher system, systems of inventory control, and financial budgeting.

Prerequisite: "C" in Accounting 1

## **COMPUTER APPLICATIONS 2**

# 2021  
Grade Level 10  
Credit: 0.25

This course offers hands on experience using Microsoft Word 2007. Students will learn many of the features contained in the Office 2007 software. The goal of this course is to give the students the necessary skills to apply what is taught for school, business, and personal use.

Prerequisite: Computer Applications 1

## **COMPUTER APPLICATIONS 3**

# 5052  
Grade Level 10, 11, 12  
Credit 0.50

This course offers students an in depth study of the integration of the Microsoft Office Suite: Access, PowerPoint, Word and Excel. This affords the student the opportunity to test out of the Level One computer classes at post-secondary institutions.

Prerequisite: Computer Applications 2

## **COMPUTER PROGRAMMING**

# 5072  
Grade level: 11, 12  
Credit: 0.50

This course will teach the students the fundamentals of the Visual Basic.Net programming language. With a focus on proper design and class programming to provide students with a strong introduction of object-oriented design and programming techniques.

Prerequisites: Algebra 1 H and Geometry H or Department approval.

## **THE LAW AND YOU**

# 6022  
Grade level: 11, 12  
Credit: 0.50

This is a survey course to introduce the students to the foundations of the legal system in the United States. The student will gain an understanding of the basic structure and principles of the legal system and the ways the law impacts their lives every day. Topics covered will be criminal law, family law, contracts, torts, ethics, and laws affecting minors.

## **WEB PAGE DESIGN**

# 6032  
Grade level: 10, 11, 12  
Credit: 0.50

This course introduces the student to the basics of web page creation using current markup standards. Students will design, maintain, and upgrade web pages, using Adobe Dreamweaver. Pages will be displayed on our local server.

Prerequisite: Computer Applications 2



# CONSUMER SCIENCES HEALTH & PHYS ED

**REQUIREMENTS:** Phys Ed/Fitness/Pool each year; Health during Grades 10, 11 and 12

## **BORDERLESS COOKING & BAKING**

# 5662  
Grade level: 10, 11, 12  
Credit: 0.50

In this course you will learn the basics of cooking and baking and research, write and present the origins, ingredients, and recipes of various international cultures. Students are encouraged to expand their culinary tastes.

Fee: \$ 25.00

## **CHILD GROWTH AND DEVELOPMENT**

# 5622  
Grade level: 10, 11, 12  
Credit: 0.50

This is a study of the physical, social and emotional development of the child from the prenatal period through age ten. There will be emphasis on the following areas - prenatal development, birth, infancy, childcare, sibling rivalry, toys, hyperactivity and schools. Techniques in handling children in special situations will also be included.

## **DRIVER'S EDUCATION**

# 5592  
Grade level: 10, 11, 12  
Credit: 0.50

This is a state certified Driver's Education Program. The class is for students both with and without the permit. We will cover everything from basic controls to signs & markings, changing of tires, extensive intersection work, parallel parking, winter driving and everyday defensive driving techniques. This class may help lower your insurance cost by up to 10% every year until you are 21. There is a fee of \$100 for this course (payable to Transportation Solutions). Behind the Wheel training is also available for an additional \$290 (payable to Transportation Solutions).

Fee: \$ 100

## **FITNESS & HEALTH**

# 4531  
Grade level: 11, 12  
Credit: 0.50

Fitness will provide students with the basic knowledge and techniques to achieve life long physical well-being. Fitness knowledge, techniques, and skills will develop through the participation of independent/class workouts and team games. Once this foundation is set the students will design their own realistic fitness programs and execute their program throughout the quarter. In the end this course will encourage students of all fitness levels to have more energy and confidence in their own physical well being. The Health component will center on concerns regarding self esteem, reproductive health, date rape, pregnancy, alcohol and drug influence on sexual activity and media influences on sexuality and the STD epidemic.

## **HEALTH**

# 2522  
Grade level: 10  
Credit: 0.50

This class focuses on issues facing today's teen. The class will address issues such as substance abuse as well as sex and sexuality. The class is taught from a Catholic perspective to encourage students to evaluate personal decisions. Overall the class will promote self-awareness and confidence to encourage healthy teenage years.

## **PHYSICAL EDUCATION**

# 2511 - Grade 10  
Credit 0.25

Physical Education is designed to develop individual and team play, leadership skills, and interest in lifetime fitness. Among the activities will be soccer, hockey, volleyball, basketball, softball and personal fitness workouts.

## **POOL**

# 5532  
Grade level: 10, 11, 12  
Credit: 0.50

This non-core class includes: water aerobics, fitness swims, stroke work, games and free swim time. Any swim level experience is fine; no need to be a "swimmer". There's something for everyone! This class will be offered at the end of the day. Students may take this course more than once.

## **POOL & HEALTH**

# 4521  
Grade level: 11, 12  
Credit: 0.50

This class includes: water aerobics, fitness swims, stroke work, games and free swim time. Any swim level experience is fine; no need to be a "swimmer". There's something for everyone! This class will satisfy the Phys Ed requirement for Juniors and Seniors and will be offered at the end of the day. The Health component will center on concerns regarding self esteem, reproductive health, date rape, pregnancy, alcohol and drug influence on sexual activity and media influences on sexuality and the STD epidemic.



# ENGLISH

**REQUIREMENTS:** English 1, 2, 3 and 4 and Speech

**ERIE BUSINESS CENTER ARTICULATION AGREEMENT:** Students can earn 3 credits when they receive a grade of B or better in English 4 A, English 4H or English 4 AP.

**EDINBORO UNIVERSITY ARTICULATION AGREEMENT:** Upon matriculation at Edinboro University of Pennsylvania, students can earn 3 credits (English 115) when they earn an "A" or "B" in the following classes: English 1 H, English 2 H or English 2 AP, English 3 H or American Literature and English 4 H or English 4 AP.

**GANNON UNIVERSITY ARTICULATION AGREEMENT:** Upon matriculation at Gannon University, students can earn 3 credits (LENG 111) when they earn a B or better in the following classes: English 1 H, English 2 H or English 2 AP, English 3 H or English Literature and English 4 H or English 4 AP.

## **CREATIVE WRITING & LITERARY MAGAZINE**

# 5152  
Grade level: 10, 11, 12  
Credit: 0.50

In workshop and seminar sessions, you will be encouraged to stretch your creative talents by daily writing and evaluating poetry, memoirs, profiles, short stories, etc...You will read and write various genres from poetry to a one-act play. All students are expected to share their writing with the class, which includes peer editing, evaluation and conferencing. Students are expected to submit to Literary Magazine. This course may be taken for Academic or Honors credit. Students taking this course for Honors credit will sign a contract during the first week of class.

**ENGLISH 2 H**  
**ENGLISH 2 A**

# 2114  
# 2124  
Grade level: 10  
Credit: 1.0

Two novels are required for summer reading. All students prepare a variety of expository and creative compositions including a required interdisciplinary research paper. Other writing includes SAT timed essays, literary analysis papers, commentary writing, and various forms of narrative and descriptive composition. Vocabulary development and oral presentations are fundamental units. McDougal Littell LITERATURE and a wide variety of novels are used, in addition to VOCABULARY WORKSHOP, Level E.

Prerequisites for H: "B-" in English 1 H or "A-" in English 1 A or Department approval. Excellent critical and rhetorical awareness is expected for this level course.

