



# **Medicine Lake High School**

## **2019-2020 Course Catalog**

Superintendent-Dr. J Lail

Guidance Counselor-Mindy Lail

311 Young Street  
P.O. Box 265  
Medicine Lake, MT 59247  
406-789-2211



**Dr. J Lail, Ed.D.**  
**Superintendent**  
Medicine Lake School District  
311 Young St.  
Medicine Lake, MT 59247

---

Redhawk Students,

The Medicine Lake School District works diligently to provide valuable learning experiences for our students and empower learners to select which experiences will be most beneficial to them based on their goals and future plans.

The courses in this guide are not the limit of our curriculum. We are always endeavoring to enhance our offerings by any means based on student needs and goals. Some courses in this catalog may only be offered every other year, others may not be offered if a minimal number of students do not enroll in the course. The core curriculum does not change, but other offerings can and will be based on availability, staffing and external resources available to us. Our driving force is student interest and we will do our very best to ensure curricula that are engaging, rigorous and valuable to students.

The evolution of technology, multi-media interfaces and partnerships with community partners and local colleges has made it possible for us to fulfill this commitment to our students through classroom instruction, digital learning experiences, work-study programs and dual enrollment opportunities.

If you do not see courses here that may be interesting or of value to you, please ask your guidance counselor if it is possible to find such a class in an online or distance-learning format. We are committed to empowering our learners to plan their futures and provide offerings that will help make it a reality.

Learn on!

Dr. J Lail, Ed.D.  
Superintendent  
Medicine Lake School District #7

## Contents

|   |    |
|---|----|
| Registration & Drop/Add.....  | 4  |
| Academic RequirementsRegistration & Drop/Add .....                  | 4  |
| Academic Requirements.....  | 5  |
| Graduation RequirementsAcademic Requirements.....                   | 5  |
| Graduation Requirements .....                                       | 7  |
| Work Study/Cooperative LearningGraduation Requirements.....         | 7  |
| Work Study/Cooperative Learning.....                                | 8  |
| Sample Schedule by Grade LevelWork Study/Cooperative Learning ..... | 8  |
| Sample Schedule by Grade Level .....                                | 9  |
| Class Offerings-Quick ViewSample Schedule by Grade Level .....      | 9  |
| Class Offerings-Quick View.....                                     | 11 |
| Class Offerings-Quick View.....                                     | 11 |
| MEDICINE LAKE HIGH SCHOOL COURSE CATALOG .....                      | 12 |
| English .....   | 13 |
| Math .....  | 15 |
| Science.....  | 16 |
| Social Studies .....  | 20 |
| Health & PE .....   | 21 |
| Agriculture.....  | 22 |
| Business & Finance .....  | 25 |
| Computer Education .....  | 26 |
| Media .....   | 27 |
| Performing Arts.....  | 28 |
| MONTANA DIGITAL ACADEMY COURSE CATALOG.....                         | 29 |
| MTDA-ADVANCED PLACEMENT (AP) COURSES .....                          | 29 |
| MTDA-DUAL CREDIT (High School/College Credit Courses) .....         | 29 |

# Registration & Drop/Add

## **Registration**

Registration for classes will be done in the spring for the following school year. All efforts will be made to have students' scheduled before leaving for summer break.

There may be instances when changes will have to be made over the summer due to changes in course offerings or shifts in staffing. These changes will be handled as swiftly as possible and families will be notified of any changes as soon as possible.

All changes in students' schedules will be made to suit the needs of the individual.

## **Dropping/Adding Classes**

*Students will have a week after the term begins to drop or add classes to their schedule.*

*Students can pick drop/add forms up from the counselor or office.*

*All forms must be signed by the teachers involved in the change and the counselor before being approved by the Superintendent.*

# Academic Requirements

## Title I Program

To the extent possible within the resources available, students shall have the opportunity to participate in the Title I Program. The goal of Title I is to enable participating students to improve academic achievement on state content and performance standards by providing services via certified teachers and paraprofessionals.\* The Medicine Lake School District strongly encourages parental involvement in all aspects of education and the Title I program (See Board Policy on 2160).

*\*Professional qualifications of teachers are on record and parents may request the information.*

## Proficiency

**Proficiency** is demonstrating mastery of a standard as measured by an assessment.

### Proficiency Assessments

Smarter Balance Test-**SBAC**

- Measures Math and Reading
- 3<sup>rd</sup>-8<sup>th</sup> grade

Cognitive Reflection Test-**CRT**

- Measures Science
- 4<sup>th</sup>, 8<sup>th</sup>, 10<sup>th</sup> grades

Pre-Scholastic Aptitude Test-**PSAT**

- 10<sup>th</sup> grade

Armed Services Vocational Aptitude Battery-**ASVAB**

- 10<sup>th</sup> grade

American College Test-**ACT**

11<sup>th</sup> grade

## **Promotion and Retention**

*All assessment data collected on each student (e.g. formative, summative, classroom, standardized), coupled with classroom performance indicators (i.e. grades) will enable the staff and administration of Medicine Lake Schools to determine the best possible course of academic action for individual students.*

*If students show they **have made satisfactory academic progress** and/or mastery of grade level content, they will be **promoted**.*

*If the data shows students **have not mastered** concepts needed to proceed to the next grade level, they will be **retained**.*

Should a student be recommended for retention, the following steps will have been taken to ensure all possible interventions have been explored:

- Tier 1 Intervention strategies
  - Regular classroom instruction
  - Conferences with student
  - Conference with parent/guardian (documented communication)
  - Teacher seeks assistance from other teachers, counselors and administrators to find differentiated strategies
- Tier II Intervention strategies
  - Continued contact with parent/guardian
  - Small group instruction
  - Placement in S.O.A.R. intervention class for content area assistance
- Tier III intervention strategies
  - Continued contact with parent/guardian
  - Possible individual instruction
  - Consideration (with parental input) of alternative placement
  - Possible recommendation for special services

The recommendation for retention will be made to the administration no later than the end of the third quarter of the school year. Before determining if retention is in the best interests of the student, all data will be analyzed and the parent/guardian will be notified of the decision to retain.

Parents have the right to appeal this decision to the Superintendent of Schools. If still not in agreement, the parent or legal guardian may ask in writing that the matter be placed on the agenda of the Board for consideration by the Board no later than their next regularly scheduled meeting. A decision shall be made and reported in writing to all parties within thirty (30) days of that meeting. The decision of the Board will be final. The written appeal and decision will be placed in the student's file.

# Graduation Requirements

## Credit Requirements

*Students will be expected to earn a total of twenty four (24) units in order to complete graduation requirements. This is over and above the State of Montana requirements.*

*One unit of credit is defined as the equivalent of 225 minutes per week.*

*Online and college courses can be included in this total with administrative approval.*

| Course  | Minimum Number of Credits |
|---|---------------------------|
| English/Communications  | Four (4)                  |
| Mathematics   | Three (3)                 |
| Social Sciences   | Three (3)                 |
| <ul style="list-style-type: none"><li>• US History-required</li><li>• Government-required</li></ul> |                           |
| Science   | Three (3)                 |
| Health & PE   | Two (2)                   |
| Fine Arts   | One (1)                   |
| Practical Arts  | One (1)                   |
| Electives   | Seven (7)                 |

*\* No student will be permitted to participate in graduation ceremonies or celebrations unless the minimum requirements for graduation are satisfied, unless otherwise granted permission by the Superintendent or Board of Trustees.*

## Graduation Honors

### ***Valedictorian -***

Student with the highest GPA in the graduating class.

