

# ARCHBISHOP RYAN

11201 Academy Road • Philadelphia, Pennsylvania 19154-3397

215-637-1800

[www.archbishopryan.com](http://www.archbishopryan.com)

## Course Selection 2008-09





---

**Archbishop Ryan High School**

11201 Academy Road

Philadelphia, Pennsylvania 19154

215-637-1800

[www.archbishopryan.com](http://www.archbishopryan.com)

---

# TABLE OF CONTENTS

<b>Topic</b>	<b>Page(s)</b>
Course Numbers.....	4
The Track System .....	4
Quality Point Table .....	5
Graduation Requirements .....	5
Current and Cumulative Ranking .....	6
Credit Adjustment Table .....	6
Office of Academic Affairs .....	6
The Advanced Placement Program.....	7
The Excel Program .....	7
Courses of Study .....	8
Post High School Education .....	10
Religious Studies .....	10-11
English Studies .....	11-13
Social Studies.....	14-15
Mathematics Studies .....	15-18
Natural and Physical Science Studies .....	19-21
World Language Studies .....	21-23
Business/Technology Education .....	23-24
Music Studies.....	24-25
Fine Art Studies .....	25-26
Physical Education & Health Studies .....	26
Diocesan Scholars Program .....	26
Bonaventure Program .....	27
CORA Auxiliary Services .....	27

## LETTER FROM THE PRINCIPAL

A.M.D.G.

Dear Parents/Guardians and Students,

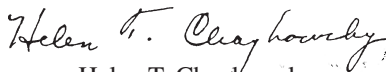
Archbishop Ryan High School presents this Course Selection listing for the 2008-2009 academic year.

Please scrutinize the content of this listing, thereby ensuring that your daughters and sons will make correct choices for next year. The Office of Academic Affairs, Counseling Center, and individual classroom instructors can advise you correctly. I ask you to remember that the Assistant Principal for Academic Affairs makes the final decision, when all Course Selection Forms have been returned. Our school philosophy strongly encourages a well-rounded curriculum based on the harmonious blend of our Christian principles and values. Every student at Archbishop Ryan is given the opportunity to develop his/her God-given talents. Every senior and junior must take six academic courses. With special permission, students will be permitted to register for seven courses. No student may select only five courses. Rosters will not be processed until the proper information is indicated on the Course Selection Form.

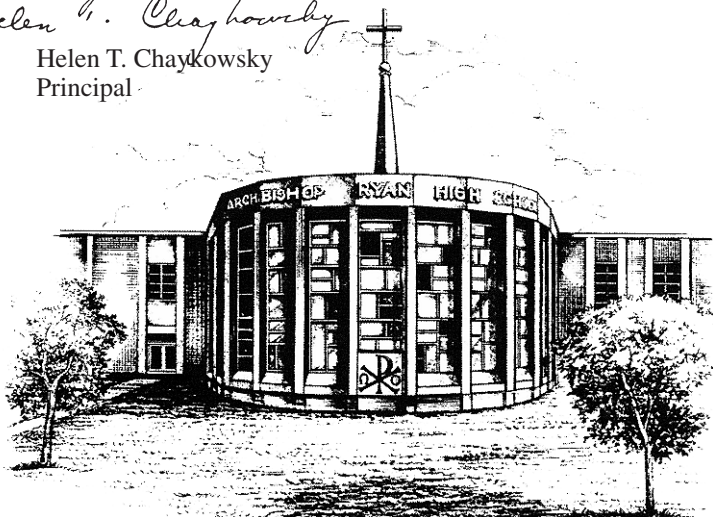
It is imperative that course selections be made wisely and deliberately. Teacher rosters, class sections, and the general running of the school day are based on the roster selections made by students. There is very little chance of obtaining any roster change in August or September. All students are required to complete summer reading requirements. Any math summer project will be given to the students in June before school closes. These assignments are always published in the Summer Newsletter. Students registered for AP courses will have additional summer requirements.

The Archbishop Ryan Administration and Faculty are grateful to you for your constant support and sacrifices.

Sincerely,



Helen T. Chaykowsky  
Principal



## CODE

AP	-	ADVANCED PLACEMENT
CR	-	CREDIT
GR	-	GRADE
M	-	MINOR
PPC	-	PERIODS PER CYCLE
SEM	-	SEMESTER
TR	-	TRACK
OAA	-	OFFICE OF ACADEMIC AFFAIRS

## COURSE NUMBERS

Each course is assigned a 3-digit number. The first digit indicates the department. The second digit, the year the course is offered and the third digit indicates track level. Exceptions are made for some special courses and electives for more than one year. See Language Section for their numbers.

**EXAMPLE: 023** 0 = Religious Studies  
2 = Sophomore Year  
3 = Track 3

DEPARTMENT	COURSE NUMBERS
Religious Studies	000-
English	100-
Social Studies	200-
Mathematics	300-
Science	400-
World Languages	500-
Business Education	600-
Art and Music	700-
Physical Education and Health	700-

## THE TRACK SYSTEM

Since the range of achievement among our students is so extensive, it is felt that ability grouping narrows the range sufficiently to allow for maximum student achievement. The tracking system provides an opportunity for success to all students.

Most subjects are offered on a track basis. The tracks are defined as follows:

- Track 5 -** Special classes for Advanced Placement. These courses require approval from the Department and the Office of Academic Affairs.
- Honors Track 1 -** College preparatory classes for high ability.
- Track 2 -** College preparatory classes and general classes for above average students
- Track 3 -** College preparatory classes and general classes for average students
- Track 4 -** Basic secondary school classes leading to a high school diploma

Track placement is initially determined by the OAA. Changes of track are usually made by teacher recommendation in consultation with the OAA. If changes are being considered the teacher should be contacted. Our core of required subjects at each level ensures the students that they will acquire the necessary credits for graduation.

**The final decision regarding track placement and track changes rests with the Assistant Principal for Academic Affairs.**

## QUALITY POINT TABLE (6-4-4-4)

	<u>AP/Track 5</u>	<u>Track 1</u>	<u>Track 2</u>	<u>Track 3</u>	<u>Track 4</u>
100	54	48	44	40	36
99	53	47	43	39	35
98	52	46	42	38	34
97	51	45	41	37	33
96	50	44	40	36	32
95	49	43	39	35	31
94	48	42	38	34	30
93	47	41	37	33	29
92	46	40	36	32	28
91	45	39	35	31	27
90	44	38	34	30	26
89	43	37	33	29	25
88	42	36	32	28	24
87	41	35	31	27	23
86	40	34	30	26	22
85	39	33	29	25	21
84	38	32	28	24	20
83	37	31	27	23	19
82	36	30	26	22	18
81	35	29	25	21	17
80	34	28	24	20	16
79	33	27	23	19	15
78	32	26	22	18	14
77	31	25	21	17	13
76	30	24	20	16	12
75	29	23	19	15	11
74	28	22	18	14	10
73	27	21	17	13	9
72	26	20	16	12	8
71	25	19	15	11	7
70	24	18	14	10	6
69	23	17	13	9	5
68	22	16	12	8	4
67	21	15	11	7	3
66	20	14	10	6	2
65	19	13	9	5	1
64	18	12	8	4	0
63	17	11	7	3	0
62	16	10	6	2	0
61	15	9	5	1	0
60	14	8	4	0	0

A student's rank is based on quality point average.

QUALITY POINTS ARE BASED ON TRACK AND GRADE.

## GRADUATION REQUIREMENTS

To graduate from Archbishop Ryan, the following credits are necessary:

Class of 2009: 24 credits

Class of 2010: 24 credits

Class of 2011: 24 credits

The school does not graduate on Total Credits alone. All other components must be fulfilled.

## CURRENT AND CUMULATIVE RANKING

CURRENT AND CUMULATIVE RANKING IS DETERMINED BY QUALITY POINT AVERAGE

The total Quality Points are multiplied by the number of credits and the results are accumulated. The accumulated result is divided by the total number of credits to determine the average quality points. In addition, a credit adjustment table that deducts portions of credits in ranges will be utilized. This feature allows the school to give a student carrying an additional load a slight advantage.

### CREDIT ADJUSTMENT TABLE

BETWEEN	0.00	and	5.00	SUBTRACT	0.00
	5.01		5.99		0.10
	6.00		---		0.15
	6.01		6.99		0.20
	7.00		---		0.25
	7.01		7.99		0.30
	8.00		---		0.35
	8.01		8.99		0.40
	9.00		---		0.45
	9.01		9.99		0.50

#### Transfer Students:

The Office of Academic Affairs reserves the right to adjust quality points to our table. (Students must attend Archbishop Ryan for at least two years to receive special awards.)

### FROM THE OFFICE OF ACADEMIC AFFAIRS

Selecting courses for next year is a serious undertaking. Many facets of our school, such as class size and personnel distribution depend on the student's selections. We have much to offer and decisions should be made after considering the student's long term goals and consulting teachers and counselors.

Some courses have pre-requisites, some have additional fees, some require summer projects and some require approval. Read all descriptions carefully. Students are **NOT** permitted to take fewer than **SIX** credits in any academic year. With the exception of the Business Department, students may not take more than **TWO** credits in any department during the academic year.

Consider the requirements for graduation:

- FOUR years of Religious Studies and English
- THREE years of Mathematics, Science and Social Studies
- ONE-HALF year of Health and Physical Education

College bound students should consult college catalogues because requirements differ. However, it is always recommended to have FOUR years of Math, Science and World Language to succeed in college.