**ENGLISH 2 AP**

# 2174  
Grade level: 10  
Credit: 1.0

This course will provide a sound background in rhetorical terminology, reading compositions on a variety of subjects and writing weekly (and sometimes daily) in the narrative, exploratory, expository, and argumentative formats. The books used are THE MC GRAW HILL READER by Gilbert Muller and AP LANGUAGE AND COMPOSITION WORKBOOK. Students will analyze essays for purpose, expectations of the audience, tone of the piece, and the voice of the author, in addition to a myriad of other rhetorical strategies. Oral presentations are a requirement, also. Throughout the course, students will study the vocabulary needed for the SAT, and how to write for both the SAT and Advanced Placement tests. The English Language and Composition AP exam may be taken in May 2010. The fee for this exam is approximately \$90.

Prerequisite: "A-" in English 1 H and completed application

**ENGLISH 3 H**  
**ENGLISH 3 A**

# 3114  
# 3124  
Grade level: 11  
Credit: 1.0

Two novels are required for summer reading. All students follow a chronological study of American Literature using Prentice-Hall THE LANGUAGE OF LITERATURE: AMERICAN LITERATURE, supplemented by assigned and optional novels and other literary works. A wide variety of expository and creative writing is required, including a mandatory research paper (6-8 page for Honors and 5-7 page for Academic) based on a topic from American Literature. Vocabulary study is from reading and WORD CLUES (Honors) and JOY OF VOCABULARY (Academic).

Prerequisites for H: "B-" English 2 H or "A-" in English 2 A or Department approval.

**ENGLISH 3**  
**AMERICAN LITERATURE AND COMPOSITION**

# 3134  
Grade level: 11  
Credit: 1.0

This course is designed to explore American culture from the earliest colonizing efforts through 1990 and examines the literature and philosophy, which have contributed to American popular culture. Specifically, the aim is to help students understand the development of American culture and to view literature as the expression of concepts and values that have formed the national character. With an emphasis on communication skills, written and oral, the course, in a general sense, helps students hone their skills and begin to prepare for the English Literature AP exam to be taken at the end of the senior year. Students in this course will receive AP quality points and will be required to move onto ENGLISH 4 AP. Students who do not take English 4 AP, will receive Honors quality points. This class requires high interest and ability due to the level of reading, writing and discussion required. Students will be using *The Norton Anthology of American Literature*, Volumes 1 and II and novels and dramas such as: *The Scarlet Letter*, *The Adventures of Huckleberry Finn*, *The Great Gatsby*, *The Awakening*, *The Grapes of Wrath*, *Walden*, *Death of a Salesman* and many more. Excellent critical and rhetorical awareness is expected for this level course.

Prerequisite: "B-" in English 2 AP or "A-" in English 2 H and teacher recommendation.

**ENGLISH 4 H**  
**ENGLISH 4 A**

# 4114  
# 4124  
Grade level: 12  
Credit: 1.0

Two novels are required for summer reading. All students follow a chronological study of British and World Literature using McDougal Littell THE LANGUAGE OF LITERATURE, BRITISH LITERATURE supplemented by assigned and optional novels and other literary works. A wide variety of expository and creative writing is required, including a mandatory 6-8 page research paper based on a topic from world literature. Vocabulary study and oral presentations are also fundamental components of this program.

Prerequisites for H: "B-" in English 3 H or "A-" in English 3 A or Department approval. Excellent critical and rhetorical awareness is expected for this level course.

**ENGLISH 4 AP**

# 4174  
Grade level: 12  
Credit: 1.0

Students are required to read and respond to three works from a prepared list for summer reading. This course provides the student with the critical ability to analyze literary works, to explicate them, and finally to evaluate their literary merit. Using a chronological approach, the course demands extensive reading of British and World Literature. Students will be expected to prepare numerous critical and creative projects, including required AP level timed essays on a weekly basis, demonstrating an ability to express ideas clearly and coherently. Robert Di Yanni's LITERATURE: APPROACHES TO FICTION, POETRY & DRAMA, NORTON ANTHOLOGY OF BRITISH LITERATURE, Perrine's INTRODUCTION TO POETRY, AP LITERATURE AND COMPOSITION WORKBOOK, and a variety of novels and dramas provide the basis for an in-depth study of literature requiring intellectual curiosity and a willingness to pursue English on a mature level. The English Literature AP exam may be taken in May 2010. The fee for this exam is approximately \$90.

Prerequisite: "A-" in English 3 H or "B-" in American Literature and Composition or Department approval.

## **JOURNALISM**

# 5124 and # 5182  
Grade level: 10, 11, 12  
Credit: 1.0 (# 5124)  
Credit: 0.5 (# 5182)

Students will learn and apply journalistic skills as they help produce the school newspaper, THE VILLA VOICE. The course includes the study of news, feature and opinion writing, editing, layout design and photography in newspaper production. Students will also gain an understanding of press law, press rights, and journalistic ethics. Journalism students serve as staff members of VILLA VOICE. Preparation and publication may require time commitments after school. Students must commit, by contract, to fulfill class requirements professionally and punctually. Students may take this course more than once.

Prerequisite: Department approval

## **LEADERSHIP 1**

# 5112  
Grade level: 10, 11, 12  
Credit: 0.50

Leadership 1 assists students in developing a personal philosophy of leadership. It provides a basic understanding of leadership concepts, theories and group dynamics and offers realistic opportunities in which to implement the skills acquired through study, discussion and observation. It is active, "hands-on, minds-on" experiential learning in areas such as: Leadership styles, motivation, meeting skills, communication and many more. Projects involve a research paper of 3-5 pages, a communication project and a portfolio. Students taking this course for Honors credit will sign a contract during the first week of class. Depending on the enrollment, 2 classes may be offered, one for underclassmen (Grade 10) and one for upperclassmen (Grades 11 & 12).

## **LEADERSHIP 2**

# 6152  
Grade level: 10, 11, 12  
Credit: 0.5

This course builds on existing skills with units on Group Dynamics, Problem Solving, Conflict Resolution, Ethics and Principles, Pluralism, and Evaluation. The final project will be to prepare and execute a seminar for incoming freshmen to acclimate them to VMA (high school life) for successful transition and optimum achievement. Excessive absenteeism is unacceptable.

Prerequisite: "B-" in Leadership 1 or Department approval

## **MINORITY LITERATURE**

# 6172  
Grade level: 10, 11 & 12  
Credit: 0.5

This course is offered every other year – It will be offered in 2010-2011

The focus of this class is to study literary works and the social/historical context of American groups who remain marginalized in dominant American cultures. You will study various genres of literature – short story, novel, poetry, personal essay, speech, memoir, autobiography, commentary and some drama. You will read, write and discuss literary works by a number of American minorities – African-American, Mexican-American, Native American, etc... In addition to studying racial minorities, this class will briefly touch on other minorities – homosexuals, the physically challenged, women writers, and religious minorities. Daily reading assignments and writing will be required in addition to preparing for individual and group presentations. Students taking this course for Honors credit will sign a contract during the first week of class.

## **SAT/ACT PREP**

# 5422  
Grade level: 10, 11, 12  
Credit: 0.5

This pass/fail course helps students prepare for standardized tests such as the SAT and the ACT. The course will be divided into three sections: verbal and writing skills, math skills and science skills. The verbal/writing section familiarizes students with the various aspects of the verbal and writing sections of the SAT and ACT tests. The topics covered are: sentence completion, reading comprehension, paragraph organization, identifying sentence errors, vocabulary and timed-writing responses. The math portion of the course includes practice with gridding student-produced responses, numbers, operations, algebra, functions, geometry, measurements, data analysis, statistics, and probability. The science portion of the course will include topics from biology, chemistry, physics, and the Earth/space sciences (geology, astronomy and meteorology). Students will practice skills such as graph reading, interpretation of scatterplots, interpretation of information presented in tables, interpretation of experimental results, and analysis and comparison of alternative viewpoints or hypotheses. This course helps prepare students by teaching them strategies for standardized test taking. Although this class cannot cover all topics as thoroughly as necessary, this class will provide specialized study skills, teacher and student feedback, and daily practice. This course will be taught in the Fall semester.

