

**2024-2025**

**COURSE DESCRIPTION BOOKLET**



**NORTHWESTERN HIGH SCHOOL  
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## INTRODUCTION

Selecting classes in high school is one of the most important things students do each year. Class selection is vital in preparing students for their future educational and career goals. The classes chosen for the freshman year are just as important as those chosen for their senior year. The choosing of classes is an important task that deserves considerable thought and preparation.

It is important that students carry a full load of classes that have a strong educational foundation for their future career. Every year in high school is important. The grades the students receive in their freshman year count just as much as the grades received in their senior year. Each year should be designed to promote maximum educational and work-related skill development and training.

Education needs to be a team effort. It is important that students, parents, and school personnel work together to ensure maximum educational opportunities. The school counselor is available to parents and students to answer questions and to assist with the scheduling process.

## GRADUATION REQUIREMENTS

**Class of '25**

*Students must complete at least 7 semesters and acquire 26 credits prior to graduation*

Four Years of English.	4 credits	Two Sciences one Physical Science & one Biology	2 credits
Three Years of Math	3 credits	Consumer Economics/ Career Exploration	.5 credit
Civics (must pass test)	.5 credit	Freshman Seminar	1 credit
U.S. History	1 credit	Three Years of P.E.	3 credits
Additional Social Science	.5 credit	Computer Applications	1 credit
Health	.5 credit	Electives	8.5 credits
Driver Education	.5 credit		

## ADDITIONAL INFORMATION

### HONORS CLASSES

Northwestern High School has a weighted grading system. Under this system a student can receive extra grade point value for honors-level classes. These grade points are used to calculate class rank, grade point average, and honor roll. They do not affect credit in any way. Students wishing to enroll in honors classes must have the following:

1. At least a 3.0 in the prerequisite class(es)
2. Teacher approval for admittance

The following are honors classes:

Science	World Language	Mathematics	Social Science	English
Biology II	Spanish III	Advanced Math	U.S. History (CP)	English IV (CP)
Chemistry II	Spanish IV	Calculus	Psychology	
Physics				

Grading for honors courses, as opposed to regular courses, will be as follows:

<i>Grade</i>	<i>Points in "regular" course</i>	<i>Points in "honors" course</i>
A	4.0	5.0
B	3.0	4.0
C	2.0	3.0
D	1.0	2.0
F	0	0

### CUMULATIVE GRADE POINT AVERAGE

A student's cumulative grade point average (GPA) is based on semester grades. It is a cumulative average taking into account ALL the grades a student has earned in high school – 9<sup>th</sup> through 12<sup>th</sup> grade.

### CLASS RANK

Class rank is computed at the end of each semester and includes all courses for which a grade is earned. The class rank is cumulative and based on grade point average of semester grades beginning with the 9<sup>th</sup> grade. The location of each student's class rank is at the top of the transcript.

### STUDENT CLASSIFICATION

The minimum number of credits required to earn the status of a particular academic class as of the fall semester are as follows:

Sophomore	5.0 credits
Junior	12.0 credits
Senior	19.0 credits
Graduate	26.0 credits

## GRADING SCALE

Percentage	Letter Grade	Grade Point Average	Honors Grade Point Average
100-98	A+	4.33	5.33
97-93	A	4.0	5.0
92-90	A-	3.67	4.67
89-88	B+	3.33	4.33
87-83	B	3.0	4.0
82-80	B-	2.67	3.67
79-78	C+	2.33	3.33
77-73	C	2.0	3.00
72-70	C-	1.67	2.67
69-68	D+	1.33	2.33
63-67	D	1.0	2.0
62-60	D-	0.67	1.67
59-0	F	0	0

**If enrollment is low in a course it could be removed from the schedule for that year and offered at a later time.**

**(\*)Denotes Honors Course**

## AGRICULTURE, FOOD & NATURAL RESOURCES

### **Introduction to Agriculture (18001A001)**

**CTE Course  
Credit: 1**

This orientation course provides an opportunity for students to learn how the agricultural industry is organized. Its major components are mainly the economic influence of agriculture at state, national, and international levels and the scope and types of job opportunities in the agricultural field. Basic concepts in animal science, plant science, and soil science, horticulture, natural resources, agribusiness management, agricultural mechanics, agricultural biotechnology, food science technology, environmental science and aquaculture science and technology will be presented. Improving computer and workplace skills will be a focus. Participation in FFA Chapter activities and Supervised Agriculture Experience (SAE) projects are integral course components for leadership development, career exploration and reinforcement of academic concepts. In addition, students will be required to maintain SAE records for the entire year.

