

# **PRAIRIEVIEW SCHOOL**

## **9th Grade Curriculum Guide**

The curriculum guide is designed to provide you with information about the courses offered for the coming school year. Administrators, counselors, teachers, and parents can also provide you with valuable information in making the appropriate selections. We hope you will find the guide to be both informative and useful.

### **9th Grade Core Classes:**

**The following required courses meet everyday all school year.**

## **Advisory**

Advisory is a place to feel at home, to make friends, to be free to express yourself, to feel part of the team, and to make a connection with an adult in the building. Advisory meets in the afternoon and is not graded.

## **English I**

This course includes the study of grammar, composition, literature, and vocabulary. Grammar skills are integrated into the study of composition. Course work in literature includes short stories, poetry, a Shakespearean play, Greek mythology, and a novel. Emphasis is placed on building vocabulary and learning to define, identify, and write about common elements of fiction.

The student will:

- Write various types of paragraphs
- Read short stories, novels, a drama, and an epic for understanding and appreciation
- Expand vocabulary skills
- Recognize common literary elements
- Develop mechanics skills

## **Honors English I**

Prerequisite: Enrollment in this class will be based on students meeting established criteria for participation in the honors program.

Honors English for freshmen emphasizes three areas of English study: literature, vocabulary, and writing. This provides an enrichment program in language arts and the humanities for highly motivated, academically oriented students.

The student will:

- Enhance skills in mechanics of writing
- Write well-developed, multi-paragraph essays
- Read a wide variety of works by British, American, and world authors
- Use the elements of literature to analyze literature
- Develop higher order thinking skills
- Develop an extensive vocabulary

# Algebra I

Prerequisites: Basic Algebra or recommendation of instructor

This course is designed as a college preparatory course to continued studies in mathematics and science. Areas of study include solving linear equations and inequalities, quadratic equations and systems of equations using the real numbers. Also included is graphing (both on a number line and in a coordinate plane), factoring, working with functions, and probability and statistics. Problem solving will occur with all the above topics.

The student will:

- Use order of operations to evaluate phrases and perform the four basic operations with rational numbers
- Solve, graph, and write linear equations and inequalities
- Translate verbal sentences and apply the problem solving techniques to solve real life problems
- Perform the four basic operations and factor polynomials and solve polynomial equations
- Use proportions and systems of equations to solve word and numeric problems

# Formal Geometry

Prerequisites: Algebra I

This course is designed for college-bound students who intend to enroll in Algebra II. It uses both plane and spatial objects to accomplish a sound development of logic. Students are given frequent opportunities to use definitions, postulates, and theorems to formulate proofs. A deep study of triangles and other polygons is included. A short time is spent on straightedge and compass constructions.

The student will:

- Use coordinate geometry to find midpoints and lengths of segments and slopes of lines
- Recognize and apply the postulates, theorems, definitions and algebraic techniques to find segment length and angle measurements in congruent triangles, similar triangles and quadrilaterals
- Find measures of angles, arcs and segments involving circles
- Find the areas, circumferences and perimeters of various plane figures
- Organize theorems, postulates and definitions into logical sequential two-column proofs

# Algebra II

Prerequisite: Formal Geometry

Algebra II enhances the problem-solving process started in Algebra I by continuing to develop the basic and advanced properties of functions and algebra. Algebra II gives students the opportunity to model real data by understanding and applying the algebraic concepts of equations and inequalities, basic relations and functions, polynomials, matrices, conics, and exponential functions. Students in Algebra II are able to describe the world around them by utilizing estimation, technology, graphing techniques, and statistics. Algebra II is designed to meet part of the three-year entrance requirements for mathematics to most colleges. Algebra II provides a valuable background for those entering technical fields and also serves as a useful course for other college-bound students.

The student will:

- Solve linear and absolute value equations and inequalities
- Graph and evaluate linear equations and functions
- Use systems of linear equations and inequalities to solve problems
- Use matrices to organize numerical data

- Solve and graph quadratic functions and inequalities
- Evaluate, graph, and solve polynomial equations
- Simplify radical expressions and solve equations involving radicals
- Graph and solve exponential and logarithmic equations
- Simplify rational expressions and graph and solve rational functions and equations
- Write, graph and recognize equations of conic sections

## Trigonometry

Prerequisite: Algebra II

This course explores in-depth applications of trigonometry in numerous chosen fields of study. Students will become more aware of the uses of trigonometry as they relate to the fields of astronomy, surveying, navigation, construction, geography, physics, engineering, chemistry, and calculus.