**The taking of SEVEN majors is NOT recommended and requests for seven majors must be made on a separate form available in the Academic Affairs Office. Lunch periods will be used for labs.**

#### ADDITIONAL INFORMATION...

- Freshmen who have a language should take the second year.
- Juniors and seniors must make sure they fulfill their graduation requirements.
- There are no "work rosters."
- Failures in June may eliminate the possibility of an Early Dismissal. During the academic year, two or more failures on any report card will require an 8th period Special Study Hall instead of an early dismissal.
- Three to four years of World Language is strongly recommended.

**ALL COURSE SELECTIONS ARE FINAL AND THERE WILL NOT BE ANY ROSTER CHANGES AFTER AUGUST 31.**

*The Office of Academic Affairs reserves the right to delete a course based on class size.*

# THE ADVANCED PLACEMENT PROGRAM

## WHAT IS THE ADVANCED PLACEMENT PROGRAM?

The Advanced Placement (AP) Program is a cooperative educational endeavor. Based on the fact that many young people can with profit and delight, complete college-level studies in secondary school, it represents a desire of schools and colleges to foster such experiences. About 30 percent of American secondary schools currently participate, serving approximately 16 percent of their college-bound students in this way. This use, by both schools and students, has been growing steadily in recent years. As an intermediary agent of the participating institutions, the AP Program does the following:

- provides conferences, consultants, and curricular materials to help interested schools establish college level courses
- furnishes and grades examinations based on the learning goals set forth in the course descriptions
- sends examination grades to the students, their schools, and their designated colleges;
- prepares related publications
- supports appropriate research

## WHO OPERATES THE PROGRAM?

The Advanced Placement Program is administered by the College Board under the advice of national groups of educators, its Council on College-Level Services and its academic advisory committees in the disciplines concerned.

The College Board itself, founded in 1900 with headquarters in New York, is a nonprofit membership organization of more than 2,500 colleges and universities, schools, school systems, and education associations. Its activities are supported, in the main, by student fees. In the operation of all its testing programs, the College Board contracts with the Educational Testing Service (ETS), an independent, nonprofit agency with headquarters in Princeton, New Jersey, for technical and operational services. Both organizations have several regional offices.

## COLLEGE COLLABORATION

Colleges and universities have varying policies as to how they handle AP grades. Students should contact the schools they are considering for specific details. Students who elect to take AP courses **must take the respective AP exam in May, 2009 regardless of their grade in the course.** The cost of the exam may vary but it will be about \$85.00. **An \$85.00 fee for each exam is required no later than September 1, 2008. Students must also receive approval of the Department Head as well as approval from the Assistant Principal for Academic Affairs.**

**Each AP course requires at least one hour of homework daily. It is a college level course. Those planning to apply must understand the workload and must understand that they may not leave the course once the academic year is underway.**

# THE EXCEL PROGRAM

EXCEL PROGRAM: 9TH GRADE, TRACK 4, THREE DAYS PER CYCLE ALL YEAR

The EXCEL SKILL STRATEGIES PROGRAM is offered to incoming freshmen. The program embraces students whose academic and personal achievements would benefit from additional support given by a team of faculty, CORA professionals, and staff. The goal of the program is to provide students with information related to life skills, assist students with organizational and time management skills, encourage and motivate students to read, provide tools to assist students with completing homework assignments and class projects, and to enhance students' self esteem, self-confidence and independence.

The Office of Academic Affairs will determine eligibility for this course based on standardized test scores, academic records, and elementary school teacher recommendations.

# COURSES OF STUDY

\* All Track 1 Courses are Honors Track 1

## GRADE 9 – REQUIRED

Religious Studies 1	- All Tracks
English 1	- All Tracks
World History 1	- All Tracks
Mathematics	
Algebra 1	- Track 1, 2, 3
*Geometry (With Approval)	- Track 1
Math Applications	- Track 4
Physical Science	- Track 1, 2, 3, 4
Biology - Track 1 (Top half)	
World Languages	
Choice of	
French 1	- Track 1, 2
Italian 1	- Track 1, 2
German 1	- Track 1, 2
Latin 1	- Track 1
Spanish 1	- Track 1, 2, 3
Literacy Skills	- Track 4 (1/2 Year)
Writing Skills	- Track 2 (1/2 Year)
Technology Applications I	- Track 1
Health - All Tracks (1/2 Year)	

\* Students must pass a Track 1, Algebra 1 final exam with a score of 85 or higher.

## GRADE 9 – ELECTIVES

All Music Offerings	- All Tracks
Art 1	- All Tracks

## GRADE 10 – REQUIRED

Religious Studies 2	- All Tracks
English 2	- All Tracks, Pre AP
World History 2	- All Tracks
European History	- Advanced Placement
Mathematics	
Geometry	- Track 1, 2, 3
Algebra 2	- Track 1
Algebra 1	- Track 4
Chemistry	- Track 1 (Top half)
Biology	- All Tracks
Physical Education	- All Tracks (1/2 Year)
(ALL STUDENTS)	
Technology Applications I	- Track 1

## GRADE 10 – ELECTIVES

World Languages	
Choice of	
French 2	- Track 1, 2
Italian 2	- Track 1, 2
Latin 2	- Track 1
Spanish 2	- Track 1, 2, 3
**Art 1	- All Tracks
Art 2	- All Tracks
All Music Offerings	- All Tracks

\*\* Students who take Art as a major and who are taking their second year of a World Language may need to defer a course until the next year.

# COURSES OF STUDY

\*\*\* Students wanting to take Calculus in senior year must take both Geometry and Algebra 2 in Sophomore year and defer a course until the next year. Admittance will be decided by the Assistant Principal for Academic Affairs and the Math Department.

## GRADE 11 – REQUIRED

Religious Studies 3	- All Tracks
English 3	- All Tracks, AP
U.S. History	- All Tracks, AP
Mathematics	
Algebra 2	- Track 1, 2, 3
Geometry	- Track 4
PreCalculus/Trig	- Track 1
Science	
Chemistry	- Track 1, 2, 3, 4

## GRADE 11 – ELECTIVES\*

Accounting 1	- Track 1, 2
Law, Real Estate	- Track 1, 2, 3
Marketing	- Track 2, 3
U.S. History	- Advanced Placement
Languages 2, 3	- Track 1, 2, 3
Art 1, 2	- Track 1
Advanced Art	- Track 1
All Music Offerings	- All Tracks
Technology Applications II	- All Tracks
Journalism I	- Track 2
Language & Composition	- Advanced Placement
Chemistry	- Advanced Placement
Biology	- Advanced Placement
Languages 1	- For Students Who Did Not Have Language in Grade 9, approval of the Assistant Principal for Academic Affairs required.

\* Seats in electives are first offered to Seniors.

## GRADE 12 – REQUIRED

Religious Studies 4	- All Tracks
English 4	- All Tracks, AP

## GRADE 12 – ELECTIVES *\*See Elective Grid for Singletons.*

Accounting	- All Tracks
Accounting 2	- Track 1
Technology Applications II	- All Tracks
Law/Real Estate	- Track 1, 2, 3
Marketing	- Track 2, 3
US Government/Applied Economics	- Track 1, 2
Physics	- Track 1, 2, Advanced Placement (If numbers permit)
Chemistry II	- Track 2, 3
Government/Street Law	- Track 3, 4
U.S. Government/Politics	- Advanced Placement
PreCalculus/Trig.	- Track 1, 2
Trigonometry	- Track 3
Calculus	- Track 1, Advanced Placement
Algebra 2	- Track 4
Consumer Math	- Track 2, 3

## COURSES OF STUDY

Environmental Science	- Track 3, 4
Anatomy/Physiology	- Track 1, 2
Biology	- Advanced Placement
Chemistry	- Advanced Placement
Biology II	- Track 2, 3
Languages 3, 4	- Track 1, 2
Advanced Art	- Track 1
All Music Offerings	- All Tracks
Literature & Composition	- Advanced Placement
Psychology	- Track 1, 2 (as space permits)
Media	- Track 2
Journalism II	- Track 2
Statistics	- Track 2
Statistics	- Advanced Placement
C.A.D. (Computer Aided Drafting)	- All Tracks

## POST HIGH SCHOOL EDUCATION

The following are general guidelines only. Students are encouraged to check the individual school catalogs, College Handbook or Choices and College View Programs in the Counseling Center. Also discuss your particular situation with a counselor or teacher.

1. Colleges count credits for grades 9, 10, 11, 12.
2. Many colleges require at least sixteen units, and all college-bound students from Ryan should have at least four English, three College Prep Math, two World Language, three Science, and three Social Studies.
3. Future engineering and science (including pre-med) majors should have four years of College Prep Math and four years of Lab Science, including Chemistry and Physics.
4. For admission, colleges consider high school courses, grades, class rank, SAT scores, and counselor/teacher recommendation (when required).
5. Some colleges will require SAT II. Students should check to see if they are required by the school. Applications for the test may be obtained in the Counseling Center.
6. Trade and technical schools generally require a high school diploma and administer their own aptitude test for admission purposes.

## RELIGIOUS STUDIES

Prayer, worship and the sacraments are integrated throughout the four-year Religious Studies curriculum.

### **011, 012, 013, 014: RELIGIOUS STUDIES 1 (6PPC, 1CR, TRACKS 1, 2, 3, 4, GRADE 9)** *Foundations of Faith*

This is a survey course that focuses on the core beliefs of the Catholic Faith. The purpose of this course is to provide a sound theological foundation for the student in the areas of “Believing the Faith,” “Celebrating the Faith,” and “Living the Faith.” Students are encouraged to be active members of their faith community.