### **Exploring Food & Agriculture (18001A002) (formerly known as Agriculture Science)**

**CTE Course  
Credit: 1**

#### **Prerequisite: Introduction to Agriculture**

Exploring Food & Agriculture courses provide the opportunity to learn fundamental concepts in agriculture to serve as a foundation for future courses and to inform students about the industry that is so vital to society and to their future. Major units of instruction include an introduction to the agricultural industry, animal science, plant science, horticulture science, agribusiness, environmental science, agricultural mechanics, food science, and leadership and personal development. Participation in FFA student organization activities is an integral course component for leadership development, career exploration and reinforcement of academic concepts.

### **Agriculture Business Management (18201A001)**

**CTE Course  
Credit: 1**

#### **Prerequisite: Introduction to Agriculture**

**Dual Credit Option**

This course will provide students with the basic knowledge and skills necessary to manage personal finances and develop into a successful entrepreneur and/or businessperson. Instructional units include: business ownership types, starting an agribusiness, managing and operating an agribusiness, financing an agribusiness, managing personal finances, record keeping and financial management of an agribusiness, local, state, and federal taxes, agricultural law, and developing employability skills. Student skills will be enhanced in math, reading comprehension, and writing through agribusiness applications. Improving computer and workplace skills will be a focus. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration and reinforcement of academic concepts.  
*Dual Credit Course – 3.0 credits from LLCC*

**Advanced Agricultural Mechanics (18402A001)  
(formerly known as Ag. Mech and Tech)**

**Prerequisite: Introduction to Agriculture**

**CTE Course  
Credit: 1**

**Dual Credit Option**

This course will concentrate on expanding student's knowledge and experiences with agricultural mechanics technologies utilized in the agricultural industry. Units of instruction included are design, construction, fabrication, maintenance, welding, electricity/electronics, internal combustion engines, hydraulics, and employability skills. Careers of agricultural construction engineer, electrician, plumber, welder, equipment designer, parts manager, safety inspector, welder, and other related occupations will be examined. Improving workplace and computer skills will be a focus. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration and reinforcement of academic concepts.

*Dual Credit Course – 3.0 credits from LLCC*

**Food Science (18402A001)**

**CTE Course  
Credit: 1**

This course is designed for students to learn the relationships between science, food, and nutrition. Students will explore the characteristics of each component found in food. Experiments done in class will help students understand and analyze how scientific principles are applied to creating nutritious food products. Understanding the relationship between food and science will help students evaluate the health impact of different foods.

**Veterinary Science (18105A001)**

**Prerequisites: Introduction to Agriculture, Exploring Food & Agriculture**

**CTE Course  
Credit: 1**

This course will develop students' understanding of the small and companion animal industry, animal anatomy and physiology, animal ethics and welfare issues, animal health, veterinary medicine, veterinary office practices, and animal services to humans. Topics to be discussed include veterinary terminology, anatomy and physiology, pathology, genetics, handling and restraint, first-aid, and physical examinations along with common surgical skills. Career exploration will focus on veterinarian, veterinary lab technicians, office lab assistant, small animal production, research lab assistant, and animal nutrition lab technician. Improving computer and workplace skills will be a focus. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration and reinforcement of academic concepts.

## BUSINESS

### **Accounting I (12104A001)**

**CTE Course  
Credit: 1**

Accounting I is a course that assists students pursuing a career in business, marketing, and management. This course includes planned learning experiences that develop initial and basic skills used in systematically computing, classifying, recording, verifying and maintaining numerical data involved in financial and product control records including the paying and receiving of money. Instruction includes information on keeping financial records, summarizing them for convenient interpretation, and analyzing them to provide assistance to management for decision making. Accounting computer applications should be integrated throughout the course where applicable. In addition to stressing basic fundamentals and terminology of accounting, instruction should provide initial understanding of the preparation of budgets and financial reports, operation of related business machines and equipment, and career opportunities in the accounting field. Processing employee benefits may also be included.