The student will:

- Measure angles in radians and degrees
- Evaluate trigonometric functions
- Solve triangles and find the area of triangles
- Graph trigonometric functions and compound functions
- Determine the amplitude, period, and phase shift for a graph
- Evaluate and graph inverse trigonometric functions
- Verify trigonometric identities
- Solve trigonometric equations
- Study vector notation, magnitude, and amplitude
- Use parametric equations to solve problems

## Probability and Statistics

Prerequisite: Algebra II

This course will provide an introduction to statistics and probability, and how they are applied to the real world. The general areas of study will include analyzing data, graphic displays, probability rules, counting principles, simulations, random variables, normal distributions, and regression analysis. The intent of this course is to help prepare the student for college and for further study in mathematics.

The student will:

- Represent data in graphical displays
- Calculate central measures
- Use counting principles
- Perform probability simulations
- Perform random sampling
- Know how to use binomial distribution
- Be able to determine if a set of data is normally distributed
- Analyze scatter plots
- Use linear regression to make predictions on a set of data

## Modern World History

Modern World History is a fusion of both geographical and historical concepts. We are helping our students meet the standards and objectives for Geography, History, and Civic Literacy from the Iowa Core. We start learning about the late 18th Century and continue through Modern Day. Each unit, we examine and analyze key themes and the impact those phenomena had on people. The main goal is to learn about, critically analyze, and then learn from past decisions that affect populations across the globe.

## Physical Science

This course is designed to give the student a foundation for the high school science program. The student will have the opportunity to study in-depth the main physical science areas. The area of chemistry covers: matter, atoms, nuclear changes, Periodic Table, chemical bonding, and chemical reactions. The area of physics covers: speed, velocity, acceleration, forces, laws of motion, waves, gravity, energy, and electrical forces.

The student will understand and apply knowledge of:

- Questions and concepts that guide scientific investigations
- Designing and conducting scientific investigations
- Energy and the Earth system
- Structure of atoms
- Structure and properties of matter
- Chemical reactions
- Motion and forces
- Conservation of energy and increase in disorder
- Interactions of energy and matter

## Honors Biology

Prerequisite: Enrollment in this class will be based on students meeting established criteria for participation in the honors program.

Honors biology is intended to be the first step for the highly motivated, academically oriented student intending to continue with advanced science courses. Topics covered include scientific inquiry, ecology, biochemistry, cells, membranes, cell division, nucleic acids, genetics, evolution, bacteria, viruses, protists, fungi, plants, invertebrates, and vertebrates.

The student will understand and apply:

- Knowledge of the cell
- Knowledge of the interdependence of organisms
- Knowledge of matter, energy, and organization in living systems
- Knowledge of the molecular basis of heredity
- Knowledge of biological evolution
- Questions and concepts that guide scientific investigations
- Knowledge of chemical reactions

**9th Grade Elective Classes:**  
**The following elective courses meet everyday all school year.**

## **Concert Band**

The principles of musicianship are taught as they relate to intonation, phrasing, tone, color, balance, and blend. The concert band performs at 3 to 5 home concerts every year plus a large-group state contest in the spring. Each student has an individual lesson once every six school days. All students are encouraged to participate in various honor bands and a solo ensemble contest.

***Marching Band*** – Instrumental Music students are strongly encouraged to participate in Waukee Warrior Regiment Marching Band, but it is not a requirement for registration in the 9th grade Concert Band class. The Marching Band meets daily from 7 a.m. to the end of 1st period and requires attendance at some additional rehearsals starting approximately 2 weeks before the school year begins. In addition to performing at all home football games, the Marching Band attends out-of-town performances on many Saturdays in the fall. The Marching Band will participate in the Iowa High School Music Association's state Marching Band contest and may also perform at many local and regional band days and parades.

***Pep Band*** – This band performs at varsity home basketball games and pep assemblies. Members are selected from those students not involved in basketball.

***Color Guard*** – The Color Guard is a unit within the Marching Band and performs at all home football games, Marching Band contests, and performances. Rehearsals are held before school from 6:45 a.m. to the end of 1st period from August through October. Additional after-school rehearsals will also be held once or twice a week. Attendance at all rehearsals and performances is required. Auditions for the color guard are held each year in the spring. Students participating in Color Guard must be enrolled in ninth grade band.