### **021, 022, 023, 024: RELIGIOUS STUDIES 2 (6PPC, 1CR, TRACKS 1, 2, 3, 4, GRADE 10)** *Old Testament: Hebrew Scriptures*

This course introduces students to the Sacred Scriptures. Its particular focus is the Old Testament or Hebrew Scriptures. Students will examine Salvation History beginning with Genesis and continuing through the Prophets. The purpose of the course is to enable students to see Scripture as the living word of God, applicable to our lives today.

## RELIGIOUS STUDIES (cont'd)

### *New Testament: Christian Scriptures*

This course focuses on the life of Jesus as reflected in the Gospels and the Letters of Paul. The course examines the message of Jesus and the way in which the early Christian communities incorporated this message into their lives. The purpose of the course is to encourage our students to become living witnesses of the Gospel message in the world today.

### **031, 032, 033, 034: RELIGIOUS STUDIES 3 (6PPC, 1CR, TRACKS 1, 2, 3, 4, GRADE 11)**

#### *Catholic Morality*

This course presents morality as a personal response to Jesus Christ. It explores conscience, laws and decision-making skills related to sound moral judgments. The teachings of Jesus Christ serve as the guide for the formation of a Christian conscience. Contemporary moral issues are explored, with the hope that students will gain confidence in their own ability to make correct Catholic choices. The Sacrament of Reconciliation is integrated into this course.

#### *Social Justice*

This course is based on the faith conviction that the call to justice is the call to live the Gospel of Jesus Christ. It examines the Christian's call and commitment to holiness and service based on the respect for human dignity demanded in the Gospels and the teachings of the Church. Its purpose is to inspire the student to make a contribution to our world as mature Catholic Christians. Concrete examples of how to live in justice and mercy are provided. Issues such as violence, war, nuclear weapons, human rights and economic justice are explored. Church teachings in these areas are presented as the focus for action and change.

### **041, 042, 043, 044: RELIGIOUS STUDIES 4 (6PPC, 1CR, TRACKS 1, 2, 3, 4, GRADE 12)**

#### *Church and Vocation*

The Church and Vocation course presents a development of the Church through its 2000 year history, focusing on the people of God who make up the Church. The study of these people should help the students to recognize the contemporary personalities and issues in Church life. The students are then challenged to take an active role in the Church community through the living out of a personal vocation of service to God and the Church. A vocation in the Church as a single, lay, religious, or cleric only makes sense in the context of the long tradition we share. Active participation in the Church is to be the end result of the year long process.

## ENGLISH STUDIES

### **GRADE 9**

#### **111: HONORS ENGLISH 1 (6PPC, 1CR, TRACK 1, GRADE 9)**

This course provides a genre approach to literature which includes the study of the short story, drama, poetry, mythology, essay, biography and the novel. Emphasis is placed on the development of specific writing skills as identified in the sequential writing program. Vocabulary skills are developed through a sequential vocabulary program. *More intensive journal/portfolio writing is expected in the Honors English Class.*

#### **112, 113: ENGLISH 1 (6PPC, 1CR, TRACK 2-3, GRADE 9)**

This course provides a genre approach to literature which includes the study of the short story, drama, poetry, mythology, essay, biography and the novel. Emphasis is placed on the development of specific writing skills as identified in the sequential writing program. Vocabulary skills are developed through a sequential vocabulary program.

#### **114: ENGLISH 1 (6PPC, 1CR, TRACK 4, GRADE 9)**

This course provides a genre approach to literature which includes the study of the short story, drama, poetry, mythology, essay, biography and the novel. Reading vocabulary and study skills are reinforced.

#### **116: LITERACY SKILLS (6PPC, 1SEM, 0.5CR, TRACK 4, GRADE 9)**

This course provides an interactive approach to reading as a meaning-making process and targets those students who are performing below grade level and may have been previously diagnosed with reading disabilities. The focus of the course is on the development of reading comprehension

## ENGLISH STUDIES (cont'd)

strategies and skills needed for mastering the reading necessary in the various content areas. Emphasis is placed on motivating reluctant readers into becoming independent readers.

### **117: WRITING SKILLS (6PPC, 1SEM, 0.5CR, TRACK 2, GRADE 9)**

This one semester course, designed for classes of 16 students, is geared toward helping the freshman student become a more competent and confident writer. It is meant to supplement the writing offerings in the regular English class. The students in this class will have access to computers and writing programs like *Writer's Solution* and *I-Text*.

### **GRADE 10**

#### **121: HONORS ENGLISH 2 (6PPC, 1CR, TRACK 1, GRADE 10)**

This course provides a chronological or thematic approach to the major authors and literary trends in British literature. Emphasis is also placed on the specific writing skills as identified in the sequential writing program. Vocabulary skills are developed through a sequential vocabulary program. *More intensive journal/portfolio writing is expected in the Honors English Class.*

#### **122, 123: ENGLISH 2 (6PPC, 1CR, TRACK 2-3, GRADE 10)**

This course provides a chronological approach to the major authors and literary trends in British literature. Emphasis is also placed on the specific writing skills as identified in the sequential writing program. Vocabulary skills are developed through a sequential vocabulary program.

#### **124: ENGLISH 2 (6PPC, 1CR, TRACK 4, GRADE 10)**

This course provides a thematic approach to the study of British Literature. Emphasis is placed on the development of writing skills as identified in the sequential writing program. Reading, vocabulary and study skills are also reinforced.

### **GRADE 11**

#### **131: HONORS ENGLISH 3 (6PPC, 1CR, TRACK 1, GRADE 11)**

This course provides a chronological approach to the authors and literary trends of the United States. Readings in the short story, drama, poetry, essay and the novel are covered. Emphasis is placed on the development of specific writing skills as identified in the sequential writing program. Vocabulary skills are developed through a sequential vocabulary program. *More intensive journal/portfolio writing is expected in the Honors English Class.*

#### **132, 133: ENGLISH 3 (6PPC, 1CR, TRACK 2-3 GRADE 11)**

This course provides a chronological approach to the authors and literary trends of the United States. Readings in the short story, drama, poetry, essay and the novel are covered. Emphasis is placed on the development of specific writing skills as identified in the sequential writing program. Vocabulary skills are developed through a sequential vocabulary program.

#### **134: ENGLISH 3 (6PPC, 1CR, TRACK 4, GRADE 11)**

This course covers selections in American literature through a chronological approach. Reading skills are reinforced in addition to the writing and vocabulary skills.

#### **135: ADVANCED PLACEMENT LANGUAGE & COMPOSITION (6PPC, 1CR, TRACK 5, GRADE 11)**

According to the Advanced Placement Course Description of the College Board, the Advanced Placement Language & Composition course "engages students in becoming skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts and in becoming skilled writers who compose for a variety of purposes. Both their writing and their reading should make students aware of the interactions among a writer's purposes, audience expectations, and subjects as well as the way generic conventions and the resources of language contribute to effectiveness in writing." The course adheres to the Advanced Placement guidelines and culminates with students taking the Advanced Placement exam in May.

**Pre-requisites: Department Head recommendation/approval, and approval of the Assistant Principal of Academic Affairs.**

## ENGLISH STUDIES (cont'd)

### **186: JOURNALISM I (6PPC, 1CR, TRACKS 2, GRADE 11)**

This course will introduce students to the development of the American press as well as present the techniques necessary for writing news, editorials, features and sports. In addition, the students will be introduced to **Quark Xpress**, a computer application used for layout and graphic design and **Photoshop**, the standard industry for photo design. The students will be exposed to all sections of a newspaper, and they will work with headlines and layout. Ultimately, students will work in every area of newspaper production: planning, writing, editing, design and pre-press production.

### **GRADE 12 ENGLISH 4**

#### *World Literature*

This course presents the social, intellectual and cultural background of selected world readings in poetry, drama, short story and the novel. The works of significant world authors will be highlighted in the readings and discussions. Vocabulary skills are developed through contextual analysis and vocabulary preparation for SAT and other standardized tests. The senior writing curriculum prepares students for college writing. *This is the required component of English 4 and must be taken in conjunction with Film Study or Drama.*

### **141, 142, 143, 144: DRAMA STUDY (6 PPC, 1 SEM, TRACKS 1, 2, 3, 4, GRADE 12)**

This is a one semester course designed to introduce students to the history, conventions, and aesthetics of drama, one of the world's greatest legacies of literature. The many playwrights of talent and genius include Greek, British (Shakespeare), World (Ibsen, Chekov, Shaw), American (O'Neill, Williams, Miller) and contemporary writers. Students will also study the development of the American Musical Theater. Attendance at live theater productions will be encouraged. This course must be taken with World Literature.

### **151, 152, 153, 154: FILM STUDY (6 PPC, 1 SEM, TRACKS 1, 2, 3, 4 GRADE 12)**

This is a one semester course designed to introduce students to the history, language, technology, and aesthetics of film study. The course will briefly cover film's history, from nineteenth-century photographic images and early cinema projections to the coming of sound, and modern special effects. Students will be introduced to the elements of film making, such as editing, lighting, sound, and camera movement. Students will study film as text, appreciating film as an auditory and visual form of literature. This course must be taken with World Literature.

