DUBOIS CENTRAL CATHOLIC

High School Course Selections

2015-2016

DUBOIS CENTRAL CATHOLIC SCHOOL

MISSION STATEMENT

The DuBois Central Catholic School is an educational complex for students pre-K through grade twelve.

As a school of the Diocese of Erie, we exist to fulfill the mission of the Catholic Church to teach as Jesus did.

We strive to accomplish this mission by evangelizing, educating and socializing our students, while worshipping God as a community of believers.

We are dedicated to the growth of the whole person, and we help students recognize and develop individual talents so that they can know God and serve Him in building a just society.

We Believe...

... every person is made in the image of God. Celebrating the Eucharist, prayer and all forms of expression of our Catholic faith constitute the core of who we are.

... the Catholic faith is the tradition of DuBois Area Catholic School, and will offer opportunities for students to be formed in Gospel values and Christian attitudes, taking these values and principles to the community.

... in academic excellence and life-long learning and are dedicated to the growth of the whole person emphasizing self-development, critical thinking, reason, imagination, creativity, adaptability, and the ability to communicate.

... in a faith-centered community, cultivating a family spirit that promotes respect of self and others, teamwork, service to others, cooperation and communication.

... in stewardship, fostering the responsible use of human, material, and financial resources which create a balanced environment.

... in developing the integrity of an individual who is open to personal and intellectual growth, and is loving, religious and committed to justice.

DUBOIS CENTRAL
CATHOLIC

The Central Difference:

Learn Well . . .

Live Well . . .

Serve Well

THEOLOGY DEPARTMENT

All students are required to earn four (4) credits in Theology to graduate.

THEOLOGY 9 – SACRED SCRIPTURE (1 cr)

Old Testament: An introduction to the "Word of God", this course will help students investigate the study of the Bible and its meaning, covering the Pentateuch, historical books, prophets and wisdom. New Testament: This course covers the foundations of the Christian faith as presented in the Gospels, Acts of the Apostles, the Epistles and the Book of Revelation.

THEOLOGY 10 – CHRISTIAN MORALITY (1 cr)

This course integrates into a moral framework these concerns: the principles of Catholic morality, the application of these principles, and personal and social accountability in light of the teachings of Jesus. The demands of the Christian life are clearly presented, drawing upon a Christian understanding of the human person, the scriptures and Christ.

THEOLOGY 11 – THE CHURCH AND SACRAMENTS (.5 cr)

This course considers the mission of the Church to teach, govern and sanctify. This is done primarily though a historical perspective of the Body of Christ through the ages. A brief overview of the sacraments is presented.

THEOLOGY 12 – CHRISTIAN LIVING (.5 cr)

This course is designed to integrate all prior theology courses toward growth in the virtue of love. It will attempt to uncover the nature of authentic Christian love and show how love can be lived out in marriage, religious vocations and the single life.

LITURGY AND SACRAMENTS (.5 cr. elective)

This course will explore the theology of the sacraments, their meaning and rituals as expressed in relationship to the Liturgy in the Church.

WORLD RELIGIONS (.5 cr, elective)

This course will study Vatican II's call to ecumenism. The method looks at five major world religions and their relation to Catholicism.

CHRIST IN ART (.5 cr, elective)

This art history course will examine the Catholic faith through art. Students will be able to identify, explain, and analyze common historical/religious themes throughout the arts.
*Christ in Art is not an art production class.

ENGLISH DEPARTMENT

All students are required to earn four (4) credits in English to graduate.

ENGLISH 9 – STRUCTURE AND THEME (1 cr)

Freshman English is an introductory course to the basics of literary terminology with emphasis on the genre approach including the short story, novel, poetry, drama and mythology. This course also covers writing, vocabulary skills and oral presentation. Reports and summaries using research techniques are stressed. Required reading supplements the course work.

ENGLISH 10 – AMERICAN LITERATURE (1 cr)

Sophomore English consists of a study of the development of American Literature from early exploration of the 1500's to the mid-20th century. Composition work consists of essay writing in formal styles. Students practice speaking skills via group projects. Students also work on vocabulary and are introduced to various types of test-taking techniques to be proficient on standardized competency tests.

ENGLISH 11 – BRITISH LITERATURE (1 cr)

British Literature is a survey course of British literature from 450 to the present. Composition units stress technical skills, work on a research paper and beginning the critical essay. Vocabulary development and test-taking techniques help prepare students for the College Boards and for writing effective essay answers.

