Our Lady of Lourdes Regional School

Diocese of Harrisburg

Course Offerings and Requirements

2024-2025

April 2024

2001 Clinton Avenue
Coal Township, PA 17866 – 169

PHILOSOPHY

Our Lady of Lourdes Regional School is a Catholic community comprised of students, faculty, parents, and alumni working together to respond in faith to the educational mission of the Church. We present the message of salvation proclaimed by Our Lord Jesus Christ in the Gospel. Church documents, such as, ***To Teach As Jesus Did*** and ***The Catechism of the Catholic Church***, guide the content and direction of the various curricula.

Community, as a lived reality, is the heart of Catholic education at Lourdes. This philosophy is practiced by the way we live and work within the family, the parish, the neighborhood, and globally. Lourdes is strongly committed to academic excellence and to the preparation of students to assume their roles as contributing members of society. In addition to spiritual formation, this preparation encompasses the students' intellectual, personal, social, and physical development.

GOALS

SPIRITUAL DEVELOPMENT

- Students will grow in the knowledge and appreciation of Catholic traditions and recognize the importance of being recognized as a disciple of Jesus.
- Students will grow in their understanding of the Catholic faith as well as having the ability to explain and live the faith.

INTELLECTUAL DEVELOPMENT

- Students will develop the ability to identify problems, generate alternative solutions, and decide upon an effective course of action.
- Students will develop an appreciation for learning and recognize that it is a life-long process.

PERSONAL DEVELOPMENT

- Students will develop a sense of purpose and self-respect.
- Students will develop the ability to make decisions in the light of Gospel values.

SOCIAL DEVELOPMENT

- Students will develop cultural sensitivity by practicing appreciation of others' ideas and opinions and responding to these differences respectfully.
- Students will develop an awareness of the social graces and the necessity to practice these daily.

PHYSICAL DEVELOPMENT

- Students will recognize the importance of healthy living by learning nutrition basics and care for their body.
- Upon graduation from Lourdes Regional, students will commit themselves to living a healthy lifestyle by consuming products and participating in activities that contribute to their overall well-being.

ADMISSION POLICY

- Any student living within the territorial limits of Our Lady of Lourdes Regional School, which includes all of Northumberland County and parts of Montour and Columbia counties, may attend Lourdes Regional School provided admission requirements are met.
- Lourdes Regional School admits students of any race, color, religion, national or ethnic origin, to all rights, privileges, programs, and activities accorded or made available to its students. The School does not discriminate based on race, color, religion, national and ethnic origin, in its administration of its education and admissions policies, scholarship and financial assistance programs, athletics, and other school-administered programs.
- Any Catholic or non-Catholic boy or girl who is promoted from the eighth grade of a Catholic regional schools is automatically a candidate to attend Lourdes Regional.
- Any student transferring into Lourdes Regional from any public school or any Catholic school outside the territorial limits of Lourdes Regional must be interviewed by the School Administration prior to acceptance.
- An application form must be completed.
- Transfer students may be accepted provided their previous academic program coincides with the Lourdes Regional educational programs as established by the Administration and/or Board of Directors. Parents/guardians must agree to the payment of fees, tuition, and costs of the school.
- Tuition assistance is available.
- Any student, regardless of creed or religion, must participate in the prescribed religion courses and attend services and programs regularly scheduled for the students.
- A non-refundable registration fee must be paid upon application to the school.

TRANSFER OF STUDENTS

Parents/guardians of students transferring to Lourdes Regional must complete and submit the school application form. Upon receipt of the application, the Principal/Administration will schedule an interview with the parents/guardians of the applicant to assess the student's compatibility with the educational and spiritual programs of Lourdes.

No student will be admitted to Lourdes until the academic, discipline, and health records from the previous school have been reviewed by the Principal/Administration. Notification of acceptance or rejection will then be provided to the parents/guardians.

LOURDES REGIONAL RESERVES THE RIGHT TO REFUSE ADMISSION TO ANY STUDENT.

ACADEMIC POLICIES AND PROGRAMS

Our Lady of Lourdes Regional School has developed a comprehensive curriculum of academic and extracurricular programs. In addition, Lourdes offers a rigorous honors program. Course offerings are differentiated to meet the needs of all students. Extracurricular activities offer students the opportunity to explore other interests and talents through athletics, organizations, and clubs.

GRADUATION REQUIREMENTS

Graduation from Our Lady of Lourdes Regional School depends upon successful completion of all required courses as mandated by the Pennsylvania Department of Education, Our Lady of Lourdes Regional School, and the Office of Catholic Education of the Diocese of Harrisburg. Completion of a course is to be interpreted as earning a grade of at least 70 for the year.

A minimum of 26 credits accumulated throughout four years of study (Freshmen through Senior year) is required for graduation from Our Lady of Lourdes Regional School. A student must, therefore, pass all subjects totaling at least these 26 credits as listed.

SUBJECTS

FRESHMEN	SOPHOMORES	JUNIORS	SENIORS
Religion I	Religion II	Religion III	Religion IV
English I	English II (H)	American Literature (H)	British Literature (H)
	English II (A)	American Literature (A)	British Literature (A)
Geometry (A)	Algebra II (H)	Precalculus/Trig (H)	Calculus (H)
Geometry (H)	Geometry (H)	Algebra II (H)	Precalculus/Trig (H)
Algebra I	Geometry (A)	Algebra II (A)	Stat. and Prob.
Algebra Concepts	Algebra I	Geometry (A)	Trigonometry
			AP Calculus (H)
Biology	Chemistry I (H)	Biology II (H)	Biology II (H)
	Chemistry I (A)		Physics (H)
		Anatomy & Physiology (A)	Anatomy & Physiology (A)
	Environ. Science	Environ. Science	Environ. Science
World History I	U.S. History (H)	20th & 21st Cent. A. H. (H)	Government (H)
	U.S. History (A)	20th & 21st Cent. A. H. (A)	Government (A)
	Western Society II (H)	Western Society III (H)	Western Society IV (H)
Principles of Biomedical Science (H)	Human Body Systems (H)	Medical Interventions (H)	Medical Innovations (H)
Spanish I	Spanish II	Spanish III (H)	Spanish IV (H)
French I	French II	French III (H)	French IV (H)
Physical Education	Physical Education	Physical Education	Physical Education
		Health II (1)	Health II (1)
		Accounting I	Accounting II
		Business Law	Business Law
	Personal Finance	Personal Finance	Personal Finance

