



AFSA High School 2023-2024 Curriculum Guide Grades 7-12

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AFSA High School engages learners in academically rigorous, student centered learning experiences and leadership opportunities within a science and agricultural context.

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CURRICULUM STRENGTHS AT AFSA

Continuity and Consistency

Students can begin their education at AFSA as early as Kindergarten and continue through 12th grade. Courses over AFSA's K - 12 curriculum build upon previous coursework to develop critical thinkers and a strong depth of knowledge of core content.

College Prep Education

Students at AFSA High School are prepared for postsecondary education. Our curriculum is designed to prepare students for postsecondary admission and success. In addition to college-preparatory classroom content, AFSA students participate in regular college and career readiness (CCR) activities. AFSA students in grades 10 through 12 visit 2- and 4-year public and private colleges and universities. AFSA also hosts an annual Career Day and College Fair. These events give AFSA students opportunities to explore career interests and postsecondary programs and help each AFSA student develop an individualized meaningful postsecondary path.

Career Focus

Agricultural careers make up nearly 20% of all jobs in the United States; AFSA was created to provide information to urban and suburban students about the wide range of careers available to them in this highly specialized field. AFSA is not preparing students to be farmers, but to be wise consumers, savvy decision makers and successful, career-oriented life-long learners. The chart on the next page shows many of the potential careers in the Science, Business and Technology of Agriculture.

Variety

AFSA offers a variety of courses for students, including more than 21 different Agriscience course offerings, 20 Language Arts courses, math classes ranging from Linear Algebra to CIS Calculus, standard and elective Science courses, Social Studies courses, two levels of Spanish, and courses in theater, art, music, and technology. Students can also earn college credits while taking classes at AFSA through the University of Minnesota's College in the Schools and Southwest Minnesota State University College NOW programs.

Small Class Sizes

The average class size at AFSA is under 25 and some classes may be as low as 10. Small class sizes allow teachers to get to know the students on an individual basis. They can spend more time with each student, providing enrichment activities for those that are ready to move ahead and provide extra review for those who need more time.

Tutoring

AFSA staff members are available after school Monday through Thursday for tutoring in all subject areas. Teachers are also available on a regular basis to assist students before and after school.

Experiential Learning

Critical thinking, teamwork, and problem solving skills are essential for today's learners. The real-world connections provided by projects, collaborative learning, and experiential learning create opportunities for students to develop critical thinking, teamwork, and problem solving skills while fostering student inquiry and innovation. All classes at AFSA incorporate projects for students to demonstrate their knowledge.

Terms

AFSA students all participate in experiential learning activities in lieu of regular classroom activities for two weeks each year: one week in October and one week in June. These are unique experiences planned by students and staff to develop skills, introduce new opportunities, and build relationships. Offerings include community service, college visits, travels, arts activities, environmental activities, camping, career exploration, sports activities, and more.

Leadership Opportunities

AFSA classes and activities provide many opportunities for students to develop their leadership potential. From student officer and junior officer positions in the FFA and National Honor Society, to committee chairpersons for community service or fundraisers, students have many opportunities to get involved in their school community.

AFSA HIGH SCHOOL - PATHWAYS, CAREER OPTIONS, AND CONCEPTS

AFSA strives to provide urban and suburban students with a broader understanding of the careers available in science and agriculture. The chart below lists just a few of the careers available to students who are trained in these areas.