ADVANCED ENGLISH 11 BRITISH LITERATURE
(1 cr)

In this year-long course, students will fulfill the goals of English 11 and read and write extensively beyond these requirements.
(Advanced elective with English Department approval)

HONORS ENGLISH 12 (1 cr, elective)

Senior Honors English includes a brief survey of world literature. The primary focus is on Western drama and extensive composition.
(Prerequisite: English Department approval)

COMMUNICATIONS (.5 or 1 cr, elective)

This course is an overview of the ways modern man communicates using media. Film study and a critical look at modern media and their techniques will be complemented by the class creating and delivering their own communication projects.
(Note: Students may register for either or both semesters.)

COMPOSITION (.5 cr, elective) or COLLEGE COMPOSITION (1 cr)

Composition will focus on a development of student writing skills in technical and creative areas. A variety of approaches to reports, term papers, short stories and poetry will help students express themselves more effectively. This course may be taken for college credit through Butler Community College.
(Note: Students may register for either the fall or spring semester. 1st semester comp must be completed prior to taking 2nd semester)
(Prerequisite: grades 10-12; approval of English Department)

ADVANCED TOPICS IN LITERATURE I

(.5 or 1 cr, elective)

This course is intended for juniors and seniors. Some of the topics of this class will be chosen by class members and all readings and writings will center on themes such as detective fiction, time passages, coming of age, friends and lovers, etc.
(Note: Students may register for either or both semesters)

AP* ENGLISH LITERATURE AND COMPOSITION

(1 cr) (all year)

This year-long course is intended for seniors and will allow students to read and respond to a variety of complex readings in fiction and non-fiction to equip them with college-level reading and writing skills and the skills to take the May Advanced Placement English Literature and Composition Tests for college credit. Some summer reading will be required.

RESEARCH 10 (.5 cr.)

This course for sophomores serves as an introduction to the research paper. Students will learn correct formatting of a research paper, including in-text citations, bibliographies, margins, text placement and arrangement. Emphasis is also given to writing thesis statements, summarizing, paraphrasing and quoting sources in the paper. Each student will complete a research paper to be used in combination with the sophomore English class.
(This will be part of a Driver Ed, Phys Ed, Research 10 twelve-week rotation and does not fulfill 4 required credits.)

The following course is an elective sponsored by the English Department but cannot be taken to fulfill the four credits required for graduation:

APPLIED JOURNALISM (.5 cr or 1 cr elective)

A combined staff will produce the student newspaper (The Cardinal), and the school's yearbook (The Katholikon). Students will receive assignment of a section editorship for one of the publications, and will be expected to contribute to other areas as needed. Students electing this course will deepen their writing skills, plan layout, develop their abilities as reporters and become proficient in photojournalism and technical production. This course is open to juniors and seniors.

SOCIAL STUDIES DEPARTMENT

All students are required to earn four (4) credits in Social Studies to graduate.

SOCIAL STUDIES 9 – U.S. HISTORY I (1 cr)

Students will learn the history of our nation from the pre-Columbian period to the beginning of the 20th Century. Topics covered include the American Revolution, Native American policies, slavery and the growth of the American economy, and the Civil War and its aftermath. Themes discussed throughout this class include slavery, the impact of technology on society, and movement of people.

SOCIAL STUDIES 10 – U.S. HISTORY II (1 cr)

Students will learn the history of the United States from the turn of the 20th Century to the first decades of the 21st Century. Topics covered include World War I, World War II, the Cold War, the Civil Rights movement, the Conservative movement, and terrorism. Themes discussed throughout the class include the business cycle, the impact of technology on society, changing role of women in society, and the military industrial complex. This class also has an emphasis on evaluating historical research and using quality sources in various research projects.

SOCIAL STUDIES 11 – WORLD CULTURES (1 cr)

Knowing about the past is important in understanding the present and future. The World Cultures course is designed to aid in the understanding of the various ways of life of other peoples around the world. Students are exposed to numerous resource materials from pre-history to modern times. The major goal of the course is not only to instill an appreciation of world culture alone, but an appreciation of history in general.

AP* U.S. HISTORY (1 cr.)