CREDITS

Religion	4
English	4
Mathematics	3
Science	3
Social Studies	4
Art or Humanities	2
Health and Physical Education	1
Electives	5

COURSE OFFERINGS

FRESHMEN	SOPHOMORES	JUNIORS	JUNIORS/SENIORS
	Studio Art	Studio Art	Studio Art
	Advanced Studio Art I	Advanced Studio Art I	Advanced Studio Art I
		Art Honors (H)	Advanced Studio Art II
			Art Honors (H)
			Career Art (H)
Concert Choir (1/2)	Concert Choir (1/2)	Concert Choir (1/2)	Concert Choir (1/2)
	Music Theory	Music Theory	Music Theory
	Instrumental Music	Instrumental Music	Instrumental Music

MINIMUM CREDIT REQUIRMENTS NON – BIOMEDICAL

FRESHMEN			**SOPHMORES**	
SUBJECT	**CREDIT**		**SUBJECT**	**CREDIT**
Religion	1		Religion	1
English	1		English	1
Mathematics	1		Mathematics	1
Science	1		Science	1
World History	1		U,S. History	1
Physical Education	¼		Physical Education	¼
Electives/Languages	1		Electives/Languages	1
Total	**7 ¼**		**Total**	**7 ¼**
JUNIORS				
SUBJECT	**CREDIT**		**SUBJECT**	**CREDIT**
Religion	1		Religion	1
English	1		English	1
20th Century U.S. History	1		Government	1
Science	1		Physical Education	¼
Mathematics	1			
Physical Education	¼		Science (optional)	1
Electives	1		Mathematics (optional)	1
Total	**6 ¼**		**Total**	**5 ¼**

TOTAL 26 CREDITS

It is strongly recommended that a student take at the minimum a two-year sequence in a foreign language. The science and math courses are optional in twelfth grade, but the student **must** have completed **three credits prior to their 12th year, both in science and in math**. If the student chooses not to take these subject areas, he/she must select other courses to replace them. Students must take at least six major subjects.

FRESHMEN			**SOPHOMORES**	
SUBJECT	**CREDIT**		**SUBJECT**	**CREDIT**
Religion			Religion	
English			English	1
Mathematics	1		Mathematics	1
Science			Science	1
World History			U.S. History	1
Physical Education			Physical Education	
Electives/Languages *	1		Electives/Languages	2
Total	**2**		**Total**	**5**
JUNIORS			**SENIORS**	
SUBJECT	**CREDIT**		**SUBJECT**	**CREDIT**
Religion			Religion	
English	1		English	1
Mathematics	1		Mathematics (optional)	1
Science	1		Science (optional)	1
U.S. History	1		Government	1
Physical Education			Physical Education	
Electives/Languages *	2		Electives/Languages	3
Total	**6**		**Total**	**7**

TOTAL 26 CREDITS

It is strongly recommended that a student take at the minimum a two-year sequence in a foreign language. The science and math courses are optional in twelfth grade, but the student **must** have previously completed **three credits both in science and in math**. If the student chooses not to take these subject areas, he/she must select other courses to replace them. Students must take at least six major subjects.

MINIMUM CREDIT REQUIREMENTS - BIOMEDICAL

FRESHMEN			**SOPHOMORES**	
SUBJECT	**CREDIT**		**SUBJECT**	**CREDIT**
Religion	1		Religion	1
English	1		English	1
Mathematics	1		Mathematics	1
Science	1		Science	1
World History	1		Human Body Systems	1
Physical Education	¼		Physical Education	¼
Principals of Biomedical Science	1		Quarter Courses	¾
Electives/Languages *	1		U.S. History	1
Total	**7 ¼**		**Total**	**7**
JUNIORS			**SENIORS**	
SUBJECT	**CREDIT**		**SUBJECT**	**CREDIT**
Religion	1		Religion	1
English	1		English	1
Mathematics	1		Mathematics (optional)	
Science	1		Science (optional)	
20th Century U.S.	1		Government	1
Physical Education	¼		Physical Education	¼
Medical Interventions	1		Medical Innovations	1
			Elective	2
Total	**6 ¼**		**Total**	**6 ¼**

TOTAL 26 CREDITS

It is strongly recommended that a student take at the minimum a two-year sequence in a foreign language. The science and math courses are optional in twelfth grade, but the student **must** have previously completed **three credits both in science and in math**. If the student chooses not to take these subject areas, he/she must select other courses to replace them. Students must take at least six major subjects.

MAXIMUM HONOR COURSES - BIOMEDICAL

FRESHMEN			**SOPHOMORES**	
SUBJECT	**CREDIT**		**SUBJECT**	**CREDIT**
Religion			Religion	
English			English	1
Mathematics	1		Mathematics	1
Science			Science	1
World History			Human Body Systems	1
Physical Education			Physical Education	
Principals of Biomedical Science	1		Quarter Courses	
Electives/Languages *			U.S. History	1
Total	**2**		**Total**	**5**
JUNIORS			**SENIORS**	
SUBJECT	**CREDIT**		**SUBJECT**	**CREDIT**
Religion			Religion	
English	1		English	1
Mathematics	1		Mathematics (optional)	1
Science	1		Science (optional)	1
20th Century U.S.	1		Government	1
Physical Education			Physical Education	
Medical Interventions	1		Medical Innovations	1
			Elective/Language	2
Total	**6**		**Total**	**7**

TOTAL 26 CREDITS

It is strongly recommended that a student take at the minimum a two-year sequence in a foreign language. The science and math courses are optional in twelfth grade, but the student **must** have previously completed **three credits both in science and in math**. If the student chooses not to take these subject areas, he/she must select other courses to replace them. Students must take at least six major subjects.