### **Computer Concepts and Applications (10004A001)**

**CTE Course  
Credit: 1**

This class is an orientation-level course designed to develop awareness and understanding of application software and equipment used by employees to perform tasks in business, marketing and management. Students will apply problem-solving skills to real-life situations using a variety of software applications, such as word processing, spreadsheets, database management, presentation software, and desktop publishing.

### **Web Page & Interactive Media Development I (10201A001)**

**CTE Course  
Credit: 1**

**Prerequisite: Computer Applications or Admin Approval**

This course will be responsible for the production of the yearbook. Web Page and Interactive Media Development I is a skill-level course designed to prepare students to plan, design, create and maintain web pages and sites. Students will learn the fundamentals of web page design using HTML, HTML editors, and graphic editors as well as programming tools such as JavaScript. Students working in a project-based environment will create a working website and learn to create pages, add hyperlinks, make tables and frames, create forms, integrate images, and set styles. They will use image-editing programs to manipulate scanned images, computer graphics, and original artwork. Instruction includes creating graphical headers, interactive menus and buttons, and visually appealing backgrounds using hardware and software to capture, edit, create, and compress audio and video clips.

### **Web Page & Interactive Media Development II (10201A002)**

**CTE Course  
Credit: 1**

**Prerequisite: Web Page & Interactive Media Development I**

Web Page and Interactive Media Development II is a skill-level course for students who have completed Web Page and Interactive Media Development I. Instruction will include using multimedia authoring applications and programming tools such as JavaScript to create a website that combines text, hyperlinks, images, video, and sound. Instruction includes using hardware

and software to capture, edit, create, and compress audio and video clips as well as create animated text, graphics, and images. Other topics include using tables to align images with text, creating newspaper-style columns, and inserting side menus and call-outs. Students will learn how to use templates, cascading style sheets and interactive elements to enhance web pages and learn to create dynamic forms that include multiple-choice questions, comment boxes, and buttons. Students will learn how to connect to a database and retrieve and write data. Students are encouraged to develop a portfolio project that demonstrates their expertise in areas such as multimedia authoring, web development, audio and video editing, and advanced JavaScript applications to create interactive web pages. This class will also be responsible for the production of the yearbook.



## CAREER OPPORTUNITIES

### **CEO (Creating Entrepreneurial Opportunities) (12053A001)**

**\*This course is open only to seniors who apply and are accepted into the program.**

CEO is a year-long course designed to utilize partnerships that provide an overview of business development and processes. Our local business partners with area schools to create project based experiences for students by providing funding, expertise, meeting space, business tours and one-on-one mentoring. Students visit area businesses, learn from guest speakers, participate in a class business, write business plans, and start and operate their own business. Business concepts learned through the experiential CEO class are critical; the 21st century skills of problem solving, teamwork, self-motivation, responsibility, high order thinking, communication and inquiry are at the heart of a student's development throughout the course.

### **Freshman Seminar (22003A000)**

**Credit: .5**

Freshman Seminar is a semester course that gives a ninth-grade student social and academic skills and understanding of what will be expected in high school, post-secondary education and in the work world. The Freshmen Seminar program exposes students to college and career paths preparing them for their future.

Freshman Seminar students learn the necessity of rules, establishing goals, giving presentations, time management, test preparation, career exploration, budgeting, job-skills, post-secondary education options, etc.

### **Office/Teacher's Assistant (22054A000)**

**Credit: 1**

**Prerequisite: Good school attendance/positive role model**

This is a non-academic class. Duties will range from the student assisting the teacher with anything from grading, filing, to tutoring students in the classroom. Office duties will be to answer the phone, assist people coming into the office, and other duties assigned by office personnel. Grades are received by the student from the areas of their attendance and performance in the classroom/office.

### **School to Work (22998A000)**

**\*This course is open only to seniors who apply and are accepted into the program.**

Workplace Experience courses provide students with work experience in fields related to business administration. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.