#### ***Criteria:***

1. Must have attended Medicine Lake Schools for at least four (4) semesters
2. Must have taken at least six (6) advanced/college-level classes
3. Must make honor roll during senior year

### ***Salutatorian -***

Student with the second highest GPA in the graduating class.

#### ***Criteria:***

1. Must have attended Medicine Lake Schools for at least four (4) semesters
2. Must have taken at least six (6) advanced/college-level classes
3. Must make honor roll during senior year.

# Work Study/Cooperative Learning

## **Medicine Lake High School Work Study/Cooperative Learning Program Introduction**

The Work Study/Internship Program provides qualifying **Junior and Senior students** an opportunity to meet their academic requirements for graduation while gaining valuable work or internship experience. Through this experience, students will build the knowledge, skills and self - confidence to be successful in higher education, in the workplace and in life. Students participating in this program will attend their academic classes daily and be granted a late arrival/early dismissal to participate in work study/cooperative learning opportunities during school hours.



# Sample Schedule by Grade Level

## 9<sup>th</sup> Grade

| Fall  | Spring                                 | Credits |
|---|--|---------|
| English I- English & Composition-A              | English I-English & Composition-B      | 1       |
| Algebra I-A                                     | Algebra I-B                            | 1       |
| Physical Science-A                              | Physical Science-B                     | 1       |
| Google Applied Digital Skills (can be switched) | Computer Applications-Microsoft Office | 1       |
| Health/PE                                       | Health/PE                              | 1       |
| Elective  | Elective                               |         |
| Elective  | Elective                               |         |
| S.O.A.R.  | S.O.A.R.                               |         |

*\*Electives may be one semester (0.5 credit) or full year course (1 credit)*

## 10<sup>th</sup> Grade

| Fall  | Spring                                      | Credits |
|---|---|---------|
| English II-World Literature & Composition-A | English II-World Literature & Composition-B | 1       |
| Geometry-A                                  | Geometry-B                                  | 1       |
| Biology-A                                   | Biology-B                                   | 1       |
| World History-A                             | World History-B                             | 1       |
| Health/PE                                   | Health/PE                                   | 1       |
| Elective                                    | Elective                                    |         |
| Elective                                    | Elective                                    |         |
| S.O.A.R.                                    | S.O.A.R.                                    |         |

*\*Electives may be one semester (0.5 credit) or full year course (1 credit)*

## 11<sup>th</sup> Grade

| Fall  | Spring  | Credits |
|---|---|---------|
| English III-American Literature & Composition-A | English III-American Literature & Composition-B | 1       |
| Algebra II-A                                    | Algebra II-B                                    | 1       |
| Chemistry or Anatomy-A                          | Chemistry or Anatomy-B                          | 1       |
| US History-A                                    | US History-B                                    | 1       |
| Elective/AP/Dual Enrollment/Work Study          | Elective/AP/Dual Enrollment/Work Study          |         |
| Elective/AP/Dual Enrollment/Work Study          | Elective/AP/Dual Enrollment/Work Study          |         |
| Elective/AP/Dual Enrollment/Work Study          | Elective/AP/Dual Enrollment/Work Study          |         |
| Elective/AP/Dual Enrollment/Work Study          | Elective/AP/Dual Enrollment/Work Study          |         |

*\*Electives may be one semester (0.5 credit) or full year course (1 credit)*

## 12<sup>th</sup> Grade

| Fall  | Spring  | Credits |
|---|---|---------|
| English IV-British Literature & Composition-A | English IV-British Literature & Composition-B | 1       |
| Government-A                                  | Government-B                                  | 1       |
| Chemistry or Anatomy-A                        | Chemistry or Anatomy-B                        | 1       |
| US History-A                                  | US History-B                                  | 1       |
| Elective/AP/Dual Enrollment/Work Study        | Elective/AP/Dual Enrollment/Work Study        |         |
| Elective/AP/Dual Enrollment/Work Study        | Elective/AP/Dual Enrollment/Work Study        |         |
| Elective/AP/Dual Enrollment/Work Study        | Elective/AP/Dual Enrollment/Work Study        |         |
| Elective/AP/Dual Enrollment/Work Study        | Elective/AP/Dual Enrollment/Work Study        |         |

*\*Electives may be one semester (0.5 credit) or full year course (1 credit)*

## Class Offerings-Quick View

Please see the Course Catalog section for complete descriptions, grade level, prerequisites and course length.

### Class Offerings\*

| English     | Math                             | Science  | Social Studies          | Health/PE                 |
|-------------|----------------------------------|--|-------------------------|---------------------------|
| English I   | Algebra I                        | Physical Science                               | World History/Geography | Health/PE                 |
| English II  | Geometry                         | Biology  | US History              | Lifetime Sports           |
| English III | Algebra II                       | Chemistry (advanced offering)                  | Government              | Weight Training & Fitness |
| English IV  | Pre-Calculus (advanced offering) | Physics (advanced offering)                    |                         |                           |
|             |                                  | Human Anatomy & Physiology (advanced offering) |                         |                           |

| Agriculture             | Business & Finance | Computer Education                     | Media        | Performing Arts           | Visual Arts   |
|-------------------------|--------------------|--|--------------|---------------------------|---------------|
| Agriculture I           | Accounting         | Computer Applications-Microsoft Office | Media Design | Medicine Lake School Band | Art 1         |
| Agriculture 2           | Marketing          | Google Applied Digital Skills          | Yearbook     | Chorus                    | Art 2         |
| Agriculture 3           | Personal Finance   |  |              |                           | Art 3 Honors  |
| Agriculture 4           | Entrepreneurship   |  |              |                           | Arts & Crafts |
| Advanced Animal Science |                    |  |              |                           | Ceramics      |
| Food Science            |                    |  |              |                           | Sculpture     |
| Engines                 |                    |  |              |                           | Mosaics       |
| Fabrication-Woodworking |                    |  |              |                           |               |
| Fabrication-Metals      |                    |  |              |                           |               |

\*All students will be assigned a period of S.O.A.R. This class will either be an elective course, or an intervention class based on student needs. Students will receive .5 credit for this course, per semester, based on Satisfactory/Unsatisfactory (S/U) performance.

# MEDICINE LAKE HIGH SCHOOL COURSE CATALOG

# English

## English I-English & Composition

**Open to:** 9

**Course Length:** Full Year Course

**Prerequisite:** None

This course focuses on a study of literary genres and informational texts. Students develop initial understanding of both the structure and the meaning of a literary work and explore the effect of the literary form in regards to interpretation. Students will also read across the curriculum to develop academic and personal interests in different subjects. In conjunction with reading skills, students will demonstrate competency in a variety of writing genres: argumentative, informational/expository, and narrative. They will also engage in research, timed writings, and the writing process. Instruction in language conventions will occur within the context of reading, writing, and speaking, rather than in isolation. Students will also demonstrate an understanding of speaking and listening for a variety of purposes.