PATHWAYS	<u>Food Science</u> (Food Processing and preserving, Packaging, Distribution, Government monitoring & regulation)	<u>Plant Science</u> (Agronomic, Horticulture, Forestry, Turf, Viticulture, Soils)	<u>Animal Science</u> (Large animals, small animals, wildlife animals, and research animals)	<u>Engineering & Mechanics</u> (Power, Structures, Controls, Geospatial Technology, Computer Systems, Electronics, Hydraulics, Pneumatics)	<u>Environment & Natural Resources</u> (Pollution Prevention, Water & Air Quality, Habitat Conservation, Forest Products, Parks and Recreation, Mining, Fisheries)
SAMPLE CAREER SPECIALTIES/ OCCUPATIONS	Sales • Communications Specialists • Business-Educators • Food Scientists • Meat Processors-Toxicologist• Biochemists-Nutritionists-Dieticians • Food Brokers-Food Inspectors • Meat Cutters-Meat Graders • Meat Science Researchers • Food Meal Supervisors • Cheese Makers • Microbiologists • Produce Buyers • Bacteriologists • Food & Drug Inspectors • Bioengineers • Biochemists • Food & Fiber Engineers • Food Processors • Storage Supervisors • Fieldman • Quality Control Specialists	Bioinformatics Specialists • Plant Breeders and Geneticists • Biotechnology Lab Technician • Soil & Water Specialists • Crop Farm Managers • Agricultural Educators • Plant Pathologists • Aquaculturalists • Sales Representatives • Botanists • Tree Surgeons • Education & Extension Specialists • Agricultural Journalists • Commodity Marketing Specialists •Grain Operations Superintendents •Custom Hay/Silage Operators • Forest Geneticists • Golf Course Superintendents • Greenhouse Mangers • Growers • Farmers •Ranchers	Aquaculturalists • Animal Caretakers-Poultry Managers • Equine Managers-Veterinarians • Veterinary Assistants-Feedlot Specialists • Animal Scientists •Embryo Technologists • Livestock Buyers • Feed Sales Representatives • Vivarian Technicians • Wildlife Biologists • Livestock Geneticists • Animal Nutritionists • Dairy Producers• Livestock Inspectors • Feed Sales Specialists •Animal Health Salespersons •Meat Science Researcher •Reproductive Physiologists • Embryo Transfer Technicians • Pet Shop Operators •USDA Inspectors • Livestock Rancher / Breeder • Agricultural Products Buyer • Animal Health Products Distributor	Electronics Systems Technicians • Engineers • Extension Engineering Specialists • Heavy Equipment Maintenance Technicians • Recycling Technicians • Waste Water Treatment Plant Operators • Equipment/Parts Mangers • Welders • Machinists • Communication Technicians • Agricultural Applications Software Developers/Programmers • Database Administrators • Computer Service Technicians • Information Lab Specialists •GPS Technicians• Remote Sensing Specialists• Machine Operators	Cartographers • Wildlife Managers • Range Technicians • Ecologists Park Mangers • Environmental Interpreters • Fish and Game Officers Loggers • Forest Technicians • Log Graders • Pulp and Paper Manager Soil Geology Technician • Geologists • Mining Engineers Fisheries Technicians • Hydrologists • Fish Hatchery Manager • Commercial Fishermen • Pollution Prevention and Control Managers • Environmental Sampling and Analysis Scientists/Technicians• Environmental Compliance Assurance Managers• Hazardous Materials Handlers • Water Environment Managers • Water Quality Managers• Toxicologists• Solid Waste Specialists
CONCEPTS	<p align="center"><u>CLUSTER KNOWLEDGE AND SKILLS: ALL PATHWAYS AT AFSA INCLUDE THE FOLLOWING EDUCATIONAL CONCEPTS AND SKILL DEVELOPMENT</u></p> <p align="center">◆Academic Foundations/College Prep Curriculum ◆ Communications ◆Problem Solving and Critical Thinking ◆ Information Technology ◆ Research ◆ Systems ◆ Safety, Health and Environment ◆ Leadership and Teamwork ◆ Ethics and Legal Responsibilities ◆ Employability and Career Development ◆ Technical Skills ◆ Personal Values ◆ Community Service ◆ Hand- on Learning ◆</p>				

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GENERAL REGISTRATION INFORMATION

1. Students should review the curriculum guide and course selection information with their parents/guardians.
2. It is the responsibility of each student to be aware of the requirements for graduation.
3. All students at AFSA must be working towards meeting the AFSA graduation requirements.
4. Each one-trimester course earns a student .5 credits unless otherwise noted in the course description.
5. Information on Terms changes each year and will be made available at the start of the school year for O-term and in February/March for J-term.
6. Additional Information about school policies and procedures can be found in the Student Handbook. Copies of this handbook are provided to all students on the first day of school.