AP American History is designed for qualified Juniors and Seniors willing to challenge themselves. The course will cover American History from pre-Columbian civilizations to the turn of the 21st Century. Extensive reading will be required to cover a wide body of work, and to also delve deep into topics including the American Revolution, the labor movement, American Imperialism, Progressivism, involvement in World Wars, the Cold War, and the Civil Rights movement of the 1960's. Students are expected to complete reading assignments, projects, and homework outside of class on a daily basis.
(Prerequisite: 90% or higher in U.S. History I and II or approval of the Social Studies Department)

ECONOMICS (.5 cr)

The economics course is designed to introduce students to the various economies of the world and, in particular, capitalism. This is a practical study of our economy, presenting basic instruction in financial decision-making.

WORLD GEOGRAPHY (.5 cr, elective)

This course will look at the world's changing boundaries. It will pay special attention to changes in Eastern Europe, the Middle East and the former Soviet Union as students study social, economic, cultural and geographical changes in the world

PSYCHOLOGY (.5 cr, elective)

This course for juniors and seniors is offered to students interested in the study of human behavior and the mental processes. Psychology attempts to explain the learning process, human development, personality, abnormal behavior and therapies for behavior.

PSYCHOLOGY II (.5 cr, elective)

This course is an extension of Psychology I and goes further in depth on human behavior.
(Prerequisite: Psychology I)

LAW (.5 cr, elective)

This course allows students to examine our laws and the legal system. Some of the areas studied include criminal law, consumer law, contract law and family law. Students will have a basic knowledge of law, which is needed in today's society.

SOCIOLOGY (.5 cr, fall elective)

This course is for juniors and seniors. Sociology is the study of groups of humans and the social forces that influence collective behavior. This class will explore how groups, organizations and societies function. Students will look at crime and violence, families, health and illness, social classes, religion and communities. Students will use current events, student created surveys and their texts to aid in study.

MATH DEPARTMENT

All students are required to earn four (4) credits in Mathematics to graduate. Note: Sophomores having had at least an 85% in Algebra I of their freshman year and permission of the Math Department are encouraged to "double up", taking both Geometry and Algebra II. This will allow them to take Elements of Calculus their senior year.

BASIC ALGEBRA I (1 cr)

Students will be refining mathematical skills, such as fractions, decimals, percent, computations with rational numbers, number theory, formulas, and equations leading into the skills of Algebra I.
(Prerequisite: Math I or permission of the Math Department)

ALGEBRA I (1 cr)

This course covers solving equations, inequalities, functions, and systems of linear equations; also working with polynomials. The skills are applied to solve verbal problems appropriate for this level.
(Prerequisite: Pre-algebra)

BASIC GEOMETRY (1 cr)

This course introduces students to the basic vocabulary of geometry. Topics will include the measuring of and the relationships between lines and angles, area and perimeter, ratio and proportions, triangles, quadrilaterals, and circles. Only Algebraic Proofs will be examined.
(Prerequisites: Basic Algebra or permission of the Math Department)

GEOMETRY (1 cr)

This course deals with familiarizing students with the extensive vocabulary of geometry. Other topics include special relationships with angles, congruent triangles, polygons, quadrilaterals, parallelism, similarity, ratio and proportion, circles, area and volume. Proofs are covered in this class.
(Prerequisite: Algebra I)

HONORS GEOMETRY (1 cr)

This course deals with familiarizing students with the extensive vocabulary of geometry. Other topics include special relationships with angles, congruent triangles, polygons, quadrilaterals, parallelism, similarity, ratio and proportion, circles, constructions, area and volume. Rigorous proof is emphasized.
(Prerequisite: Honors Algebra I and permission of the Math Department)

BASIC ALGEBRA II (1 cr)

Basic Algebra II uses the same book and covers the same topics as Algebra II. The difference is that the most basic problems are stressed and some parts of topics are eliminated as to give students more time to master the material.

ALGEBRA II (1 cr)

As Algebra I is linear, Algebra II goes beyond linear. Topics include: quadratic functions, polynomial functions, functions involving roots and radicals, rational functions, exponential functions and logarithmic functions. Analytic and graphing capabilities are stressed.
(Prerequisite: Algebra I and Geometry)

HONORS ALGEBRA II (1 cr)

Students learn a number of techniques dealing with algebraic functions, quadratic equations, simultaneous equations and exponents. Application of these techniques to verbal problems is stressed.
(Prerequisite: Honors Algebra I and Geometry and permission of the Math Department)

TRIGONOMETRY (1 cr)

