

MISSOURI VALLEY  
HIGH SCHOOL

605 East Lincoln Highway  
Missouri Valley, IA 51555  
Phone: (712) 642-4149  
Fax: (712) 642-4624  
Website: [www.movalleyschools.org](http://www.movalleyschools.org)

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COURSE GUIDE &  
REGISTRATION MANUAL

High School Principal: Kristie Kruckman, [kkruckman@movalleycsd.org](mailto:kkruckman@movalleycsd.org)

High School Counselor: Jamie Justesen, [jjustesen@movalleycsd.org](mailto:jjustesen@movalleycsd.org)

# 2011-2012 COURSE GUIDE & REGISTRATION MANUAL

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## GRADUATION REQUIREMENTS

Each student must earn a total of 44 credits of which at least 34 credits must be classified as academic. The academic curriculum is defined as courses other than those in physical education, vocal music, instrumental music, driver's education, and work release. The student must also successfully complete designated course requirements in the following subject areas:

**Language Arts:**            *4 years (8 semesters)*

**Science:**                    *3 years (6 semesters)*

\*One year of physical science and one year of biological science is required.

**Social Studies:**            *3 years (6 semesters)*

\*One year of World History, one year of American History, one semester of American Government, and one semester of Behavioral Sciences is required.

**Math:**                         *3 years (6 semesters)*

**Business:**                 *1 semester of Business Issues*

**Physical Education:**     *1 semester each year the student is enrolled*

Students earning high school credit while in middle school will still be required to meet the designated course requirements above. For example, a student who was awarded high school credit for a math course taken in middle school will still be required to take three additional years in high school. All required courses must be successfully completed. When a student fails a course, the best procedure to follow is to visit with the counselor in order to make any necessary schedule changes. Any failed required course must be retaken at the first possible opportunity. If a course is successfully completed, it may not be retaken for credit.

## COURSE LOAD REQUIREMENTS

Freshmen, sophomores, and juniors are expected to be enrolled in **seven** credits per semester. The only exception would be for students who are attending courses in another district. Seniors must be enrolled in a minimum of **four** credits per semester.

## **CLASSIFICATION OF STUDENTS**

Students at Missouri Valley High School shall be classified at the beginning of each school year as follows:

- Freshmen: 0-11 credits
- Sophomores: 12-23 credits
- Juniors: 24-31 credits
- Seniors: 32 or more credits

## **TRANSFER STUDENTS**

Course requirements for incoming transfer students may be adjusted at the discretion of the principal.

## **SCHEDULE CHANGE POLICY**

If a student wishes to change his or her course schedule, it must be done within **four** school days after the start of the semester. Students can only change their schedule on or after their schedule change day. Seniors may change their schedules on the 1<sup>st</sup> day of the semester, juniors on the 2<sup>nd</sup>, sophomores on the 3<sup>rd</sup>, and freshmen on the 4<sup>th</sup>. Schedule changes will be allowed when the request is the result of failure or an unrealistic choice, provided that teachers involved have approved them and there is an opening in the selected class. Changes as a result of a whim, low grades, etc., will not be allowed. This also includes simply rearranging classes for a preferred order. It is therefore necessary that students consult with parents, teachers, and the counselor to make sure that their course selections are realistic and align with their goals.

No schedule changes can be made after the student's designated schedule change day. If a student wishes to drop a course after this time, he or she must submit a formal written request to the high school principal stating their reason for dropping the course. This request must also be signed by the student's parent/guardian prior to submission. If the request is approved by the administration, the student will be dropped from the course and receive an "F" on their permanent high school transcript. The student will also be required to enroll in an online course for credit recovery. If the request is not approved, then the student must remain in the course for the rest of the semester.

## **TEACHER AIDES**

In order for a student to be a teacher aide, the classroom teacher must approve him or her in writing with permission from the high school principal. Teacher aides are to be seniors who are on track to graduate. A student can only be scheduled as an aide if they have an open period in their schedule. Students will not receive credit for being a teacher aide.

## **INDEPENDENT STUDY**

At times, due to conflicts in scheduling, a student may not have the opportunity to participate in a class of his or her choosing. In those circumstances, a student may participate in an independent study class. In order for a student to be eligible for an independent study, the student must be a junior or senior; be on track to graduate; have written permission from the teacher; and have approval from the principal. In addition, an independent study course cannot be one that is required in order for the student to graduate. All requests for an independent study class by a student must be submitted and approved before the first day of the semester.

## **WORK RELEASE**

Seniors who meet the eligibility requirements may complete a work release application. When a work release contract has been approved by the high school principal and a time slot arranged, seniors may reduce their course work to include no less than three classes. Work release receives one credit per semester.

## **EARLY RELEASE**

Seniors who meet all of the following criteria may be eligible for early release during their senior year:

- Parent approval indicated on an agreement contract
- Senior is passing all of their classes and on track to complete graduation requirements
- Senior is enrolled in four 1 credit classes (required to be considered a full time student)
- Senior signs out in the office and leaves the school campus
- No credit will be awarded for early release

If a senior is in violation of any of the criteria listed above, they will be required to spend their afternoons in an academic study hall.

## **POST-SECONDARY PLANNING**

It is important to give considerable attention to the selection of high school courses. Although students have met MVHS requirements, please be aware that requirements of some 4-year universities may be different. Listed below are Missouri Valley High School's requirements and those of the three state universities.

<u>Subject</u>	<u>MVHS</u>	<u>Four Year Iowa Public Universities</u>
English	4 years	4 years
Math	3 years	3-4 years (Algebra I & II, Geometry)
Science	3 years	3 years (Biology, Chemistry, Physics)
Social Studies	3 years	2-3 years
Foreign Language	Not required	0-2 years

## **EXTENDED LEARNING PROGRAM**

The Extended Learning Program (ELP) is designed for students possessing outstanding abilities and are capable of high performance. ELP students require appropriate instruction and educational service consistent with their abilities and needs beyond those provided by the regular school program. ELP students include those with demonstrated achievement or potential ability, or both, in any of the following areas or in combination: general intellectual ability, creative thinking, leadership ability, visual and performing arts ability, and/or specific ability aptitude.

All students at MVHS are eligible to qualify for ELP status based upon the following identification process: parent and self/peer nomination, ITED scores in math, reading, and science in the 95<sup>th</sup> percentile or higher, teacher recommendation, and current grades. Students are encouraged to meet with the school counselor if they are currently a ELP student or would like to see if they qualify in order to discuss the opportunities available in the program.

## **SENIOR YEAR PLUS PROGRAM**

Missouri Valley High School offers students the opportunity to earn college credit in high school as part of the Senior Year Plus Program. The program includes Postsecondary Enrollment Options, Concurrent Enrollment, College Early Start, and Advanced Placement (AP).

In order to qualify to participate in any of these programs, the student must demonstrate proficiency in math, reading and science. A student will automatically be eligible for the Senior Year Plus program if he or she is proficient in the Reading Comprehension, Math Concepts & Problem Solving, and Science portions of the Iowa Tests of Educational Development (ITEDS). Proficiency is a national percentile rank score of 41 or higher.

If a student is not proficient in reading, math, and/or science on the ITED exam, then they must demonstrate proficiency in that content area by a combination of any two of the three criterion listed below.