### **145: ADVANCED PLACEMENT LITERATURE & COMPOSITION (6PPC, 1CR, TRACK 5, GRADE 12)**

The Advanced Placement course in English Literature and Composition engages students in the careful reading of literary works. Through such study, they sharpen their awareness of language and their understanding of the writer's craft. The writing assignments in this course focus on the critical analysis of literature and include essays in exposition and argument. Through the study and practice of writing, students become more aware of the resources of language: connotation, metaphor, irony, syntax, and tone. The course adheres to the AP guidelines and culminates with students taking the Advanced Placement exam in May.

**Pre-requisites:** Department Head recommendation/approval, and approval of the Assistant Principal of Academic Affairs.

### **182: MEDIA (6PPC, 1CR, TRACK 2, GRADE 12)**

TV and all aspects of programming, production and basic equipment maintenance and use, form the focus of this course.

### **187: JOURNALISM II (6 PPC, 1 CR, TRACK 2, GRADE 12)**

This course is limited to a select number of students who serve as editors of school publications. This course will enable students to work on various aspects of writing and production at an advanced level. Successful completion of Journalism I is required. Students need approval of the instructor as well as the Office of Academic Affairs to be admitted into the course.

# SOCIAL STUDIES

## **211, 212, 213, 214: WORLD HISTORY 1 (6PPC, 1CR, TRACK 1, 2, 3, 4, GRADE 9)**

World History 1 is a chronological study of the development of world civilization from the Prehistoric World through the River Valley Civilizations of the Middle East, Japan, China and India. Classical Greece and Rome are considered with development of Western Civilization through the Middle Ages up to the Reformation.

## **221, 222, 223, 224: WORLD HISTORY 2 (6PPC, 1CR, TRACK 1, 2, 3, 4, GRADE 10)**

World History II is a chronological study of the continued development and advancement of world civilization from the English Civil War through the revolutions in France, the Americas and Russia. Events of the 20th century are presented with an emphasis on the impact technology has had in creating a world of interdependent nations, hence, a real global community.

## **225: ADVANCED PLACEMENT EUROPEAN HISTORY (6PPC, 1CR, TRACK 5, GRADE 10)**

An understanding of some of the principal themes in Modern European history and the ability to analyze historical evidence will be developed. The time frame of the course will be from approximately 1450 to the present.

**Pre-requisites:** Department Head recommendation/approval, and approval of the Assistant Principal of Academic Affairs.

## **231, 232, 233, 234: U.S. HISTORY (6PPC, 1CR, TRACK 1, 2, 3, 4, GRADE 11)**

Two semester course – survey course emphasizing development of America from colonial period to present day.

**Semester 1** – In-depth study of colonial period, American Revolution, with special emphasis on the development of American democracy. This should include the study of the Declaration of Independence, Constitution of the United States and events leading to the Civil War.

**Semester 2** – America’s Emergence as a World Power. The development of the United States socially, politically and economically during the twentieth century.

## **235: ADVANCED PLACEMENT U.S. HISTORY (6PPC, 1CR, TRACK 5, GRADE 11)**

This course covers a period from colonial times to 2000. Emphasis is on 1800-2000. This course follows Advanced Placement guide. The narrative of history is explored along with changing interpretations of various epochs. Simulations and analysis of primary resources will be emphasized utilizing the internet. Document-based questions, standard essays and multiple choice questions are utilized as means of assessment.

**Pre-requisites:** Department Head recommendation/approval, and approval of the Assistant Principal of Academic Affairs.

## **241, 242: US GOVERNMENT/APPLIED ECONOMICS (6PPC, 1CR, TRACK 1, 2, GRADE 12)**

The first part of this course is a study of the Constitution of the United States and the Bill of Rights, with emphasis on relating the powers and limitations of our government to the modern world. The second part is a multi-media, “hands on” approach to the study of U.S. economic system of free enterprise, consisting of weekly visits by trained business consultants from firms in the community, and computerized simulations to reinforce the learning of economic concepts.

## **243, 244: GOVERNMENT/STREET LAW (6PPC, 1CR, TRACK 3, 4, GRADE 12)**

**Semester 1** - American Government – a one semester course which is designed to give the student a basic understanding of the problems of the United States through an understanding of its law making process at the Federal, State and the Local government level. Upon completion of the course, the student should have the basic knowledge needed to live as a participating individual in our society.

**Semester 2** - Street Law and Economics - a one semester course to give the student an awareness and an understanding of his and her basic legal obligations, rather than merely focusing on the criminal aspects of law.

## SOCIAL STUDIES (cont'd)

### **245: ADVANCED PLACEMENT U.S. GOVERNMENT AND POLITICS (6PPC, 1CR, TRACK 5, GRADE 12)**

A course in United States Government and Politics designed to give students an analytical perspective on government and politics in the United States. This course involves both the study of general concepts used to interpret U.S. Politics and the analysis of specific case studies. It also requires familiarity with the various institutions, groups, beliefs, and ideas that make up U.S. political reality.

**Pre-requisites:** Department Head recommendation/approval, and approval of the Assistant Principal of Academic Affairs.

### **251, 252: PSYCHOLOGY (6PPC, 1CR, TRACK 1, 2, GRADE 12)**

A course in Introductory Psychology designed to give students the basic concepts needed to interpret principles of Psychology. Topics include: Biological bases of behavior, learning, cognition, motivation, developmental psychology, personality, abnormal psychology, and social psychology. **Space is limited. (Date of registration and track level reserve the seat.)** **Pre-requisite:** All seniors who take this course must also register for Government/Economics.

## MATHEMATICS STUDIES

### **ALL STUDENTS TAKING A MATHEMATICS CLASS MUST HAVE A TI-84 GRAPHING CALCULATOR.**

**\*\*Freshmen in Track 1 who wish to take Calculus in their senior year may elect to take two math courses (Geometry and Algebra 2) in their sophomore year. They must have a first semester average of 90 or better, be recommended by their ninth grade mathematics teacher, and receive approval from the Department Chairperson and the Assistant Principal for Academic Affairs. In addition, all students enrolled in the Accelerated Program must meet certain guidelines as specified by the Mathematics Department.**

**\*\*Students taking both mathematics courses in sophomore year may have a required course deferred until junior year (as determined by the O.A.A.).**

### **311: HONORS ALGEBRA 1 (6PPC, 1CR, TRACK 1, GRADE 9)**

This course has been designed to embrace the Standards for Mathematics recommended by the National Council of Teachers of Mathematics. Traditional topics of linear equations in one and two variables, inequalities in one and two variables, rational and radical expressions, quadratic equations, and factoring are covered with a strong emphasis on graphing, problem solving, and applications. The concept of function is stressed in this course. Students are also introduced to the topics of statistics and matrices.

### **312: ALGEBRA 1 (6PPC, 1CR, TRACK 2, GRADE 9)**

This course has been designed to embrace the Standards of Mathematics recommended by the National Council of Teachers of Mathematics. Traditional topics of linear equations in one and two variables, inequalities in one and two variables, rational and radical expressions, quadratic equations, and factoring are covered with a strong emphasis on graphing, problem solving, and applications.

### **313: ALGEBRA 1 (6PPC, 1CR, TRACK 3, GRADE 9)**

This course includes the study of real numbers, linear equations and inequalities, graphing, factoring, algebraic fractions and simple quadratic equations, and problem solving. The course is designed to meet the needs of students with average ability in mathematics.

### **314: MATHEMATICS APPLICATIONS (6PPC, 1CR, TRACK 4, GRADE 9)**

This course is offered for those students who have not completed the basic arithmetic curriculum. The course material includes topics from arithmetic and an introduction to beginning topics from Algebra. The course has been restructured to embrace the new Standards for Mathematics recommended by the National Council of Teachers of Mathematics and is designed to help students become mathematically literate and self-confident.

# MATHEMATICS STUDIES (cont'd)

## **321: HONORS GEOMETRY (6PPC, 1CR, TRACK 1, GRADE 10)**

The first part of this course is the study of Euclidean Geometry with stress on the basic axioms of geometry and proficiency in developing formal proofs. It includes properties of angles, congruent and similar polygons, circles and spheres, construction and loci, coordinate geometry, area and volume. Algebraic skills are constantly being used and intensified throughout the course.

## **322: GEOMETRY (6PPC, 1CR, TRACK 2, GRADE 10)**

This course is the study of Euclidean Geometry with stress on concepts and skills in developing or completing proofs. The course includes the study of angles, polygons, especially triangles and quadrilaterals, circles, selected constructions, area, and volume. Some concepts from coordinate geometry are included. The text emphasizes understanding of properties of plane figures and skill in applying them. The course is designed to meet the needs of students with good mathematical ability.

## **323: GEOMETRY (6PPC, 1CR, TRACK 3, GRADE 10)**

This course is the study of Euclidean Geometry with stress on the properties of plane figures and completing proofs involving them. The course includes the study of angles, triangles, quadrilaterals, circles and some constructions. The text emphasizes recognition of properties of plane figures and simple proofs. The course is designed to meet the needs of students with average ability in mathematics.

## **324: ALGEBRA 1 (6PPC, 1CR, TRACK 4, GRADE 10)**

This course includes the study of real numbers, linear equations and inequalities, graphing, factoring, algebraic fractions and simple quadratic equations, and problem solving. The course is designed to meet the needs of students with low average mathematical ability.

## **325: HONORS ALGEBRA 2 (6PPC, 1CR, TRACK 1, GRADE 10)**

This course is very challenging and is designed to prepare students for Pre-Calculus in junior year. An accelerated pace is maintained throughout the course. The course has been designed to embrace the Standards for Mathematics recommended by the National Council of Teachers of Mathematics. Traditional topics such as linear functions, conic sections, polynomials and rational algebraic expressions, quadratic equations, systems, irrational and complex numbers, exponents and logarithms, inverses, sequences and series, and trigonometric functions are covered with a strong emphasis on graphing, problem solving, and applications. The topics of statistics and matrices, introduced in Algebra I, are continued in this course.