## DISTANCE LEARNING

### **LLCC Distance Learning (01149A000)**

**Prerequisite:** Permission sheet on file

**Credit:** Varies

Students may take an online course through Lincoln Land Community College to receive high school credit, college credit, or both (dual credit). Courses taken must be limited to courses failed by the student or courses not offered at Northwestern High School if taken for high school credit or dual credit. The student is responsible for all fees and requirements needed to complete the course. The student must request the class from the school counselor's office and a permission sheet must be on file. It is the student's responsibility to register for the class through LLCC and to submit final grades to the school counselor's office to receive a grade and credit on the high school transcript. Students may be limited to the number of distance learning courses that apply toward high school credit per Board Policy 6:310.\*

### **Internet Courses (SC196)**

**Prerequisite:** Permission sheet on file

**Credit:** Varies

Internet courses are high school equivalent classes or college classes that a student would take via the internet. If a student has failed a class, this class can be made up through an internet course. Students may also take courses that are not offered by Northwestern High School. If a student takes a college level course they may elect to take the class for college credit only or both high school and college credit (known as dual credit). The student shall request the class or possible offerings from the school counselor's office. A permission slip will then be filled out and placed on file in the school counselor's office. The student is then responsible for all fees and requirements needed to complete the course. The end result will be the university sending the grade and credit obtained from completing the class to the high school. The grade and credit will then be added to the student's transcript for high school courses or courses selected as dual credit. Students may be limited to the number of distance learning courses that apply toward high school credit per Board Policy 6:310.\*

***\*PLEASE NOTE: ONLY 6 UNITS OF CREDIT MAY BE COUNTED TOWARD THE REQUIREMENTS FOR A STUDENT'S HIGH SCHOOL GRADUATION PER BOARD POLICY 6:310. THE OFFICIAL FINAL GRADE MUST BE ON RECORD AT NORTHWESTERN HIGH SCHOOL BY THE FRIDAY BEFORE GRADUATION FOR THE STUDENT TO PARTICIPATE IN THE GRADUATION CEREMONY.***

## **DRIVER'S EDUCATION**

### **Driver's Education - Classroom (08151A000)**

**Prerequisite: Must have passed 8 classes in the previous 2 semesters** **Credit: .25**

Classroom course provides students with the knowledge to become safe drivers on America's roadways. Topics in these courses include legal obligations and responsibility, rules of the road and traffic procedures, safe driving strategies and practices, and the physical and mental factors affecting the driver's capability (including alcohol and other drugs).

### **Driver's Education - Laboratory (08152A001)**

**Prerequisite: Driver's Education - Classroom** **Credit: .25**

"Behind-the-Wheel" course provides students with the experience to become safe drivers on America's roadways. Topics in these courses include legal obligations and responsibility, rules of the road and traffic procedures, safe driving strategies and practices, and the physical and mental factors affecting the driver's capability (including alcohol and other drugs). Students must complete a minimum of six clock hours of behind-the-wheel experience to qualify for completion of this course.

## ENGLISH LANGUAGE ARTS

### **English I (01001A000)**

**Prerequisite: None**

**Credit: 1**

Literature study in this class focuses on short stories, modern drama, Shakespearean dramas, some poetry and prose forms, and a novel with strong emphasis on vocabulary study and compositions. Special writing assignments will be required throughout the study of literature. Either an oral or written book report is required for each semester. Grammar study in the ninth grade focuses on verb agreement and pronouns; sentence-combining techniques with emphasis on phrases and clauses; grammar usage; mechanics of capitalization, punctuation, vocabulary, spelling, and the writing process with a focus on argumentative, persuasive, and analytical essays.

### **English II (01002A000)**

**Prerequisite: One semester of English I**

**Credit: 1**

Students will study literary elements and literature in the forms of short stories, poetry, essays, and a novel. Students will study vocabulary throughout the year. Students will work on writing skills throughout the year with an emphasis on analysis and evaluation. Grammar lessons will be addressed throughout the year. The focus during the second semester will be speeches.

### **English III (American Literature/Composition) (01003A000)**

**Prerequisite: One semester of English II**

**Credit: 1**

Students will study the progression of American literature starting with Native American literature. Students will learn the history of the time period before studying the literature of that time period. Students will study vocabulary throughout the year. Students will work on writing skills throughout the year along with a research paper project. Grammar lessons will be addressed throughout the year as the need arises.

### **English IV, (British Literature/Composition) (01056A000)**

**Prerequisite: One semester English III**

**Credit: 1**

Students will study the progression of British literature starting with the Anglo-Saxon period. Students will learn the history of the time period before studying the literature of that time period. Students will study vocabulary throughout the year. Students will work on writing skills throughout the year along with a research paper project in the second semester. Grammar lessons will be addressed throughout the year as the need arises.