1. The student received a grade of "C" or better in one of the following high school related courses: English 10 (Reading), Algebra I (Math), Biology (Science). These courses correlate to the Iowa Tests of Educational Development performance level descriptors.
2. The student is proficient on the English, Math, or Science portions of the ACT exam as measured by the college readiness benchmark scores established by ACT: Math – 18, Reading- 21, and Science-24
3. The student is proficient on the COMPASS exam. Proficiency is a score above the developmental level as determined by the partner community college: Iowa Western Community College (Reading-71, Math- 53 in Algebra). The student would need to prove proficiency in Science by meeting another criterion as the COMPASS does not offer a Science exam.

### ***College Early Start/Concurrent Enrollment***

College Early Start and Concurrent Enrollment courses are offered in partnership with Iowa Western Community College (IWCC) and provide students the opportunity to earn college credit while they are still in high school. College Early Start courses refer to those that meet on IWCC's Council Bluffs campus. Concurrent Enrollment courses refer to those that meet on a high school campus (i.e. MVHS, Logan-Magnolia High School, and/or West Harrison High School).

High school students may not enroll full time in college credit through any one postsecondary institution. Full time enrollment is defined as 24 credit hours in an academic year. Therefore, the district covers the cost of tuition, fees, and books for up to 23 credit hours per year for any combination of college credit courses taken through IWCC. If the student wishes to earn additional college credit at IWCC, they can enroll and pay for the courses independently. Each student must register with IWCC through the counseling office and pay a one-time \$25 application fee to the college.

Credit for these courses will be granted at both the high school and community college. Therefore, courses taken through this program will appear on both the student's MVHS transcript and the student's IWCC transcript. Students should contact the college or university they plan to attend after high school for information on transferability. Any request to transfer college credit must be made through the IWCC Registration Office.

Concurrent Enrollment courses are available to all eligible high school students. The courses offered through this program **will** count in the student's high school GPA. If a student wishes to change their concurrent enrollment schedule, they must follow the MVHS schedule change policy outlined in this manual.

College Early Start courses are available to eligible seniors. The student is responsible for providing his or her own transportation to the IWCC campus and must be enrolled in at least one course at MVHS per semester. Courses taken through this program **will** count towards the student's cumulative high school GPA. These courses will also be considered in determining a student's athletic eligibility. Students will be awarded one high school credit for each course.

If a student wants to change their College Early Start schedule, they must notify the counselor by the 5<sup>th</sup> day after college classes begin. If a student is dropping a course, they may need to add another course at MVHS or IWCC in order to maintain 4 credits each semester. Students who request to drop a course after the 5th day of class will receive an "F" for the course on their MVHS transcript. The student will receive a "W" on their IWCC transcript. If a late drop causes the student to fall below 4 credits for the semester, then the student will no longer be eligible to

participate in athletics, earn an academic letter, or be recognized as an honors student at graduation.

### ***Advanced Placement (AP) Program***

The AP Program provides college-level course options to eligible MVHS students. The courses, curriculum requirements, and optional tests are provided by *The College Board*. Optional exams are offered at the end of each course and based on the examination score and the postsecondary institution's policies, students may be eligible for college credit or advanced standing at the college or university to which they attend. MVHS students are eligible to enroll in AP courses through the Iowa Online AP Academy if they are a 9-12 grade ELP student or a junior or senior with a 3.5 cumulative GPA or higher. Students are encouraged to meet with the school counselor if they are interested in enrolling in an AP course. Please see the course descriptions section of the manual for more information regarding the AP courses that are available.

### ***Postsecondary Enrollment Options (PSEO)***

This program allows 11<sup>th</sup> and 12<sup>th</sup> grade students as well as 9<sup>th</sup> and 10<sup>th</sup> grade ELP students to enroll in college courses. Through the program, individual students may enroll in a college or university course if the course is not offered at their school. Successful completion of the course also generates high school credit and applies toward district subject area requirements.

If the student successfully completes the course, the school district pays the eligible postsecondary institution for the cost of tuition and books (\$250). If a student fails to complete the course, the student and/or his parent/guardian may be required to pay the district's costs. Any courses taken through IWCC as part of this program will count toward a student's full time status.

### **HIGH SCHOOL SHARING PROGRAM WITH WEST HARRISON & LOGAN-MAGNOLIA**

Students have the opportunity to travel to either West Harrison High School or Logan-Magnolia High School in order to take courses that are not offered locally. West Harrison offers courses in agriculture, computer science, Project Lead the Way (engineering), and industrial technology. Logan-Magnolia offers a college level math course. The school counselor will work with students interested in participating in this program in order to create a schedule that will allow the student to attend courses at both Missouri Valley and West Harrison or Logan-Magnolia. Every attempt will be made to accommodate the student's course choices. However, some course options may not be able to work in the student's schedule. For more information on the specific course options available through this program, please consult the course descriptions section of this manual.

## **OFFICIAL HIGH SCHOOL TRANSCRIPTS**

A request for official high school transcripts can be made in the counseling office. Transcripts are considered official only if they are sent directly from the counseling office and include the counselor's signature and school seal. A transcript may be issued directly to the student, but they will be marked unofficial.

## **RESOURCES**

Students are encouraged to visit the MVHS Counseling Center Website at <https://sites.google.com/a/movalleycsd.org/counseling/> for more information on course planning and registration, college planning, scholarships, testing, job opportunities, etc. The counseling office also has print materials available for student use.

## COURSE DESCRIPTIONS

### ART

#### **DRAWING (1 CREDIT)**

GRADE 9-12 ELECTIVE

Drawing is a one-semester course focusing on realism in various drawing media. Students will explore pencil, ink, charcoal, pastel, oil pastel, and scratch board. WIC Art Show participation is expected. Drawing may be used as a prerequisite to both the Painting and Mural classes. Advanced study is possible (Advanced Portfolio) with successful completion and teacher approval.

#### **2D DESIGN (1 CREDIT)**

GRADE 9-12 ELECTIVE

2D Design is a one-semester course focusing on 2D art processes including: block printing, collage, digital photography, mixed media, mosaic, and painting. WIC Art Show participation is expected. 2D Design may be used as a prerequisite to both the Painting and Mural classes. Advanced study is possible (Advanced Portfolio) with successful completion and teacher approval.

#### **PAINTING (1 CREDIT)**

GRADE 10-12 ELECTIVE

*Prerequisite: Drawing or 2D Design*

This semester course focuses on painting in three media: watercolor, tempera, and acrylic. Students will work with many subjects from portraiture to still life to abstraction. Emphasis will be placed on students developing a personal style of painting. WIC Art Show participation is expected. Painting may be used as a prerequisite to the Mural class. Advanced study is possible (Advanced Portfolio) with successful completion and teacher approval.

#### **CRAFTS (1 CREDIT)**

GRADE 9-12 ELECTIVE

This one-semester class focuses on artwork made from traditional craft materials. Many of the projects students make will be functional in addition to artistic. Projects will include beaded jewelry, weaving, clay, batik, and mask making. WIC Art show participation is expected. Crafts may be used as a prerequisite to Ceramics. Advanced study is possible (Advanced Portfolio) with successful completion and teacher approval.