COURSE DESCRIPTIONS

RELIGION

1100 RELIGION I - FRESHMEN - ACADEMIC - REQUIRED

Freshmen religion is based on the essential beliefs of the Catholic Faith. The curriculum is developed following the systematic presentation of the ***Catechism of the Catholic Church***: the Profession of Faith (Creed), the celebration of the Christian mystery (Liturgy and Sacraments), Life in Christ (Moral Living), and Christian Prayer.

1200 RELIGION II - SOPHOMORES - ACADEMIC - REQUIRED

HEBREW SCRIPTURES

This course provides commentary, analysis, and reflection on the major stories of the Old Testament. The major themes and issues are illustrated through important places and events in the life of the Hebrew people. Key passages are used as reflections for incorporating biblical truths into students' everyday life situations.

CHRISTIAN SCRIPTURES

The curriculum, "*Jesus of History, Christ of Faith*," traces the path the early Christians took as they came to fuller knowledge of Jesus. The approach used is known as "Christology from below," a theological perspective that has been predominant in the Church since Vatican Council II. The goal is to aid students in recognizing the full humanity and divinity of Jesus.

1300 RELIGION III - JUNIORS - ACADEMIC - REQUIRED

MORALITY AND SOCIAL JUSTICE

Key Christian morality themes studied are ethical teachings of Jesus, the Commandments, sin, conscience, Church's social justice principles, virtues, and Works of Mercy. Students will learn strategies for decision-making relating to the moral theme studied and to teen interests.

The second semester examines significant social justice issues, such as, respect for life and God's creation by referencing Scripture and Church documents.

1400 RELIGION IV - SENIORS - ACADEMIC - REQUIRED

CHURCH AND VOCATION

Study of the development of the Church through its 2000-year history. The course encourages students to actively participate in the Church community through service to God and His people. Students will discern their personal call or vocation from God as single, married, priesthood, or consecrated life.

ENGLISH

2100 ENGLISH I - FRESHMEN - ACADEMIC - REQUIRED

Students will read and discuss works of Literature from various genres. They will also read one Shakespearean drama, at least one novel, and study the basics of Greek mythology. Students will demonstrate competency in grammar, usage, and spelling through verbal and written responses to literature and by beginning and maintaining a writing portfolio. Vocabulary study will emphasize contextual skills. Students will also be introduced to basic research techniques and will complete a research paper.

PREREQUISITE: Student must have successfully completed 8th grade English before being admitted to English I.

2200 ENGLISH II - SOPHOMORES - ACADEMIC

Students will continue the study of Literature from various genres around the world. They will read one Shakespearean drama, at least one novel. Students will demonstrate competency in grammar usage, delivering presentations, responding critically to literature and by compiling a writing portfolio. Instruction in writing and vocabulary will continue. Students will expand their knowledge of research techniques and will complete a research paper. Career prep will include building a resumé.

PREREQUISITE: Student must have successfully completed English I before being admitted to English II.

2220 ENGLISH II – WORLD LITERATURE - HONORS

Students will continue the study of Literature from various genres around the world. They will read one Shakespearean drama, at least one novel. Students will demonstrate competency in grammar usage, delivering presentations, responding critically to literature and by compiling a writing portfolio. Instruction in writing and vocabulary will continue. Students will expand their knowledge of research techniques and will complete a research paper. Career prep will include building a resumé. Emphasis will be on a more sophisticated response to literary topics and enhanced performance in composition at the honors level.

PREREQUISITES: Student must have successfully completed English I, must have an average of 90 or higher, and must have teacher approval in order to be admitted to English II Honors.

2300 AMERICAN LITERATURE - JUNIORS - ACADEMIC
Students will study American literary history through the writings of major American authors from the Civil War era through present day. They will read various text selections and at least one novel. They will also study one Shakespearean drama. Vocabulary development will continue, as will the focus on students' writing and instruction process. Emphasis will be on a more sophisticated response to literary topics and enhanced performance in composition. Career prep will include writing a cover letter.
PREREQUISITE: Student must have successfully completed English II before being admitted to Junior English.

2320 AMERICAN LITERATURE - JUNIORS - HONORS
Students will study American literary history through the writings of major American authors from the Civil War era through present day. They will read various text selections and at least one novel. They will also study one Shakespearean drama. Vocabulary development will continue, as will the focus on students' writing and instruction process. Emphasis will be on a more sophisticated response to literary topics and enhanced performance in composition. Career prep will include writing a cover letter. Emphasis will be on a more sophisticated response to literary topics and enhanced performance in composition at the honors level.
PREREQUISITES: Student must have successfully completed English II. A student in Academic English must have an average of 90 or higher; a student in Honors English must have an average of 88 or higher; and the student must have teacher approval.

2400 BRITISH LITERATURE - SENIORS - ACADEMIC
Students will study British Literature in its historical context(s), dating from the Anglo-Saxon Era through present day. They will study at least one Shakespearean drama and read one novel. Vocabulary development and focus on students' writing will continue. Students' experience in the research process will culminate at this level. Career prep will include college application essays.
PREREQUISITE: Student must have successfully completed Junior English before being admitted to Senior English.

2420 BRITISH LITERATURE - SENIORS - HONORS
Students will study British Literature in its historical context(s), dating from the Anglo-Saxon Era through present day. They will study at least one Shakespearean drama and read one novel. Vocabulary development and focus on students' writing will continue. Students' experience in the research process will culminate at this level. Career prep will include college application essays. Emphasis will be on a more sophisticated response to literary topics and enhanced performance in composition at the honors level.
PREREQUISITES: Student must have successfully completed Junior English. A student in Academic English must have an average of 90 or higher; a student in Honors English must have an average of 88 or higher; and the student must have teacher approval.