## English II-World Literature & Composition

**Open to:** 10

**Course Length:** Full Year Course

**Prerequisite:** English I

This course builds upon the 9th Grade Literature and Composition course through a continued focus on a study of literary genres and informational texts. Students will develop an understanding that theme is what relates literature to life and that themes are recurring in the literary world, and students will explore the effect of themes in regard to interpretation. Students will also read across the curriculum to develop academic and personal interests in different subjects. While the focus of composition studies is writing argument in tenth grade literature, students will also demonstrate competency in informative/expository and narrative writing genres. They will also engage in research, timed writings, and the writing process. Instruction in language conventions will occur within the context of reading, writing, and speaking, rather than in isolation. Students will also demonstrate an understanding of speaking and listening for a variety of purposes.

## English III-American Literature & Composition

**Open to:** 11

**Course Length:** Full Year Course

**Prerequisite:** English I, II

This course is a survey of American Literature from the Colonial Period to the Modern Era. It builds upon the 10th Grade Literature and Composition course through a focus on the acquisition of higher level reading, writing, speaking, listening, and language skills. This course focuses on the study of American literature and informational texts, writing modes and genres, and essential conventions for reading, writing, and speaking. Students will read a variety of informational and literary texts in all genres and modes of discourse. In addition, students will read across the curriculum to develop their academic and personal interests in different subjects. While expository writing is the focus in American literature, students will also demonstrate competency in argumentative and narrative genres. They will also engage in research, timed writing, and the writing process. Instruction in language conventions will occur within the context of reading, writing, and speaking. Students will also demonstrate an understanding of speaking and listening for a variety of purposes.

## **English IV-English Literature & Composition**

**Open to:** 12

**Course Length:** Full Year Course

**Prerequisite:** English I, II, III

This course is a survey of British Literature from the Anglo-Saxon Period to the present. It builds upon the American Literature and Composition course and focuses on literature and informational texts, writing modes and genres, and essential conventions for reading, writing, and speaking. Students will develop an understanding of chronological context and the relevance of period structures in British literature. They will also develop an understanding of the ways the period of literature affects its structure and how the chronology of a work affects its meaning. Students will encounter a variety of informational and literary texts and read texts in all genres and modes of discourse. They will also read across the curriculum to develop their academic and personal interests in different subjects. While the continued focus is expository writing in British literature, students will also demonstrate competency in argumentative and narrative genres. Students will engage in research, timed writing, and the writing process as well as develop an understanding of the impact that technology has on writing. Instruction in language conventions will occur within the context of reading, writing, and speaking, rather than in isolation. Students will also demonstrate an understanding of speaking and listening skills for a variety of purposes.

# Math

## Algebra I

**Open to:** 9

**Course Length:** Full Year Course

**Prerequisite:** None

Algebra is the first mathematics course in the high school. Algebra provides tools and ways of thinking that are necessary for solving problems in a wide variety of disciplines. This course will assist students in developing skills and processes to be applied using a variety of techniques, including technology, to successfully solve problems in a variety of settings including: linear equations in one variable, quadratic functions with integral coefficients and roots as well as absolute value and exponential functions.

## Geometry

**Open to:** 10

**Course Length:** Full Year Course

**Prerequisite:** Algebra I

Geometry is the second course in mathematics for high school students. Within this course, students will have the opportunity to make conjectures about geometric situations and prove in a variety of ways, both formal and informal, that their conclusion follows logically from their hypothesis. Students will use the traditional tools of compass and straightedge. Geometry is meant to lead students to an understanding that reasoning and proof are fundamental aspects of mathematics and something that sets it apart from the other sciences.

## Algebra II

**Open to:** 11

**Course Length:** Full Year Course

**Prerequisite:** Algebra I, Geometry

Algebra II an upper-level math course and is a continuation and extension of Algebra I and Geometry. While developing the algebraic techniques that will be required of students who continue their study of mathematics, this course is also intended to continue developing alternative solution strategies and algorithms. Technology will provide students the means to address a problem situation to which they might not otherwise have access.

## Pre-Calculus

**Open to:** 12

**Course Length:** Full Year Course

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

This course is designed to provide a sound foundation for seniors who are planning to enter a four-year college after graduation. Students in this class will deepen their algebraic skills as this course will emphasize mathematical thinking, the use of mathematical models and the understanding of mathematical functions and graphs. Beginning concepts of Calculus will be introduced.

# Science

## Physical Science

**Open to:** 9

**Course Length:** Full Year Course

**Prerequisite:** Life Science, Earth Science

The study of physical science involves all of physical non-living parts of the universe. Some of the topics covered include the following: natural laws controlling forces and energy in the universe, thermal energy, electricity, magnetism, waves, sound, light, atoms, chemical compounds, chemical reactions, solutions, acids, bases and salts. This class is taught at the high school level and is a lab-based class. Since many chemicals and forces are used in the experiments, students will need to follow the lab safety procedures in order to participate.

An understanding of the natural laws of physical science are necessary for the following careers and many others: Mechanical repair, electrical repair, heating and cooling systems, all engineering professions, chemical careers, agriculture, communication professions such as radio and satellite services, recycling, resource management, medicine and health careers such as nursing, food sciences, computers and aeronautic careers.

## Biology

**Open to:** 10

**Course Length:** Full Year Course

**Prerequisite:** Physical Science

The Biology class continues the study of the topics covered in Life Science but only in much more detail. The chemistry of living things is emphasized more than in 7th grade life science. Some of the topics covered are cell structure and function, photosynthesis, respiration, cellular reproduction, genetics, DNA, evolution, bacteria, viruses, protists, fungi, classification, plant structure and function, plant reproduction, various animal groups and ecology. This is a lab-based class and experiments will be done throughout the class.

An understanding of biology is necessary for any career involving living things. Some of them are as follows: medicine, physical therapy, dentistry, forestry, agriculture, horticulture and food science.



## **Physical Science**

**Open to:** 9

**Course Length:** Full Year Course

**Prerequisite:** Life Science, Earth Science

The study of physical science involves all of physical non-living parts of the universe. Some of the topics covered include the following: natural laws controlling forces and energy in the universe, thermal energy, electricity, magnetism, waves, sound, light, atoms, chemical compounds, chemical reactions, solutions, acids, bases and salts. This class is taught at the high school level and is a lab-based class. Since many chemicals and forces are used in the experiments, students will need to follow the lab safety procedures in order to participate.

An understanding of the natural laws of physical science are necessary for the following careers and many others: Mechanical repair, electrical repair, heating and cooling systems, all engineering professions, chemical careers, agriculture, communication professions such as radio and satellite services, recycling, resource management, medicine and health careers such as nursing, food sciences, computers and aeronautic careers.

## **Biology**

**Open to:** 10

**Course Length:** Full Year Course

**Prerequisite:** Physical Science

The Biology class continues the study of the topics covered in Life Science but only in much more detail. The chemistry of living things is emphasized more than in 7th grade life science. Some of the topics covered are cell structure and function, photosynthesis, respiration, cellular reproduction, genetics, DNA, evolution, bacteria, viruses, protists, fungi, classification, plant structure and function, plant reproduction, various animal groups and ecology. This is a lab-based class and experiments will be done throughout the class.