#### **SCULPTURE (1 CREDIT)**

GRADE 9-12 ELECTIVE

This one-semester course will emphasize creating three-dimensional works from several media. Units will include clay, wire, life-sized sculpture, mobiles, and carving. WIC Art Show participation is expected. Sculpture may be used as a prerequisite to Ceramics. Advanced study is possible (Advanced Portfolio) with successful completion and teacher approval.

**CERAMICS (1 CREDIT)**

GRADE 9-12 ELECTIVE

*Prerequisite: Crafts or Sculpture*

This semester course will focus on creating three-dimensional work using clay. Attention is paid to the various forming methods and stages through which the clay progresses from the raw product to the finished glazed piece. WIC Art Show participation is expected. Advanced study is possible (Advanced Portfolio) with successful completion and teacher approval.

**HONORS VISUAL ARTS I & II (2 CREDITS)**

GRADE 11-12 ELECTIVE

*Prerequisite: Instructor permission is required*

This is an independent study course designed for experienced art students. Students may expand their expertise in a particular form or style, explore a topic in greater detail, or develop more advanced skills.

**BUSINESS EDUCATION****FRESHMEN SEMINAR (2 CREDITS)**

GRADE 9 REQUIRED

This yearlong course will offer objectives that include improvement of research and investigatory skills, presentation skills, interpersonal skills, group process skills, and problem solving/critical thinking skills. Other topics covered are careers and employment, post-secondary educational opportunities, life-coping skills, public speaking, computer skills, and note- and test-taking strategies.

**COMPUTER APPLICATIONS I & II (2 CREDITS)**

GRADE 10-12 ELECTIVE

This semester long course will focus on learning basic features of the Microsoft Office 2010 suite including Word, Excel, PowerPoint and Publisher.

**BUSINESS LAW (1 CREDIT)**

GRADE 10-12 ELECTIVE

This course deals with a basic understanding of the laws that affect everyday business practices. Some personal law is also covered in this course. The course is for the student who may be interested in pursuing a management, accounting, or law career.

**MARKETING (1 CREDIT)**

GRADE 10-12 ELECTIVE

This course will expose students to the fundamental concepts of marketing. Students will use hands-on activities to assess the common marketing functions of industry and market research, customer research, product and service design, pricing, creating awareness, distribution, and presentation.

**INTRO TO BUSINESS (1 CREDIT)**

GRADE 9-12 ELECTIVE

This course is for students wanting to obtain an understanding of the characteristics, the organization, and the operations of business. It is intended for those students who are planning on or who are exploring the possibility of a career in business. This is a project/lecture-oriented class.

**ACCOUNTING I (2 CREDITS)**

GRADE 10-12 ELECTIVE

The general aim of the Accounting course is for the students to develop the basic skills needed to keep an orderly, accurate, and useful set of business records using double entry accounting. The student will gain an understanding of business records and of the precise steps taken from the initial recording of business transactions as they occur from day to day - to the completion and interpretation of the financial records of the business at the end of the fiscal period. A practice set is used to give students an opportunity to apply the accounting process to actual business situations. Students who are considering a career in business should take this course. Possible IWCC articulation credit is available.

**ENTREPRENEURSHIP I & II (2 CREDITS)**

GRADE 11-12 ELECTIVE

*Prerequisite: Students must complete an application & receive permission from the instructor*

This course will include enhanced marketing information as it relates to entrepreneurial activities. Subject matter will include introductory entrepreneurial concepts, business plan development, management responsibilities, and legal and ethical issues of business ownership. Students will take responsibility in running the school store and conducting day-to-day operations required of a store.

**BUSINESS ISSUES (1 CREDIT)**

GRADE 11 REQUIRED

This course covers topics such as career exploration, job searching, and effective employee qualities. The remainder of the semester concentrates on finance units dealing with economics, budgeting, banking, credit, insurance, taxes, and living on your own.

**COMPUTER SCIENCE****BASIC COMPUTER PROGRAMMING (2 CREDITS)**

GRADE 10-12 ELECTIVE

*Prerequisite: Algebra I*

This class is designed to develop the fundamentals of computer programming. Classes involve writing and editing computer programs in Q-BASIC language, along with reading and completing written homework assignments. Mathematics concepts are used in the programs, so a math background is necessary.

**WEB PROGRAMMING (2 CREDITS)**

GRADE 10-12 ELECTIVE

*Prerequisites: Geometry completed or currently enrolled*

IWCC COLLEGE CREDIT

This course is designed to take 10-12th grade students, who have successfully passed Algebra and are currently taking Geometry or Algebra with a "C" or better average, beyond computer literacy to a deeper, broader understanding of the applications of computer technology in our society.

Internet Applications provides the student with introductory and advanced Internet concepts. The student uses available Web Browsers and File Transfer Protocols in order to transfer files. Students learn common Internet programming languages.

**PC SUPPORT (2 CREDITS)**

GRADE 11-12 ELECTIVE

*Prerequisite: Web Programming*

IWCC DUAL CREDIT

Personal Computer Support I explores the current hardware and software similarities and differences between the personal computer and mainframe computer system. This course examines troubleshooting techniques and applies these methods to everyday needs of the district. Students will also learn to salvage, up-grade, and build computers.

**FAMILY & CONSUMER SCIENCES****BASIC FOODS & NUTRITION (1 CREDIT)**

GRADE 9-12 ELECTIVE

This course will cover healthy eating habits, My Pyramid, kitchen utensils and tools, using recipes, safety and sanitation procedure, and simple meal planning. Food preparation labs will include dairy foods, eggs, fruits and vegetables, cereals, pasta, cookies, cakes, and quick breads.

**GLOBAL FOODS (1 CREDIT)**

GRADE 10-12 ELECTIVE

*Prerequisite: Basic Foods*

This course will cover the study and preparation of foods native to countries throughout the world. It will also cover how history, climate, geography, economy, and culture have influenced the food customs of these countries. The continents we will study about are North, South, and Latin America, Europe, Asia, and Africa. The study of these cultures will reflect the differences and similarities of a global society.

**ADVANCED FOODS (1 CREDIT)**

GRADE 9-12 ELECTIVE

*Prerequisite: Basic Foods*

This course covers the principles of meat cookery, pastry and yeast bread preparation, soups and sauces, and management of food resources. The students will use the food preparation skills they are further developing to prepare a meal for a guest within a set food budget. During the soup unit they will participate in the annual "Advanced Foods Chili Cook-Off" contest.

**CULINARY ARTS I & II (2 CREDITS)**

GRADE 11-12 ELECTIVE

*Prerequisite: Basic Foods and Advanced Foods*

As a class, we will be forming a "mock" restaurant during our class time with the intention of serving a four or five course meal at least once a month. Class members will learn about different careers in the food service industry by actually planning and serving meals, doing the work of different work stations found in a "fine dining" restaurant setting, and learn how to develop a business plan for the restaurant. Students will also have an opportunity to develop their leadership skills in the worksite by being responsible in various workstations of the "mock" restaurant.

**CHILD DEVELOPMENT (1 CREDIT)**

GRADE 9-12 ELECTIVE

This course covers intellectual, physical, social and emotional development of a child from conception through adolescence. It discusses readiness for parenting, parenting techniques, guidance of children and various childcare options. Part of the class time will be spent exploring careers in childcare. Students will have the options of experiencing the "Empathy Belly", care and handling of the "Real-Care" babies, and opportunities to work with children in day-care or school settings.