***Jazz Band*** – Jazz Band membership is open to all 9-12th grade students who will be required to audition for the instrumentation needs (5 saxes, 5 trumpets, 5 trombones, drums, piano, bass and guitar) of the jazz band. Auditions will occur in May prior to the next school year. Please note that Concert Band enrollment is required of all Jazz Band members. The Jazz Bands rehearse weekly outside of the school day and participate/compete at various festivals throughout the season.

## **Vocal Music**

**9th Choir** – Enrollment is open to all Prairieview 9th grade students. Choral singing techniques and skills will be explored and discussed in detail. Students will sing, study, and perform a wide variety of literature and present 3 or 4 concert programs a year. Choir students are eligible and encouraged to participate in other musical opportunities outside of the school day.

***Spirit*** and ***Millennium*** show choirs and ***Avenue Jazz*** and ***Sound Check*** jazz choirs are extensions of the choral program at Waukee High School for students 9-12th grade. These ensembles rehearse weekly outside of the school day and participate and compete at festivals throughout the Midwest through the winter months. Participation is open to all vocal music students by audition. Each offers a unique opportunity to Waukee's vocal music students.

## World Languages

Please note that there is NO language requirement for graduation from Waukee High School. It is a very useful life skill, and can help increase scores for the RAI index for admission to Regent Universities, but is not a required class.

### Spanish I

Spanish I is a yearlong introduction to the Spanish language and the cultures of the Spanish-speaking world. The student will receive a solid foundation in the four skills of speaking, listening, reading and writing through storytelling, classroom activities, projects and regular out-of-class preparation. Students will build their Spanish vocabulary in topics such as self, family, home and school. Much of the class will be conducted in Spanish to promote the use and understanding of the language from the very beginning of study. It is recommended that students take Spanish I and Spanish II consecutively.

The student will:

- Recognize material studied when encountered in a familiar context
- Begin to produce accurately the sounds of the language when using familiar context
- Recognize course content when encountered in a familiar context
- Begin to produce simple sentences using course content

### Spanish II

Prerequisite: Spanish I

Spanish II is a yearlong course that continues the development of the skills from Spanish I. The class is conducted mostly in Spanish and the students are expected to participate in Spanish. Students will continue to build the four skills of speaking, listening, reading and writing through storytelling, classroom activities, projects and regular out-of-class preparation. Spanish II will delve more deeply into previously learned topics and themes. Students will expand their vocabulary and broaden their communication skills by using the past tenses.

The student will:

- Recognize increasingly complex material in familiar contexts
- Recognize familiar material in new settings
- Produce more complex sentences and stories

### German I

Prerequisite: Completion of or current enrollment in English I

German I is an intensive course using higher order thinking and reasoning skills to learn basic German vocabulary and conversational patterns. Although emphasis is placed on the development of listening and reading comprehension in German, the language skills of writing and speaking are also practiced. Some aspects of German grammar are introduced. In addition to German language skills, students also study

geographic and cultural information about the countries in which German is spoken. It is recommended that students take German I and German II consecutively.

The student will:

- Recognize material studied when encountered in a familiar context
- Begin to produce accurately the sounds of language when using familiar context
- Recognize course content when encountered in a familiar context
- Begin to produce simple sentences using course context

## **German II**

Prerequisite: German I

German II is a yearlong course that continues the development of the skills from German I. The class is conducted mostly in German and the students are expected to participate in German. German II will delve more deeply into previously learned topics and themes. Students will expand their vocabulary and broaden their communication skills by using the conversational past tense.

The student will:

- Recognize increasingly complex material in familiar contexts
- Recognize familiar material in new settings
- Produce more complex sentences and stories

## **Introduction to Publications/Yearbook**

Prerequisite: None

This class will cover journalism, photography, and layout design. Grades will reflect the student's ability to produce quality work and meet deadlines. Computer background and strong writing skills are recommended for this course.

The student will:

- Design yearbook layouts
- Write yearbook articles
- Conduct interviews
- Use a digital camera

## **Introduction to Engineering Design (a Project Lead The Way class)**

Prerequisites: Strong math and science abilities and current or previous enrollment in either Algebra or Geometry.