In this course, Trigonometry topics are taught in the fall, and Statistics topics are taught in the spring. Trigonometry topics include right triangle trigonometry, trigonometry in all types of triangles, trig functions, radian measure and identities
(Prerequisite: Algebra II)

PRE-CALCULUS/ELEMENTS OF CALCULUS (1 cr)

Taught in conjunction with St. Francis University, Pre-Calculus topics include vectors, sequences, exponential and logarithmic functions, rational functions, and conic sections and their graphs, systems of equations and inequalities. Elements of Calculus honors course is taught as a strong pre-calculus course with calculus topics covered throughout the course
(Prerequisite: In conjunction with Trig/Stats and permission of the Math Department)

AP* CALCULUS (1 cr)

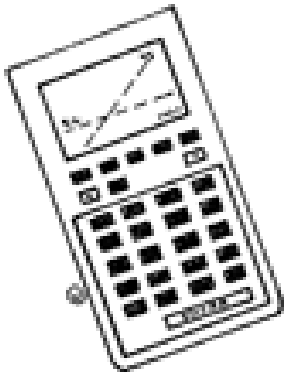
Taught in conjunction with St. Francis University, this course covers limits, continuity, the derivative and its applications, the integral and its applications, and inverse functions including natural logs and exponents. Students are prepared to take the AP Calculus AB exam in May.
(Prerequisite: Pre-Calculus and permission of the Math Department)

ACCOUNTING (1 cr.)

This course gives students an understanding of the basic principles of accounting through three types of businesses: proprietorship, partnership and corporation. Each type of business is presented in a complete accounting cycle covering analyzing transactions, journalizing, posting, petty cash, financial statements, and adjusting and closing entries

PERSONAL FINANCE/STATISTICS (1 cr)

This course is an advanced and in-depth study of the mathematics needed in everyday life. Students completing this course will have the knowledge to complete many of the business transactions they will encounter after high school. Statistics topics include graphing quantitative data, measures of central tendency and variability, distributions of data and sampling.



SCIENCE DEPARTMENT

In order to graduate, all students are required to earn four (4) credits in the science department, including one lab science. College Prep students must complete a second lab science.

BIOLOGY I (lab science) (1 cr)

Biology offers the student a solid foundation for the study of life on earth. Lab work helps demonstrate the activities of a biologist. The course strives to help the student develop an understanding of the processes by which information has been obtained. Emphasis is placed on creating an interest in biological learning outside as well as inside the classroom.

AP* BIOLOGY (College Credit) (AP lab science) (1cr)

The basis of this course is the integration of **The Eight Major Themes of AP Biology** within the **Three Major Topics.** This course revolves around a central theme of evolution of life on earth. We take a non-linear approach to the text references. We begin by coordinating chapter material from the central theme of evolution. A student is familiar with most of the text by the end of the course, but not as yet an expert. We begin with an introduction to science education as a process involving observation and experimentation which includes data collection and measurement. Our first topic of discussion is the introduction into the levels of biological organization from the biosphere to the ecosystems, communities, populations, organisms, organs and organ systems, tissues, cells, organelles, molecules and atoms. We continue with the history of life on earth, the evolution of the cell and its structures, and the evolution and organization of multi-cellular organisms that form the organized phyla. There is a regulation and communication that exists between an organism's cells, tissues, organs and organ systems. And, as well, there is a dynamic interdependence of organisms in an environment. This community

interdependence requires communication and regulation among the populations within it.
(Prerequisite: "B" in chemistry/Permission of the Science Department)

ANATOMY AND PHYSIOLOGY (lab science) (1 cr)

This course introduces students to the structure of the human body and the systems that allow the body to function. This course will especially benefit those students who are interested in the medical fields.
(Prerequisite: "B" in Biology I and permission of Science Department)

CHEMISTRY I (lab science) (1 cr)

This course is designed to provide students with a basic understanding of chemistry, including the major theories, terminology, and mathematical relationships. Emphasis is placed on laboratory work in which students gain the skills and knowledge of techniques used in chemistry. Attention is given to the role of chemistry in daily life and the practical applications of scientific principles.
(Prerequisite: "C" in Biology I and "B" in Algebra I)

ADVANCED CHEMISTRY I (lab science) (1 cr)

This course is designed to provide the honors student with an in-depth understanding of chemistry, including the major theories, terminology and mathematical relationships. Emphasis is placed on laboratory work in which students gain the skills and knowledge of techniques used in chemistry.
(Prerequisite: 90% or higher in Algebra I)