**FOREIGN LANGUAGE****SPANISH I (2 CREDITS)**

GRADE 9-12 ELECTIVE

*Prerequisite: Strongly recommended to have at least a "C+" average in English*

Students will learn the basics of communication in the Spanish language. The focus of the class will be on developing the skills of speaking, listening, reading, and writing in Spanish for use in real world situations. This course also includes study of culture in the Spanish speaking world.

**SPANISH II (2 CREDITS)**

GRADE 10-12 ELECTIVE

*Prerequisite: Spanish I*

Students will further their ability to communicate in Spanish. Again, the focus of the class is on developing the skills of speaking, listening, reading, and writing in Spanish for use in real world situations. There will be an emphasis on class and small group discussion. This course also includes study of culture in the Spanish speaking world.

**SPANISH III (2 CREDITS)**

GRADE 11-12 ELECTIVE

*Prerequisite: Spanish II*

Spanish III is designed for students with a sincere interest in learning Spanish. Students will be able to communicate on an advanced level in Spanish through developing the skills of speaking, listening, reading, and writing in real world situations. There is a greater emphasis on reading than in previous levels. Again, students will also be exposed to the culture of the Spanish speaking world.

**SPANISH IV (2 CREDITS)**

GRADE 12 ELECTIVE

*Prerequisite: Spanish III*

Spanish IV is designed for students with a sincere interest in learning Spanish. This course will prepare students for the study of Spanish in college. Students will continue to develop high level skills in speaking, listening, reading, and writing. Students will be exposed to the works of well-known authors in the Spanish speaking world.

**MATHEMATICS**

High school elective credit will be given for Algebra I and Geometry completed in middle school, but the grades received will not count in the high school GPA. All students are required to take 3 years of math in high school regardless of what was completed in middle school.

**BUSINESS MATH (2 CREDITS)**

GRADE 11(WITH TEACHER APPROVAL) - 12 ELECTIVE

This class reinforces general math skills, emphasizes accuracy in computations, and applies these skills in a variety of business and everyday applications. Business Math reinforces rational numbers, measurement, and basic statistics. In addition, these skills will be applied to real-life situations: buying a house and car, renting an apartment, contracts, banking, discounts, interest, travel and other real-life situations.

**ALGEBRA I (2 CREDITS)**

GRADE 9-12 ELECTIVE

Algebra I will provide each student with a background of fundamental algebraic operations as a means of solving everyday problems. A balance between theory and practice is used. Students will become familiar with polynomials, equations, inequalities, functions, and relations. A student must receive a passing grade the first semester in Algebra in order to continue into the second semester.

**GEOMETRY (2 CREDITS)**

GRADE 9-12 ELECTIVE

*Prerequisite: Algebra I*

Geometry is the study of properties, concepts, and relationships of both plane and solid geometric figures. Skill is developed in the use of the tools of geometry as the student learns to devise geometric constructions. Course work includes the principles of algebra as applied to geometric variables. A student must receive a passing grade the first semester in Geometry in order to continue into the second semester.

**ALGEBRA II (2 CREDITS)**

GRADE 9-12 ELECTIVE

*Prerequisite: Algebra I and Geometry*

Algebra II is a continuation of Algebra I with emphasis on more advanced topics and includes some work with analytic geometry and trigonometry. The course is designed for all students planning to attend college and for others interested in advanced work in mathematics. A student must receive a passing grade the first semester in Algebra II in order to continue into the second semester.

**FUNCTIONS, STATISTICS, & TRIGONOMETRY (2 CREDITS)**

GRADE 11-12 ELECTIVE

*Prerequisite: Algebra II*

FST is a course for college bound students. The following topics will be covered: functions, systems of equations, graphs, logarithms, statistics, combinatorics, and trigonometry. Students should have their own Texas Instruments Graphing calculator, Model TI-82 or newer.

**PRE-CALCULUS (2 CREDITS)**

GRADE 11-12 ELECTIVE

*Prerequisite: Functions, Statistics, & Trigonometry*

Pre-Calculus is a course for college bound students that explores the interpretation of graphs and tables through the use of calculus as well as analytic methods. Derivatives and definite integrals are interpreted through the use of application and mathematical means. Convergence and divergence of series are interpreted graphically. The use of technology is integrated throughout the book to provide a balanced approach to the learning of calculus that involves algebraic, numerical, graphical, verbal, and written methods.

**LANGUAGE ARTS****ENGLISH 9 (2 CREDITS)**

GRADE 9 REQUIRED

English 9 is based on the Common Core Standards for Literacy in Language Arts. Students build a strong foundation for written expression with a focus on the basic elements of solid essay writing. Students also read a wide variety of genres of literature including study of a contemporary novel. Subject matter for all studies is selected with a focus on broadening the student's connection to and understanding of the world around them.

**ENGLISH 10 (2 CREDITS)**

GRADE 10 REQUIRED

English 10 includes studies in both literature and composition. In literature, the student will study short stories, prose forms, Shakespearean drama, modern drama, the novel, and poetry. In writing, the students will study sentence construction and paragraph writing. The students also touch on the basic characteristics of style development. A continued study of grammar, usage, mechanics, vocabulary, and spelling will also be emphasized. Extensive use of the computer for word processing is mandated for writing assignments.

**AMERICAN LITERATURE I AND II (2 CREDITS)**

GRADE 11 REQUIRED

This course surveys American literature from the writings of Native Americans and our founding fathers to the diversity of contemporary authors. The course contains classical, traditional, and modern selections, complemented with aids that develop the necessary skills for understanding and appreciating literature. Discussion questions, author biographies, vocabulary study, and unit reviews permit students an opportunity to expand their knowledge of American writers. Emphasis

is placed on those American writers who have had a profound effect on literary history. Units in grammar, usage, and composition are also included in this course.

**LANGUAGE LAB (1-2 CREDITS)**

ITED NON-PROFICIENT READING STUDENTS

This class is designed to increase reading proficiency through intensive study. The focus will be on vocabulary, reading comprehension, read aloud/ think aloud and modeled reading strategies. Students will be required to read twelve books a semester. They will be required to read twenty minutes outside of class five times a week. This class is design to increase reading comprehension. Jamestown and Stanford placement tests will be given.

**SPEECH (1 CREDIT)**

GRADE 9 (WITH TEACHER APPROVAL) -12 ELECTIVE

*Prerequisite: Recommended "C" average in English*

The primary objective of this introductory course is to provide the student with many different opportunities to communicate with fellow students while improving basic public speaking skills. Public speaking involves research, outlines, speech development, delivery, and analysis. Individual speeches designed to inform, to entertain, and to demonstrate will be given using both the extemporaneous and the impromptu formats.

**FILM APPRECIATION (1 CREDIT)**

GRADE 11-12 ELECTIVE

The purpose of this course is to gain an appreciation for films beyond what can be achieved through casual viewing; an understanding of film history and production; and a realization of the power of film on our cultural values. Students will view a wide variety of films, across genres, including classics and more contemporary offerings. Students will be required to write critical analyses of films viewed in class, participate in class discussions, and complete one research project.