This course parallels the entry-level engineering courses offered at many universities. Using the design process of Project Lead The Way, project solutions are developed, analyzed and communicated using 3D solid modeling CADD software. Engineer notebooks are completed and an electronic portfolio is assembled as the class progresses. Ten units utilize both individual and group work as the PLTW curriculum is followed and all students interested in design or engineering will benefit greatly from this course. This class is articulated with Iowa State University, the University of Iowa, and DMACC, and students have the opportunity to earn three hours of college credit by successfully completing PLTW coursework.

**Classes that meet every *other* day, all year long.**

## **Physical Education**

The goals of this course are to develop physical fitness, establish an understanding of team/individual sports and promote a healthy lifestyle. Activities include individual and team sports. Physical conditioning is included.

The student will:

- Increase muscular development, flexibility and endurance
- Develop proper techniques and alignment for safe, injury-free participation in all fitness activities
- Perform and understand component movements of individual, lifelong and team activities
- Demonstrate knowledge of history, rules, terminology, strategies, safety measures, and equipment care and selection for the various activities
- Develop and exhibit good sportsmanship, cooperation, teamwork, emotional control, leadership, and a positive self-concept
- Demonstrate recognition and acceptance of one's own strengths and limitations, as well as those of others and an appreciation for regular physical activity

## **Health**

This comprehensive course introduces students to a wide range of health subject areas. The areas of study include personal hygiene and fitness; nutrition; human body systems; diseases and disorders; adolescent growth and development; consumer and environmental concerns; and substance use and abuse. Within these areas students will further explore stress management, teenage suicide and human sexuality issues.

The student will:

- Be able to employ healthful choices with regard to personal hygiene practices
- Identify essential nutritional elements to develop an understanding of proper nutrition, diet planning and weight management
- Discuss the relationship between cultivating good mental health behaviors and how to apply those behaviors to successful interpersonal relationships
- Discuss the function of each major body system, including neurological, cardiovascular, respiratory, digestive, musculoskeletal, integumentary, excretory, endocrine, urinary and reproductive
- Gain an awareness of human sexuality issues, including growth and development, contraception and sexually transmitted diseases
- Distinguish between infectious and noninfectious diseases and disorders
- Differentiate between use and abuse of substances including alcohol, tobacco, illegal drugs, and medicines, and analyze the risks inherent with the use of each
- Analyze various factors that have an impact on health and safety, including public health issues, consumer choices and environmental health



**Elective Classes:**  
**The following courses meet everyday for one semester.**

## **Introduction to Business**

A major purpose of this course is to contribute to improved economic citizenship through a study of the business and economic environment in which we live.

The student will:

- Know the characteristics of the American enterprise system
- Understand how businesses are organized within our economic system
- Learn consumer rights and responsibilities
- Identify the functions of the financial services industry
- Demonstrate how students can manage money efficiently

## **Culinary Arts I**

Prerequisite: None

Students will learn about nutrition, basic food preparation and procedures, the principles of cooking and baking through demonstrations and lab experiences. Students will practice employability skills and apply criteria for evaluating product quality. Their experience includes a final individual practical lab using the skills acquired during the semester.

The student will:

- Use kitchen equipment, small and large appliances
- Practice safety and sanitation guidelines
- Interpret recipes to produce quality products
- Use math skills to convert and manipulate recipes.
- Prepare foods from the following categories: cookies, quick breads, fruits and vegetables, dairy, eggs, and grains

## **Speech I**

This is an introductory course in the fundamentals of oral communication. Basic speaking skills are studied, such as vocalization, body language, handling stage fright, the use of visual aids, and the use of credible supporting evidence. Additionally, students will study the communication process and the traits of effective and ineffective interpersonal and intrapersonal communication. Lab experience includes oral interpretation, narrative, informative, demonstration and impromptu speeches as well as group discussions and communication analysis.

The student will:

- Develop appropriate verbal and nonverbal performance skills
- Develop strategies to channel nervous energy in a positive way for an effective delivery
- Learn to organize and develop various forms of speeches
- Learn how to plan, prepare and use a variety of visual aids
- Analyze personal communication style and develop strategies to work effectively with other styles of communication
- Learn to identify the cause of communication breakdown and develop preventative strategies

# Housing and Interiors

Prerequisites: None

This class is designed to increase awareness of housing options and selection. Housing trends and styles are explored. Emphasis is placed on elements and principles of design and their applications to housing and interiors. A number of projects are included.