2432 MASS MEDIA – Sophomores – Juniors - Seniors
Introduces students to mass communication as a field of study. Exploration of historical, social, and political intersections with journalism, advertising, public relations, ethics, and government will be considered from both a national as well as a global perspective. Groundbreaking theories of mass communication will also be introduced.

4350 SPORTS MEDIA & MARKETING – Sophomores – Juniors - Senior

Students will be introduced to the basic concepts of marketing in sports. This course will develop fundamental skills of marketing analysis and managerial decision making. Fundamentally, students will be taught the role of marketing in the business of sports, the role and responsibilities of the sports media profession, and the unique nature of sports-derived products. Hands-on experience in the sports world will be provided by allowing students to assist the athletic department with sporting events and sports operations. Also, students will be given the opportunity to produce videos, photos, writing material and/or broadcasting opportunities for sporting events.

SOCIAL STUDIES

3100 WORLD HISTORY I - FRESHMEN - REQUIRED

Examines the social, political, religious, intellectual, and technological developments from the early Renaissance (c.1450) to the present. Western Civilization will be the focus.

3202 United States History I (A) – Sophomore – REQUIRED

Examines the events that influenced the creation of the United States including the Golden Age of Exploration, colonialism/colonial contention, Native American civilizations, and reaction to British policy. The latter half of the course includes topics such as the initial stages of the American government, the first industrial revolution, expansion West, and intellectual movements. The course concludes with analysis of the Civil War.

3204 US History I (H) – Sophomore – REQUIRED

Course study includes an overview of the settlement of North America, the examination of British policies that led to independence and the creation of America. Topics for discussion will include the evolution of the young republic, growing sectionalism, and expansion to the West. Results of the Civil War and its aftermath will be examined. The latter half of the course will focus on the importance of reconstruction, the birth of American imperialism, the progressive movement, and events leading to World War I.

Students will be expected to synthesize and evaluate issues logically. Key historical skills such as causality, recognizing themes, and understanding chronology of events will be employed for the purpose of developing students' critical and analytical thinking skills. At least two research papers/projects will be assigned for this course. **Prerequisite for Honors: Permission of instructor**

3200 WESTERN SOCIETY II – Honors (Elective)

This course begins an advanced study of the course of Western society. Focused attention begins with the Renaissance and continues through the upheaval of the French Revolution, Napoleon, and the dawn of the new Europe.

Prerequisite for honors: World History I (grade of 88) and permission of instructor.

3240 WESTERN SOCIETY IV – ADVANCED – SENIORS HONORS (Elective)

This is an advanced course that continues the study of Western civilization and focuses on the social, political, religious, intellectual, and technological aspects of contemporary issues and how they relate to events of the past and may be precursors of the future. Emphasis will be on Europe and the United States.

Prerequisite: Instructor Approval

3250 WESTERN SOCIETY III Advanced - Juniors, Seniors – Honors (Elective)

This course continues the survey of Western civilization. The study will include the effects of Western policies of imperialism that led to unrest and war in the 20th century and still cause major repercussions throughout the world. Additionally, focus will be on world changes that have occurred because of power shifts in what were previously known as Third World nations (e.g., China, India) and the results in the global world of the 21st century.

Prerequisite: Instructor Approval.

3300 20/21st Century United States History - Juniors - Honors – REQUIRED
Students will study various aspects (social, political, religious, intellectual, technological, etc.) of the United States from the beginning of the 20th century to the present day. The course will address such topics as the Great Depression, the New Deal, the Cold War, etc., as well as military actions (e.g., WWI, WWII) social/intellectual dilemmas (e.g., Holocaust, Hiroshima), etc.
Prerequisite: Instructor Approval

3330 20/21st Century United States History - Juniors - Academic– REQUIRED
Students will study various aspects (social, political, religious, intellectual, technological, etc.) of the United States from the end of the Civil War to the Modern Era. In this course students will learn about topics such as Reconstruction, the Second Industrial Revolution, World War I, World War II, and the Cold War.

3401 GOVERNMENT - SENIORS - HONORS - REQUIRED
This course is an introduction to government structures. Students are encouraged to develop civic competence skills necessary for participation within a democratic republic. In addition to an introduction to politics, the course will also discuss contemporary world/national issues. Focus on the Supreme Court and historic, as well as current cases will be discussed.
Prerequisite: Instructor approval

3400 GOVERNMENT - SENIORS - ACADEMIC – REQUIRED
This course examines the framework of our country's government and other forms of government. Introduction to the philosophies of the Founding Fathers, the three major branches of the federal government, the function of state and local governments, the voting process, judicial processes, as well as other government forms like confederations, dictatorships, and monarchies will be studied. Examination of domestic and foreign current events will be reviewed.

BUSINESS

4390 CAREER PREPARATION – FRESHMEN QUARTER COURSE
This course focuses on the development of the student's understanding of career preparation and career development. Students will use handouts, websites, and reference materials to obtain information about career preparation. Emphasis will be on career interests, planning post-secondary educational goals, job networking, and interview skills.

4300 PERSONAL FINANCE—SOPHOMORES, JUNIORS, SENIORS
Management of finances is essential in life. This class instructs students in practical steps for financial success through engaging activities including video, class discussion, and small group activities. Topics include debt reduction, managing money, spending, and saving wisely. Students will experience utilizing the stock market through simulation.

4320 ACCOUNTING I – JUNIORS, SENIORS – ACADEMIC
In this course, students develop the ability to analyze and record business transactions. Students learn to recognize the language, organizations, and procedures of business. It is highly recommended that students interested in pursuing a business degree in college register for this course for it serves as an orientation for advanced study in business.

4360 BUSINESS LAW – JUNIORS, SENIORS - ACADEMIC
This course aids students in becoming familiar with criminal and civil law and how it pertains to individuals in societal relationships.