### **\*College Prep English IV (British Literature/Composition) (01056A000)**

**Prerequisite: 3.0 GPA in Junior English and Teacher Recommendation**

**Credit: 1**

Students will study the progression of British literature starting with the Anglo-Saxon period. Students will learn the history of the time period before studying the literature of that time period. Students will study vocabulary throughout the year. Students will work on writing skills

throughout the year along with a research paper project in the second semester. Grammar lessons will be addressed throughout the year as the need arises. Writing will be the primary focus and form of assessment for the college preparatory class. Weekly and unit papers will be expected from each student. The focus of the writing will be persuasive, argumentative and using literary criticisms for analysis.

### **20th Century Literature (01996A000)**

**Credit 1**

Students will improve their language arts and critical thinking skills by focusing on American literature written during the last 100 years. Students will determine underlying assumptions and values within selected works by examining each decade's societal events, social attitudes, and overall cultural influences. Students will compare the points of view of various authors and how living in different decades may have influenced their opinions on the same subject matter: women's rights, civil rights, war, etc.. Oral discussion will be an integral part of class as well as written composition and verbal presentations.

## HUMAN SERVICES

### **Family and Consumer Science (19251A000)**

**Credit: 1**

Family and Consumer Sciences—Comprehensive courses help students to develop the knowledge and skills that are used to manage one’s family and career efficiently and productively. Course topics typically include foods and nutrition; apparel; child care and development; housing, interior design, and maintenance; consumer decisions; personal financial management; interpersonal relationships; and careers available in family and consumer sciences.

### **Child Development and Parenting (19052A001)**

**CTE Course**

**Credit: 1**

Child Development and Parenting addresses the knowledge, skills, attitudes, and behaviors associated with supporting and promoting optimal growth and development of infants and children. The focus is on research-based nurturing and parenting practices and skills, including brain development research, that support positive development of children. Students will explore opportunities in human services and education-related careers and develop a career portfolio.

### **CE2: Consumer Economics (19262A000) & Career Exploration (22151A001)**

**CTE Course**

**Credit: .5**

Consumer Economics/Personal Finance (formerly consumer education) courses provide students with an understanding of the concepts and principles involved in managing one’s personal finances. These courses emphasize lifespan goal-setting, individual and family decision making, and consumer rights as well as topics that are commonly associated with personal finance so that one can become a financially responsible consumer. Topics may include savings and investing, credit, insurance, taxes and social security, spending patterns and budget planning, contracts, and consumer protection. These courses may also investigate the effects of the global economy on consumers and the family. Career Exploration (formerly job skills) courses help students identify and evaluate personal goals, priorities, aptitudes, and interests with the goal of helping them make informed decisions about their careers. These courses expose students to various sources of information on career and training options and may also assist them in developing job search and employability skills.

## FINE ARTS

### **Art (05154A000)**

**Credit: 1**

Comprehensive courses enable students to explore one or several art forms (e.g., drawing, painting, two- and three-dimensional design, and sculpture) and to create individual works of art. Initial courses emphasize observations, interpretation of the visual environment, visual communication, imagination, and symbolism. Courses cover the language, materials, media, and processes of a particular art form and the design elements used. Advanced courses encourage students to refine their skills while also developing their own artistic styles following and breaking from traditional conventions. Courses may also include the study of major artists, art movements, and styles.

### **Concert Band (05102A000)**

**Credit: 1**

The Concert Band is the main performing ensemble from which other instrumental groups are drawn. During the first quarter, the concert band doubles as a marching band and performs at all home football games. During the second quarter, members of the concert band perform as a pep band for all home basketball games. The concert band performs for the district-wide Christmas and spring music concerts. Students are encouraged to participate in IMEA sponsored district music festivals, Honor Band concerts, and IHSA solo and ensemble music contests. Students who audition may be placed in the Jazz Band, which meets alternating with Concert Band on an as-needed basis. Students who do not participate in Jazz Band will be given alternate assignments.

## WORLD & FOREIGN LANGUAGE

### **Spanish I (24052A000)**

**Credit: 1**

In Spanish I students acquire the knowledge of practical phrases and basic vocabulary that will permit them to communicate with Spanish-speaking people and to transact business in Spanish-speaking countries. Students will learn how to speak in the Present and Simple Future Tenses. Many vocabulary words that students learn are related to home-life, school-life or other familiar environments that they relate to easily. Finally, students learn geography and a broad variety of Hispanic culture and civilization.