AP* CHEMISTRY (AP lab science) (1 cr)

AP* Chemistry is a study of the behavior of matter and the methods used to describe that behavior. Through discussions, student projects, lab work and equations, students are taught to describe and predict chemical behavior both quantitatively and

qualitatively. It offers the foundations that allow students not only to understand the chemistry presented, but also to extend this understanding to new situations, including nuclear, thermal, organic, kinetics and biochemistry.
(Prerequisite: 90% or higher in Chem I Honors)

BASIC PHYSICS (lab science) (1 cr)

This course surveys the major topics of physics – motion and energy, waves, electricity and magnetism and modern technology. It develops science skills and their application to everyday life. Mathematical applications are kept to a minimum.

PHYSICS (lab science) (1 cr)

Physics deepens the student's understandings of forces, motion and energy, through the study of velocity, acceleration, momentum and work, along with waves, atomic structure and nuclear physics. Many scientific laws will be illustrated to show how many everyday experiences are governed by the laws of physics.
(Prerequisite: "B" in Chemistry and Trig or Permission of the Science Department)

ECOLOGY (1 cr)

This course concentrates on the complex relationships between plants, animals and the abiotic aspect of various ecosystems. It examines the environment in the framework of physical and biological principles. We study the life patterns seen in nature, focusing particularly on the temperate deciduous forest, our own ecosystem. Special emphasis is place on appreciating the dynamic mechanisms involved in its extensive biological diversity.

AP* ENVIRONMENTAL SCIENCE (AP lab science) (1 cr)

This course provides students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Its emphasis is a concentration on the biosphere, ecosystems, the materials needed to keep them running smoothly and the human processes that curtail them.

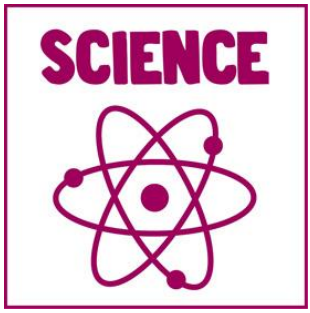
The following themes provide the framework for this course: science as a process, energy conversions throughout the planet, biogeochemical systems of the planet, human effect on natural systems, cultural and social consequences of human activity, and the (hopeful) achievement of sustainable systems.
(Prerequisite: "B" in Biology)

MEDICAL TECHNOLOGY

Students will be exposed to four different Health Science Career Pathways: Cardiac Diagnostics, Pathogens and Disease, Pharmacology and Sports Medicine. The Health Science Career Pathways program is designed to specifically address the National Health Care Skill Standards. Each unit represents over 15 weeks of content and hands-on skill building activities. Lessons and computer-based assessments are presented with a simple multimedia interface. All necessary equipment, published materials, consumable supplies, software, and tools are included in each unit.

SENIOR SCIENCE SEMINAR

This course is designed for ambitious students who are looking for an intense and in-depth review of the sciences as a preparatory course before entering college. Sciences covered include Chemistry, Biology, and Basic Physics.



FOREIGN LANGUAGE DEPARTMENT

All students in grades 9 through 12 are expected to take two years of a modern language.
All college prep students must complete two years of a language.

GERMAN II (1 cr)

This course builds upon the foundations of German language and culture laid down in German I. German II concentrates on refining the student's understanding of German grammar and culture, with an emphasis on conversational German and German reading.
(Prerequisite: German I)

GERMAN III (1 cr)

These courses build upon the foundations of the German language and culture. Prerequisites are German II & III. German III and IV refine the students' knowledge of German grammar and culture with an emphasis on conversational German language and German fundamentals.

SPANISH I (1 cr)

This course is a basic presentation of the Spanish language with background provided in geography, civilization and culture. The students will learn basic pronunciation and sentence patterns for communication as well as reading and writing basic paragraphs.

SPANISH II (1 cr)

This second level expands upon the first year and provides for more conversation through vocabulary development and reading. Culture is researched more on this level. Emphasis is placed on oral and listening proficiency through real-life situations.
(Prerequisite: Spanish I)

SPANISH III & SPANISH IV (1 cr each)

These levels offer expanded conversation, reading, writing and grammar study through literary works of different countries. Emphasis is placed on oral proficiency and writing skills. More real-life situations are included to enable the student to deal with travel, shopping, banking, dining and other aspects of daily life in the particular language. These classes will be taught as much as possible in the target language.
(Prerequisite: Spanish II or III and permission of the Spanish teacher)

FRENCH I

This is a first-year course into the language of the French culture, history and language. Our emphasis is placed on speaking the language and relating to this culture. Two texts are used, one traditional; the other is more focused on speaking than grammar.