The student will:

- Evaluate floor plans
- Apply elements and principles of design to create environments that are aesthetic and functional
- Recognize housing styles and features

# Computer Applications

This is a hands-on course in which the students will become familiar with a computer and its peripherals while learning to use a variety of software programs and their applications. Microsoft Office will offer the student experience in word processing, spreadsheet, PowerPoint as well as the creation and manipulation of graphics. Students will integrate Office capacities to create form letters, mailing labels and other office procedures. Microsoft Access will offer the student experience in a database environment.

The student will:

- Create word processing, database and spreadsheet documents using the advanced features of an office software program
- Combine the features of word processing, database and spreadsheet documents to create integrated documents
- Use database and spreadsheet applications in problem solving applications
- Create multimedia projects using Microsoft PowerPoint software
- Perform internet searches using the advanced features of a search engine
- Use the hypertext markup language (HTML) to create a personal web page

# Introduction to Drafting and Design

Prerequisite: None

This is an ideal course for those students considering careers in engineering, construction, manufacturing, or design/drawing. The class includes units on drafting fundamentals, measurement, sketching, orthographic drawings, and pictorial drawings among others. Students will be introduced to AutoCAD computer-aided design software which is used to produce assigned drawings. Student progress will be evaluated using daily scores, drawings, written assignments, quizzes and tests.

The students will:

- Apply the design process to a variety of design problems defined by the instructor
- Complete drawings using proper sketching and CADD techniques
- Use proper drawing and dimensioning techniques for orthographic and pictorial drawings
- Develop verbal communication skills, social behavioral skills, and learn to manage time well

# Introduction to Woodworking

Recommended: Successful completion of Introduction to Drafting and Design

The woodworking technology curriculum is designed to engage students in learning through woods project production using a wide range of processes. Units in the class will include machine and hand tool safety/use, wood types, wood joints, gluing/clamping, and finishes. Students will be provided materials for individual projects, but must furnish their own safety eyewear. Evaluations will be through daily lab /class written assignments, required lab projects, machine safety exams, and written assignments and tests.

The student will:

- Attain a competent safety level with woodworking machinery and increase his or her skill level with these machines
- Understand and demonstrate woodworking processes thru product creation
- Have awareness of the careers in industry which relate to woodworking
- Use woodworking skills learned in the class to make the student a better problem solver, better consumer and more marketable employee

# Basic Art I

Prerequisite: None

Basic Art I is a survey of art areas, designed to give the beginning art student a basic working knowledge of the media techniques of art. The principles of design and composition are stressed in the knowledge of the media techniques of art. The principles of design and composition are stressed in the areas of drawing, shading for 3D, perspective drawing, color theory, ink drawing, watercolors, hand-building ceramics, art appreciation, sculpture and art history. Originality and independent thinking are stressed. Students learn the safety, care and proper use of the tools and materials and become familiar with terms and procedures used in artwork. Students complete a research paper on an artist of their choice with instructor approval.

The student will:

- Demonstrate an understanding of art as a language for expression, meaning, communication and creativity
- Complete work and develop skills in a wide range of media areas
- Practice a responsible attitude toward the care and safe use of art media, tools and materials
- Develop ability to evaluate artwork
- Develop individual thinking and problem-solving skills

**Special Programs: Available to students  
by parent, teacher, and/or administrative placement.**

## **Extended Learning Program (ELP)**

The Extended Learning Program at Prairieview seeks to provide appropriate educational experiences for identified students. Students explore areas of their interest as well as enrichment of the content areas through experimentation, projects and research. A number of academic competitions are provided for all students throughout the school year, including Mock Trial, Geography Bee, MathCounts, National History Day, Invent Iowa, and Knowledge Bowl.

## **English as a Second Language (ESL)**

In the Waukee Community School District we serve our English language learners through the ESL program. Students receive comprehensible input through one-on-one and small-group pull-out or grade-level collaborative instruction. Our program provides specialized and specific instruction in listening, speaking, reading, and writing while honoring our students' languages and cultures.

## **Instructional Methods**

Instructional Methods is a specially designed class for students who have been recognized as needing individual assistance and have an IEP. These students will be given direct instruction and re-teaching in the areas of reading, mathematics, written language, and behavior. This time is not designed as a study hall, though some time may be allotted, during the week, for students to work on their daily work.

Students are required to take this class if they are in Special Education. There may be some exceptions. Those must be discussed with your child's Special Education teacher beforehand.

Instructional Methods is pass/fail and students will be given an elective credit toward graduation.