**ADVANCED WRITING (1 CREDIT)**

GRADE 11-12 ELECTIVE

*Prerequisite: Recommended "B" average in English or strong English skills with teacher approval*

Advanced writing is a comprehensive, composition-based course that includes study in the following: expository, creative, cause and effect, and persuasive writing. Students begin with paragraph writing and advance to longer forms of writing. Grammar, usage, and mechanics are emphasized along with vocabulary. During the term paper session, students write various short papers before beginning the researched report (following Modern MLA style).

**JOURNALISM (2 CREDITS)**

GRADES 11-12 ELECTIVE

*Prerequisite: Recommended "B" average in English or strong English skills with teacher approval*

Journalism is a course designed to fill the publications needs in the high school. The material covered enables a student to work on the newspaper and the yearbook. Students are given sufficient instruction in gathering and writing news articles for the paper as well as instruction in layout and design for the yearbook. Students wishing to take this course for a second year may do so but will not receive English credit for it.

**WORLD LITERATURE (1 CREDIT)**

GRADE 12 ELECTIVE

*Prerequisite: American Literature I and II*

This upper level course is designed for college-bound seniors and will emphasize comprehension, discernment, and critical thinking skills in the reading of texts and literature. More advanced literary techniques are introduced and explored with the aim of creating sophisticated readers. Students will produce numerous projects, write an expository paper, and be responsible for preparing themselves for quizzes and testing.

**CREATIVE WRITING (2 CREDITS)**

GRADES 9-12 ELECTIVE

*Prerequisite: ITBS/ITED in the 95<sup>th</sup> percentile or higher & cumulative GPA of 3.5 or higher*

Creative Writing is a class designed for Talented and Gifted students who are interested in attending college and would like ways to prepare for that experience. Participation and success in this class depends largely on students' motivation to succeed, time management skills, and often work ethic outside of class time. Creative Writing projects include "green" product invention; original movie scripting, filming, editing, and presenting; short story writing; internet blogging; and so on.

**PHYSICAL EDUCATION**

Students are required to take at least one semester of PE each year. They may choose from Aerobics, Team Activities, or Weights. Health does not meet the PE requirement. Students are required to wear tennis shoes and provide their own gym clothes.

**AEROBIC ACTIVITIES (1 CREDIT)**

GRADE 9-12 ELECTIVE

This course is designed to develop the student's fitness level and to increase the student's knowledge of selected fitness concepts through the use of walking, jogging, and selected video workouts.

**WEIGHT TRAINING (1 CREDIT)**

GRADE 9-12 ELECTIVE

Weight Training will develop a student's skills with free weights and universal stations. Basic principles concerning anatomy and muscle groups will be covered.

**TEAM ACTIVITIES (1 CREDIT)**

GRADE 9-12 ELECTIVE

This course is designed to provide students with the skills and knowledge to participate in a variety of team activities, develop a feeling of belonging to a group, and demonstrate teamwork to achieve a desired outcome. Students will demonstrate the concepts of team play and develop fitness awareness through team activities.

**HEALTH (1 CREDIT)**

GRADE 9-12 ELECTIVE

This cover will cover various aspects of your health including mental health (personality, managing stress, understanding mental disorders), social health (developing relationships, marriage and parenthood), physical wellbeing (personal care, food and nutrition, health diets, fitness, body systems, lifestyle), and health and society (consumer health, choosing health care, and public health).

**SCIENCE****PHYSICAL SCIENCE (2 CREDITS)**

GRADE 9-10 ELECTIVE

This course is a freshman level study of science concepts, scientific principles, the properties of matter and energy and the devices that illustrate technical applications. Topics emphasized include atoms and molecules, motion, heat, light, sound, mechanical energy, and basic chemistry. Demonstrations and some laboratory work are integrated into this course.

**BIOLOGY (2 CREDITS)**

GRADE 9 (WITH TEACHER APPROVAL) -10

This course is established so that students should obtain a mastery of certain fundamental biological concepts. From these initial understandings, the student should then progress from cell, to protists, to plants and animals, and to man.

**BIOLOGY TOPICS I & II (2 CREDITS)**

GRADE 10-12 ELECTIVE

*Prerequisite: Biology (recommended "C+" or higher)*

This course will be a two semester course that will concern the student with the current topics in biology, touching on microbiology, forensics, and biotechnology.

**ENVIRONMENTAL SCIENCE I & II (2 CREDITS)**

GRADE 10-12 ELECTIVE

*Prerequisite: Biology (recommended "C" or higher)*

Environmental Studies is a one-semester class focusing on the value of our environment. The different types of pollution causes and results are covered along with solutions to environmental problems.

**ANATOMY & PHYSIOLOGY (2 CREDITS)**

GRADE 10-12 ELECTIVE

*Prerequisite: Biology (recommended "C" or higher)*

This course is designed to familiarize students with the structure of the human body and to prepare those who are interested for further specialized work in the field. There will be an intensive vocabulary load that must be mastered in order to understand the physiological concepts clearly and concisely. Experiments will follow the chapter sequence. Units covered are: introduction to anatomy, disease processes, and systems and functions of the body

**PHYSICS (2 CREDITS)**

GRADE 10-12 ELECTIVE

This course is intended for the student with an interest in scientific thought and thought processes. It is in essence the story of men's search for the mysteries of the atom through the reasoning and development of the natural regarding tangibles such as mechanics, time, space, light, sound, and electricity. Lab work and independent research are an integral part of the course.

**CHEMISTRY (2 CREDITS)**

GRADE 10-12 ELECTIVE

*Prerequisite: Algebra*

This is a fundamental investigation of the nature of matter and simple relationships that exist between types of matter. Equations, atomic structure, industrial preparations, and solutions are studied factually and mathematically. The study of laboratory techniques and manipulations is aided by the presence of modern, fully equipped facilities.

**SOCIAL SCIENCES****WORLD HISTORY (2 CREDITS)**

GRADE 9 REQUIRED

This year-long class will cover the human history of our world from Australopithecus to the Greeks to the Mongols to today. Focus will be given to how people and cultures have grown, changed, and adapted over the years. The roles of conflict, politics, economics, and environment will be considered as well. Studies will also cover world nations today and how they differ from one another, cooperate, and problem-solve individual crises.

**AMERICAN HISTORY (2 CREDITS)**

GRADE 10 REQUIRED

This course includes a survey of persons and events contributing to the building of our country. Man and his activities are studied to better understand how and why our conditions and institutions are developing in the present manner.

**AMERICAN GOVERNMENT (1 CREDIT)**

GRADE 11 REQUIRED

American Government is directed toward giving the student a foundation in the nature of our government. Since government is unstable, subject to change with each new generation, it is hoped that the student will grasp an understanding of how our laws are made and how they may be changed.

**BEHAVIORAL SCIENCES (1 CREDIT)**

GRADE 11 REQUIRED

This course is a general survey in the Behavioral Sciences. The program of study will include topics in Psychology, Sociology, Economics, Anthropology, and other Social Sciences. Particular focus will be paid to human behavior, group dynamics, and the human psyche.

**CURRENT EVENTS (1 CREDIT)**

GRADE 11-12 ELECTIVE

This course will focus on current events in U.S. history, their anticipated long term impact on society, and their roots in history as to why it is happening how.

**GLOBAL ISSUES (1 CREDIT)**

GRADE 11-12 ELECTIVE

This course will focus on current events in world history, their anticipated long term impact on society, and their roots in history as to why it is happening how.