### **Spanish II (24053A000)**

**Credit: 1**

#### **Prerequisite: Spanish I**

In Spanish II students will increase vocabulary and verb comprehension through speaking aloud, listening to the conversations of native Spanish speakers, reading and written exercises. They will learn how to speak about past events. They will write compositions and summaries in the language using grammatical concepts. Class conversation in Spanish will be emphasized. Students will read and translate short stories. Students will practice their new skills in videos and other mediums of technology.

### **\*Spanish III (24054A000)**

**Credit: 1**

#### **Prerequisite: Spanish II & 3.0 GPA in Spanish II**

In this class students will gain proficiency in grammatical concepts using the preterit, imperfect, future, and pluperfect tenses in conversation, oral talks, written exposes, and cultural projects. Students will engage in a project teaching younger children. They will read a variety of Spanish literature and experience different types of Spanish media. Students will practice their newly acquired skills in videos and other mediums of technology.

### **\*Spanish IV (24055A000)**

**Credit: 1**

#### **Prerequisite: Spanish III & 3.0 GPA in Spanish III**

Students will develop grammatical skill in conversation, creative writing, and oral presentations. They will build vocabulary and reading comprehension. They will study Spanish painters and historical figures with written and oral evaluation. Students will engage in a project teaching younger children. They will read a variety of Spanish literature and experience different types of Spanish media. Students will practice their newly acquired skills in videos and other mediums of technology.



## ARCHITECTURE AND CONSTRUCTION

### **Beginning Construction (17001A001)**

**CTE Course  
Credit: 1**

The Beginning Construction course exposes students to the opportunities available in construction related trades, such as carpentry, masonry, air conditioning/refrigeration, plumbing, and so on. Students learn about the processes involved in construction projects and may engage in a variety of small projects.

### **Construction Trades I (17002A001)**

**CTE Course  
Credit: 1**

This course provides experiences related to the erection, installation, and maintenance of residential buildings and related fixtures. Planned learning activities allow students to understand fundamental principles and methods, and develop technical skills related to masonry, carpentry, and finish work. Instruction includes safety principles and practices, recognition of standard lumber sizes, foundation layout methods, building concepts and procedures, local, state, and national codes, cost estimating, and blueprint reading.

### **Carpentry I (17003A001)**

**CTE Course  
Credit: 1**

This course is designed to introduce students to the Carpentry/Carpenter occupation. Students are instructed in areas of safety, including hand tool, power tool, ladder, scaffolding and the use of safety harnesses. Students are introduced to the theoretical knowledge needed to lay out rafter, stairs, and basic framing techniques. Students demonstrate knowledge of blueprint reading, including foundations, concrete, floor plans, specification schedules, and electrical, plumbing and mechanical symbols. Students demonstrate entry-level skills in all facets of residential construction. Technology-related mathematics, reading, writing, vocabulary, blueprint reading, and science are integrated throughout the curriculum.

### **Carpentry II (17003A002)**

**CTE Course  
Credit: 1**

#### **Prerequisite: Carpentry I**

This course provides learning experiences related to the erection, installation, maintenance and repair of building structures and related utilities. Students are instructed in areas of safety, including hand tool, power tool, ladder, scaffolding and the use of safety harnesses. Students demonstrate knowledge of exterior trim and finishes, energy conservation in residential construction, and design of stairs and rafter building. Students gain knowledge of planning and zoning regulations and building codes. Students are introduced to estimating both materials and construction costs, and demonstrate basic knowledge in applying drywall materials, stair-building skills, designing and erecting wall partitions, applying roofing materials, and installing common siding and interior finish. Technology-related mathematics, reading, writing, vocabulary, blueprint reading, and science are integrated throughout the curriculum.

## MATHEMATICS

### **Pre-Algebra (02051A000)**

**Credit: 1**

This course is designed to increase students' foundational mathematics skills and prepare them for Algebra I by covering a variety of topics, such as properties of rational numbers (i.e., number theory), ratio, proportion, estimation, exponents and radicals, the rectangular coordinate system, sets and logic, formulas, and solving first-degree equations and inequalities.

### **Algebra I (02052A000)**

**Credit: 1**

The purpose of this course is to satisfy the Algebra I requirement of the Common Core Mathematics Standards. This course fits into an overall program of mathematics studies with a rigorous academic core by extending what students have learned in introductory-level mathematics courses as well as introducing more advanced topics. These advanced topics include understanding our number system, solving, graphing, and writing linear equations and inequalities, linear systems, exponents, quadratics, polynomials, and factoring.