MATHEMATICS

5100 ALGEBRA I – ACADEMIC
Concepts studied include expressions, equations, and functions; properties of real numbers; solving, graphing, and writing linear equations; exponents, polynomials, and factoring. Core algebraic skills at an academic pace are the focus for this course. **Prerequisite: Math 8/Pre-Algebra**

5200 GEOMETRY – ACADEMIC
Concepts studied include tools of geometry; parallel and perpendicular lines; triangle congruence and relationships; quadrilaterals; proportions and similarity; and introduction to trigonometry. This is a course in Euclidean Geometry that concentrates on the general understanding of geometric concepts at an academic pace.
Prerequisite: Algebra I and teacher approval

5220 GEOMETRY –HONORS
Concepts studied include tools of geometry; reasoning and proof; parallel and perpendicular lines; triangle congruence and relationships; quadrilaterals; proportions and similarity; introduction to trigonometry; transformations; and circles. This is an in-depth advanced pace course in Euclidean Geometry that requires rigorous applications of problem solving.
Prerequisite: An average of 90 in Algebra I, a solid work ethic, and teacher approval.

5300 ALGEBRA II – ACADEMIC
Concepts studied at an academic pace include review of linear equations/functions and inequalities; systems of equations and inequalities; exponents and exponential functions; polynomials and factoring; quadratic equations/functions; radicals and geometry connections; rational equations and functions; introduction to probability and data analysis.
Prerequisite: Algebra 1 and Geometry

5320 Algebra II – Honors
Concepts studied at an advanced pace include quadratic equations/functions and factoring; radicals; rational equations and functions; polynomials and polynomial functions; rational exponents and radical functions. This is an in-depth course that requires rigor and problem-solving skills.
Prerequisite: Algebra 1 with an average of 85 in Geometry Honors or 90 in Geometry Academic, a solid work ethic, and teacher approval.

5430 STATISTICS AND PROBABILITY - SENIORS - ACADEMIC
This course includes frequency distribution, central tendency, mean, median, mode, probability distribution, standard normal curve, standard deviation as well as aspects of probability.
Prerequisite: Algebra I, Geometry, an average of 80 in Algebra II and teacher approval.

5440 Pre-Calculus/Trigonometry – Honors
This is a preparatory course for senior calculus. In Addition to review of algebra with focus on linear and quadratic functions as well as polynomials, time is allotted for defining one-to-one and inverse functions. Graphing of functions with emphasis on vertical and horizontal translations is covered as well as the equations of circles, all in preparation for using the unit circle to ultimately define trigonometric relations. Providing a foundation to eventually study wave mechanics, including determining the period and phase shifts of trigonometric functions builds upon the graphic representation of common functions addressed in fundamental Algebra. The first semester concludes with a thorough introduction to exponential and logarithmic functions, emphasizing that they are inverse functions. This will include using these functions in equations. The second semester is almost exclusively devoted to trigonometry, defining trigonometric functions in terms if the right triangle, and then moving to the Cartesian plane and ultimately to the unit circle. Emphasis will be placed on graphic representations of these relationships in preparing those who will later study Fourier Series. Trigonometric identities will be addressed including double and half-angle identities. As tie permits and depending on the students' motivation, vectors, the complex plane and polar coordinates will be approached, at least in a cursory manner. Especially ambitious students will be encouraged to learn the fundamental operations of matrices while solving simultaneous linear equations expressed in multiple variables. The goal is to prepare students to use the language of mathematics to model their physical, artistic, and business worlds while enhancing their appreciation of God's creation.
Prerequisites: Recommendation from Algebra II instructor. Students will be discouraged from taking this course if they are not committed to diligent study habits and daily problem-solving exercises. They will be strongly encouraged however, to schedule this course if their future studies require the

study of calculus. Even students not planning to pursue careers requiring knowledge of advanced mathematics, but who like cognitively challenged, or who have a curiosity about the functioning of the physical world, may be intellectually satisfied pursuing this subject matter.

5500 Calculus – Honors
This curriculum will mimic a two-semester college experience in differential and integral calculus. While it will not lead to AP credit, it will certainly provide a firm foundation to perform well in college calculus. The first semester will use practical examples to introduce the concept of limits and the use of the infinitely large and infinitesimally small to solve real world problems. The derivative of functions will be introduced as a mathematical limit. Operations to find derivatives of polynomials including use of the product and quotient rules as well as the chain rules will be covered in fairly good depth. Finding derivatives of trigonometric , exponential and logarithmic functions will be addressed using challenging examples. Implicit differentiation, word problems including finding the extrema, maxima and minima and use of higher order derivatives will be touched upon. The second semester will focus on finding the antiderivatives as the inverse of taking the derivative, Definite integrals and Fundamental Theorem of Calculus will be covered. Techniques of integration such as integration by parts will be introduced. Using the definite integral to find areas beneath curves and between curves will be introduced. Finding partial derivatives and solving forst order differential equations is also a goal for the second semester. As time permits, properties of infinite series will be discussed including the approximation of a function using Taylor's Series.
Prerequisites: Successful completion of Pre-Calculus a solid work ethic, and teacher approval.

5506 Calculus – AP - AB
This is an online course only. It requires taking the AB Calculus test for Advanced Placement credit in May 2025. While the OLOL faculty is unable to teach this course with the ultimate goal of obtaining college credit, we will provide limited support to students who wish to take this online course with nonembedded faculty. This option should only be pursued by students who are exceptionally well prepared in math and have a firm desire to be intellectually challenged.
Prerequisites: A minimum grade of 90% in Pre-Calculus Honors
IF YOU DO NOT MEET THE PREREQUISITES, YOU WILL NOT BE PERMITTED TO OVERRIDE.
***A TI-84ce graphing calculator is required.**

SCIENCE

6200 BIOLOGY I - FRESHMEN - ACADEMIC
Biology I will cover cellular, molecular, and genetic topics including modern lab techniques and theories. Students will study cellular structures and their functions (from environmental response to maintaining homeostasis), metabolism, and molecular and genetic topics (from protein production to family inheritance patterns). The course will conclude with ecological studies. Laboratory experiments will complement the course of study. National science standards focusing on STEM education will be addressed.