FRENCH II

This course builds upon the foundations of the French I course. This course uses the same two series of texts and approaches introduced in French I. A higher level of grammar and conversational skills are used.

FRENCH III & IV

This advanced course offers intermediate students the chance to expand their capabilities to communicate with native speakers in real-life situations; such as, travel, dining and shopping. Additional time should be spent reading and writing French as compared to the first two courses offered.

FINE ARTS DEPARMENT

All students are required to earn one (1) credit in the fine arts for graduation.

ART I (.5 or 1 cr)

Art I is a course that provides an introduction to art through a multi-media experience. Students will learn and apply the elements and principles of design to produce creative art projects that reflect their understanding of these concepts as well as personal expression. Students will encompass the arts through production, history, criticism, and aesthetics. This course will result in measurable gains for all students in knowledge and skills for a foundation of learning for a continued study in the arts.

ART II (.5 or1 cr)

This course is a continuation of Art I, with emphasis placed on painting, printmaking, and three-dimensional projects. Art II will emphasize making art as an ongoing process that involves the student in informed and critical decision making. Students will continue to encompass the arts through production, history, criticism, and aesthetics.
(Prerequisite: Art I)

STUDIO ART (1 cr)

This course is open to students who have completed Art I and Art II. Individual students will work with the instructor to develop projects that will broaden the student's experiences and/or in depth study of particular mediums or subjects. This course will consist of building both 2-D and 3-D portfolios.
(Prerequisite: Permission of the art teacher)

DIGITAL FILM: CHARLIE CHAPLIN TO VIRAL VIDEO

This course explores the history of film to our modern age. Students will explore the timeline of film while they write, product, edit, and star in their own digital short movies.

DRAMA (.5 cr or 1 cr)

Drama class provides students with training in public performance beginning with non-verbal communication and other rudimentary acting exercises and stage work. Students perform skits and plays for the student body and for the public as their acting skills develop.
(This course is open to members of all classes with preference given to upperclassmen, with a limit of 15.)

CONCERT CHOIR (CHORUS) (5 or 1 cr)

All singers in grades 9 – 12 can learn vocal techniques and music reading. Song preparation is stressed. Performances are planned for various school occasions. Attendance is mandatory.

MUSIC COMPOSITION (.5 or 1cr)

This is a class that focuses on students composing their own original music. It explores theory and technique through lecture, videos, listening, and hands on learning. Circle of Fifths, great composers (classic and modern day) clefs, pitch alteration, rhythm and meter, scales and modes, intervals and triads, are just a handful of the theoretical concepts covered in class. Students will write Psalms for our weekly mass and will have to compose and perform for various events throughout the school year. Midterm and Final are Family Advent Celebration in December and the Festival of the Arts in May. Instrument preferred would be piano or guitar.

BUSINESS & TECHNOLOGY DEPARTMENT

ADVANCED EXCEL & DATA BASE DESIGN (required)

Students will learn that Excel is a powerful tool to assist in manipulating data efficiently. They will learn various functions to help organize and analyze within spreadsheets. They will make connections to capabilities of Excel and their other classes. Along with Intro to Database Design with Access this course makes up a semester.

INTRO TO DATABASE DESIGN WITH ACCESS (required)

Students will learn how to design and create databases; work with tables, fields and records; sort and filter data; and set field properties and data entry rules. Students will be able to create queries, forms and reports. Along with Advanced Excel this course makes up a semester.

INTRO TO 3D COMPUTER DESIGN WITH SKETCHUP

Learn to design and use a platform that is used across industries for 3D modeling. Create buildings, landscapes, and prototypes. This course will be an opportunity to explore concepts used in engineering. Along with Multimedia Development this course makes up a semester.

MULTIMEDIA DEVELOPMENT

Students will work with Movie Maker and video and audio software to create projects that showcase the power of editing and manipulating media. They will also learn to work with YouTube and other online sources of audio and video as resources and as

platforms for sharing their creations. Along with Intro to 3D Computer Design with Sketchup this course makes up a semester.