### **Geometry (02072A000)**

**Credit: 1**

#### **Prerequisite: Algebra I**

This is a second year of math class with Algebra I as a prerequisite. The basic properties of points, lines, planes, circles, triangles, and quadrilaterals are covered. Also covered are area, perimeter, and volume of various figures. Students are taught the theorems necessary to do formal proofs. Elementary trigonometry is introduced and analytical geometry is covered more fully.

### **Applied Geometry (02071A000)**

**Credit: 1**

#### **Prerequisite: Algebra I**

Applied Geometry is a second year math class with Algebra I as a prerequisite. It is a basic course in geometry with a study of points, lines, planes, circles, triangles and quadrilaterals. Also, students learn area, perimeter, and volume of various figures.

### **Algebra II (02056A000)**

**Credit: 1**

#### **Prerequisite: Geometry**

The purpose of this course is to satisfy the Algebra 2 requirement of the Common Core Mathematics Standards. This upper level course fits into an overall program of mathematics studies with a rigorous academic core by extending what students have learned in introductory-level mathematics courses as well as introducing more advanced topics. These advanced topics include linear equations, inequalities, and systems, quadratic, polynomial, exponential, logarithmic, and rational functions, equations, and expressions.

**\*Advanced Math (02107A000)**

**Credit: 1**

**Prerequisite: Algebra II**

The purpose of this course is to satisfy the Advanced Math requirements of the Common Core Mathematics Standards. Advanced Math provides a strong foundation of pre-calculus concepts, techniques, and application to prepare students for more advanced work. Trigonometry is covered extensively as well as analytical geometry, sequences, series, and matrices.

**\*Calculus (02121A000)**

**Credit: 1**

**Prerequisite: Advanced Math & 3.0 GPA**

Advanced Math is required for this fifth year math class. Limits, differentiation, integration, and their applications are covered.

## HEALTH & PHYSICAL EDUCATION

### **Fitness for Life (08001A000)**

**Credit: 1**

Fitness for Life is a physical education class that focuses on healthy life long habits for students. Students will work on exercises, healthy eating, walking, and aerobics.

### **Health (08051A000)**

**Credit: .5**

Health education is a class designed to positively influence the behavior of our students through the objective presentation of different topics relating to an individual's overall physical, mental and social health.

### **Physical Education (08001A000)**

**Credit: 1**

Physical education is the learning and practice of human movement. Through physical education, students learn basic individual skills, team skills, rules, and recreational activities that will carry on to post-secondary life.

### **Fitness and Conditioning (08009A000)**

**Credit: 1**

Weight Training courses help students develop knowledge and skills with free weights and universal stations while emphasizing safety and proper body positioning; they may include other components such as anatomy and conditioning.

## SCIENCE

### **Introduction to the Physical Sciences (03159A000) Credit: 1**

Physical Science is an introduction to physics and chemistry. Topics covered in this course include motion, forces, light, electricity, matter, atomic structure, chemical bonds, and chemical reactions. Activities include lecture, demonstrations, and laboratory.

### **Biology I (03051A000) Credit: 1**

This course is an introduction to biological sciences. Topics include cell biology, genetics, invertebrates, ecology, and plants. Activities include lecture, demonstrations, and laboratory (microscopy and outdoor).

### **\*Biology II (03052A000) Credit: 1**

This is an advanced biology course. Topics include DNA science, human anatomy and physiology, evolutionary theories, and comparative vertebrate anatomy. Activities include lecture, demonstrations, and laboratory (microscopy, physiological, and outdoor).

### **\*Physics (03151A000) Credit: 1**

#### **Prerequisite: 3.0 GPA Advanced Math**

Physics is an advanced study of matter and energy. Topics include motion, forces, vectors, heat, waves, gravity, electricity, and magnetism. Activities include lecture, demonstrations, and laboratory.

### **Chemistry I (03101A000) Credit: 1**

#### **Prerequisite: Algebra I**

This course is an introduction to chemistry. Topics include scientific measurements, atomic theory, chemical bonding, chemical equations, and stoichiometry. Activities include lecture, demonstrations, and laboratory.