**GEOGRAPHY OF TOURSIM (1 CREDIT)**

GRADE 11-12 ELECTIVE

Students will build trips and virtual vacations to different regions of the world which would give the “traveler” an accurate representation of the physical and cultural geography, historical events, climate, and environment.

**ETHNIC STUDIES (1 CREDIT)**

GRADE 11-12 ELECTIVE

This course will focus on the various minority groups in American society, their history, their culture, and current/past issues of adaptation and the merging of cultures.

**INDUSTRIAL TECHNOLOGY****BEGINNING WOODS (1 CREDIT)**

GRADE 9-12 ELECTIVE

This course will be devoted to the development of good plans to follow when making a project, calculating board feet, and writing a bill of materials. Students will learn the importance of developing cooperation, communication, and responsibility with others when working in groups. The students will demonstrate their ability to safely use the hand and power tools in the shop by drawing the plans and the construction of several required projects. Pine wood will be provided at no cost, but a student may choose to purchase an alternative hardwood if he or she desires.

**COMPUTER AIDED DRAFTING (CAD) (1 CREDIT)**

GRADE 9-12 ELECTIVE

In today’s workplace students must have an understanding and a sense of application for technology that includes reading for interpretation and applying science and math concepts. A technology laboratory challenges students to discover the underlying principles of technology. Students in these classes will work in teams in company style format involving a continuous improvement style of management.

**MECHANICAL DRAFTING (1 CREDIT)**

GRADE 10-12 ELECTIVE

Students will learn the basics of drafting and the proper use and care of drafting equipment. The students will work with geometric description, orthographic projections, and dimensioning of drawings. Computer aided drafting (CAD) will be utilized as well. Students will supply their own pencils and erasers and other equipment will be provided. A lab fee will be assessed.

**ARCHITECTURAL DRAFTING (1 CREDIT)**

GRADE 10-12 ELECTIVE

Students will become familiar with the terms associated with the building of a house and the history of design. After drawing details of house parts in order to become familiar with conventional construction techniques, students will prepare floor plans of a single story house with a basement. Students will dimension the floor plan, draw elevational views as well as prepare the electrical schemes. Computer aided drafting (CAD) will be utilized as well. Drafting equipment will be provided, but students will supply their own pencils and erasers. A lab fee will be assessed.

**ADVANCED WOODS (1 CREDIT)**

GRADE 10-12 ELECTIVE

*Prerequisite: Beginning Woods*

Advanced Woods is designed to hone and develop woodworking skills that were introduced in beginning woods. A knowledge of drafting is needed since students will be designing and drawings their own projects. Students will take their projects from concept to completed product. They will calculate materials and costs. Students will be required to purchase their own materials.

**PRINCIPLES OF BUILDING CONSTRUCTION I & II (6 CREDITS)**

GRADE 11-12 ELECTIVE

*Prerequisite: Beginning and Advanced Woods*

IWCC COLLEGE CREDIT

This course is designed to develop a basic understanding of construction. Students will be introduced to basic skills and knowledge needed in construction. Students will build a small structure as well as work with concrete, roofing, siding, and a variety of other materials and tasks. Students will be required to draw and plan a project from start to finish. This class is open to any student who has taken Advanced Woods and it is preferred that the student has taken Architectural Drafting.

## HEALTH SCIENCE ACADEMY

The Health Science Academy program will provide students with transferable skills and technical experience to meet the needs of the rapidly expanding health care industry. Students are actively involved in Health Occupations Students of America (HOSA) and will represent themselves and the school through competition of knowledge acquired in the classroom at the state and national levels. In order to be considered for this program, students will need to complete an application.

**HEALTH SCIENCE I (1 CREDIT)**

GRADE 11-12 ELECTIVE

*Prerequisite: Instructor approval*

Student will have a basic introduction to the history of health care, health care systems, professionalism, and legal and ethical responsibilities of the health care worker. The communication process will be introduced as well as an understanding of patients' needs and behaviors.

**FIRST AID/CPR (1 CREDIT)**

GRADE 11-12 ELECTIVE

*Prerequisite: Health Science I*

IWCC COLLEGE CREDIT

First Aid/CPR prepares the students with lifesaving, hands-on instruction in many emergency situations. Emphasis centers on real life responses and what to do in the first five minutes of an emergency.

**MEDICAL TERMINOLOGY (1 CREDIT)**

GRADE 12 ELECTIVE

IWCC COLLEGE CREDIT

*Prerequisite: Health Science I, First Aid/CPR, and permission from the instructor. Students are also encouraged to take Anatomy & Physiology.*

Medical Terminology is the language of health care and provides transferable skills for the student regardless of the health career they pursue. This course gives the student a working knowledge of the roots, prefixes and suffixes or commonly used medical terms related to anatomy, physiology, pathology, diagnostics, and treatments. Emphasis is placed on the correct spelling and pronunciation of the vocabulary. This course is designed to provide the student with an opportunity to shadow in health careers, increased leadership opportunities, public health teaching, and health maintenance practices.

**SURVEY OF ANATOMY (1 CREDIT)**

GRADE 12 ELECTIVE

*Prerequisite: Medical Terminology*

IWCC COLLEGE CREDIT

Survey of Anatomy/Allied Health is a beginning-level study of the structure, organization, and functions of the major organ systems of the human body.

**HEALTH SCIENCE II (2 CREDITS)**

GRADE 12 ELECTIVE

*Prerequisite: Health Science I, First Aid/CPR, and permission from the instructor. Students are also encouraged to take Anatomy & Physiology.*

This course provides students with work experience in the health care industry. Goals are set cooperatively by the student, teacher, and employer. This course will also include classroom activities involving further study of the field and discussions of student experiences in the workplace.

**VOCAL MUSIC****MIXED CHORUS (1 CREDIT)**

GRADE 9-12 ELECTIVE

Any student wishing to be involved in vocal music is accepted into Mixed Chorus. From this group, a Women's Chorus and Men's Chorus will be formed and will rehearse during the same class period. This structure enables the chorus to learn their material quickly, allowing the groups to perform challenging music.

## INSTRUMENTAL MUSIC

### **CONCERT BAND (1 CREDIT)**

GRADE 9-12 ELECTIVE

Concert Band includes the following ensembles, Pep Band and small ensembles. The band rehearsals and individual lessons (available if the student desires extra instruction) help students continue in their development of sight-reading skills, tone quality, intonation, phrasing, interpretation, and performance technique. Students enrolled are required to participate in the scheduled performances (which are a major portion of their grade).

Pep/Marching Band performs at home games. These are required performances unless the student has a special circumstance that prevents his/her participation. It is the student's responsibility to discuss this with the director. The music played at these functions is contemporary.

## SUMMER DRIVER EDUCATION

### **DRIVER EDUCATION (0.5 CREDIT)**

GRADE 9-12 ELECTIVE

Missouri Valley High School will offer a driver's education program in the summer. To be eligible, a student must pay the fee established by the Missouri Valley School Board, be at least 14 years of age before the first class meeting, and possess a valid Iowa Learner's Permit. The course follows the Iowa Department of Transportation code consisting of 30 hours of class instruction and 6 hours of behind-the-wheel driving instruction.

