

9th Grade Course 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 every day all year.*

English I

This course includes the study of grammar, composition, literature, and vocabulary. Grammar skills are integrated into the study of composition. Coursework 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 narrative, analysis, and argumentative pieces.
- 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

Basic Algebra

This course covers material from the first semester of Algebra I, in addition to an emphasis on problem solving, building number sense, and foundational math skills.

- Use order of operations to evaluate phrases and perform the four basic operations with rational numbers
- Solve, graph, write and model with linear equations and inequalities

Algebra I

Course Description:

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, graphing (both on a number line and in a coordinate plane), factoring, working with functions, as well as problem-solving.

The student will:

- Use order of operations to evaluate phrases and perform the four basic operations with rational numbers
- Solve, graph, write and model with linear equations and inequalities
- Solve systems of linear equations
- Use proportions and systems of equations to solve word and numeric problems
- Explore and Apply Properties of Exponents and Exponential Growth and Decay.
- Perform the four basic operations and factor polynomials and solve quadratic equations.
- Explore operations of radical expressions and simplification. Use these properties to solve with Pythagorean theorem.

Geometry

Course Description:

This course is designed for college-bound students who intend to enroll in Algebra II. It uses both planar and spatial objects to develop deep understanding of geometric relationships and logic. Students are given frequent opportunities to use definitions, postulates and theorems to formulate proofs of relationships studied in class.

The student will:

- Use coordinate geometry to find midpoints and lengths of segments, slopes of lines, and perform transformations of geometric objects
- Use analog (compass & straightedge) and digital (GeoGebra) tools to perform basic construction techniques
- Recognize and apply postulates, theorems, definitions and algebraic techniques to find segment lengths and angle measurements in geometric shapes, including similar/congruent triangles and quadrilaterals
- Find measures of angles, arcs and segments involving circles

- Find areas, circumferences and perimeters of various planar figures and volume and surface area of solids
- Organize theorems, postulates and definitions into logical sequential proofs of geometric relationships

Algebra II

Course Description:

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, regression equations, basic relations and functions, polynomials, and exponential functions. Students in Algebra II are able to describe the world around them by utilizing estimation, technology, and graphing techniques. 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 equations and inequalities
- Graph and evaluate linear and absolute value equations and functions
- Use and analyze regression equations and models.
- Use systems of linear equations and inequalities to solve problems
- Solve and graph quadratic functions and inequalities
- Evaluate, graph, and solve polynomial equations and functions
- 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

Pre-Calculus

Course Description:

This course is a culmination in the process of acquiring the fundamental skills of algebra, geometry and trigonometry and is designed to meet the needs of the college-bound student. General areas of study include functions, graphs, and their applications. Most of the time is spent on the polynomial, exponential, logarithmic, and trigonometric functions. Equations and graphs of the conic sections are also included. Some time is spent studying vectors, matrices, and limits.

The student will:

- Graph linear, polynomial, radical, trigonometric, logarithmic, and exponential functions
- Study the nature of graphs and various transformations
- Solve systems of equations and inequalities by utilizing algebraic algorithms, matrices, and graphing
- Study trigonometric identities before applying them to solve trigonometric equations
- Transfer the concepts of the rectangular coordinate system to the polar coordinate plane
- Graph and recognize conic sections by their equations
- Explore limits

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: forces, momentum, laws of motion, electromagnetic waves, gravity, energy, and electrical forces. The area of earth science covers: life cycle of stars, Kepler's laws, and properties of water. 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

9th Grade Elective Classes: *The following elective courses meet every day all year.*

9th Grade Music- Students taking both band and chorus will be in band every other day and chorus on opposite days. Students in only band or chorus will be in those courses daily.

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. Any combination of music classes will take one period total in a student's schedule.

Vocal Music 9th Choir

Enrollment is open to all Waukee 9th grade students. The class will focus on choral singing techniques, music literacy, rehearsal and performance skills as well as voice building. Students will sing, study, and perform a wide variety of literature and present 3 or 4 concert programs a year. Students enrolled in curricular 9th grade choir are eligible and encouraged to participate in other musical opportunities outside of the school day. Show and jazz choirs opportunities will be available to 9th graders through the audition process. These ensembles rehearse weekly outside of the school day.

9th Grade Elective Classes: *The following elective courses meet every day all year.*

World Languages

Please note that there is ***NO world 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

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

Physical Education (State requirement)

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

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
- 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

Waukee students are required to take Speech I prior to high school graduation, and may take it at any time in their 9th-12th grade years. 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 course includes an emphasis on writing in addition to speaking. 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

Child Development: Pre-School

Child Development II centers around various topics related to children ages 3-10 years old. Topics include: developmental theories, developmentally appropriate practice, center based care, observational methods, and exceptional children. This is a great class for those interested in child care careers. Successful completion of both Child Development courses (grade C or better) fulfills the articulation agreement for college credit at DMACC.

The student will:

- Relate physical, emotional, social, and intellectual characteristics to the appropriate age.
- Summarize the importance of child safety
- Describe the importance of keeping children safe and how this can be achieved
- Examine careers related to children of all ages

Computer Applications

This is a hands-on course differentiated for pace, 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 use Microsoft Office capacities to create documents, spreadsheets and presentations used in a personal and business setting. The student will:

- Create word processing, database and spreadsheet documents using the advanced features of Microsoft Office
- 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

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

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

All information in the course guide is subject to change due to a variety of internal and external factors that may occur after the printing of this registration guide. Changes in personnel, federal and state requirements, and budgetary constraints are all factors that can force changes.