Prerequisite: Algebra 2, or Geometry with concurrent enrollment in Algebra 2

Fee: Students will purchase their own SAT and/or ACT workbooks. The cost for all workbooks is approximately \$45

## **SPEECH**

# 4132  
Grade level: 11, 12  
Credit: 0.50

This course provides students with numerous opportunities in various speaking situations, such as: argumentative, persuasive, introductory, demonstrative, informative, commercial, comedic, impromptu and improv, to mention a few. Students will become more comfortable in formal and informal speaking situations. Students who have completed 2 years of Speech and Forensics with a "C" average or above will be exempt from this course.



## FINE ARTS

**REQUIREMENTS:** Freshman Fine Arts course and Art Appreciation or Movie History or Music History in Junior or Senior Year.

## PERFORMING ARTS

### ACTING

# 9272  
Grade level: 10, 11, 12  
Credit: 0.50

Develop your individual acting skills through improvisation, readings, monologues, scenes with other classmates, and critique of self and others in the areas of comedy and drama. Emphasis will be placed on stage presence, character development, and performance. Audition skills and techniques and repertoire will also be developed.

Prerequisite: Audition and/or teacher approval

### ADVANCED DANCE

# 5542  
Grade level: 10, 11, 12  
Credit: 0.50

Continue your dance training and experience advanced training, challenging you beyond the basics. Guest choreographers will challenge you at an upbeat pace. Students may take this course more than once.

Prerequisite: Previous dance training – ballet, tap, jazz, etc. An audition is required.

## **DANCE**

# 5552  
Grade level: 10, 11, 12  
Credit: 0.50

Learn dance techniques, terminology, combinations, and routines for all styles of dance. The class will perform at the end of the semester. Students may take this course more than once.

## **MUSIC HISTORY**

# 4242  
Grade level: 11, 12  
Credit: 0.50

This course satisfies the upper level Arts requirement. The course is a chronological study of Western Music from Antiquity through the 21<sup>st</sup> Century. Emphasis is placed on gaining an understanding and appreciation of the History of Music and provides students with the opportunity to gain knowledge of musical critique and elements as well. Social, political, and cultural parallels and influences in conjunction with Music History will be discussed throughout the various styles and periods of music. In order to receive Honors credit, students will complete a research paper and other additional assignments agreed to by signing a contract within the first week of class.

## **MUSIC THEORY AP**

Grade level: 12  
Credit: 1.0

This course is offered every other year it will be offered in 2010-2011.

This advanced level course is designed for students who plan to pursue a career in music. The format of the course is independent. Class time will be used to prepare music for college auditions, as well as prepare for the required AP Music Theory exam. The Music Theory AP exam will be taken in May 2010. The fee for this exam is approximately \$90.

Prerequisite: Teacher approval

## **SHOW CHOIR**

# 5264  
Grade level: 10, 11, 12  
Credit: 1.0

Show Choir is a vocal and dance ensemble comprised of no more than 12 students performing vocal literature of the jazz and musical theatre repertoire. The ensemble continues the development of proper vocal technique while adding the elements of movement. This ensemble performs in all VMA concert settings. In addition, Show Choir performs outside of the VMA community in the greater Erie area for other schools, churches, and civic venues. This course requires additional commitment and rehearsals outside of school, which will count towards your course grade. Students may take this course more than once. A contract will be signed during the first week of class.

Prerequisite: Vocal Ensemble and/or teacher approval. Audition required

## **THEATRE**

# 9292  
Grade level:10, 11, 12  
Credit: 0.50

Theatre is an art form everyone can enjoy! This course will introduce students to the history and various elements of live theatre including, but not limited to, sections of performance, costuming, make-up, and critique. This course may be taken for Honors credit, which requires additional assignments and a contract. Students taking this course for Honors credit will sign a contract during the first week of class.  
Fee: \$10 (for unit on stage make-up)

## **VOCAL ENSEMBLE**

# 9212 (Semester)  
# 9214 (Year)  
Grade level: 10, 11, 12  
Credit: 0.50 # 9212  
Credit: 1.0 # 9214

Vocal Ensemble focuses on performing quality vocal literature of the concert repertoire with pieces from various periods and in various styles. Students will learn and apply proper vocal technique and production, sight reading skills, and basic music theory skills. Vocal Ensemble emphasizes accurate and expressive performance of choral literature and performs in all VMA concert settings. Additional rehearsals outside of school may be required, which will count towards your course grade. Students may take this course more than once. Students taking this course for Honors credit will sign a contract during the first week of class.

# **VISUAL ARTS**

## **ART APPRECIATION**

Grade level: 11, 12  
Credit: 0.50

This course is offered every other year – It will be offered in 2010-2011

This advanced level course is designed for students interested in meeting their Fine Arts requirement through the Art Department. Art Appreciation aims to provide students with a general overview of the study of art, including methods and techniques, media and materials, technologies, innovations, artists, art movements, and a general history of art. This is a seminar course, integrated with cooperative learning activities, technology-based research opportunities, and creative arts projects. This course also involves field trips in the form of museum visits and exhibitions. Students taking this course for Honors credit will sign a contract during the first week of class.

## **ART STUDIO – 2-D DESIGN AP**

# 7224  
Grade level: 12  
Credit: 1.0

This course is designed for students who plan to major in Art in college. Students must produce 5 pieces of artwork per quarter and 30 slides of artwork for the year. A portfolio reflecting skill in a variety of media, subjects, and techniques is produced and presented to the College Board for Advanced Placement credit. Summer work will be required upon approval of class and will count toward a percentage of the first quarter grade. The fee is approximately \$90, with additional costs for photographing of work and slide production.

Fee: \$ 90 for AP Portfolio, \$50 for supplies and \$40 for photos and slides.  
Prerequisite: Department approval

## **CERAMICS 1**

# 5212  
Grade level: 10, 11, 12  
Credit: 0.50

This course is designed for students interested in exploring the three-dimensional art media of clay. Students will explore the processes of hand building sculpture, glazing, and firing in the creation of finished ceramic pieces. An introduction to the process of throwing on the potter's wheel will also be given, with time allotted for each student to create a piece on the wheel.

Prerequisite: Studio Art or Department approval  
Fee: \$ 25

## **CERAMICS 2**

# 8272  
Grade level: 11, 12  
Credit: 0.50

This advanced level course is designed to engage the experienced student ceramist in further development of pottery and hand-building skills. Students will expound on knowledge gained in Ceramics 1 to design and produce more advanced ceramic vessels and sculptures.

Fee: \$ 25  
Prerequisites: "B+" in Ceramics 1 or Department approval

## **CERAMICS 3 (Independent Study)**

# 7232  
Grade level: 11, 12  
Credit: 0.50

This advanced level course is designed for students who show significant ability and knowledge in three-dimensional ceramic design. In order to take this course, students must have earned a B+ or higher in Ceramics 1 and 2. Projects will emphasize the use of the pottery wheel and hand building techniques to design dynamic and college-level sculptural pieces. Students will be required to complete a minimum of four pieces for the semester, and should have ample experience with glazing.

Prerequisites: "B+" in Ceramics 1 and Ceramics 2 or Department approval

Fee: \$ 25

## **DIGITAL PHOTOGRAPHY 1** **(Students must have a digital camera)**

# 8242  
Grade level: 10, 11, 12  
Credit: 0.50

This is a beginning level course for students who wish to develop their artistic talents in photography. It provides a core background in how to use a digital camera along with how to safely store and save photos on computers and storage devices. This course also provides students with the knowledge of printing devices. Along with this course the students will learn the correct way to take photos with different styles of projects throughout the semester. This course fulfills the Fine Arts requirement for all students. Students must have a digital camera.