## AGRICULTURE (WEST HARRISON)

### **INTRODUCTION TO AGRICULTURE EDUCATION (1 CREDIT)**

GRADE 9-12 ELECTIVE

This course includes an introduction of the FFA, leadership skills, animal science and animal welfare. Agribusiness is stressed at all times. The animal science curriculum will include pets, horses, swine, sheep, beef, poultry, and dairy. Units presented in Introduction to Agriculture will allow the students to obtain knowledge and skills related to the livestock and pet industry that will serve as a foundation for occupational entrance or further education.

### **AGRICULTURAL SCIENCE AND PRODUCTION I (1 CREDIT)**

GRADE 9-12 ELECTIVE

This course revolves around crop production and horticulture. Floriculture and houseplants are units that make up the largest part of the horticulture curriculum. Fruits and vegetables are also discussed. Leadership skills are enhanced with a unit of parliamentary procedures and leadership development. Units in Agriculture Science and Production will allow the student to obtain knowledge and skills related to agronomy and horticulture will serve as a foundation for occupational entrance or further education. A wildlife conservation unit explores some of Iowa's natural resources.

**ADVANCED AGRICULTURAL SCIENCE AND PRODUCTION II (1 CREDIT) GRADE 9-12 ELECTIVE**

This course involves a variety of units ranging from soil chemistry and fertility to livestock nutrition and landscaping. Agribusiness is discussed during this year

**HORTICULTURE (1 CREDIT) GRADE 9-12 ELECTIVE**

This class offers students the chance to develop skills in the horticulture science area. The course includes lawn care and turf management, identification of nursery and floriculture plant material, propagation practices with perennials, floral design, planting and transplanting., pruning techniques, landscape design, planting of trees and shrubs, record keeping, and sales and marketing.

**INTRO TO VETERINARY (1 CREDIT) GRADE 9-12 ELECTIVE**

This class offers students an introductory look as to what a career as a veterinarian would entail. Students are introduced to information about the causes, diagnosis, and treatment of diseases and injuries of animals, including both domestic and farm animals.

**WILDLIFE MANAGEMENT (1 CREDIT) GRADE 9-12 ELECTIVE**

This course provides students with the opportunity to understand and appreciate the importance of maintaining the land and ecological systems that enable non-domesticated animals to thrive. This course emphasizes how humans and animals may both take advantage of the same land and how economic benefits can be gained from land without degrading its natural resources or depleting plant and animal populations.

**AG AND SOCIETY (1 CREDIT) GRADE 9-12 ELECTIVE**

This class offers students an overview of understanding the importance of, the impact on, and relationships between agricultural endeavors and society at large. Topics emphasized include the economic and environmental factors, current technological advances, and the impacts and the influences of society on agricultural production, processing, and distribution.

**SMALL ANIMALS (1 CREDIT) GRADE 9-12 ELECTIVE**

Throughout the semester, students will gain an understanding for the small animal production and companion animal industry. Areas of greatest importance will include breed identifications, nutrition, health, reproduction, selection, and handling of all companion animals.

**PLANT SYSTEMS I (1 CREDIT) GRADE 9-12 ELECTIVE**

This course provides students with an introduction to the propagation of plants for food and fiber. Topics such as soil sciences, irrigation, pest and weed control, food and fiber processing, and farm operations are covered.

**PLANT SYSTEMS II (1 CREDIT)**

GRADE 9-12 ELECTIVE

*Prerequisite: Plant Systems I*

This course provides students with an advanced understanding to the propagation of plants for food and fiber. Topics such as soil sciences, irrigation, pest and weed control, food and fiber processing, and farm operations are covered.

**PRINCIPLES OF AGRONOMY (1 CREDIT)**GRADE 11-12 ELECTIVE  
IWCC COLLEGE CREDIT

Principles of Agronomy introduces students to the principles of plant-soil-climate relationships in crop production.

**SURVEY OF THE ANIMAL INDUSTRY (1 CREDIT)**GRADE 11-12 ELECTIVE  
IWCC COLLEGE CREDIT

Survey of the Animal Industry deals with issues impacting the American and international animal industry, such as breeds, basic management and marketing of farm animals. Specific topics involve beef and dairy cattle, companion animals, horses, poultry, sheep, swine, and their products. This course is the introductory course for all agriculture offerings in the Agriculture Department. It is recommended for all students to take this introductory class before all other Agriculture classes. Students will develop leadership skill to increase marketability in any career area. Students enrolled in this course will learn about the diverse field of agriculture and all of the benefits the Agriculture program can offer.

**PROJECT LEAD THE WAY (WEST HARRISON)****INTRODUCTION TO ENGINEERING DESIGN (2 CREDITS)**

GRADE 11-12 ELECTIVE

This course teaches problem-solving skills using a design development process. Models of product solutions are created, analyzed, and communicated using solid modeling computer design software. It starts off as a basic drafting course with the addition of solving problems by actually creating different projects.

**PRINCIPLES OF ENGINEERING (2 CREDITS)**

GRADE 11-12 ELECTIVE

This course helps students understand the field of engineering/engineering technology. Exploring various technology systems and manufacturing processes help students learn how engineers and technicians use math, science and technology in an engineering problem solving process to benefit people. The course also includes concerns about social and political consequences of technological change.

**DIGITAL ELECTRONICS (2 CREDITS)**

GRADE 11-12 ELECTIVE

*Prerequisite: Introduction to Engineering Design & Principles of Engineering*

This is a course in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices.

**CIVIL ENGINEERING & ARCHITECTURE (2 credits)**

GRADE 11-12 ELECTIVE

*Prerequisite: Introduction to Engineering Design & Principles of Engineering*

The major focus of the Civil Engineering and Architecture course is a long-term project that involves the development of a local property site. As students learn about various aspects of civil engineering and architecture, they apply what they learn to the design and development of this property. The course provides freedom to the teacher and students to develop the property as a simulation or to students to model the real-world experiences that civil engineers and architects experience when developing property.

**COMPUTER SCIENCE (WEST HARRISON)****CCNA DISCOVERY I (1 credit)**

GRADE 11-12 ELECTIVE

*Prerequisite: PC Support I*

IWCC COLLEGE CREDIT

This course teaches students the skills needed to obtain entry-level home network installation jobs. Students will develop some of the skills needed to become network technicians, computer technicians, cable installers, and help desk technicians. This course will provide hands-on introduction to networking and the Internet, using tools and hardware commonly found in home and small business environments. Laboratories include PC installation, Internet connectivity, wireless connectivity, file and print sharing and the installation of game consoles, scanners, and cameras.

**CCNA DISCOVERY II (1 credit)**

GRADE 11-12 ELECTIVE

*Prerequisite: CCNA Discovery I*

IWCC COLLEGE CREDIT

Students will develop additional skills required for computer technicians and help desk technicians. This course provides a basic overview of routing and remote access, addressing, and security. It also familiarizes students with servers that provide e-mail services, web space, and authenticated access. Students also learn about soft skills required for help desk and customer service positions. Network monitoring and basic troubleshooting skills are taught in context. After successfully completing CCNA Discovery 1 and CCNA Discovery 2, students are qualified to sit for the Cisco Certification Exam – Cisco Certified Entry Network Technician (CCENT).