6300 CHEMISTRY I - SOPHOMORES - ACADEMIC
Students will study the major concepts in modern chemistry. Topics will include periodic relations, chemical synthesis, atomic structure, reaction progression; and topics such as thermochemistry, acid-base chemistry, and nuclear chemistry. Laboratory studies, developing critical thinking skills, and data recording techniques will be important components of the learning process.
Prerequisite: Successful completion of Biology I and Algebra I

6320 CHEMISTRY I - SOPHOMORES – HONORS
Students will study the major concepts in modern chemistry. Topics will include periodic relations, chemical conversions, atomic structure, naming of chemical compounds, chemical reactions, and topics such as isotopes and acid base chemistry, Laboratory studies will be an important part of the learning process, developing critical thinking skills and data recording techniques. Further emphasis will be placed on chemistry in the news and research. This course will provide the necessary background to students who are considering a career in medicine or science.

Prerequisite: An average of 90 in Biology I, an average of 86 in Algebra, and teacher approval.

6340 ENVIRONMENTAL SCIENCE – SOPHOMORES, JUNIORS, SENIORS –ACADEMIC
Environmental Science will cover ecological topics like biomes, communities, populations, population growth, change and development, and pollution. Addressing today's local (Pennsylvania ecology) and global environmental issues will be investigated and ideas for improvement will be strategized. Individual research options are available.
Prerequisite: Successful completion of Biology I.

6120 PHYSICS – SENIORS - HONORS
This course of study will require successful completion of Precalculus. The first semester will address Newtonian Laws of Motion. This will include linear and parabolic motion as well as angular motion. Learners will study equations of displacement including the derivatives leading to a definition of velocity and acceleration. Momentum, kinetic and potential energy will be studied by numerous example exercises. While Calculus is not a prerequisite for this course, it is recommended that the student study Physics and Calculus concurrently. Solving world problems is fundamental to the study of Physics. The second semester will address the fundamentals of electromagnetic theory including MAXWELL'S Laws. Selected topics in optics, sound and nuclear physics will be introduced as time permits. This course is highly recommended for anyone with aspirations of studying engineering, the physical sciences, biological sciences or mathematics. It complements and gives meaning to the study of mathematics.
Prerequisite: Successful completion of Biology I, Chemistry I (academic or honors), Algebra I and II, and Geometry in addition to teacher approval.

6500 BIOLOGY II – JUNIORS, SENIORS – HONORS
An advanced course in biology designed for the student who is interested in studying biological sciences at the next level. This course puts emphasis on detailed concepts of cellular biology, cellular division, cellular energy transformations, enzymes, and genetics. Other topics of study include plant biology, ecology and animal diversity.
Prerequisite: Average of 90 in Biology I, 87 in Chemistry I academic, and teacher approval.

6550 ANATOMY AND PHYSIOLOGY –SENIORS - HONORS
This course will delve into the details of human body structure and function. With each organ system addressed, homeostatic mechanisms will be the focus. An appreciation of God's greatest creation, made in his image and likeness, will prepare students to study pathologic conditions as a manifestation of homeostatic imbalance. This will be an in-depth study of the various organ systems taught by a physician, supplemented by guest physicians who are specialist practicing in the selected topics being addressed. Incorporated in this curriculum will be the student's independent study addressing assigned disease processes. They will make presentations to their peers. This course will presuppose basic knowledge of Inorganic Chemistry and Molecular Biology. Topics in Organic Chemistry, Biochemistry and Physics will be approached by the instructor as needed to comprehend the physiological principles being investigated. Labs will include dissection of the porcine heart led by cardiac surgeons. While this course may be helpful to those pursuing careers in Allied Medical Professions, it will not be modified for simplicity. Daily reading assignments and participation in class discussion led by the instructors will be anticipated.
Prerequisite: Successful completion of Biology I, Chemistry

3321 GENERAL PSYCHOLOGY – JUNIORS, SENIORS – HONORS
A course with a general introduction to psychology designed for a student who is interested in delving into the major complexities of psychology. This course emphasizes the main ideas of psychology including emotion and motivation, heredity and environment, perception, learning, personality, and intelligence. Upon completion, students will understand the basics of the scientific study of human behavior.
Prerequisite: Successful completion of Biology I, Chemistry I, and teacher approval.

LANGUAGES

8100 SPANISH I - FRESHMEN - ACADEMIC

This course introduces the student to the structure of the Spanish language. Instruction is presented in both Spanish and English. This course uses a variety of resources including a textbook and online learning tools to develop the students' understanding of the fundamentals of the Spanish language. Culture is also incorporated throughout the year. Students will identify various Spanish speaking countries and familiarize themselves with the country's culture. Approximately 12 topics are studied in the course in addition to a variety of engaging activities. This course is designed for non-native Spanish speakers.

8120 FRENCH I - FRESHMEN - ACADEMIC

This course introduces the students to the French language and culture. The students learn a carefully defined vocabulary range and grammatical concepts that will enable them to read, speak, understand, and write French within reasonable limits. Students learn to talk and write about themselves and their families, ask for information, make purchases, and interact in a variety of social situations.

8200 SPANISH II - SOPHOMORES - ACADEMIC

This course is a continuation of topics introduced in Spanish I. Students will enhance their knowledge of present tense verbs and will begin using verbs in the past tense. They will also develop skills in utilizing direct, indirect, and reflexive pronouns. Vocabulary lessons will include practical applications such as descriptions of the home, making and accepting invitations, labeling various foods and drinks, identifying holidays, and naming the parts of the human body. Students will gain proficiency in reading, listening, and speaking in Spanish, while becoming more familiar with Spanish culture. Speaking Spanish to explain oneself will be the norm.