Fee: \$ 25

## DIGITAL PHOTOGRAPHY 2

# 5252  
Grade level: 10, 11, 12  
Credit: 0.50

This intermediate level course is for students who wish to develop their artistic talents in photography. It provides a review background in how to use a digital camera. This course also provides students with an advanced knowledge of digital photography. Projects throughout the semester are Architecture Photography (inside and out), Nature Photography (landscape and wildlife), Photojournalism and Event Photography. Students can take Digital Photography 2 or 3 before going on to Digital Photography 4. Students must have a digital camera.

Prerequisite: "B+" in Digital Photo 1 or Department approval

Fee: \$ 25

## DIGITAL PHOTOGRAPHY 3

# 5282  
Grade level: 10, 11, 12  
Credit: 0.50

This is an intermediate level course for students who wish to develop their artistic talents in photography. It provides a review background in how to use a digital camera. This course also provides students with an advanced knowledge of digital photography. Projects throughout the semester are People and Portraits, Sports Photography, Sunsets and Night photography (around Erie). Students can take Digital Photography 2 or 3 before going on to Digital Photography 4. Students must have a digital camera.

Prerequisite: "B+" in Digital Photo 1 or Department approval

Fee: \$ 25

## DIGITAL PHOTOGRAPHY 4 (Independent Study)

# 6222  
Grade level: 11, 12  
Credit: 0.50

Students selecting the course must produce a photo essay that reflects a specific theme. The theme may be any subject or element of photography that can be a focus of the semester's work. Students have a minimum of 20 images submitted at the end of each quarter. **Students must have a digital camera.**

Prerequisite: "B+" in Digital Photo 2 and Digital Photo 3 or Department approval

Fee: \$ 25

## DRAWING 1

# 5222  
Grade level: 10, 11, 12  
Credit: 0.50

This is an intermediate level course for students who wish to develop their artistic talent in two-dimensional media. It provides a background in drawing through the use of various drawing media such as pencil, charcoal, ink, pastels and colored pencil. The materials, methods, processes and techniques involved in the study of drawing are investigated. Units presented will integrate all of the above sections of the practice of art, with a focus on studio projects and assignments. Subject matter from still life to the human figure will be explored, as well as subjects from nature.

Fee: \$ 25

Prerequisite: Studio Art

## **DRAWING 2**

# 6272  
Grade level: 10, 11, 12  
Credit: 0.50

This intermediate level course is designed for students who are seriously interested in further developing their talent in two-dimensional media. This class will encompass an in-depth study of drawing using various media such as pencil, colored pencil, charcoal, pastel, ink/watercolor and mixed media collage. Subject matter will include portraiture, human figure, still life, nature, abstraction and imaginative imagery.

Fee: \$ 25

Prerequisite: "B+" in Drawing 1 or Department approval

## **DRAWING 3 (Independent Study)**

# 7222  
Grade level: 11, 12  
Credit: 0.50

Students will complete a minimum of six major drawings that will be evaluated by the student and teacher. A sketchbook will be kept and submitted every two weeks. The sketchbook should reflect brainstorming ideas and practice work in preparation for each of the six major drawings. At least one sketch will be done outside of class each week. Media and subject are completely up to the student, but must be approved prior to beginning the work.

Fee: \$ 25

Prerequisites: "B+" in Drawing 2 or Department Approval

## **GRAPHIC ARTS 1**

# 8282  
Grade level: 10, 11, 12  
Credit: 0.50

This course is designed for students who are interested in the field of graphic design. This course will cover areas of design such as advertising, fashion illustration, product design, graphic design, computer-aided designs and architectural design. This is an introductory course to the tools and processes of graphic art. Students must have a digital camera.

Fee: \$ 25

## **GRAPHIC ARTS 2**

# 8292  
Grade level: 10, 11, 12  
Credit: 0.50

This course is the follow-up to Graphic Arts 1. It emphasizes the more advanced techniques and tools of design. Students may work on similar design problems as the Graphic Arts 1 students; however, more creativity and advanced layouts are expected from Graphic Arts 2 students. In addition, this course furthers explores the processes of the Adobe Photoshop® computer program, animation, and graphic design. Students must have a digital camera.

Fee: \$ 25

Prerequisite: "B+" in Graphic Arts 1 or Department approval

## **GRAPHIC ARTS 3 (Independent Study)**

# 9222  
Grade level: 11, 12  
Credit: 0.50

A student will complete a minimum of 8 graphic designs. A sketchbook will be kept and submitted every two weeks. The sketchbook should reflect brainstorming ideas and practice work in preparation for each of the graphic designs. Students must have a digital camera.

Fee: \$ 25

Prerequisites: "B+" in Graphic Arts 2 or Department Approval

## **MASS MEDIA**

# 6252  
Grade level: 10, 11, 12  
Credit: 0.50

Mass Media is a course that explores all aspects of the media, its place in society, and historical significance. It will involve the students with the history and application of American media including newspapers, radio, television, movies, advertising, marketing, and the Internet. Students will also be responsible for directing, producing and editing the afternoon video announcements. Students may take this course for Honors credit if they do additional assignments (videotaping activities and afternoon announcements). Students taking this course for Honors credit will sign a contract during the first week of class.

Fee: \$ 25

## **MOVIE HISTORY**

# 6242  
Grade level: 11, 12  
Credit: 0.50

This course is offered every other year – It will be offered in 2009-2010

This class will take students from the birth of movies to the present day. The class will break down and discuss the movies we watch in class and do an analysis of each film. Students will also watch and analyze two out of class movies and write a critique of each. The class will see fifteen movies in the course of the semester; some movies just in parts and others in whole. We will examine how the movies were made from all aspects; filming, editing, sound, music, actors and directors. Students taking this course for Honors credit will sign a contract during the first week of class.

## **PAINTING 1**

# 5262  
Grade level: 10, 11, 12  
Credit: 0.50

This intermediate level course is designed for students who are seriously interested in developing their painting skills beyond the basic level. This course serves as an introduction to the intense study of painting and the materials, methods, processes and techniques involved in using the medium. This course also examines the importance of art history, art criticism and aesthetics to the study of the process of painting. Units presented will integrate all of the above sections of the practice of art, with a focus on studio projects and assignments. It is recommended that Drawing 1 be taken before Painting 1.

Prerequisite: Studio Art and Drawing 1 or Department approval.

Fee: \$ 25

## **PAINTING 2**

# 7272  
Grade level: 10, 11, 12  
Credit: 0.50

This is an advanced level course designed for students who are seriously interested in further developing their painting skills. This two-dimensional and mixed media course is designed to allow students to explore more advanced methods of painting by investigating various subject matter and media. Technical skill in painting with acrylic and watercolor will be emphasized, and students will also be encouraged to experiment with the inclusion of other two-dimensional media, such as paper, ink, pastel, and charcoal. Students will be self-directed to explore the full capability of paint and brush, and to focus on the development of their own style and process. Competence with painting media and tools is expected.

Fee: \$ 25

Prerequisites: "B+" in Painting 1 and Drawing 1 or Department approval

## **PAINTING 3 (Independent Study)**

# 9252  
Grade level: 11, 12  
Credit: 0.50

Students will complete a minimum of four paintings in either watercolor or acrylic media. Acrylic paintings may be done on canvas board or stretched canvas. Watercolors will be done on stretched paper. Students will prepare their own surfaces, choose the appropriate media, and develop their compositions. Media and subject are completely up to the student, but must be approved prior to beginning the work. A sketchbook will be kept and submitted every two weeks. The sketchbook should reflect brainstorming ideas and practice work in preparation for each of the paintings. All preliminary work will also be handed in at the end of each quarter.