### **\*Chemistry II (03102A000) Credit: 1**

#### **Prerequisite: 3.0 GPA in Chemistry I**

This course is an advanced study of chemistry. Topics include solutions, acids and bases, equilibrium, energy and kinetics, and oxidation reduction. Activities include lecture, demonstrations, and laboratory. Chemistry II involves constant lab work. Lab meets Tuesday and Thursday first semester, then Monday, Wednesday, and Friday during the second semester. Students are required to keep a lab notebook.

## SOCIAL STUDIES

### **Illinois State History (04105A000)**

**Credit: .5**

State-Specific Studies courses examine the history, politics, economics, society, and/or cultures of one state in the United States. This course may focus primarily on the history of that state or may take an interdisciplinary approach to the contemporary issues affecting it.

### **Current Events (04064A000)**

**Credit: .5**

This course will cover events happening locally, nationally, and internationally. Using current events, this course focuses on world and local issues that affect students' everyday lives, such as economics, government and conflict. This course uses newspapers, online media, cartoons, and newscasts to support class discussion.

### **World Geography (04001A000)**

**Credit: 1**

World Geography courses provide students with an overview of world geography, but may vary widely in the topics they cover. Topics typically include the physical environment; the political landscape; the relationship between people and the land; economic production and development; and the movement of people, goods, and ideas.

### **World History (04051A000)**

**Credit: 1**

World history deals with major high points in the development of civilization. Beginning with the cradles of civilization to the world of today, particular attention is devoted to the origin of Western Civilization in the cultures of Ancient Egypt, Greece, Rome and the periods of the Middle Ages, Renaissance, and the Modern Times concentrating on development of Europe and the New World.

### **U.S. History (04101A000)**

**Credit: 1**

This course covers American history from colonial days to WWII. It gives the student an overall view of the major events in American history along with some idea of how they are related to each other. Included in the presentation are cultural diversity, democratic values, economic factors, global relations, and technology in shaping America then and now. "Who we are is based on what we were." This is a required course. Studies of the U.S. and Illinois Constitutions are also included. Students are required to pass both the U.S. Constitution test and the Illinois Constitution test.

### **\*College Prep U.S. History (04101A000)**

**Credit: 1**

#### **Prerequisite: 3.0 GPA and Teacher Recommendation**

This course provides a general overview of the history of the United States. In chronological order, students will explore America's past, examining the cultural, political, geographical, economical, and technological changes that have taken place and have helped to shape and guide

us as a nation today. Topics will include issues relating to Colonization through WWII. This course is a lecture intensive survey course. Students will be responsible for lengthy reading assignments accompanied by guided reading questions or analysis/interpretation in written essays. The text for this course is written at a reading level suited for first or second year college students. College Prep United States History is designed to provide students with the analytical skills and enduring understandings necessary to deal critically with the problems and materials in United States history. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full-year introductory college courses. Students should learn to assess historical materials – their relevance to a given interpretive problem, their reliability, and their importance – and to weigh the evidence and interpretations presented in historical scholarship. Studies of the U.S. and Illinois constitutions are included in the course. Students are required to pass the U.S. and Illinois Constitution tests.

**\*Psychology (04254A000)**

**Credit: 1**

**Prerequisite: 3.0 GPA and Teacher Recommendation**

This is a general introductory course, which seeks to understand human behavior. Study units include topics such as intelligence, motivation, emotions, frustrations, mental health, senses, attention, perception, learning, forgetting, thinking, and development. Course objectives are to provide broad coverage of the field of psychology, introducing theories, research, and applications that constitute the discipline, to arouse intellectual curiosity and build an appreciation for the relevance of psychology, and to serve as an impetus for students to think critically about psychological phenomena, particularly those that have an impact on their everyday lives. This course seeks to illustrate the substantial diversity within the field of psychology and in society by presenting material that reflects the discipline's increasing concern with cultural, gender, racial, and ethnic issues.

**Civics (04161A000)**

**Credit: 1**

The Civics course will focus on government institutions, discussion of current and controversial issues, service learning, and simulations of the democratic process. The curriculum introduces students to issues that influence our life in the global multicultural society. Students will research current economic, political, social, and cultural problems, and explore how ongoing conflicts affect groups as well as individuals. Some of the pressing problems facing our rapidly changing society will be examined in detail using a variety of media. Critical thinking skills and technology related research is emphasized. Speaking and listening skills are reinforced through class discussions and oral presentations.