## **331: HONORS ALGEBRA 2 (6PPC, 1CR, TRACK 1, GRADE 11)**

This course provides for the continued development of major ideas of Algebra. The course has been reconstructed to embrace the Standards of Mathematics recommended by the National Council of Teachers of Mathematics. Traditional topics such as linear functions, conic section, polynomials and rational algebraic expressions, quadratic equations, systems, irrational and complex numbers, exponents and logarithms, sequences and series, and trigonometric functions are covered with a strong emphasis on graphing, problem solving, and applications. The course is designed to meet the needs of students who are mathematically talented.

## **332: ALGEBRA 2 (6PPC, 1CR, TRACK 2, GRADE 11)**

This course includes linear functions and conic sections with graphs, operations on rational algebraic expressions, simplification of irrational numbers, quadratic equations and their graphs, complex numbers, exponents and logarithms. The text used emphasizes mastery of algebraic skills. The course is designed to meet the needs of students of good to average math ability.

## **333: ALGEBRA 2 (6PPC, 1CR, TRACK 3, GRADE 11)**

This course aims to help students to master algebraic skills. It includes a review of principles of Algebra I including linear equations and inequalities, polynomials, algebraic fractions, and quadratic equations. More advanced topics introduced are irrational and complex numbers and graphing of simple conics. The text emphasizes mastery of algebraic skills. The course is designed to meet the needs of students with low average mathematical ability.

# MATHEMATICS STUDIES (cont'd)

## **334: BASIC GEOMETRY (6PPC, 1CR, TRACK 4, GRADE 11)**

This course is the study of Euclidean Geometry with stress on the properties of plane figures and completing proofs involving them. The course includes the study of angles, triangles, quadrilaterals, circles and some constructions. The text emphasizes recognition of properties of plane figures and simple proofs. The course is designed to meet the needs of students with low ability in mathematics.

## **336: PRE-CALCULUS/TRIGONOMETRY (6PPC, 1 CR, TRACK HONORS, GRADE 11)**

This course is very challenging and is designed to prepare the students for Calculus or AP Calculus in senior year. It moves at a fast pace and includes further study of trigonometry, analytic geometry, the algebra of functions, polynomial, exponential and logarithmic functions, sequences, series, complex numbers, rational functions and their graphs, techniques of equation solving and probability.

**Pre-requisites:** Algebra 1, Geometry, Algebra 2 (88 or better in Honors Track), approval of the student's present Math teacher(s), the Department Chairperson and the Assistant Principal for Academic Affairs.

**Any junior who elects not to take the Honors PreCalculus #336 course will not be permitted to enroll in Honors PreCalculus #341 until senior year. Since course #341 is a senior course, those students opting out of the double-up Math program must wait until senior year to enroll. For their junior year, these students will be given the option of enrolling in Track 2 Statistics.**

## **341: HONORS PRE-CALCULUS/TRIGONOMETRY (6PPC, 1CR, TRACK 1, GRADE 12)**

This course is very challenging and is designed to prepare the students for Calculus. It moves at a fast pace and includes further study of trigonometry, analytic geometry, the algebra of functions, polynomial, exponential and logarithmic functions, sequences, series, complex numbers, rational functions and their graphs, techniques of equation solving and probability.

**Pre-requisites:** Algebra 1, Geometry, Algebra 2 (88 or higher in Honors Track), approval of the student's present Math teacher(s), the Department Chairperson and the Assistant Principal for Academic Affairs.

## **342: PRE-CALCULUS/TRIGONOMETRY (6PPC, 1CR, TRACK 2, GRADE 12)**

The course content combines two courses, Trigonometry and Analytic Geometry, with special emphasis on the conic sections. It includes the radian measure of angles and polar coordinates, graphs of trig functions, solving right triangles and verifying identities, solving trigonometric equations and systems of quadratic equations. The text used is designed to meet the needs of students who have good mathematical skills.

**Pre-requisites:** Algebra 1, Geometry, Algebra 2, approval of the student's present Math teacher(s), the Department Chairperson and the Assistant Principal for Academic Affairs.

## **343: TRIGONOMETRY (6PPC, 1CR, TRACK 3, GRADE 12)**

This course reinforces the material covered in Algebra 2 then develops the following topics; radian measure, trigonometric relationships, solving triangles, identities, and graphing trig functions.

**Pre-requisites:** Algebra 1, Geometry, Algebra 2, approval of the student's present Math teacher(s), the Department Chairperson and the Assistant Principal for Academic Affairs.

## **344: ALGEBRA 2 (6PPC, 1CR, TRACK 4, GRADE 12)**

This course is specifically designed for those seniors who are required to have Algebra 2 before graduation. The course aims to help students master algebraic skills. It includes a review of principles of Algebra 1 including linear equations and inequalities, polynomials, algebraic fractions, and quadratic equations. More advanced topics introduced are irrational and complex numbers and graphing of simple conics. The text emphasizes mastery of algebraic skills. This course is designed to meet the needs of seniors with low average mathematical ability.

## **352: CONSUMER MATHEMATICS (6PPC, 1CR, TRACK 2, 3, GRADE 12)**

This course is designed to help students become mathematically literate and self confident. It will help students improve their mathematics problem solving skills while giving them an inside look

## MATHEMATICS STUDIES (cont'd)

into their role as consumers in American society. Students will make use of a calculator in everyday mathematical problem solving situations.

**\*For students in Tracks 1, 2 and 3, Consumer Mathematics is an elective course. For Track 1 and 2 students, Trigonometry must be taken along with or have been completed in junior year in order to select Consumer Mathematics.**

### **351: CALCULUS (6PPC, 1CR, TRACK 1, GRADE 12)**

This course is offered to those students who have successfully completed Course 336 (Pre-Calculus/Trigonometry) in the eleventh grade. Students will have a firm foundation in Calculus upon entering college, giving them a competitive edge in a college Calculus course. Topics covered include limits, continuity, differentiation and integration. These are the same as those covered in AP Calculus. The main difference is in accountability. Students will participate in a multi-disciplinary *Container Design Project* as the highlight of the year and must be available to participate in a lab period one day per cycle.

**Pre-requisites: Pre-Calculus/Trigonometry (80 or better in Honors Track 1), departmental approval and approval of the Assistant Principal for Academic Affairs.**

### **355: ADVANCED PLACEMENT CALCULUS AB (6PPC, 1CR, TRACK 5, GRADE 12)**

This AP course strictly adheres to the guidelines for the college board approved Advanced Placement Calculus AB course and culminates in the taking of the AP Calculus exam in May for college credit. The topics covered include limits and continuity, differentiation, integration, maxima and minima, implicit differentiation, the Chain Rule, and techniques of differentiation and integration. Students will participate in a multi-disciplinary *Container Design Project* as the highlight of the year and must be available to participate in a lab period one day per cycle.

**Pre-requisites: Pre-Calculus/Trigonometry (90 or better in Honors Track 1), departmental approval, and approval of the Assistant Principal for Academic Affairs.**

### **356: COMPUTER AIDED DRAFTING (CAD) (6PPC, 1CR, TRACK 2, GRADE 12)**

This course uses CAD (Computer Aided Drafting) about 90% of the time to acquaint the student with the basic operations of drafting. Operations covered include the execution of one, two and three view orthographic projections; the construction of isometric projections; dimensioning, etc. Mechanical, architectural, civil, and other types of drafting are explored. No previous knowledge needed.

**Pre-requisites: Approval of the Department Chairperson and the Assistant Principal for Academic Affairs.**

### **357: ADVANCED PLACEMENT STATISTICS (6PPC, 1CR, TRACK 5, GRADE 12)**

This AP Course adheres to the guidelines for the College Board approved Advanced Placement Statistics course and culminates in the taking of the AP Statistics exam in May for college credit. The course includes exploratory analysis, planning a study, probability and statistical inference. Successful completion of this course satisfies the college requirement for the social, political and health sciences as well as for mathematics and engineering majors. The **TI-83 Plus** (*preferably the Silver Edition*) graphing calculator is a necessary tool for this course. Students will have an opportunity to apply what they have learned through participation in a multi-disciplinary project as the highlight of the year and must be available to participate in a lab period one day per cycle.

**Pre-requisites: Pre-Calculus/Trigonometry (90 or better in Honors Track 1), departmental approval and approval of the Assistant Principal for Academic Affairs.**

### **358: STATISTICS (6PPC, 1CR, TRACK 2, GRADE 12)**

This course is intended to be the first introduction to statistical analysis. The purpose of this course is to help students become acquainted with how to collect, interpret, and display information about varying sets of data. Real world applications will show students how statistics can improve decision making in a variety of business situations. Topics covered will be controlled experiments, descriptive statistics, normal distributions, sampling, correlation, and regression. Graphing calculators required.

**Pre-requisites: Algebra 1, Geometry, Algebra 2, departmental approval and approval of the Assistant Principal for Academic Affairs.**

# NATURAL AND PHYSICAL SCIENCE STUDIES

## **410: HONORS BIOLOGY 9 (6PPC, 1CR, TRACK 1, GRADE 9)**

A thorough study of biological concepts at the cellular level with focus on major life processes. The course concentrates on molecular and cellular biology. Topics dealing with microbiology, botany, genetics, invertebrates and vertebrates are studied. Organisms from all kingdoms are included as well as their ecological relationships. Laboratory investigation utilizing the scientific method, microscopic techniques, and dissections are emphasized. Designed for the student with superior interest and ability in science. Assignment to this class is done by the O.A.A.