Fee: \$ 25

Prerequisites: "B+" in Painting 2 or Department Approval

## **STUDIO ART**

# 1232  
Grade level: 10, 11, 12  
Credit: 0.50

This course serves as an introduction to the subject of art, techniques, methods, and materials in the art process. Units presented will integrate the above aspects of the practice of art, with a focus on studio projects and assignments. Students must purchase a sketchbook and drawing kit.

Fee: \$25

## **TEXTILE DESIGN 1**

# 9262  
Grade level: 10, 11, 12  
Credit: 0.50

This course is designed for the student interested in an in-depth exploration of wearable and fabric art. Students will gain a stronger knowledge of textile art forms along with fiber application in wall murals, clothing, and sculpture pieces. Projects will include: Macramé, Hand Beading, Vertical Weaving, Fabric Painting, Embroidery and Appliqué.

Prerequisite: Studio Art

Fee: \$ 25

## **TEXTILE DESIGN 2**

# 5232  
Grade level: 10, 11, 12  
Credit: 0.50

This advanced-level course is designed for students interested in further study of the applications learned in Textiles 1. This class will encompass an in-depth study of large mural design and construction, an independent wearable art piece, and a cooperative class project. Additionally, a jewelry-making unit will be introduced.

Prerequisite: "B+" in Textile Design 1

Fee: \$ 25

## **YEARBOOK**

# 6214  
Grade level: 10, 11, 12  
Credit: 1.0

Students in this course are responsible for the publication of the Villa Yearbook. Students scheduling this course should have mastered basic writing skills, have an eye for design or a photographic experience and a commitment to meet deadlines. Time in school and after school will be required for students. Students will also have to sell Yearbook ads to offset the cost of the book. Students may take this course more than once. Class size is limited to 12 students so Teacher Approval is required.

Prerequisites: Approval by Yearbook teacher.



# FOREIGN LANGUAGE

**REQUIREMENTS:** 2 consecutive years of the same Language.

**ARTICULATION AGREEMENT WITH GANNON UNIVERSITY:** Upon matriculation at Gannon University, students can earn 3 credits in Latin (LAT 111) when they earn a B or better in Latin 1 H, Latin 2 H, Latin 3 H and Latin 4 H. Students can earn 2 credits in Spanish (SPAN 111) when they earn a B or better in Spanish 1 H, Spanish 2 H, Spanish 3 H and Spanish 4 H.

**LATIN 1 A**  
**LATIN 1 H**

# 1324  
# 1354  
Grade level: 10, 11, 12  
Credit: 1.0

This course is a complementary approach of traditional and audio-lingual methods applied to language skills of reading, writing, listening, and speaking. While learning basic syntax, the student will also study the culture of the Romans.

**LATIN 2 A**  
**LATIN 2 H**

# 2324  
# 2354  
Grade level: 10, 11, 12  
Credit: 1.0

This course is a continuation of Latin 1 with emphasis placed on the reading and comprehension of texts, as well as other interesting aspects of Roman culture.

Prerequisite for Latin 2 H: "B" in Latin 1 H or "A-" in Latin 1 A or Department approval.

Prerequisite for Latin 2 A: "C-" in Latin 1 A.

**LATIN 3 H**

# 3324  
Grade level: 11, 12  
Credit: 1.0

This course is designed for the serious and motivated student who wishes to further develop and deepen their skills and knowledge in Latin. A wide range of Latin literature is also presented. There is continued emphasis on reading and comprehension; an added feature is interpretation.

Prerequisite: "B" in Latin 2 H or "A" in Latin 2 A or Department approval.

**LATIN 4 H**

# 4324  
Grade level: 12  
Credit: 1.0

This course is a survey of Latin literature from the 3<sup>rd</sup> century B.C. up to and including the Era of the Pax Romana. Authors will include Sulpicia, Catullus, Martial, Virgil, Ovid, Horace, Pliny the Younger, Petronius, extracts from The Vulgate Bible, and Cicero's Letters. Students will learn about the cultural and political development of Rome through a close reading of original texts, perfect their translation skills, and enhance their appreciation for, and knowledge of, the many profound connections between classical and modern western culture.

Prerequisite: "B" in Latin 3 H or Department approval.

**SPANISH 1 A  
SPANISH 1 H**

# 1334  
# 1344  
Grade level: 10, 11, 12  
Credit: 1.0

A proficiency approach to the language skills of listening, speaking, reading, and writing Spanish through the study of basic patterns and structures. A variety of activities will be used to expand and explore the student's knowledge of the Spanish language and the Spanish-speaking world.

**SPANISH 2 A  
SPANISH 2 H**

# 2334  
# 2344  
Grade level: 10, 11, 12  
Credit: 1.0

This course is a continuation of first year study with emphasis on language structure. Daily life events are presented along with interesting cultural insights to introduce new and current vocabulary and structures.

Prerequisite for Spanish 2 H: "B" in Spanish 1 H or "A-" in Spanish 1 A  
Prerequisite for Spanish 2 A: "C-" in Spanish 1 A

**SPANISH 3 H**

# 3334  
Grade level: 11, 12  
Credit: 1.0

This course is designed for the serious and motivated student who wishes to further develop and deepen their skills and knowledge in Spanish. A variety of activities and topics will expand student vocabulary and grammar skills. Audiotapes will help polish listening skills. The history of Spain from the early civilizations (Greek, Roman), the monarchies, the Civil War to the present is covered. Selected literary and artistic works will be used to expand knowledge of grammar and culture.

Prerequisite: "B" in Spanish 2 H or "A" in Spanish 2 A or Department approval.

**SPANISH 4 H**

# 4344  
Grade level: 12  
Credit: 1.0

Vocabulary and grammar will be expanded through dialogues, tapes, and songs. More emphasis will be placed on writing and spontaneous speech using directed writings and skits, then expanding to more original projects. Grammar and pronunciation topics will be covered through oral and written activities. Literary and artistic works will be used to expand knowledge of grammar and culture.

Prerequisite: "B" in Spanish 3 H or Department approval.



# MATHEMATICS

**REQUIREMENTS:** 3.25 credits of Math; 1 additional credit in Math and/or Science.

**ERIE BUSINESS CENTER ARTICULATION AGREEMENT:** Students can earn 3 credits when they receive a grade of B or better in Algebra 2 A or Algebra 2 H.

**EDINBORO UNIVERSITY ARTICULATION AGREEMENT:** Upon matriculation at Edinboro University of Pennsylvania, students can earn 4 credits (Math 107) when they earn an “A” or “B” in the following classes: Algebra 2 H, Geometry H, Precalculus/Trigonometry H and Calculus H or AP.

**GANNON UNIVERSITY ARTICULATION AGREEMENT:** Upon matriculation at Gannon University, students can earn 3 credits (MATH 111 or MATH 140) when they earn a B or better in the following classes: Algebra 1 H, Algebra 2 H, Geometry H, Precalculus/Trigonometry H and Calculus H or AP.

**NCAA ELIGIBILITY STANDARDS:** For Division I colleges, 3 credits of Mathematics are required. For Division II colleges, 2 credits of Mathematics are required. Approved courses are Algebra 1 or above.

**ALGEBRA 1 A**  
**ALGEBRA 1 H**

# 1424  
# 1414  
Grade level: 10,11,12  
Credit: 1.0

Algebra 1 provides the foundation for future mathematics courses. It begins the transition from the concrete reasoning of arithmetic to the abstract reasoning of higher mathematics. Students will learn to simplify algebraic expressions, and to solve and graph algebraic equations. They will also apply these skills to solving real world problems. The honors level explores topics in more depth and moves at a faster pace.