Prerequisite: **An average of 80 in Spanish I and teacher approval**.

8220 FRENCH II - SOPHOMORES - ACADEMIC

This course aims at strengthening and building on the skills acquired in French I. The students learn to describe people and things, to talk about their homes, to interact with others about leisure-time and vacation activities, to discuss health concerns, and to interact in a variety of social situations. The cultural aspects of the course expand and focus on the customs and traditions of the Francophone world.

Prerequisite: An average of 80 in French I and teacher approval.

8300 SPANISH III - JUNIORS - HONORS

This course is a continuation of previously learned material, including present and preterit verbs, object pronouns, commands, and an increase in vocabulary. Students will build upon their knowledge of grammatical structures and will use vocabulary relative to the family, places around town, weather, school, etc. Students will continue to develop their speaking, reading, and listening skills, and knowledge of Hispanic culture. Spanish will be spoken frequently in class.

Prerequisite: **An average of 83 in Spanish II and teacher approval.**

8320 FRENCH III - JUNIORS - HONORS

This advanced course provides an opportunity for students to build on the knowledge gained in French II and to sharpen their communication and comprehension skills. The students learn to talk about their daily routines, express emotions, give opinions, and make travel plans. The cultural emphasis is on the Francophone world with its varied customs and points of interest.

Prerequisite: An average of 85 in French II and teacher approval.

8400 SPANISH IV - SENIORS - HONORS

Students will strive to become fluent in the Spanish Language. They will build upon their knowledge of grammatical structures and increase their vocabulary acquisition. Students will continue to develop their speaking writing, reading, and listening skills, and recognize elements of Hispanic culture. Various projects, reading and speaking assignments will be assigned to develop their Spanish proficiency. Instruction will be presented in Spanish and students will be expected to ask questions and respond primarily in Spanish.

Prerequisite: **An average of 85 in Spanish III or teacher approval.**

8420 FRENCH IV - SENIORS - HONORS
This advanced course provides an opportunity for students to build on the knowledge gained in French III and to sharpen their communication and comprehension skills. The students will use functional language to interact socially, express opinions, and converse and write in French on high-interest and contemporary topics. The cultural emphasis is on French history, geography, art, music, literature, and science.
Prerequisite: **An average of 85 in French III and teacher approval.**

8130 LATIN I – FRESHMEN, SOPHOMORES
To introduce students to simple and basic elements of Latin grammar (declensions of nouns, conjugation of basic verbs, etc.), basic vocabulary as well as an introduction to ancient Roman History, culture, society, and religion.

MUSIC

9040 CONCERT CHOIR – ½ CREDIT
The choir is open to students who are interested in creating music in a group setting. The ensemble will lead music at Mass and will perform Christmas and spring Concerts. Solo and small group opportunities, such as cantoring at Mass or performing a duet at a concert, are also available to those who are interested. Additionally, students may also choose to participate in Cabaret Night in the fall and the Musical in the spring. Piano students interested in accompanying the chorus are also encouraged to sign up for this class.

9060 MUSIC ELECTIVE--SOPHOMORES, JUNIORS, SENIORS
Students enrolled in the music elective class can design their own course by choosing from various musical interests such as:

- **Music Theory**: Students who opt for this course will learn and apply the foundations of music, including scales, key signatures, chords, and inversions. Class projects include score analysis, composition, and playing chords on the guitar. This class is most beneficial to students who currently participate in musical activities such as playing an instrument or singing.
- **Instrumental Music**: This is open to students who have previous experience with instrumental music. Students will be required to submit practice journals and videos, and will have opportunities to perform at Mass, concerts, and other events.
- **Composition**: Composition is geared toward students who want to create their own music. Students enrolled in this course will learn the basics of music composition and will engage in several projects to produce original music.

Prerequisite: Prior experience with choir or instrumental music, or teacher approval.

ART

9100 STUDIO ART - SOPHOMORES, JUNIORS, SENIORS – ACADEMIC
This is a full-year hands-on studio art class. Introduction to a wide range of mediums will enable students to produce art utilizing a particular medium. Assignments will include but are not limited to the following: illustration, painting, sculpture, woodburning, etc. Students will apply their new skills to create works of art.
Prerequisite: **A general interest in art. Students must have passed the ruler test from the prior year and obtained the art teacher's approval.**

9200 ADVANCED STUDIO ART I- JUNIORS, SENIORS - ACADEMIC
This course builds upon the skills acquired in the initial studio art class. Completion of studio art from the previous year is required to register.
Prerequisite: Students must have passed the ruler test from the prior year, achieved an 85% overall average or higher, and obtained the art teacher's approval.

9210 INTRODUCTION TO GRAPHIC DESIGN- JUNIORS, SENIORS
This is a full year of learning Graphic Design basics. Students will learn graphic design basics using state of the art 27" I-Mac. Students will become familiar with Adobe suite, current versions of Illustrator, Photoshop, and In-Design by creating posters and various marketing pieces.
Prerequisite: Students must have passed the ruler test, taken studio art previously, be interested in furthering their education in the art field, and obtain the art teacher's approval.

9220 ADVANCED STUDIO ART II— SENIORS – ACADEMIC
Completion of Advanced Studio Art 1 is required to register for this course. Expertise in studio art will be developed through projects that reflect the student's interests.
Prerequisite: Students must have passed the ruler test from the prior year, achieved an 85% overall average or higher, and obtained the art teacher's approval.

9240 CAREER ART – SENIORS - HONORS
This is a class for a student who wants to pursue art as a career. We will be developing a 10-piece art portfolio. Artwork will include illustration, sculpture, photography, painting, etc.
Prerequisite: Students must have passed the ruler test from the prior year, achieved a 90% overall average or higher the previous year, successfully completed Studio Art, Adv. 1 and 2, and obtained the art teacher's approval.