## **411, 412: PHYSICAL SCIENCE (6PPC, 1CR, TRACK 1, 2, GRADE 9)**

A laboratory oriented course which investigates the principles of science and the application of these principles to technology and society. Emphasis is based on drawing conclusions from laboratory experiences. Designed for the student with above average ability and interest in science.

## **413: PHYSICAL SCIENCE (6PPC, 1CR, TRACK 3, GRADE 9)**

A discovery approach to the basic concepts of chemistry and physics. Laboratory techniques and processes are a vital part of the program. Designed for the student with an average ability and interest in science.

## **414: GENERAL SCIENCE (6PPC, 1CR, TRACK 4, GRADE 9)**

By exploring the basic principles of science the student develops a conceptual awareness of his world. Emphasis is placed on the scientific method as a problem solving technique.

## **421, 422: BIOLOGY (7PPC, 1CR, TRACK 1; 6PPC, 1CR, TRACK 2, GRADE 10)**

A thorough study of biological concepts at the cellular level with a focus on major life processes. This course concentrates on molecular and cellular biology. Topics dealing with microbiology, botany, genetics, invertebrates and vertebrates are studied. Organisms from all classification kingdoms are included as well as their ecological relationships. Laboratory investigation utilizing the scientific method, microscopic techniques, and dissections are emphasized in this course. Designed for the student with above average interest and ability in science.

## **423: BIOLOGY (6PPC, 1CR, TRACK 3, GRADE 10)**

A general biology course that studies biological organization from simple to complex organisms. Life processes, genetics, classification, and ecological relationships are studied. Laboratory investigations utilize microscopic techniques and dissection. Designed for the student with average ability and interest in science.

## **424: BIOLOGY (6PPC, 1CR, TRACK 4, GRADE 10)**

A general biology course which studies biological organization from simple to complex organisms. Life processes, genetics classification, and ecology are emphasized. The course is designed to make the student aware of and become involved with the study of living things.

## **425: ADVANCED PLACEMENT BIOLOGY (8PPC, 1CR, TRACK 5, GRADE 11, 12)**

An advanced placement course designed for those students interested in the medical field. This course offers an extensive study of the biochemical relationships in the human body. In-depth laboratory investigation of major areas such as psychology, bio-chemistry, genetics and evolution is emphasized. The curriculum studied in AP Biology is equivalent to a college level course. All students must take the AP Test in May. Students may take additional science courses while taking AP Biology.

**Pre-requisites: Biology and Chemistry with an 85 or better at the Honors level; Departmental approval and approval of the Assistant Principal for Academic Affairs.**

## **430: HONORS CHEMISTRY 10 (7PPC, 1CR, TRACK 1, GRADE 10)**

A study of atomic and molecular concepts. Chemical dynamics, chemical families, and chemical calculations are studied in depth. Special emphasis is placed on kinetics, thermodynamics, gases, equilibrium and acid base chemistry. Designed for the student with superior ability and intense interest in science. This is a college preparatory course in chemistry.

## SCIENCE STUDIES (cont'd)

### **431: CHEMISTRY (7PPC, 1CR, TRACK 1, GRADE 11)**

A study of atomic and molecular concepts. Chemical dynamics, chemical families, and chemical calculations are studied in depth. Special emphasis is placed on kinetics, thermodynamics, gases, equilibrium and acid base chemistry. Designed for the student with superior ability and intense interest in science. This is a college preparatory course in chemistry.

### **432: CHEMISTRY (6PPC, 1CR, TRACK 2, GRADE 11, 12)**

Traditional study of concepts in chemistry. Periodic table, atomic structures and chemical calculations are emphasized. Topics include equation writing, gas laws, acid-base principles, solutions, and introduction to equilibrium. Designed for the student with an above average interest and ability in science.

### **433: CHEMISTRY (6PPC, 1CR, TRACK 3, GRADE 11, 12)**

A demonstration-oriented lecture approach to the basic concepts in chemistry. Special emphasis is placed on the application of chemistry in the students life. Topics include periodic table, atomic structure, gases, equations, and some math calculations. Designed for the student with average interest and ability in science

### **434: CHEMISTRY (6PPC, 1CR, TRACK 4, GRADE 11, 12)**

Study of the basic concepts in chemistry. Emphasis is placed on societal issues involving chemistry. Demonstrations and labs are designed to explain chemical concepts. Topics include periodic table, formula writing, equations, gases, atomic structures and some calculations. Designed for the student with some interest in science. **ONLY TRACK 4 BIOLOGY STUDENTS WILL BE ADMITTED TO THE COURSE**

### **435: ADVANCED PLACEMENT CHEMISTRY (8PPC, 1CR, TRACK 5, GRADE 12)**

This course is designed for those students who wish to pursue a career in the sciences. This course offers an extensive study in thermodynamics, kinetics, acid-base solubility, redox and equilibrium. Intense study and utilization of stoichiometric calculations are a significant part of the course. The curriculum studied in AP Chemistry is equivalent to a college level course. All students must take the AP Test in May.

**Pre-requisites: Biology and Chemistry (85 or higher at the Honors level). Department approval as well as approval of the Assistant Principal for Academic Affairs is also required.**

### **441: HONORS PHYSICS (7PPC, 1CR, TRACK 1, GRADE 11, 12)**

This course serves as preparation for the potential science major. Topics studied include mechanics, universal gravitation, momentum, kinetic theory, wave theory, electricity, magnetism and atomic/nuclear physics. Laboratory work and computer based work are an integral part of the course. A solid understanding of Algebra II and Geometry are required. It is also beneficial that students be enrolled in Trigonometry or Pre-Calc/Trig simultaneously. Students may take other science electives in conjunction with Honors Physics.

**Pre-requisites:**

- **Juniors: Successful completion of Biology and Chemistry at the Honors level.**
- **Seniors: Successful completion of Physical Science, Biology, Chemistry and Algebra II.**
- **All students should have an average of 85 or higher in all math courses.**

### **442: PHYSICS (6PPC, 1CR, TRACK 2, GRADE 11, 12)**

This course serves as a preparation for the potential science major or as an overview of physics. Topics include force and motion, universal gravitation, momentum kinetic theory of gases, and wave theory of light and sound. Atomic physics, nuclear physics, electricity and magnetism are also studied. The course presumes a basic understanding of Algebra and Geometry.

**Pre-requisite: Students wishing to take Physics Track 2 must have an 85 average or better in Algebra 2.**

### **445: ADVANCED PLACEMENT PHYSICS (8PPC, 1CR, TRACK 5, GRADE 12)**

Advanced Placement Physics "B" provides a systematic development of the main principles of

## SCIENCE STUDIES (cont'd)

physics, with emphasis on problem solving and developing a deeper understanding of general physics concepts. This course includes studies in mechanics, thermal physics, electricity and magnetism, waves and optics, and nuclear/atomic physics. The curriculum in AP Physics "B" is considered equivalent to a college level course. All students must take the AP Test in May.

**Pre-requisites:** Successful completion of Biology, Chemistry and Physics at the Honors level, as well as departmental approval and approval from the Assistant Principal for Academic Affairs.

### **447, 448: CHEMISTRY II (7PPC, 1CR, TRACKS 2 & 3, GRADE 12 ONLY)**

Students taking Chemistry II will attain a further depth in the understanding of chemistry fundamentals and an enhanced competence in dealing with chemical problems. Topics include but are not limited to stoichiometry, atomic theory, the structure of matter, the periodic table of elements, chemical bonding, kinetic molecular theory and the states of matter.

Pre-requisites: The Chemistry II course can be taken only after the successful completion of Chemistry in the junior year with a grade of 80 or higher. A documented proficiency in basic algebra is also required. Class size is limited. Students seeking careers in the medical field are strongly encouraged to apply.

### **452, 453: BIOLOGY II (7PPC, 1CR, TRACK 2, 3, GRADE 12)**

An intensive, lab oriented biology course designed for the student with a high level of interest in the biological sciences. Topics such as botany, zoology, ethology, pathology, anatomy, and physiology will be presented, Dissections of representative invertebrates and vertebrates will be required.

**Pre-requisites:** Completion of Chemistry I and Biology I, minimal grade 75. Seniors only.

### **456, 457: ANATOMY/PHYSIOLOGY (7PPC, 1CR, TRACK 1; 6PPC, 1CR, TRACK 2, GRADE 12 ONLY)**

This course offers an intense lab-oriented curriculum that familiarized students with their own body mechanics and allows students to understand the interrelationships of body organ systems. This course aids in the preparation of those students considering a career in medicine. Class size is limited-requirements and pre-requisites will be strictly enforced.

**Pre-requisites:**

- **Track 1:** Successful completion of Physical Science, Biology and Chemistry with an overall grade of 85 or higher in these courses. Physics is strongly recommended.
- **Track 2:** Successful completion of Physical Science, Biology and Chemistry with an overall grade of 85 or higher in these courses. Physics is strongly recommended.

### **461: ENVIRONMENTAL SCIENCE (6PPC, 1CR, TRACKS 3 & 4, GRADE 12 ONLY)**

This course provides an overview of ecological and environmental problems through the study of biomes, ecology and pollution. Studies in astronomy, geology and oceanography are also incorporated into the course. Lab work and field trips will be emphasized throughout the course.