An understanding of biology is necessary for any career involving living things. Some of them are as follows: medicine, physical therapy, dentistry, forestry, agriculture, horticulture and food science.

## **Chemistry**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Physical Science, Biology, Algebra 1, Algebra II

Chemistry involves the study of all of the physical parts of the universe that are too small to normally be seen. It also investigates the natural laws that control the forces and motions of such small particles. The laws that control the larger substances that are made up of these small particles such as gases, liquids, and solids are also studied. Some of the topics that are studied are composition of matter, matter and energy interactions, organization of elements, atomic structure, various types of chemical compounds, chemical equations, stoichiometry, energy changes, gas laws, solutions, chemical equilibrium, acids, bases, salts, reactions rates and electrochemistry. Since this is a lab-based class, regular attendance is necessary to get the labs accomplished.

Many careers involve the use of chemical principles. Some of the careers using chemistry are as follows: all engineering fields, chemical careers, all mechanical repair fields, computer science, all medical, physical therapy, nursing and other health careers, medical supply professions, careers involving sales and safety of chemicals, agriculture, recycling, natural resource management, forestry, hydraulic and pneumatic professions, heating and cooling professions, weather forecasting, and construction and hardware supply professions.

## **Physics**

**Open to:** 11, 12

**Course Length:** Biannually (not offered this year)

**Prerequisite:** Physical Science, Biology, Algebra 1, Algebra II, Geometry

Physics is the study of the nonliving parts of our universe. The understanding of the physical laws of the universe are important for any person wanting to be accomplished in any scientific field. Some of the topics studied are as follows: Laws governing linear motion, projectile motion, inertia of objects, laws and forces that govern the acceleration and reaction of objects in the universe, laws governing the momentum of objects, laws involving energy, work, and power, Machines, centripetal and gravitational forces, Special Relativity, waves, sound, light, electric fields, and magnetism.

This class regularly uses algebra and trigonometry math skills in order to understand the natural laws of the universe. Students should be proficient in math in order to do well in this class. This is a lab based class will all of the experiments involving math calculations.

## **Human Anatomy & Physiology**

**Open to:** 11, 12

**Course Length:** Biannually (offered this year)

**Prerequisite:** Physical Science, Biology

Human Anatomy and Physiology is a topic for students wanting to go on to careers in the medical fields such as internal medicine, medical surgery, physical therapy, dentistry and nursing.

This class covers anatomical parts of the human body and the physiological chemical process in the human body. Some of the topics covered are as follows: Integumentary System, Skeletal System, Joints, Muscular System, Nervous System, Endocrine System, Cardiovascular System, Blood, Lymphatic System, Immunity, Digestive System, Nutrition and Metabolism, Respiratory System and Urinary System.

While not a prerequisite, previously passing chemistry class will aid in vocabulary comprehension and chemistry references. Students will need to have good study skills in order to digest the extensive material in this class. Students will have opportunities, when available, to dissect once-living specimens in order to experience the structures of biological systems first-hand.

All health careers require a mastery of this material. Examples of such well-paying careers are as follows: medical doctors, surgeons, physical therapists, nurses, dentists, medical record professions and medical insurance professions.

# Social Studies

## Montana History

**Open to:** 7, 8

**Course Length:** Biannually

## 7-8th US History

**Open to:** 7, 8

**Course Length:** Biannually

## World History/Geography

**Open to:** 10

**Course Length:** Full Year Course

**Prerequisite:**

This course serves as an introduction to the world around us - from the physical earth to the people that inhabit it, as well as the relationship that exists between the two. This course's examination of the world is split into general themes reinforced with specific examples taken from various world regions. Particular emphasis is placed on the physical world, demography, culture, governments and economics, as well as the development of rural and urban networks.

## US History

**Open to:** 11

**Course Length:** Full Year Course

**Prerequisite:** World History/Geography

This course is a conceptual look at changing American culture, politics, environment and economy. The course's intent is to help students better understand the themes of history which shaped and continue to impact our lives. The course also challenges the knowledge gained from the World History course and applies that background to America's perspective of the 20th Century. The concepts explored in this course will continue to prepare and empower students to make choices as responsible participants in society.

## Government

**Open to:** 12

**Course Length:** Full Year Course

**Prerequisite:** World History, US History

This course will provide students with knowledge of Montana and United States Government that will enable them to participate effectively in civic life in America. Students will examine fundamental constitutional principles; the organization of government at the federal, state, and local level; the rights and responsibilities of citizenship; the policy-making process; political parties and elections; comparative government and foreign policy; and the American economic system.

# Health & PE

## Health & PE

**Open to:** 9, 10

**Course Length:** Full Year Course

**Prerequisite:** None

This class is a combination of classroom learning and physical activity participation. Students acquire the knowledge and skills to take responsibility for their health and well-being by learning different methods of exercise, how to perform them correctly, and how to properly plan fitness activities, all while emphasizing the development of a good attitude toward lifetime physical activities.

## Lifetime Sports

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** 9 PE

This course is designed to introduce and provide opportunities for students to develop the basic and intermediate skills in a variety of sports/activities and conditioning. The content articulates the knowledge, skills, and confidence students need to maintain meaningful physical activity throughout their lifetime. Badminton, tennis, pickle ball, aerobic walking, fitness, jogging, juggling, yoga, softball, volleyball, water activities, and golf will be offered during this course.

## Weight Training/Fitness

**Open to:** 10, 11, 12

**Course Length:** Full Year Course

**Prerequisite:** 9 PE

Designed to provide the opportunity to develop high levels of fitness through involvement in weight training, cardio fitness, and a study of nutrition.

# Agriculture

## Intro to Agriculture

**Open to:** 7

**Course Length:** One Semester

**Prerequisite:** None

Ready...Get Set... GO! Let's get a move on! Personal growth, premier leadership and career success is where we're going. This Intro to Ag course will be your start in the wonderful world of agriculture and FFA. From animal science industry to plant science and even get your hands on some woodworking tools and see what you can build!

## Intro to Agriculture

**Open to:** 8

**Course Length:** One Semester

**Prerequisite:** None

Keep Running! This is a continuance of 7th grade Intro to Ag, where we will be diving further into FFA and all opportunities available, natural resource industry, MORE woodworking and finish up as outdoor as possible with range science! See you here!

## Agriculture 1

**Open to:** 9, 10, 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Intro to Ag.

This course provides instruction in the foundations of the various segments of the agricultural industry emphasizing agricultural career opportunities. Animal, plant and soil science will be elaborated along with an introduction to farm business management, public speaking and you will complete a scroll saw woodworking puzzle.

## Agriculture 2

**Open to:** 10, 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Intro to Agriculture, Agriculture 1

This course provides instruction in range plants and management, introduction to small engines, sales and business start-up, shielded metal arc welding, wiring and a natural resources unit which includes a taxidermy project!

### **Agriculture 3**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Intro to Agriculture, Agriculture 1, Agriculture 2

This course will include land surveying, construction and concrete work; animal feeding and genetics; premier leadership development for career readiness and Gas Metal Arc Welding, plasma cutting and a metals project.

### **Agriculture 4**

**Open to:** 12

**Course Length:** Full Year Course

**Prerequisite:** Intro to Agriculture, Agriculture 1, Agriculture 2, Agriculture 3

This course will focus on cropping systems and production management, equipment maintenance and repairs, biotechnology, advanced livestock husbandry and a personal construction project.