**ALGEBRA 2 A**  
**ALGEBRA 2 H**

# 3434  
# 3444  
Grade level: 10, 11  
Credit: 1.0

Algebra 2 expands on the topics studied in Algebra 1. Topics include factoring, variations and graphs, linear and quadratic relations, systems of equations, imaginary and complex numbers, powers, radicals, and radical equations. The honors level explores topics in more depth and moves at a faster pace.

Prerequisite for Algebra 2 A: "C-" in Geometry A or Department approval.

Prerequisite for Algebra 2 H: "B-" in Geometry H or Department approval.

**ALGEBRA 3 A**

# 4472  
Grade level: 12  
Credit: 0.5

Algebra 3 is a semester course that explores advanced algebraic concepts. Topics include systems of equations, quadratic equations, matrices, roots of polynomials, and graphing algebraic equations. This course will be taught in the Spring semester.

Prerequisites: "C-" in Algebra 2 and Trigonometry, or Department approval.

**CALCULUS AP**

# 5474  
Grade level: 12  
Credit: 1.0

Calculus AP is a rigorous course that follows the Advanced Placement Calculus "AB" curriculum. It includes both differential and integral calculus. Past AP exam questions will be used throughout the class so that students may gain experience and build confidence. A fee may be included for an AP test booklet. The "Calculus AB" AP exam may be taken in May 2010. The fee for this exam is approximately \$90.

Prerequisites: "B" in Algebra 2 H, Geometry H, Pre-Calculus H and Department approval.

Fee: Students will purchase their own workbooks. The cost is approximately \$ 25.

**CONSUMER MATHEMATICS**

# 4454  
Grade level: 11, 12  
Credit: 1.0

Consumer mathematics provides students with the math skills necessary for personal and career situations. Topics include computational skills, income, banking, credit, taxes, insurance, and budgeting.

Prerequisite: Informal Geometry or Geometry, or Department approval.

**GEOMETRY A  
GEOMETRY H**

# 2434  
# 2424  
Grade level: 10  
Credit 1.0

Geometry provides an introduction to formal mathematics. Students will develop an understanding of logic and mathematical reasoning, and will apply these reasoning skills to relationships between geometric figures including points, lines, planes, triangles, polygons, and circles. They will also use these relationships and their algebra skills to solve real world problems. The honors level will explore topics in more depth, including an increased emphasis on formal proof, and will move at a faster pace.

Prerequisite for Geometry A: "C-" in Algebra 1 A or Department approval. Students earning a "D+" or lower in Algebra 1 are expected to attend a refresher course during the summer to remain in the academic program.

Prerequisite for Geometry H: "B-" in Algebra 1 H or Department approval

**INFORMAL GEOMETRY**

# 2444  
Grade level: 10  
Credit 1.0

Informal geometry emphasizes an understanding of the application of geometric theorems and postulates. Students will explore measurement and construction, angles, triangles, polygons, circles, and the surface area and the volume of three-dimensional figures.

Prerequisite: Introduction to Algebra or Algebra 1 or Department approval

**PRECALCULUS / TRIGONOMETRY H**

# 4414  
Grade level: 11, 12  
Credit: 1.0

Precalculus / Trigonometry is an advanced math course that combines the topics of College Algebra (Algebra 3), Trigonometry, and Analytical Geometry. (It is the honors level of Trigonometry and Algebra 3.) It also shows the relationships between these fields of mathematics and provides a solid foundation for the study of Calculus. Topics include functions, equations and inequalities, integers and polynomials, rational numbers and rational functions, recursion and mathematical induction, polar coordinates and complex numbers, graphs, vectors, the trigonometric functions, right triangles, graphs of trigonometric functions, fundamental identities, inverse trigonometric functions, radian measures, triangles, vectors, and analytical geometry.

Prerequisites: "B-" in Algebra 2 H or Department approval.

## **SAT/ACT PREP**

# 5422  
Grade level: 10, 11, 12  
Credit: 0.5

This pass/fail course helps students prepare for standardized tests such as the SAT and the ACT. The course will be divided into three sections: verbal and writing skills, math skills and science skills. The verbal/writing section familiarizes students with the various aspects of the verbal and writing sections of the SAT and ACT tests. The topics covered are: sentence completion, reading comprehension, paragraph organization, identifying sentence errors, vocabulary and timed-writing responses. The math portion of the course includes practice with gridding student-produced responses, numbers, operations, algebra, functions, geometry, measurements, data analysis, statistics, and probability. The science portion of the course will include topics from biology, chemistry, physics, and the Earth/space sciences (geology, astronomy and meteorology). Students will practice skills such as graph reading, interpretation of scatterplots, interpretation of information presented in tables, interpretation of experimental results, and analysis and comparison of alternative viewpoints or hypotheses. This course helps prepare students by teaching them strategies for standardized test taking. Although this class cannot cover all topics as thoroughly as necessary, this class will provide specialized study skills, teacher and student feedback, and daily practice. This course will be taught in the Fall semester.

Prerequisite: Algebra 2, or Geometry with concurrent enrollment in Algebra 2

Fee: Students will purchase their own SAT and/or ACT workbooks. The cost for all workbooks is approximately \$45.

## **STATISTICS H**

# 4482  
Grade level: 12  
Credit: 0.5

Statistics is a semester introductory course. Topics include representing data, central tendency, variation, mathematical models, experimental design, and probability. Students will be required to have a TI scientific or graphing calculator that includes statistical functions.

Prerequisite: "B-" in Algebra 2 H or Department approval

## **TRIGONOMETRY A**

# 5452  
Grade level: 12  
Credit: 0.5

Trigonometry is a semester course that provides an extension of many of the concepts of algebra and geometry. Although not required for all areas of study, this course would be beneficial for college-bound students interested in health, business, science, or math fields. Students will study the trigonometric functions, right triangles, graphs of trigonometric functions, fundamental identities, inverse trigonometric functions, radian measures, triangles, and vectors. This course will be taught in the Fall semester.

Prerequisite: "C-" in Algebra 2 or Department approval.



# SCIENCE

**REQUIREMENTS:** 3 credits of Science; 1 additional credit in Math and/or Science.

**ERIE BUSINESS CENTER ARTICULATION AGREEMENT:** Students can earn 3 credits when they receive a grade of B or better in Biology A or Biology H.

**EDINBORO UNIVERSITY ARTICULATION AGREEMENT:** Upon matriculation at Edinboro University of Pennsylvania, students can earn 3 credits (Biology 101) when they earn an “A” or “B” in the following classes: Earth Space Science H, Biology H, Chemistry H, and Biology 2 AP or Chemistry 2 AP or Physics 1 H and Physics 2 H.

**GANNON UNIVERSITY ARTICULATION AGREEMENT:** Upon matriculation at Gannon University, students can earn 3 credits (BIOL 139) when they earn a B or better in the following classes: Earth Space Science H, Biology H, Chemistry H, and Biology 2 AP or Chemistry 2 AP or Physics 1 H and Physics 2 H.

## ASTRONOMY

# 5712  
Grade level: 10, 11, 12  
Credit: 0.50

This course is offered every other year – It will be offered in 2009-2010

This course is a study of the universe and its component parts such as galaxies, solar systems, nebulae, and stars, with a special emphasis on our sun. There is time spent on the development of astronomy as a science and instruments used. A special section is devoted to current discoveries and theories now developing. Films, class activities, and laboratory experiences are included. Students taking this course for Honors credit will sign a contract during the first week of the class.

Prerequisites: Earth Space Science and Departmental approval.

**BIOLOGY H**  
**BIOLOGY A**

# 2714  
# 2724  
Grade level: 10  
Credit: 1.0

This course is required for Sophomores and covers the study of cellular structure and functions, genetic principles, evolution, a survey of the six kingdoms of organisms, and ecology. There is an emphasis on laboratory, hands-on experiences. Lecture, discussion, and projects are also components of the course. In the honors level the material is covered in more detail, more independent work is expected, including written work and critical thinking.