## INDUSTRIAL TECHNOLOGY (WEST HARRISON)

### **COMPUTER AIDED DRAFTING I (CAD) (1 credit)**

GRADE 11-12 ELECTIVE  
IWCC COLLEGE CREDIT

Students will study the basic parts of a PC. They will develop skills using CAD as a drafting device. The following areas will be covered: Demonstrate basic CAD operations. Demonstrate proper care and maintenance of CAD equipment and software. Demonstrate proficiency in creating two-dimensional CAD drawings.

## MATH (LOGAN)

### **COLLEGE ALGEBRA (1 CREDIT)**

GRADE 11-12 ELECTIVE  
IWCC COLLEGE CREDIT

College Algebra provides an intensified study of the topics in algebra and prepares students for higher levels of mathematics. Topics include functions, exponents, logarithms, systems of equations, matrices, polynomials, and conic sections.

## ADVANCED PLACEMENT (AP) ONLINE COURSES

### **CALCULUS AB (2 CREDITS)**

GRADE 9-12 TAG or GRADE 11-12 with a 3.5 GPA

*Prerequisite: Algebra I, Geometry, Algebra II, & FST*

In AP Calculus AB, students learn to understand change geometrically and visually (by studying graphs of curves), analytically (by studying and working with mathematical formulas), numerically (by seeing patterns in sets of numbers), and verbally. Instead of simply getting the right answer, students learn to evaluate the soundness of proposed solutions and to apply mathematical reasoning to real-world models. Calculus helps scientists, engineers, and financial analysts understand the complex relationships behind real-world phenomena. The equivalent of an introductory college-level calculus course, AP Calculus AB prepares students for the AP Exam and further studies in science, engineering, and mathematics.

### **CHEMISTRY (2 CREDITS)**

GRADE 9-12 TAG or GRADE 11-12 with a 3.5 GPA

*Prerequisite: High School Chemistry & Algebra II*

AP Chemistry builds students' understanding of the nature and reactivity of matter. After studying the structure of atoms, molecules, and ions, students move on to solve quantitative chemical problems and explore how molecular structure relates to chemical and physical properties. Students will examine the molecular composition of common substances and learn to predictably transform them through chemical reactions. The equivalent of an introductory college-level chemistry course, AP Chemistry prepares students for the AP Exam and for further study in science, health sciences, or engineering.

**ENGLISH LANGUAGE AND COMPOSITION (2 CREDITS)** GRADE 9-12 TAG or GRADE 11-12 with a 3.5 GPA

*Prerequisite: At least a B- in most recent English course*

In AP English Language and Composition, students learn to understand and analyze complex styles of writing by reading works from a variety of authors. They'll explore the richness of language, including syntax, imitation, word choice, and tone. They'll also learn about their own composition style and process, starting with exploration, planning, and writing, and continuing through editing, peer review, rewriting, polishing, and applying what they learn to a breadth of academic, personal, and professional contexts. The equivalent of an introductory college-level survey class, this course prepares students for the AP Exam and for further study in communications, creative writing, journalism, literature, and composition.

**ENGLISH LITERATURE AND COMPOSITION (2 CREDITS)** GRADE 9-12 TAG or GRADE 11-12 with a 3.5 GPA

*Prerequisite: At least a B- in most recent English course*

AP English Literature and Composition immerses students in novels, plays, poems, and short stories from various periods. Students will read and write daily, using a variety of multimedia and interactive activities, interpretive writing assignments, and class discussions to assess and improve their skills and knowledge. The course places special emphasis on reading comprehension, structural and critical analysis of written works, literary vocabulary, and recognizing and understanding literary devices. The equivalent of an introductory college-level survey class, this course prepares students for the AP Exam and for further study in creative writing, communications, journalism, literature, and composition.

**PHYSICS B (2 CREDITS)** GRADE 9-12 TAG or GRADE 11-12 with a 3.5 GPA

*Prerequisite: Algebra II, Pre-Calculus with Trigonometry*

AP Physics B is a non-calculus survey course covering five general areas: Newtonian mechanics, thermal physics, electricity and magnetism, waves and optics, and atomic and nuclear physics. Students will gain an understanding of physics' core principles and then apply them to problem-solving exercises. They'll learn how to measure the mass of a planet without weighing it, find out how electricity makes a motor turn, and learn how opticians know how to shape the lenses for glasses. The equivalent of an introductory college-level course, AP Physics B prepares students for the AP Exam and for further study in science and engineering.

**STATISTICS (2 CREDITS)** GRADE 9-12 TAG or GRADE 11-12 with a 3.5 GPA

*Prerequisite: Algebra II or Math Analysis*

AP Statistics gives students hands-on experience collecting, analyzing, graphing, and interpreting real-world data. They will learn to effectively design and analyze research studies by reviewing and evaluating real research examples taken from daily life. The next time they hear the results from another poll or study, they will know whether the results are valid. As the art of drawing conclusions from imperfect data and the science of real world uncertainties, statistics plays an important role in many fields. The equivalent of an introductory college-level course, AP Statistics

prepares students for the AP Exam and for further study in science, sociology, medicine, engineering, political science, geography, and business.

**U.S. HISTORY (2 CREDITS)**

GRADE 9-12 TAG or GRADE 11-12 with a 3.5 GPA

*Prerequisite: At least a B- in most recent social studies course*

AP U.S. History analyzes and explores the economic, political, and social changes in America since Columbus. Students master historical knowledge and critical analysis, build reading, writing, and communication skills, and discover how historical events have contributed to American culture. In the process, they'll learn how decisions and events of the past continue to have profound effects on the world today and how knowledge of the causes behind past events can influence future decisions. By the end of the course, students will be ready to put their factual knowledge to work by weighing evidence and interpreting problems presented by historians. The equivalent of an introductory college-level course, AP U.S. History prepares students for the AP Exam and for further study in history, political science, economics, sociology, and law.

## IOWA WESTERN COLLEGE EARLY START COURSES

The following list represents courses that have been taken by MVHS students in the past. The list is not comprehensive but serves as a sample of the coursework that is available through this program. If you are interested in a different course than what is listed here, please consult with the school counselor. More detailed course descriptions can be found in the IWCC course catalog. The number next to each course represents credit hours.

Composition I (3)  
Composition II (3)  
Public Speaking (3)  
College Algebra (4)  
Statistics (4)  
Finite Math (3)  
Trigonometry (3)  
Calculus I (5)  
Calculus II (5)  
General Biology I (4)  
General Biology II (4)  
General Chemistry I (5)  
General Chemistry II (5)  
General Physics I (4)  
General Physics II (4)  
Human Anatomy & Physiology I w/ Labs (4)  
Human Anatomy & Physiology II w/ Labs (4)  
Principles of Astronomy (3)  
Introduction to Psychology (3)  
Introduction to Sociology (3)  
Developmental Psychology (3)  
Personality & Adjustment (3)  
Introduction to Criminal Justice (3)  
Western Civilization Ancient to Early Modern (3)  
Western Civilization Early Modern to Present (3)  
US History to 1877 (3)  
US History Since 1877 (3)  
US History 1945 to Present (3)  
Introduction to Philosophy (3)  
Introduction to Ethics (3)  
American National Government (3)  
Elementary Spanish I (4)  
Elementary Spanish II (4)  
Intermediate Spanish I (4)  
Intermediate Spanish II (4)