### **Advanced Animal Science**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Biology

This course will provide instruction on veterinary medical terminology, positional terms, anatomical terms and the skeletal, muscular, digestive, urinary, reproductive, cardiovascular, and respiratory systems. Dissections will be regular in this class and basic vet procedures such as sutures, applying dewormer, tying halters, giving shots, tubing and drenching cattle.

### **Food Science**

**Open to:** 9, 10, 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Intro to Agriculture

This course will follow the Harvest of the Month focusing on Montana grown foods. This will involve the scientific study of foods, preparing healthy options and growing part of our own food source.

## **Engines**

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** Intro to Agriculture, Agriculture 1, Agriculture 2

This class will cover 2- and 4-stroke engine theory, safety and tools, engine operation and internal combustion engine systems along with troubleshooting. There will be a brief overview of multiple-cylinder engines and more if time allows.

## **Fabrication-Woodworking**

**Open to:** 12

**Course Length:** One Semester

**Prerequisite:** Intro to Agriculture, Agriculture 1, Agriculture 2, Agriculture 3

This will be a semester where students will plan, design, build and finish a woodworking project. Completion of one project per quarter will be required.

## **Fabrication-Metals**

**Open to:** 12

**Course Length:** One Semester

**Prerequisite:** Intro to Agriculture, Agriculture 1, Agriculture 2, Agriculture 3

This will be a semester where students will plan, design, build and finish a metals project. Completion of one project per quarter will be required.



# **Business & Finance**

## **Accounting**

**Open to:** 9, 10, 11, 12

**Course Length:** Full Year Course

**Prerequisite:** None

The objective of this course is not just learning about debits and credits and writing journal entries. It is about learning the difference between assets, liabilities, equity, revenue, and expenses. It is about learning and understanding the basic financial statements; the Income Statement, Balance Sheet, Statement of Retained Earnings and Statement of Cash Flow.

## **Marketing**

**Open to:** 9, 10, 11, 12

**Course Length:** One Semester

**Prerequisite:** None

The objective of this course is to introduce students to the concepts, analyses, and activities that comprise marketing management, and to provide practice in assessing and solving marketing problems. Topics include marketing strategy, customer behavior, segmentation, market research, product management, pricing, promotion, sales force management and competitive analysis.

## **Personal Finance**

**Open to:** 9, 10, 11, 12

**Course Length:** Full Year Course

**Prerequisite:** None

This course is designed to develop an understanding of financial markets, investing institutions, and the finance and credit industry in our economic system. Students will receive an introduction to the allocation of financial resources, the effects of the finance and credit institutions on the business community, and the impact that financial decisions have on the consumer market. Areas of study include stock markets, bonds, futures, commodities, interest rates and the economy, interpretation of financial information, insurance and risk management.

## **Entrepreneurship**

**Open to:** 10, 11, 12

**Course Length:** One Semester

**Prerequisite:** Marketing

This course provides students the opportunities to evaluate the benefits and risks of self-employment, and develop a personal competence in starting a small business. Some of the topics included in this course include: implications of scarcity, analysis of current events, interdependence of households and firms, comparison of different economic systems, principles of microeconomics and macroeconomics, the economic role of government, effects of international trade, and financial choices.

# Computer Education

## Computer Applications-Microsoft Office

**Open to:** 9, 10

**Course Length:** One Semester

**Prerequisite:** None

This course provides an overview of microcomputer applications including Microsoft Windows 8, Microsoft Office 2016, Microsoft Word 2016, Microsoft Excel 2016, Microsoft Access 2016, Microsoft PowerPoint 2016, and Microsoft Publisher 2016. No experience with a computer is assumed, and no mathematics beyond the high school freshman level is required.

## Google Applied Digital Skills

**Open to:** 9, 10

**Course Length:** One Semester

**Prerequisite:** None

In this class, students will use G Suite for Education to practice life and job skills by building creative projects. The project-based curriculum addresses digital literacy, problem-solving and creativity. Students work individually and collaboratively to tackle financial decision making, event planning and project management. **At the end of the semester, students will have the opportunity to take the Google for Education- G Suite Certification Exam.**

# Media

## Media Design

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** None

This project-based, year-long course explores the basic design principles of photography and video production.

**Digital photography:** Students learn to understand the artistic qualities of the photographic medium while acquiring the techniques for utilizing photography for expressive purposes. Instruction includes studio and field techniques, photojournalism, portrait, nature, wildlife and more. In producing their own works and by studying the photographs of others, students will develop a base for making informed aesthetic judgements.

**Video Production:** Students are instructed on the three stages of project creation. In pre-production, students learn the basic principles of story development, screenplay writing, storyboarding, scheduling, etc. Production stage includes basic visual composition, setup and operation of camera, sound and lighting equipment. Students learn to use software applications for video and audio post-production.

## Yearbook

**Open to:** 9, 10, 11, 12

**Course Length:** Full Year Course

**Prerequisite:** None

Yearbook is a production-based elective course responsible for the content, design, layout and sale of the Medicine Lake School yearbook. Students will gain real-world skills in copywriting, revisions, and editing, designing and marketing print publications. Students will work as a part of a team to produce a quality yearbook that reflects the values, pride and experience of being a student at Medicine Lake School.

# Performing Arts

## Medicine Lake School Band

**Open to:** 7, 8, 9, 10, 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Can perform Exercises 1 - 58 in the Essential Elements Book 1

The Medicine Lake Band is a high energy performing unit that learns through performance! This is highly important organization that represents our school! It is open to any student who has successfully completed the beginning band program and can play Exercises 1 - 58 in the Essentials Elements Book One. Attendance at concerts, pep rallies, basketball pep band, graduation ceremony performance and even a scheduled after school rehearsal is MANDATORY. All band instruments are offered including electric guitar, bass guitar, keyboard, drum set and even singers! Grades are given for performance, dress at concerts, practice records and playing ability. The goal is to entertain with high quality music performance for the school body and community. Marching Band may also be offered.

## Chorus

**Open to:** 9, 10, 11, 12

**Course Length:** Full Year Course

**Prerequisite:** None

A dynamic offering vocal / singing course will be offered for beginners and experienced alike! Basic instruction includes traditional Solfege, traditional choir music history and application in group and solo and ensemble singing. This is a semester offered course. Performances will be done at Spring and Winter times and attendance at concerts is mandatory. An option to perform at Festival in spring if offered!

# Visual Arts

## Art 1

**Open to:** 9, 10, 11, 12

**Course Length:** Full Year Course

**Prerequisite:** None

Foundations of Art, which emphasizes the elements of art and the principles of design. Students are provided a strong foundation in drawing media, painting and color theory, 3-D design, pottery, calligraphy and techniques in perspective. Students will learn about art history and visual art careers. Problem solving and decision-making are emphasized throughout Art 1. ***This course is a prerequisite course for advanced art classes.***

## Art 2

**Open to:** 10, 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Art 1

This course is designed to further develop the concepts and skills learned in Art 1. Students will use the skills and techniques learned previously to enhance artwork in 2 and 3-D design using a variety of different media. The 2-D media includes graphite, charcoal, pastels, color pencil, acrylic, watercolor, and ink techniques. The 3-D media includes ceramics, foam sculpture, along with non-traditional sculpture materials. The student will develop an ability to make effective choices concerning media, techniques, subject matter, methods of interpretation and compositional design.