INTRO TO GAMING

Students will learn to program games with software that uses visual editors and a behavior based logic system. Students will create several levels of games in the course. Along with Intro to Web Design/HTML this course makes up a semester.

INTRO TO WEB DESIGN/HTML

Students will be introduced to HTML which is the standard used to program web pages. Students will also learn to use a software editor and how to manipulate graphics. Each student will create a website that includes text and graphics, as well as complex elements like scripting and embedding. Along with Intro to Gaming this course makes up a semester.

INTRODUCTION TO PROGRAMMING (.5 cr)

Students will begin with program design basics and flowcharting. They will concentrate on the programming language Visual Basic to create a Graphic User Interface. Students learn how to manipulate and create basic computer programs using control properties, variables, expressions, operators and functions. Students will also learn HTML basics to create their own web pages and how to create animated graphics for the web. Finally, they will learn to create their own game simulations using game programming software.
Prerequisite: Computer Applications

DIGITAL GRAPHICS AND DESIGN (.5 cr)

Students will design/create graphics and will manipulate images using Adobe Photoshop. Digital artwork will be created by adjusting an image's light, shadow, color, texture, size, placement and transparency. They will utilize digital cameras and scanners. Students will gain the knowledge of advanced photo editing while creating many types of special effects in Photoshop. Key Skills: design concepts, composition, independent judgment and creativity, image editing, typography, optimizing and sizing JPEGs and GIFs for the web and for print, file management and naming conventions. A portfolio will be created to show their work.

MARKETING & SOCIAL MEDIA (1 cr)

Students will study traditional marketing concepts and interact with business owners and marketing experts. They will also understand the impact of social media on the Internet for building business connections, sharing information and collaborating online. Opportunities for shadowing business leaders in the community will be offered to the students who take this course.

MASTERING WEB DESIGN (elective – Semester Course)

Challenging hands-on projects will help you develop advanced Web skills. You will learn about Cascading Style Sheets, JavaScript, Dynamic and Reusable Content, and Client and Server Side Interactivity.

APP DESIGN (elective – Semester Course)

In this course, students will learn to design and develop mobile apps. The goal of the class is to enable students to independently produce fully functional app prototypes. This course operates in two distinct but related modes: development, wherein an app is made functional; and design, through which an app is made

usable. Students will be expected to consider both modes when producing their apps.

ENGINEERING GRAPHICS

This class will introduce students to Engineering Graphics with the use of a modern Computer Aided Design package – *Autodesk Inventor 2015*. Students in this class will be guided from constructing basic shapes to making complete sets of engineering drawings. This class will introduce beginning CAD users to the graphic language used in all branches of technical industry.

ARCHITECTURAL DESIGN

Using *Autodesk Revit* 2015, an architectural building design software, this class will take a project based approach. Students will use architectural tools to develop a single family residence. The drawings start with the floor plans and develop all the way to photo-realistic renderings.

ACCOUNTING (1 cr.)

This course gives students an understanding of the basic principles of accounting through three types of businesses: proprietorship, partnership and corporation. Each type of business is presented in a complete accounting cycle covering analyzing transactions, journalizing, posting, petty cash, financial statements, and adjusting and closing entries

PERSONAL FINANCE/STATISTICS (1 cr)

This course is an advanced and in-depth study of the mathematics needed in everyday life. Students completing this course will have the knowledge to complete many of the business transactions they will encounter after high school. *(May be taken for Math credit with approval.)*

PHYSICAL EDUCATION DEPARTMENT

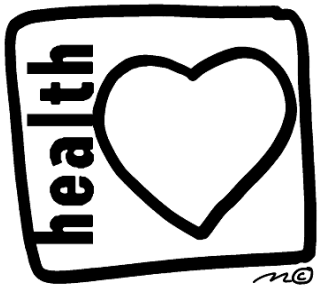
All students must earn one full credit in physical education in order to graduate. Students will be scheduled for an elective course opposite their physical education class. This choice will be based on student preference and the availability of the class based on the master schedule.

NON-COED PHYSICAL EDUCATION
GRADE 9 (.5 cr)**, GRADE 12** (.5 cr ea)

The physical education program will focus on various aspects of physical fitness and team/individual sports. Activities include but are not limited to volleyball, soccer, football, basketball, hockey, lacrosse, and racquet sports. Each student will be evaluated on participation, fitness tests, and/or written tests

HEALTHY LIVING 9 (.5 cr) **TAKEN OPPOSITE PHYS ED 9**

This non-coed course is required of all freshmen. Students will have the opportunity to develop an understanding of how their bodies normally function. Instruction will focus on exploring the body systems, growth/development, nutrition, stress, disease, drugs, alcohol, tobacco, mental health, environmental health and exercise/fitness.