Prerequisite for Biology H: "B+" in Earth Space Science H or "A" in Earth Science A with Department approval.

**BIOLOGY 2 AP**

# 5794  
Grade level: 12  
Credit: 1.0

This is a comprehensive course designed to be the equivalent of an introductory college level biology course. AP Biology aims to provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly evolving field of biology. The areas of study include: molecular and cellular biology, genetics, ecology, evolution, plant and animal anatomy and physiology. Primary emphasis is placed on developing an understanding of concepts; essential to this conceptual understanding are: scientific inquiry, recognition of unifying themes that integrate the major topics in biology, application of biological knowledge, and critical thinking applied to environmental and societal concerns. The Biology AP exam may be taken in May 2010. The cost of the test is approximately \$90.

Fee: \$50

Prerequisites: "B+" in Biology H and Chemistry H, or "A" in Biology A and Chemistry A or Department Approval

**CHEMISTRY H**  
**CHEMISTRY A**

# 3714  
# 3724  
Grade level: 11  
Credit: 1.0

This course satisfies the Junior science requirement. In this course students will apply the basic concepts in chemistry to everyday life. This course includes lecture, discussion, reading, problem solving, calculations, research based projects, and laboratory experiences, enabling students to learn many concepts through the discovery process and scientific method. Topics include: SI units, significant figures, graphing, dimensional analysis, matter and its properties, atomic structure and bonding, naming and writing formulas, balancing equations, moles and stoichiometry, behavior of gases, solutions, acids, bases and salts, mixtures, chemical behavior in reactions, analysis of energy sources and heat transfers and basic organic chemistry. The Honors level course will explore topics including oxidation-reduction, and acids and bases, and organic and biochemistry more in depth than the Academic level course.

Prerequisites for Chemistry H: Earth Space Science, "B" in Biology H or "A" in Biology A , and "B" in Algebra H" or "A" in Algebra A or Department approval.

Prerequisites for Chemistry A: Earth Space Science A, Biology A, Algebra A or Department approval.

## **CHEMISTRY 2 AP**

# 5764  
Grade level: 12  
Credit: 1.0

AP Chemistry is designed to be the equivalent to the general chemistry course that is usually taken during the first year of college. Students will attain a depth of understanding of fundamentals and a reasonable competence in dealing with chemical problems. The course will contribute to the development of the students' abilities to think clearly and to express their ideas orally and in writing, with clarity and logic. The student must be willing to do the work of a typical college chemistry course. The Chemistry AP exam may be taken in May 2010. The fee for this exam is approximately \$90.

Fee: \$ 50

Prerequisites: "B+" in Chemistry H and "B+" in Geometry H or Algebra 2 H

## **ENVIRONMENTAL CHALLENGES**

# 7762  
Grade level: 11, 12  
Credit: 0.50

This is a semester course focused on environmental issues and problems. The topics of focus include: environmental problems in a social context, ecological principles and their application, energy including alternative energy, resources including water, air, and land, and pollution and policy. A text will be used as well as articles addressing issues and topics. Field experiences and laboratory exercises will provide valuable exploration of these ecological and environmental topics. The interacting influences of history, religion, economics, science and technology, society and government on the environment will be studied and analyzed through lecture and discussion. Students taking this course for Honors credit will sign a contract during the first week of class.

Prerequisites: Earth Space Science and Biology. Chemistry can be taken at the same time.  
Fee: \$ 25

## **FORENSIC SCIENCE**

# 7782  
Grade level: 12  
Credit: 0.50

Forensics uses science to assess and evaluate crime scene scenarios. This class will integrate knowledge and lab skills from Earth Science, Biology and Chemistry and put them into a real world scenario. Forensic Science class will give students the opportunity to immerse themselves in this popular topic.

Prerequisites: Earth Space Science, Biology and Chemistry with Department approval.  
Fee: \$ 25

## **HUMAN BIOLOGY 1 H**

# 6792  
Grade level: 11, 12  
Credit: 0.50

This honors level course is designed for students interested in pursuing a medically-related career. The course focuses on the biochemistry of cellular processes, structures and functions of body cells and tissues, and takes a systems approach to studying the anatomy, physiology, and pathology of the cardiovascular, endocrine, and nervous systems. You will learn the structures, functions, and dysfunctions of the human body by studying structures and processes at a variety of levels including the molecular, cellular, tissue, organ and organ system level.

Fee: \$ 25

Prerequisites: Earth Space Science; "B" in Biology H or "A" in Biology A. or department approval. Chemistry may be taken at the same time.

## **HUMAN BIOLOGY 2 H**

# 7792  
Grade level: 11, 12  
Credit: 0.50

This honors level course is designed for students interested in pursuing a medically-related career. The course takes a systems approach to studying the anatomy, physiology, and pathology of skeletal, muscular, integumentary, digestive, respiratory, and reproductive systems. Students may take Human Biology 2 without taking Human Biology 1. You will learn the structures, functions, and dysfunctions of the human body by studying structures and processes at a variety of levels including the molecular, cellular, tissue, organ and organ system level.

Prerequisites: Earth Space Science; "B" in Biology H or "A" in Biology A or departmental approval. Chemistry may be taken at the same time.

Fee: \$ 25

## **OCEANOGRAPHY**

#  
Grade level: 10, 11, 12  
Credit: 0.50

This course is offered every other year it will be offered in 2010-2011.

From whence did all this water come? What is really under there? What does the ocean offer for the future? How do marine animals live and what are their special adaptations for ocean living? These and many more questions are answered in a study of the development of oceans, research done, and possibilities to consider for the twenty first century. Information is shared through films, interactive lectures, activities including Internet site explorations, and research. Students taking this course for Honors credit will sign a contract during the first week of class.

Prerequisites: Earth Space Science and Department approval

## **PHYSICS 1 H**

# 6732  
Grade level: 12  
Credit: 0.50

Physics is the science of energy and motion. Physics 1 introduces mechanics, which is the study of the motion of physical bodies. Students will use conceptual and mathematical models to describe and explain different types of motion. It is highly recommended that a student pursuing a science career take both semesters of Physics H.

Prerequisites: "B" in Algebra 2, "B" in Precalculus/Trigonometry H or "A" in Trigonometry A, and "B+" in Chemistry H, or Department approval. (Precalculus /Trigonometry may be taken concurrently.)

## **PHYSICS 2 H**

# 6742  
Grade level: 12  
Credit: 0.50

This course introduces the various divisions of physics, building on the concepts from Physics I. Topics include: mechanical energy, waves, optics, acoustics, electrostatics, electricity, magnetism, and modern physics.

Prerequisites: "B" in Physics 1 H or Department approval.

## **PHYSICS A**

# 5782  
Grade level: 11, 12  
Credit: 0.50

This is a conceptual survey course of physics. The mathematical emphasis is minimal. Topics include: motion, forces, energy, waves, acoustics, optics, and electricity. Practical applications are stressed.

Prerequisites: Algebra 1, Earth Space Science, Biology and Chemistry with Department approval.

## **SAT/ACT PREP**

# 5422  
Grade level: 10, 11, 12  
Credit: 0.5

This pass/fail course helps students prepare for standardized tests such as the SAT and the ACT. The course will be divided into three sections: verbal and writing skills, math skills and science skills. The verbal/writing section familiarizes students with the various aspects of the verbal and writing sections of the SAT and ACT tests. The topics covered are: sentence completion, reading comprehension, paragraph organization, identifying sentence errors, vocabulary and timed-writing responses. The math portion of the course includes practice with gridding student-produced responses, numbers, operations, algebra, functions, geometry, measurements, data analysis, statistics, and probability. The science portion of the course will include topics from biology, chemistry, physics, and the Earth/space sciences (geology, astronomy and meteorology). Students will practice skills such as graph reading, interpretation of scatterplots, interpretation of information presented in tables, interpretation of experimental results, and analysis and comparison of alternative viewpoints or hypotheses. This course helps prepare students by teaching them strategies for standardized test taking. Although this class cannot cover all topics as thoroughly as necessary, this class will provide specialized study skills, teacher and student feedback, and daily practice. This course will be taught in the Fall semester.