**Pre-requisites:** Successful completion of Physical Science, Biology and Chemistry.

## WORLD LANGUAGE STUDIES

### **WORLD LANGUAGE 1 (6PPC, 1CR, TRACK 1, 2, 3, GRADE 9, 10, 11)**

Introductory language courses stress student communicative ability and oral proficiency. Reading and writing skills as well as the basic rules of grammar are presented in carefully controlled content. Effort is made to familiarize the student with the customs and culture of the people. Frequent use of the CDs which accompany the text provides oral practice, listening comprehension and a sense of accomplishment.

### **WORLD LANGUAGE 2 (6PPC, 1CR, TRACK 1, 2, 3, GRADE 10, 11, 12)**

The second year of foreign language study continues, the development of the four basic language skills (listening, speaking, reading and writing) with emphasis placed on conversation. Since a greater facility of formulating questions and responses is acquired much of the class can be conducted in the target language. Further knowledge of culture is learned with richly detailed texts and audio-visual materials.

# WORLD LANGUAGE STUDIES (cont'd)

## **\*WORLD LANGUAGES OFFERED ARE:**

French, Italian, Latin, Spanish, German

### **541: LATIN 1 (6PPC, 1CR, TRACK 1, GRADE 9, 10, 11)**

First year Latin introduces the student to the written and cultural records of Roman civilization. A review of English grammar pertinent to the study of Latin will be provided so that the student can see the relationship of the two languages. Emphasis will be placed upon the study of vocabulary to increase and enrich the English vocabulary of the student. The declensions of nouns, pronouns, and adjectives as well as the conjugations of verbs are introduced in the framework of a basic 1,000 word vocabulary. Readings in Latin on Roman life and history complete the first year of study.

### **542: LATIN 2 (6PPC, 1CR, TRACK 1, GRADE 10, 11, 12)**

This course continues the systematic presentation of the elements of Latin 1, thus providing a firm foundation in grammar and word study. It involves the study of more complicated structures in order to help the student in reading and comprehension of Latin. The study of Roman civilization is continued.

### **551: FRENCH 3 (6PPC, 1CR, TRACK 1, GRADE 11)**

French 3 clarifies all the grammatical concepts, (verb tenses, sentence constructions) used in the first two years. Reading, dictation and composition help the student to master the language. Vocabulary enrichment is gained through written and oral exercises. An introduction to French Literature is also presented this year.

### **555: FRENCH 4 (6PPC, 1CR, TRACK 1, GRADE 12)**

This course is the culmination of the four years of language study. Using the reading from current text book materials as points of departure, the teacher will guide the student in acquiring advanced writing skills. Works of the various periods and movements of French Literature are introduced and in the second semester the students read complete works. The class will also view French movies that will encourage listening and conversing totally in French.

### **571: ITALIAN 3 (6PPC, 1CR, TRACK 1, GRADE 11, 12)**

More emphasis will be placed on reading and writing skills. Speaking Italian continues to be one of the principal goals of this course. Further study of Italian civilization and literature is actualized through the readings themselves and individual research by the students.

### **575: ITALIAN 4 (6PPC, 1CR, TRACK 1, GRADE 12)**

Stress on the four language skills continues in the fourth year. Individual research of Italian culture continues to be a focal point. An introduction of Italian literature through the ages will be presented through the works of famous authors.

### **581,582: SPANISH 3 (6PPC, 1CR, TRACK 1, 2, GRADE 11, 12)**

The aim of this course is the development of the student's conversational ability. Emphasis is placed on improving speaking and listening skills. Additional practice is given in reading and writing Spanish. The study of the culture and customs of Spanish speaking people continues to be stressed.

**Pre-requisite: Approval of Spanish 2 teacher.**

### **585: SPANISH 4 (6PPC, 1CR, TRACK 1, GRADE 12)**

Further emphasis is given to the mastery of more advanced conversation and composition. Students are introduced to some works of Spanish literature and other materials suited to their interests. The study of the culture and civilization of Spanish-speaking people continues to play an important part.

## **LANGUAGE COURSE NUMBER KEY:**

French 1 - Track 1 - 501	Spanish 2 - Track 1 - 534	German 1 - Track 1 - 511
French 1 - Track 2 - 502	Spanish 2 - Track 2 - 535	German 1 - Track 2 - 512
French 2 - Track 1 - 504	Spanish 2 - Track 3 - 536	
French 2 - Track 2 - 505	Italian 1 - Track 1 - 521	
Spanish 1 - Track 1 - 531	Italian 1 - Track 2 - 522	
Spanish 1 - Track 2 - 532	Italian 2 - Track 1 - 524	
Spanish 1 - Track 3 - 533	Italian 2 - Track 2 - 525	

## BUSINESS/TECHNOLOGY EDUCATION

### **641,642: ACCOUNTING 1 (6PPC, 1CR, TRACK 1, 2, GRADE 11, 12)**

This course is designed to teach students basic accounting principles. The student is introduced in stages to a simple accounting cycle. Training is provided for analyzing transactions and for the single proprietorship business for which the student records transactions. The course incorporates manual as well as computerized applications. **It is recommended not only to business students but to those students who wish to major in Accounting or Business Administration in college.**

### **643: PRACTICAL ACCOUNTING TECHNOLOGIES (6PPC, 1CR, TRACK 3, GRADE 12)**

This course is designed to introduce students to the basic accounting and record keeping techniques used in the modern office. This course will emphasize development of occupational skills. It will provide a thorough grounding in manual techniques as a basis for introducing the student to computerized techniques. These skills will be reinforced and broadened by examining computerized application topics in spreadsheets, databases, word processing, payroll, banking, billing, personal finances and business accounting. Seniors will be given first preference, however, if space is available, juniors who are pre-approved by the chairperson of the department and the O.A.A. may be considered.

### **651: ACCOUNTING 2 (6PPC, 1CR, TRACK 1, GRADE 12)**

This course is a continuation of Accounting 1, which is a pre-requisite. Topics include departmentalized, general, partnership and corporate financial accounting methods. The course incorporates manual as well as computerized applications.

**Pre-requisites: Accounting 1.**

### **681: TECHNOLOGY APPLICATIONS I (6PPC, 0.5CR, TRACK 2, GRADE 10)**

This one-semester course is designed to teach the student the computer applications needed to utilize the school's technology. At the beginning of the course, there will be a brief reinforcement of the keyboard. Microsoft Office 2000 is the software package the students will use. This introductory course will include word processing, spreadsheet applications, database management and the understanding and use of PowerPoint presentations. Also, students will learn the basics of the Internet such as getting connected and finding the types of information available. **This course is open to all tracks.**

### **692: ADVANCED TECHNOLOGY APPLICATIONS/WEB DESIGN (6 PPC, 1 CR, TRACK 2, GRADE 11, 12)**

This course is designed to develop advanced knowledge and skill in utilizing the Microsoft Office 2007 applications software and will include web page design and HTML and basic network organization. Word, Excel, Power Point, Outlook and Access will be covered in depth as stand alone applications followed by comprehensive examination of the integrated functions of these applications. The course will thoroughly examine the construction and assembly of websites by reviewing the basic principles of web design and HTML followed by the study of the primary network structures.

### **661, 662, 663: LAW FOR BUSINESS, REAL ESTATE AND INSURANCE (6PPC, 1CR, TRACK 1,2,3, GRADE 11, 12)**

In this course, students will be introduced to the interaction between Law and Justice, how ethics fits into our legal system, and why contracts are the foundation of our legal system. Students will discover the laws that surround employment, insurance, personal and real property as well as real-world issues of credit, banking, bankruptcy, crimes and torts. Students will have the opportunity to explore law in the media, law and the **Internet**, and go **on-line** for solutions to problems involving wills, commercial papers, lease agreements, sales contracts and warranties, auto insurance, property valuation, and the criminal and civil court system. It is an ideal course for all students and especially those considering business as a major in college and those pursuing careers in the field of law. **This course is open to all tracks.**

### **672, 673: MARKETING (6PPC, 1CR, TRACKS 2, 3, GRADE 11, 12)**

This course is designed to take students into the world of the marketer. The curriculum covered will allow students to demonstrate creativity and business savvy by developing ideas for advertising, marketing and promoting products. Marketing product, price, promotion, place, consumer behavior and marketing research are also emphasized in this course. Other topics and media such as e-commerce and the Internet will also be explored. **This course is open to all tracks.**

# MUSIC STUDIES

## **706: INTRODUCTION TO CONCERT BAND (6PPC, 1CR, TRACK 2, GRADE 9, 10)**

This is a beginning and intermediate level course open to all interested freshmen and sophomores. Basic fundamentals of music theory, reading music, and the development of technical proficiency on various band instruments will be emphasized. Each student will take one music lesson per week. Lessons are offered once a week during the school day. **Department approval is necessary.**

## **701, 702, 703, 704: CONCERT BAND (6PPC, 1CR, TRACK 2, GRADE 9, 10, 11, 12)**

The Concert Band is a performing band that is designed to continue the development of technical proficiency of the various instruments along with the basic musicianship through the performance of varied band literature. The group participates in public programs, assemblies and other school activities. This band is the one from which all the other bands are formed. The Marching, Pep, Jazz and any instrumental performing ensemble are all extensions of the Concert Band. Students in this course must participate in the Competitive Marching or Pep bands. The grade will be determined by the student's ability to perform the band literature, proficiency on their instrument, solo performance, music theory quizzes and **PARTICIPATION IN ALL BAND PERFORMANCES.** Each student must take one lesson per week. Lessons are offered once a week during the school day. **Honors requirements:** This course can be taken for honors credit. Students must fulfill all requirements of the regular class as well as complete requirements in the areas of: private study on their instruments, verified out-of-class service to department, solo performance and All-Catholic tryouts. **Pre-requisite: Department audition and approval are necessary.**