## Art 3 Honors

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Art 1, Art 2

This course is designed for students to create advanced artwork using a variety of Art making processes. Students are expected to create well planned and well executed projects. Traditional Art making techniques will be built upon and new techniques will be explored. ***Students must show initiative and good work habits in addition to being interested in Art.***

## Arts & Crafts

**Open to:** 9, 10, 11, 12

**Course Length:** One Semester

**Prerequisite:** Art 1, Art 2

This course will be a study in traditional crafting techniques and applications. Skills such as leather working, basketry, weaving and jewelry making will be taught.

## **Ceramics**

**Open to:** 9, 10, 11, 12

**Course Length:** One Semester

**Prerequisite:** None

This course will enable the student to explore various hand building techniques such as the pinch-pot method, and slab building and coil building construction. Utilization of the potter's wheel will also be employed. We will round out this course by employing surface decorations and glaze application.

## **Sculpture**

**Open to:** 9, 10, 11, 12

**Course Length:** One Semester

**Prerequisite:** None

This course will require the student to carve, cast, build and construct sculptures from a variety of mediums including plaster, wire, wood and clay.

## **Mosaics**

**Open to:** 10, 11, 12

**Course Length:** One Semester

**Prerequisite:** None

In this course students will explore the history of mosaics as well as designing and making several mosaics using a variety of materials such as paper, cloth, tile, and glass.

# MONTANA DIGITAL ACADEMY COURSE CATALOG

Open to Grades 11 & 12

# **MTDA-English**

## **Journalism**

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** None

Students will explore the history of journalism and see how the modern world of social media can provide an excellent platform for news.

## **Gothic Literature: Monster Stories**

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** None, however; this course is designed as a junior/senior level elective English course

Vampires, ghosts, and werewolves have lived in our collective imagination since the 18th century, and they continue to influence the world of fiction even today. Gothic Literature: Monster Stories focuses on the major themes found in Gothic literature and demonstrates the techniques writers use to produce a thrilling psychological experience for the reader. The themes of terror versus horror, the power of the supernatural, and the struggle between good and evil are just a few of the classic Gothic subjects explored in this course. Are you brave enough to go beyond the fear and find an appreciation for the dark beauty of Gothic stories?

## **Book Club-Utopian & Dystopian Literature**

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** None

MTDA offers a new course offering for students that are interested in doing deeper dives in specific genres of literature.

Have you wanted to read interesting books and talk to others about them? Have you ever wondered what The Hunger Games, "The Lottery" and 1984 have in common? Have you found dystopian literature and films fascinating? If so, this discussion-based book club is for you! This class will introduce you to the concepts of utopia and dystopia, show you how to discuss books productively, and help you develop your analytical skills while you apply these themes to our current world.



## **Creative Writing**

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** English I

This creative writing course will develop observation and reflection skills as well as develop the creative use of grammar in the writing process. Students will hone skills as they utilize a variety of technology to write for a variety of audiences, share writing with others, and give constructive feedback to peers. This is not a course to write for only yourself or to avoid communicating with a variety of peers. Students will study excellent creative writing in books of their choice.

## **Mythology & Folklore**

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** English I

Mighty heroes. Angry gods and goddesses. Cunning animals. Mythology and folklore have been used since the first people gathered around the fire as a way to make sense of humankind and our world. This course focuses on the many myths and legends woven into cultures around the world. Starting with an overview of mythology and the many kinds of folklore, the student will journey with ancient heroes as they slay dragons and outwit the gods, follow fearless warrior women into battle and watch as clever animals outwit those stronger than themselves. They will explore the universality and social significance of myths and folklore, and see how they are still to shape society today.

## **MTDA-Science**

### **Astronomy**

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** None

Why do stars twinkle? Is it possible to fall into a black hole? Will the sun ever stop shining? Since the first glimpse of the night sky, humans have been fascinated with the stars, planets, and universe that surrounds us. This course will introduce students to the study of astronomy, including its history and development, basic scientific laws of motion and gravity, the concepts of modern astronomy, and the methods used by astronomers to learn more about the universe. Additional topics include the solar system, the Milky Way and other galaxies, and the sun and stars. Using online tools, students will examine the life cycle of stars, the properties of planets, and the exploration of space.

# **MTDA-Social Studies**

## **Criminology**

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** None

Criminology isn't about solving cases and catching perpetrators. Criminologists work to understand why crime happens in the first place. They also focus on how to prevent and address crime. As you go through this course, you'll be given a series of challenging situations that need the mindset of a criminologist to navigate successfully. The course will encourage you to analyze a range of criminal acts, from shoplifting to hate crimes. By the end, you'll have an opportunity to envision alternative strategies for dealing with crime in our society and in your own school environment in particular.

## **Global Studies**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Students should possess high school level research, writing, critical thinking, and analysis skills.

Global Studies is an introductory social studies course. Students will be put in the role of a reporter for the Global News Network and be sent out on various "assignments" to explore and report back on the cultural, political, geographical and economic issues facing Africa, Asia, the Middle East, North and South America and Europe. Current events and issues are emphasized in connection with the curriculum.

## **Psychology**

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** This class has adopted a higher-level textbook; students should be comfortable with a high school reading level at minimum.

Psychology is the study of the human mind and human behavior. This one-semester course covers topics such as history, research, biopsychology, sensation and perception, consciousness, learning, memory, intelligence, personality, psychopathology and therapy. Coursework integrates multicultural approaches and themes to make psychology meaningful to students of diverse backgrounds.

# **MTDA-Business & Finance**

## **Sports & Entertainment Marketing**

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** None

Have you ever wished to play sports professionally? Have you dreamed of one day becoming an agent for a celebrity entertainer? If you answered yes to either question, then believe it or not, you've been fantasizing about entering the exciting world of sports and entertainment marketing. Although this particular form of marketing bears some resemblance to traditional marketing, there are many differences as well—including a lot more glitz and glamour! In this course, you'll have the opportunity to explore basic marketing principles and delve deeper into the multi-billion dollar sports and entertainment marketing industry. You'll learn about how professional athletes, sports teams, and well known entertainers are marketed as commodities and how some of them become billionaires as a result. If you've ever wondered about how things work behind the scenes of a major sporting event such as the Super Bowl or even entertained the idea of playing a role in such an event, then this course will introduce you to the fundamentals of such a career.

# **MTDA-Family & Consumer Science**

## **Fashion Design**

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** None

Do you have a flair for fashion? If so, the design industry might just be for you! In this course, you'll explore what it is like to work in the industry by exploring career possibilities and the background that you need to pursue them. Get ready to try your hand at designing as you learn the basics of color and design then test your skills through hands-on projects. In addition, you'll develop the essential communication skills that build success in any business. By the end of the course, you'll be well on your way to developing the portfolio you need to get your stylishly clad foot in the door of this exciting field.