Prerequisite: Algebra 2, or Geometry with concurrent enrollment in Algebra 2

Fee: Students will purchase their own SAT and/or ACT workbooks. The cost for all workbooks is approximately \$45



# SOCIAL STUDIES

**REQUIREMENTS:** World History 1, World History 2, American Heritage/US History and Government

**ERIE BUSINESS CENTER ARTICULATION AGREEMENT:** Students can earn 3 credits when they receive a grade of B or better in Psychology.

**EDINBORO UNIVERSITY ARTICULATION AGREEMENT:** Upon matriculation at Edinboro University of Pennsylvania, students can earn 2 elective credits in History when they earn an “A” or “B” in the following classes: World History 1 H, World History 2 H, US History H or AP and Psychology AP or Government H or AP.

**GANNON UNIVERSITY ARTICULATION AGREEMENT:** Upon matriculation at Gannon University, students can earn 3 credits in History (LHST 111) when they earn a B or better in the following classes: World History 1 H, World History 2 H, US History H or AP, Psychology AP and Government H.

## GOVERNMENT

# 4812  
Grade level: 12  
Credit: 0.50

This required course for seniors discusses the foundations of our governmental system and provides an in-depth examination into the three branches of government. The roles of the federal, state, and local levels are examined. Students are encouraged to apply their knowledge by taking an active role in our system. Students taking this course for Honors credit will sign a contract during the first week of class explaining the requirements which include three research papers.

## PSYCHOLOGY

# 5822  
Grade level: 11, 12  
Credit: 0.50

This course relates theories of behavior to practical life situations. Topics will include: learning theories and behavior shaping, development and motivation, normal and abnormal behavior. College credit is not available for this course. Students taking this course for Honors credit will sign a contract during the first week of class.

## **PSYCHOLOGY AP**

# 5834  
Grade level: 12  
Credit: 1.0

An entire introductory college-level course in Psychology will be taught, covering such topics as the historical development of the field, development, learning theories, sensation and perception, testing, motivation and emotion, and abnormal behavior. Only those willing to do college level work should elect this course. The Psychology AP exam may be taken in May 2010. The fee for this exam is approximately \$90.

Prerequisite: "B" in US History AP, "A" in US History H or "A+" in US History A or Department approval.

## **US HISTORY H US HISTORY A**

# 3844  
# 3834  
Grade level: 11  
Credit: 1.0

This history course covers our American heritage from colonial times to the present. Notetaking, essay writing, and research paper skills are refined in the course. In addition to the material covered in US History A, the Honors class adds analysis of events, additional reading and essay writing, and a research paper.

Prerequisite for H: "B+" in World History 2 H, or "A" in World History 2 A or Department approval.

## **US HISTORY AP**

# 3874  
Grade level: 11  
Credit: 1.0

United States History taught on the AP level will provide students with a learning experience equivalent to an introductory college level course. A chronological approach is taken to the social, economic and political aspects of our history. Students will be challenged to deal critically with historical materials to analyze the problems of the past and make informed conclusions. Extensive writing and reading will be required in this course. The United States History AP exam may be taken in May 2010. The fee for this exam is approximately \$90.

Prerequisite: "A" in World History 2 H or "A+" in World History 2 A or Department approval.

## **WORLD HISTORY 2 H WORLD HISTORY 2 A**

# 2814  
# 2824  
Grade level: 10  
Credit: 1.0

This course will integrate the history of the east and west in a survey course covering the time period beginning with the Scientific Revolution up to modern times. The focus will be on themes that serve as unifying threads, helping students to see what is peculiar about each time period and providing ways to make comparisons of these ideas over time. The themes include but are not limited to: The impact of interaction among major societies; the relationship of change and continuity over time; the impact of technology on people and the environment; systems of social and gender structure; cultural and intellectual developments; and growth of states and political entities.

Prerequisite for World History 2 H: "B+" in World History 1 H or "A" in World History 1 A, or Department approval.



# THEOLOGY

**REQUIREMENTS:** 4 years of Theology

**GANNON UNIVERSITY ARTICULATION AGREEMENT:** Upon matriculation at Gannon University, students can earn 3 credits (LTHE 121) when they earn a B or better in the following classes: Scripture/Theology 1 H, Catholic Traditions/Theology 2 H, Morality/Social Justice 1/Theology 3 H and Social Justice 2/Christian Lifestyle/Theology 4 H.

**CATHOLIC TRADITION H**  
**CATHOLIC TRADITION A**

# 2934  
# 2944  
Grade level: 10  
Credit: 1.0

This course examines the Tradition of the Catholic Church as a second piece of foundational understanding in Catholicism. Part of the course emphasis is teaching students that the Church believes both Scripture and Tradition are essential for understanding religious truth. Students will survey Elements of Faith, Christology, Trinitarian Theology, Ecclesiology, Sacraments, Prayer and Worship, and Church History. Additionally, students will continually be invited to examine the modern day Church and its particular challenges in light of these elements of Tradition. A service project including verification of 25 hours of community service and a reflection component must be completed. Honors courses involve a greater depth of analysis while Academic courses focus more on breadth The Honors class is more writing intensive and includes extra outside reading.

Prerequisites for Catholic Tradition H: "B-" in Scripture H or "A-" in Scripture A or Theology Department approval

**MORALITY / SOCIAL JUSTICE 1 H**  
**MORALITY / SOCIAL JUSTICE 1 A**

# 3932 & # 3952  
# 3942 & # 3962  
Grade level: 11  
Credit: 1.0

After studying the two Catholic foundations for understanding religious truth, junior year invites students to begin studying topical issues of faith. In the first semester, students examine Catholic Morality, a catechism-based study of personal morality, understanding of sin, virtues, and processes of decision-making. The second semester begins studying Social Justice. This is the first half of a two-part course on issues of justice and peace. In this first half students will study the Scriptural foundations for the Church's view on social concerns, the history of Catholic Social Teaching, and the foundational issue of poverty and economic justice. A service project including verification of 25 hours of community service and a reflection component must be completed. Honors courses involve a greater depth of analysis while Academic courses focus more on breadth. The Honors class is more writing intensive and includes extra outside reading.

Prerequisite for H: "B-" in Catholic Tradition H, or "A-" in Catholic Tradition A or Theology Department approval

**SOCIAL JUSTICE 2 / CHRISTIAN LIFESTYLE H**  
**SOCIAL JUSTICE 2 / CHRISTIAN LIFESTYLE A**

# 4952 & 4972  
# 4962 & 4982  
Grade level: 12  
Credit: 1.0

Senior year begins in the first semester with Social Justice 2; this course picks up on the foundations of Social Justice 1 and examines other specific social concerns. This includes abortion and capital punishment, the environment, racism, sexism, homosexuality, and war. The second semester studies Christian Lifestyle, in which students will study personal identity formation and its relationship to faith, vocations, and relationships and sexuality. A service project including verification of 25 hours of community service and a reflection component must be completed. Honors courses involve a greater depth of analysis while Academic courses focus more on breadth. The Honors class is more writing intensive and includes extra outside reading, including summer reading.

Prerequisite for H: "B-" in Morality and Social Justice 1 H or "A-" in Morality and Social Justice 1 A or Theology Department approval