## **707: INTRODUCTION TO STRING ORCHESTRA (6PPC, 1CR, TRACK 2, GRADE 9, 10, 11, 12)**

This course is designed to introduce students with little or no musical background to violin, viola, cello or bass. Students will learn proper technique, note reading, basic theory and music history. In addition to classroom instruction, each student will receive a lesson once a week during the school day. Performance at two concerts is a class requirement. Instruments and facilities will be provided. **Pre-requisite: Department approval is required.**

## **708: STRING ORCHESTRA (6PPC, 1CR, TRACK 2, GRADE 9, 10, 11, 12)**

This course is designed for students with at least one full year of instruction on violin, viola, cello or bass. Students will have the opportunity to play in quartets, trios and/or other small ensembles. Music Theory as well as Music History will be covered. Performance at the Christmas and Spring Concerts is a class requirement. Lessons are offered once a week during the school day. **Pre-requisites: Introduction to Strings, Department audition and Departmental approval.** **Honors requirements:** This class can be taken for honors credit. Students must fulfill all requirements of the regular class as well as complete requirements in the following areas: private study on their instruments, verified out-of-class service to the Department, solo performance and All-Catholic tryouts.

## **705: VOCAL CLASS (6PPC, 1CR, TRACK 1, GRADE 10, 11, 12)**

In this class, students will learn the basics of singing: producing a good vocal tone, diction, breathing, phrasing, note and rhythmic accuracy, singing in harmony, and sight singing. Once these skills have been learned, the course will proceed with an emphasis on classic choral literature as a further development of the voice and an appreciation of the masters.

## **714: GUITAR ENSEMBLE/FRETTED INSTRUMENTS (6PPC, 1CR, TRACK 2, GRADE 10,11, 12)**

This class is open to sophomore, junior and senior students who own an acoustic or electric guitar. Students will learn to read music notation and will play music from different eras and styles that have been arranged for guitar ensemble. Scales, modes, chords theory and various playing techniques will be explored. The guitar ensemble will perform at both the Christmas and Spring Concerts. **Pre-requisite: Department approval is required.**

## **709: ADVANCED PLACEMENT MUSIC THEORY (6PPC, 1CR, TRACK 5, GRADE 12)**

AP Music Theory is offered to students who wish to increase their knowledge of the skills involved in the understanding and performance of music. Students will be given an in-depth study of the rudiments and terminology of music, including notation, scales and key signatures, chords, metric

## MUSIC STUDIES (cont'd)

organization, and rhythmic patterns. Through exercises in listening, performing and analyzing musical compositions, students will develop their written and creative musical skills. **All students must take the AP Exam in May.**

**Pre-requisites: Knowledge of music fundamentals and departmental approval.**  
(Exceptions with approval by the Assistant Principal for Academic Affairs)

### **711: MUSIC TECHNOLOGY I (6PPC, 1CR, TRACK 2, GRADES 10, 11, 12)**

Students will be introduced to the study of music technology and music fundamentals. Areas of instruction include instrument and equipment care, beginning level music literacy (reading and writing music), keyboard performance skills, music technology, related history, concepts, terminology and experience with a variety of computer applications.

**Pre-requisite: Department approval is required.**

**STUDENTS ARE LIMITED TO NO MORE THAN 2 MUSIC COURSES ON THEIR ROSTER.**

## FINE ART STUDIES

### **731: HONORS ART 1 (6PPC, 1CR, TRACK 1, GRADE 9, 10, 11, 12)**

This course is designed to introduce students to the World of Art. Emphasis will be placed on understanding the elements of art and the principles of design. Students will be introduced to various art media and techniques. Various artists and periods in art history will be examined. Creative problem solving skills will also be developed. Students will assess their own work as well as the work of others, thus attaining healthy critical and analytical skills.

**Pre-requisites: Departmental approval and the approval of the Assistant Principal for Academic Affairs.**

### **732: HONORS ART 2 (6PPC, 1CR, TRACK 1, GRADE 10, 11, 12)**

This course is designed to further explore creative involvement through exposure to a wider range of media and processes. Various principles of design are applied to problem-solving situations. Students are encouraged to continue to evaluate their own work. This critical analysis is enhanced by the opportunity to take one of the Art field trips made available to the students at this level.

**Pre-requisites: Departmental approval, a grade of at least an 80 in Art 1 and the approval of the Assistant Principal for Academic Affairs.**

### **733: ART 3/4 (ADVANCED ART) MAJOR (6PPC, 1CR, TRACK 1, GRADE 11, 12)**

The advanced art course by means of in-class demonstrations, lectures and critiques is designed to explore a fuller range of studio experience, including conceptual and technical development in painting, drawing, sculpture, print making and computer graphic programs. Art history is examined and discussed to provide a resource of ideas and concepts in art. This is further enhanced by art field trips that are made available to the students throughout the course of the year. Attention is given to students planning a career in the arts with a heavy focus on portfolio preparation and career counseling. Class time is often allotted to guest lecturers and visiting artists.

**Pre-requisites: Department approval, a grade of at least an 80 in Art 2 and the approval of the Assistant Principal for Academic Affairs.**

### **735: ADVANCED PLACEMENT STUDIO ART (6PPC, 1CR, TRACK 5, GRADE 12)**

Students interested in entering the AP Studio Art Program must be highly motivated and capable of doing college level work. It is strongly recommended that all applicants complete at least two years of Art preceding this course. **All students must be invited by the Chairperson of the Fine Arts Department, have a grade of at least 95 in the previous year's Art course and be approved by the Assistant Principal for Academic Affairs.**

# PHYSICAL EDUCATION & HEALTH STUDIES

**ONE CREDIT IN HEALTH/P.E. IS REQUIRED FOR GRADUATION.**

## **712, 713: PHYSICAL EDUCATION (6PPC, 0.5CR, TRACK 2, GRADE 9,10)**

This course is designed to provide wholesome experiences through participation in team and individual activities that promote maximum and optimum development and growth in an individual's potentialities in all phases of life. The program includes recreational games, individual and team sports, and physical fitness activities.

## **722: HEALTH EDUCATION (6PPC, 0.5CR, TRACK 2, GRADE 9, 10)**

This course is designed not to suggest a list of solutions to health problems but to isolate some of the most perplexing questions and provide opinions, data, and facts that can help the individuals to make decisions about how those questions will affect their lives, now and in the future. The major topics discussed include mental health, human sexuality, drug use and abuse, first aid, nutrition, and conflict resolution.

# DIOCESAN SCHOLARS PROGRAM

## **700: DIOCESAN SCHOLAR PROGRAM**

### **A. PURPOSES**

To recognize the quality of education imparted in our Catholic Secondary school system as exemplified by those students who have excelled in their academic development and performance. To honor those students who have excelled and to provide them opportunity to gain experience at the collegiate level while continuing their valued involvement and growth in the high school community. To provide a means to permit our Catholic College and University community to express its recognition, admiration and appreciation for the work being performed in the Catholic secondary schools. To provide these students opportunity to experience the quality of education on Catholic College and University campuses.

### **B. PROGRAM**

A number of students chosen from among the top twenty (20) (ranked at the beginning of the second semester junior year) from each Catholic High School will be designated "Diocesan Scholars" and will be permitted to take two courses each semester during their senior year at a nearby Catholic College or University. During that time they will be guests of the College or University (will not pay tuition but will be graded participants in the selected courses, and the home high school will accept the course and grade toward their graduation). Following graduation from high school, the host College or University will provide a transcript of the courses they have taken.

# DUAL ENROLLMENT

Archbishop Ryan High School is in partnership with the Community College of Philadelphia and Bucks County Community College in a dual enrollment program. Under this program, eligible Archbishop Ryan students will take college level courses for both college and high school credit. As these courses are offered, information will be distributed to parents and students.

# BONAVENTURE PROGRAM

The Bonaventure Program serves a unique group of students with identified learning disabilities. These students are fully integrated into the academic and social environment of the school. In addition they receive instruction in learning strategies in a resource room for one period each day. They are accommodated in their regular classes through appropriate modifications in instruction techniques and testing procedures. Additional tuition is required.

Admission is through the Office of Catholic Education. For more information contact the Office of Academic Affairs at 637-1800, extension 217.

## CORA AUXILIARY SERVICES

According to the provision of the Education Act 89 of the Commonwealth of Pennsylvania, the following services are provided to Archbishop Ryan Catholic High School students.

### STUDY SKILLS/READING AND MATH

General purpose: To develop reading proficiency to an acceptable level based on student's needs as identified by prior diagnosis. To develop mathematics proficiency which will enable the student to succeed in high school math.

**Eligibility:** A student may be recommended for the program by the non-public school administrator if the student meets one or more of the following criteria:

- A. Has scored at or below grade level in reading and/or math on a recent standardized achievement test.
- B. Is placed in an instructional group that is below his/her grade placement.
- C. Is recommended by a classroom teacher with supporting evidence that the student's performance is not up to grade expectations.





Archbishop Ryan High School  
11201 Academy Road • Philadelphia, Pennsylvania 19154-3397  
215-637-1800 • [www.archbishopryan.com](http://www.archbishopryan.com)