## **Interior Design**

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** None

Are you constantly redecorating your room? If so, the design industry might just be for you! In this course, you'll explore what it is like to work in the industry by exploring career possibilities and the background that you need to pursue them. Get ready to try your hand at designing as you learn the basics of color and design then test your skills through hands-on projects. In addition, you'll develop the essential communication skills that build success in any

business. By the end of the course, you'll be well on your way to developing the portfolio you need to get your foot in the door of this exciting field.

## **MTDA-Foreign Language**

### **French I**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** None

This beginning, year-long course teaches the basics of the French language. New words and phrases are introduced with pictures, audio clips, and examples. Students have many opportunities to practice what they learn through interactive practice activities in the form of games, written practice, and listening and speaking exercises. Students also explore the cultures of France, Canada, and other French-speaking regions by learning about geography, foods, celebrations, and traditions from each place.

### **German I**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** None

This is a beginning level course that will introduce the student to a variety of areas of language learning. In this course, the student will learn listening, speaking, reading, and writing skills through activities that are based on pedagogically proven methods of foreign language instruction. Starting with five units of study in Semester 1 (Greetings, Calendar, Weather, Time and Colors) and continuing with the following units in Semester 2 ( The City, My Family, Food and Drink, Leisure time, School and Chores), students learn to express themselves using an ever increasing vocabulary, present-tense verbs, articles, and adjectives. Grammar is presented and practiced in innovative and interesting ways with a variety of learning styles in mind.

Culture is sprinkled throughout the course in an attempt to introduce the learner to the German speaking world and their culture, people, geographical locations, and histories.

### **Spanish I**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** None

In Spanish I, you will learn the basics of speaking, reading, writing, and listening to the Spanish language. You will learn basic vocabulary including greetings, feelings, school, family and more. You will develop a basic understanding of simple Spanish language and learn about customs and cultures of Spanish speaking countries

# **MTDA-Health & PE**

## **Sports Officiating**

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** None

In this course, students will learn the rules, game play, and guidelines for a variety of sports, including soccer, baseball, softball, basketball, volleyball, and football. In addition, they will learn the officiating calls and hand signals for each sport, as well as the role a sport official plays in maintaining fair play.

# **MTDA-Health Occupations**

## **Health Occupations**

**Open to:** 11, 12

**Course Length:** One Semester

**Prerequisite:** None

This Career and Technical course provides an overview of what it means to be a healthcare professional. Students will explore the topics of history and trends of medicine, professionalism, leadership skills, legal and ethical responsibilities, communication, cultural diversity, health care systems, medical math, and infection control as they relate to health care. Additionally, students will research and reflect on the compatibility of various health care professions with their personal traits and goals for the future.

# MTDA-ADVANCED PLACEMENT (AP) COURSES

## AP Language & Composition

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Advanced Placement courses are open to all students, but students should be prepared for college-level work and have strong writing and analytical skills. Generally speaking, students below Junior or Senior level do not have the writing background to be successful in this course.

Students should review the article list in the Norton Anthology before registering; some topics are more appropriate for older high school/college-aged students. <http://books.wwnorton.com/books/978-0-393-92948-5/>

This course is a demanding, college-level class that prepares students for the AP\* English Language and Composition exam in May. Students focus on becoming skilled readers of prose written from different time periods and rhetorical contexts, as well as becoming skilled writers who compose for a variety of purposes. Emphasis is on expository, analytical and argumentative writing that forms the basis of academic and professional communications, as well as the personal and reflective writing that fosters the ability to write in any context. Students should check with their intended college to see which AP\* English exams may exempt them from freshmen English composition requirements. For a more extensive course description visit:

[http://www.collegeboard.com/student/testing/ap/sub\\_englang.html?englang](http://www.collegeboard.com/student/testing/ap/sub_englang.html?englang)

AP courses have challenging time demands. Students taking AP courses should be able to dedicate significant time for reading and study each week. It is not recommended that students take this course a supplement to a regular core course, but in replacement of it.

## AP Literature & Composition

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Successful completion of English I, II, & III. Student will be exposed to college-level composition and literature.

This course is a demanding, college-level class that prepares students for the AP\* English Language and Composition exam in May. While enrolled in the MTDA AP Literature and Composition course students will engage in close reading (active and thoughtful) of literary works in a rigorous, college-level curriculum. Through the deep study of works of literary merit, students will sharpen their awareness of language and how writers use language to create meaning. In addition, students will develop an independent appreciation of literary works while becoming sensitive to literature as shared experience. Students will discuss and write about the individual work (novels, plays, poems, essays) as well multiple sources. This course's literary study will look at style and structure, diction, figurative language, imagery, selection of detail, language, tone and syntax. Writing well about literature is a key component of the course. In addition to essay writing, students will be expected to write clear, supported posts and responses in threaded discussion. For a more extensive course description visit:

[http://www.collegeboard.com/student/testing/ap/sub\\_englit.html?englit](http://www.collegeboard.com/student/testing/ap/sub_englit.html?englit)

AP courses have challenging time demands. Students taking AP courses should be able to dedicate significant time for reading and study each week. It is not recommended that students take this course a supplement to a regular core course, but in replacement of it.

## **AP Calculus**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Pre-Calculus Recommended

AP Calculus AB is a college-level course that prepares students for the AP Calculus AB exam. Before studying calculus, all students should complete four years of secondary mathematics designed for college-bound students. Students will demonstrate learning using multiple methods; analytic, algebraic, numerical, graphical, and verbal. Students must be familiar with the properties of functions, the algebra of functions and the graphs of functions. Students must also understand the language of functions and know the values of the trigonometric functions of the numbers 0,  $\pi/6$ ,  $\pi/4$ ,  $\pi/3$ ,  $\pi/2$  and their multiples. Explorations are used to actively involve students in the understanding of calculus and solve problems by developing math models, solve, confirm, and interpret the solution then communicating their understanding by verbalizing and in written sentences. Multiple methods are used to represent problems often times emphasizing the connection among these representations.

## **AP Statistics**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Algebra II

This course is designed to provide college-level instruction on the concepts and tools for working with data. Students collect and analyze data and draw conclusions based on real-world information. The course challenges students to explore patterns, think critically, use a variety of tools and methods, and report their findings and conclusions.

Access the site link below to view the PDF of the course description from the College Board:

<http://apcentral.collegeboard.com/apc/public/repository/ap-statistics-course-description.pdf>

## **AP Biology**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Advanced Placement courses are open to all students, but students should be prepared for college-level work and have strong writing and analytical skills.

While not required, previous coursework in biology and chemistry at the high school level are recommended.

Access the site link below to view the PDF of the course description from the College Board:

<https://secure-media.collegeboard.org/digitalServices/pdf/ap/ap-biology-course-and-exam-description-effective-fall-2015.pdf>

AP Biology is a course designed to be the equivalent of a two-semester college introductory biology course usually taken by biology majors during their first year. This course follows the AP curriculum and prepares students for the AP Biology exam in May. It is designed to help students develop a conceptual framework for modern biology and an appreciation of science as a process. Essential to this conceptual understanding are a grasp of science as a process, personal experience in inquiry, application of major topics, critical thinking, and environmental and social concerns through research

## **AP Environmental Science**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Students are assumed to have previous knowledge of basic high school biology, earth science, and chemistry principles. This knowledge is usually gained by previously taking and passing each of these courses. Students are responsible for making sure they have the previous knowledge described at the beginning of each section. Students must complete semester A prior to semester B.