9270 ART HONORS – JUNIORS, SENIORS - HONORS
This advanced course provides in-depth techniques on art mediums and includes hands-on projects that enhance the student's creative abilities. Students will recognize how the history of art is applied in today's creations.
Prerequisite: Must have passed the ruler test from the prior year, achieved a 90% overall average or higher the prior years, have taken Studio Art and art teacher approval.

9282 YEARBOOK – SOPHOMORES, JUNIORS, SENIORS – PASS/FAIL
Students will create the Lourdes Yearbook. Tasks will include writing text, taking pictures, and graphic design. It is required that students organize information and meet deadlines.

BIO MEDICAL

9500 BIOMEDICAL SCIENCE – HONORS - FRESHMEN
Principles of Biomedical Science (PBS) HONORS is a full-year 9th grade course in the Biomedical Science Program. This course serves to provide foundational knowledge and skills in fields such as biology, anatomy and physiology, genetics, microbiology, and epidemiology. Students will be expected to apply their understanding of these content areas to actual situations, cases, and problems. Students will address real-world challenges faced by biomedical professionals through collaborative team activities and projects by using the same tools and equipment used in hospitals and labs. Students will develop skills in technical documentation and effectively communicate their findings and solutions to problems. In addition, students will explore the inter-disciplinary connections of computer science and engineering and how these may shape the future of medicine and collaborative practices among colleagues from various fields.
Prerequisite: Application to the Biomedical Science Program

9520 HUMAN BODY SYSTEMS - HONORS - SOPHOMORES

Human Body Systems (HBS) HONORS is a full-year 10th grade course in the Biomedical Science Program. Students examine the interactions of body systems as they explore identity, communication, power, movement, protection, and homeostasis. Students design experiments, investigate the structures and functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. By actively exploring science in action, students participate in building organs and tissues on a skeletal manikin, address real-world cases, and simulate the role of biomedical professionals to solve medical mysteries. Students practice problem solving with structured activities and progress to open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills.
Prerequisite: Successful completion of Principles of Biomedical Science

9530 MEDICAL INTERVENTION - HONORS - JUNIORS
Medical Interventions (MI) HONORS is a full-year 11th grade course that allows students to investigate the variety of interventions involved in the prevention, diagnosis, and treatment of disease as they follow the lives of a fictitious family. The course will explore how to prevent and fight infection, how to screen and evaluate the code in our DNA, how to prevent, diagnose, and treat cancer, and how to survive when the organs of the body begin to fail. Through these scenarios, students will be exposed to the wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

Each case scenario will introduce multiple types of interventions, reinforce concepts learned in the previous two courses, and present the latest topics. Lifestyle choices and preventive measures are emphasized throughout the course as well as the impact that scientific thinking and engineering design influence the development of future interventions. Critical thinking skills are developed through structured activities that aid students in addressing realistic open-ended projects that require them to plan, document, and communicate strategies in solving actual health issues.
Prerequisite: Successful completion of Human Body System

9540 MEDICAL INNOVATION – HONORS - SENIORS

Biomedical Innovation (BI) HONORS In this capstone course, students apply their knowledge and skills to answer questions or solve problems related to the biomedical sciences. Students design innovative solutions for the health challenges of the 21st century as they work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health. Students will participate in an independent project and may collaborate with a mentor or advisor from a university, hospital, physician's office, or industry. Throughout the course, students must present their work to an adult audience that may include representatives from local businesses and the healthcare community. Students will apply what they have learned in the previous three courses to solve unique problems in science, medicine, and healthcare.
Prerequisite: Successful completion of Medical Interventions

HEALTH/PHYSICAL EDUCATION

9800 HEALTH I – SOPHOMORES – QUARTER COURSE - REQUIRED

This is a required quarter course consisting of an introduction to the various systems of the human body, an overview of the symptoms and treatments of common health problems, self-responsibility for wellness, and a realistic approach to decision-making regarding health-related issues. Special consideration of the topics of drug and alcohol use in our society and the importance of developing positive, value-based attitudes toward God's great gift - the human body.

9810 PHYSICAL EDUCATION – ¼ CREDIT – FRESHMEN, SOPHOMORES, JUNIORS, SENIORS - REQUIRED

This required course promotes the development of basic skills in various sports. Emphasis includes rules and regulations, team play, strategy, sportsmanship, and a positive approach toward physical fitness as an essential component of a person's lifestyle.

9820 HEALTH II - JUNIORS, SENIORS – 1 CREDIT

This course contains an in-depth study of key health issues with an emphasis on safety and first aid.
Prerequisite: Health I and teacher approval

VOCATIONAL/TECHNICAL SCHOOL

9993 VOCATIONAL-TECHNICAL SCHOOL – JUNIORS, SENIORS – 3 CREDITS

The Northumberland County Vocational School offers various trade and technical programs to students of Northumberland County. The learning and training experiences coincide with today's workforce standards. Students participating in this program attend Lourdes classes in the morning and travel to the Technical school for afternoon sessions. Students are responsible for their own transportation to the Technical school. Courses offered are Health Occupation, Communication Electronic Technology, Protective Services, Occupational Childcare, Culinary Arts, Cosmetology, Computer Technology, Automotive Repair Welding, Collision Repair, Carpentry, and Electrical Construction.

9997 CO-OP WORK STUDY – JUNIORS, SENIORS – 3 CREDITS

Students may participate in work study programs. Students are responsible for arranging their work assignments and providing their own transportation to their work site. Student opportunities may include working with contractors, emergency medical services, and hospitals, during the morning and afternoon shifts.

VIRTUAL HIGH SCHOOL

The Harrisburg Diocese participates in a consortium that provides on-line classes through VHS learning. Over 200 unique classes are available to students, on standard, honors, and advanced placement levels. Course offerings can be viewed at vhslearning.org/catalog. Students interested in taking online classes must make this request on the course selection sheet. Summer courses are also available.