DRIVER ED (.33 cr)

This required course for sophomores covers both car and classroom instruction. Classroom instruction covers rules, regulations and general knowledge of the highway transportation system. All 10th graders schedule this course as part of a Driver Ed, Phys Ed, Research 10 twelve-week rotation.

LIFETIME FITNESS (.5 cr)

This exciting coed course explores a variety of health and fitness related topics and develops skills and habits that promote safe and healthy living throughout a student's life. Topics may include but are not limited to aerobics, weight training, nutrition, and first aid. A classroom setting combined with a traditional PE setting will be incorporated into one class.

GIRLS' AEROBIC FITNESS (.5 cr)

This non-coed course provides an opportunity for students to experience a variety of ways to improve their aerobic fitness. Activities include Low/High Impact Floor Aerobics, Step, Tae bo/Kickboxing, Pilates, Yoga, Abs Blast, Aerobic Dance, Ballroom, Running/Walking, Jump Roping, Weight Training, and Self-Defense.

JUNIOR/SENIOR ROTATIONS

JUNIOR ROTATION COURSES

SAT Verbal Prep (1/4 cr)

This quarter-long course is designed to help juniors prepare to achieve success on the verbal portion of the SAT. For all juniors, it will provide a helpful review of basic concepts in English, and, for college bound juniors, it will provide tips for the test itself. Evaluation will be based on completion of assignments and simulated SAT tests.

SAT Math Prep (1/4 cr.)

This quarter-long course is designed to help juniors prepare to achieve success on the mathematics portion of the SAT. For all juniors, it will provide a helpful review of basic math concepts, and, for college bound juniors, it will provide tips for the test itself. Evaluation will be based on completion of assignments and simulated SAT tests.

PREPARING FOR COLLEGE/CAREERS (1/4 cr)

This quarter-long course is designed to help juniors and their parents navigate the sometimes tricky waters of researching, choosing, paying for, and ultimately succeeding in college, vocational training, and future careers. Students who take this course seriously will find a wealth of information, both in general and applied to them personally, that will help them achieve success long after they graduate from DACS. Evaluation will be based on completion of assignments, participation, and/or writing assignments/class projects.

Physical Education 11 (1/4 cr)

This quarter-long course will focus on various aspects of physical fitness and team/individual sports. Activities include, but are not limited to, volleyball, football, soccer, basketball, hockey, lacrosse, and racquet sports. Each student will be evaluated based on participation, fitness tests, and/or written tests.

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SENIOR ROTATION COURSES

The senior block will give seniors a final opportunity to develop and practice Catholic leadership skills during their Central education.

Societal Issues

The social issues component will center on a study of the major trends in American life from 1950 to the present, including integration, immigration, medical advances, poverty and homelessness, among others.

Social Justice

The theology quarter will involve a discussion of the Catholic Church's teachings on the same issues, require students to clarify their views on pressing social matters, and determine what social justice demands of the Catholic.

Contemporary Issues in Humanities

Through a series of speakers, research, interviews, and on-site visits to social service agencies, students will learn about the human needs in their parishes, community, nation or world.

PROGRAM OF STUDIES

Subject	*College Prep*	*Liberal Arts*
English	4	4
Math	4	4
Science	4 (2 lab)	4 (l lab)
Social Studies	4	4
Theology	4	4
Foreign Language	2	2
Fine Arts	1	1
Physical Education	1	1
Typing / Word Proc.	1	1
Health / Driver Ed	.5	.5
General Electives	3.5	3.5
Total Credits**	29	29

Additional details on the Program of Studies are found in the Student Handbook.

9th Grade ½ year rotations: *Healthy Living 9 & Phys Ed*

10th Grade 12-week rotations: *Driver Ed, Phys Ed, Research 10*

11th Grade quarter rotations: *SAT Verbal Prep, SAT Math Prep, Preparing for College/Careers, Non-Coed Physical Education II*

12th Grade 12-weekr rotations: *Societal Issues, Social Justice, Contemporary Issues in Humanities*


TO KNOW CHRIST