The goal of Environmental Science is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world and to identify and analyze environmental problems that are natural and human-made. Students will evaluate the relative risks associated with these problems and examine alternative solutions for resolving or preventing problems. Laboratories support student content mastery with hands-on experiences.

## **AP US History**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Students should be at a junior-level reading and writing level.

AP\* United States History prepares students for the AP\* exam in May. This rigorous course provides students with the necessary skills to critically analyze events in United States history. Students learn to assess historical materials and to weigh the evidence and interpretations presented in historical scholarship. For a more detailed course description, visit:

[http://www.collegeboard.com/student/testing/ap/sub\\_ushist.html?ushist](http://www.collegeboard.com/student/testing/ap/sub_ushist.html?ushist)

## **AP Government & Politics**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Advanced Placement courses are open to all students, but students should be prepared for college-level work and have strong writing and analytical skills.

The ability to read entry-level college textbooks and related sources, to analyze the content and describe and explain what, how and why, to write concise and precise answers to Free Response Questions and to do well on timed comprehensive tests. The ability to ask relevant questions is highly desirable.

Advanced Placement US Government and Politics is equivalent to an introductory college political science course. A student who takes the College Board exam in May must score at least a 3 (out of 5) to earn credit at most colleges or universities. A score of 3 will normally earn 3 semester credits at a Montana university or college. In order to earn a score of 3 or above a student must be able to score 60% or higher on the College Board exam, which consists of 55 multiple choice questions and 4 free response questions.

The MTDA course consists of 7 modules covering the structure of US government, its operations and politics in America. Each semester deals with 4 of these modules. Students must read and understand the text and complete multiple choice quizzes and tests (1 per module) as well as a proctored final exam for each semester.



## **AP Human Geography**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** None

The AP® Human Geography course is designed to provide college level instruction on the patterns and processes that impact the way humans understand, use, and change Earth's surface. Students use geographic models, methods, and tools to examine human social organization and its effect on the world in which we live. Students are challenged to use maps and geographical data to examine spatial patterns and analyze the changing interconnections among people and places.

Access the link below to view the PDF of the course description from the College Board:

<http://apcentral.collegeboard.com/apc/public/repository/ap-human-geography-course-description.pdf>

## **AP Psychology**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** This class has adopted a higher-level textbook; students should be comfortable with a high school reading level at minimum.

The AP Psychology course introduces students to the systematic and scientific study of human behavior and mental processes. While considering the psychologists and studies that have shaped the field, students explore and apply psychological theories, key concepts, and phenomena associated with such topics as the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology. Throughout the course, students employ psychological research methods, including ethical considerations, as they use the scientific method, analyze bias, evaluate claims and evidence, and effectively communicate ideas.

The AP Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings.

- Students learn about some of the explorations and discoveries made by psychologists over the past century.
- Students assess some of the differing approaches adopted by psychologists, including the biological, behavioral, cognitive, humanistic, psychodynamic, and sociocultural perspectives.
- Most important, students come to an appreciation of how psychologists think (or at least an appreciation of the kind of critical analysis that psychologists embrace and hope to model in their words and actions).

Access the site link below to view the PDF of the course description from the College Board:

<http://media.collegeboard.com/digitalServices/pdf/ap/ap-psychology-course-description-2014-15.pdf>

## **AP Macroeconomics**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Solid math and writing skills, along with a willingness to devote considerable time to homework and study, are necessary to succeed. Emphasis is placed on critical and evaluative thinking skills.

Understand the choices you make as a producer, consumer, investor, and taxpayer. This course provides you with the knowledge and decision-making tools necessary for understanding how a society must organize its limited resources to satisfy its unlimited wants.

Access the site link below to view the PDF of the course description from the College Board:

<http://apcentral.collegeboard.com/apc/public/repository/ap-economics-course-description.pdf>

## **AP Microeconomics**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** Solid math and writing skills, along with a willingness to devote considerable time to homework and study, are necessary to succeed. Emphasis is placed on critical and evaluative thinking skills.

The AP Microeconomics course provides students with an understanding of the principles of economics as they apply to individual decision-making units, including individual households and firms. The course examines the theory of consumer behavior, the theory of the firm, and the behavior of profit-maximizing firms under various market structures. Students evaluate the efficiency of the outcomes with respect to price, output, consumer surplus, and producer surplus. They examine the behaviors of households and businesses in factor markets, and learn how the determination of factor prices, wages, interest, and rent influence the distribution of income in a market economy. There are ample opportunities to consider instances in which private markets may fail to allocate resources efficiently and examine various public policy alternatives aimed at improving the efficiency of private markets. By taking on the role of a leader at a fictitious company, you will learn fundamental economic concepts, including scarcity, opportunity costs and trade-offs, productivity, economic systems and institutions, exchange, money, and interdependence.

Access the site link below to view the PDF of the course description from the College Board:

<http://apcentral.collegeboard.com/apc/public/repository/ap-economics-course-description.pdf>

## **AP Art History**

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** None. However, the course does require a high degree of commitment to academic work and to the purposes of a program designed to meet college standards. Students who have done well in other courses in the humanities, such as history and literature, or in any of the studio arts are especially encouraged to enroll.

Within AP Art History, students will explore the interconnections between art, culture, and historical context using critical analysis through the critical lenses of artistic expression, cultural awareness, and purpose. Using a defined art historical skill set and reflective learning, students will analyze relationships across cultures with a global lens. The examination of how people have responded to and communicated their experiences through art will enable students to think conceptually about art ranging from prehistoric to contemporary. Students will be active participants, engaging with art and its context as they read, research, and collaborate to learn about art, artists, art making, and responses to and interpretations of art.

Follow the link below for the College Board description of this course:

<http://media.collegeboard.com/digitalServices/pdf/ap/ap-art-history-course-description.pdf>

# MTDA-DUAL Credit (High School/College Credit Courses)

## Dual Credit-Elementary College Spanish I

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** 16 years of age, Junior in High School or waiver approved by Helena College

This introductory course prepares students for basic communication in Spanish and presents fundamentals of the language holistically through listening, speaking, reading, and writing. The course also explores cultural information.

This course is available for dual credit only. Students may not take this course without the college credit component. Students that neglect to apply or don't qualify for Helena College credit will be dropped from the course.

## Dual Credit-Contemporary Math-M105

**Open to:** 11, 12

**Course Length:** Full Year Course

**Prerequisite:** The student must have *either* a minimum math college entrance score of 21 on the ACT or 490 on the SAT, *or* they may take the Accuplacer Next Gen at one of the available testing sites in Montana. Please review the [information here](#).  
16 years of age, Junior in High School or waiver approved by Helena College

This course is a dual credit course offered in cooperation with our partner, Helena College. A separate application to Helena College is required.

This course is designed to meet the general education mathematics requirement for the liberal arts major. It surveys some of the important ideas and practical applications in mathematics and uses algebra skills to solve real problems. Topics include problem-solving, financial math, mathematical modeling (linear and quadratic), and elementary statistics.

This course is available for dual credit only. Students may not take this course without the college credit component. Students that neglect to apply or don't qualify for Helena College credit will be dropped from the course.