Annual Registration Procedures

New Students: Each June, scheduling dates will be arranged by grade level. All new students will be required to attend their scheduling session to complete the Math Placement exam and finalize their schedule.

Returning Students: Schedules will be finalized before the beginning of the next school year.

Please see a school official if you have questions regarding your schedule.

Orientation-First Day of School

Orientation is held prior to the first day of school for all students new to AFSA. This is an optional program to help students become comfortable on campus, meet their teachers and start to develop friendships. All families are invited to attend our back to school picnic on the same day as orientation as well. Sessions are held for parents to help get to know the school as well.

On the first day of school each year, all students gather in the gym for welcome and introductions. School staff members speak briefly to the entire group and then divide students up by their advisory groups. The advisory groups then meet for 1-2 hours to go over any questions a student might have. Information given out at that time includes student lunch numbers, locker information, computer logins and passwords, daily schedule, directions and any other information students need to make their school year successful.

AFSA GRADUATION REQUIREMENTS FOR GRADES 9 - 12

AFSA's graduation standards are higher than state requirements and all courses meet or exceed Minnesota State Standards. To graduate from AFSA, high school students must earn 28.5 Credits, complete 4 Science Fair Projects, carry out 12 Public Presentations, participate in Community Service each year and complete a portfolio in a web-based program. Completion of these requirements results in the AFSA Honors Diploma. Exceptions may be made by referral to the Academic Advisory Committee and will not qualify for the Honors Diploma.

Credits must be earned in the following areas:

- 4.5 credits each of Language Arts
- 4 credits each of Math, Science, Social Studies and Agriscience
- 2 credits of a World Language
- 1 credit of an Arts class (Art, Music, Theatre)
- .5 credits of Phy Ed.
- .5 credits of Health
- 4 credits of Electives (Terms, SAEs, projects, etc)

*7th and 8th grade course requirements meet state standards so that students can progress into the high school program.

AFSA Requirements Grades 7 - 12

Science Fair projects: Students must complete one science fair project per year

- These may be completed in class (science or agriculture) or developed independently.
- AFSA will hold an in-house science fair competition in January. Students who do not complete their Science Fair in January must present their Science Fair on a school presentation night. This needs to be arranged in advance.
- In order to receive credit, Science Fair projects must investigate a scientific topic and reflect that topic in a display board, a paper, and presentation to judges.

Public Presentations: Students carry 3 public presentations per year

- One presentation will be the student's annual science fair presentation at the local, state or national science fair.
- One presentation can be a student's participation in an event such as a recruitment visit or other activities as approved by their advisor.
- One presentation will be from a class project developed by the student.

Note: Presentations in classes do not count towards this requirement.

Electronic Portfolio:

- Students begin their portfolio in 7th grade and update it each year. Advisors track progress and sign off on the final (senior year) portfolio.
- Student portfolios will be done using a web-based program.
- The student's electronic portfolio should include:

<ul style="list-style-type: none"> ○ Cover letter and resume ○ Student career goals and information ○ Career Interest Inventories ○ Copies of student work (projects, papers, photos, etc) 	<ul style="list-style-type: none"> ○ Copies of awards and activities ○ Record of presentations ○ Other items as recommended by your advisor ○ Senior Graduation Survey
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Community Service: All students participate in 12 hours of community service activities each year. Students can complete these hours by participating in AFSA's Fall and Spring Community Service Days. Students who are unable to complete their community service hours during AFSA's designated days will work with AFSA staff to demonstrate completion of the community service requirement.

School Participation: Full participation in all seminars, terms, Friday activities and advisory groups.

- AFSA has a special schedule each Friday when in session, staff and students plan special meetings and events for these days:
 - All-school FFA meetings
 - Seminars
 - Science Fair preparation
 - Academic check-ins and rewards
- O-term is held in October.
- J-term is held in June.
- Advisory groups meet each day.

SIX YEAR COURSE PLAN

NOTE: This plan is the typical path for students who start at AFSA in Middle School. Adjustments can be made for students who test in at higher levels or who start at AFSA as 8th, 9th, 10th, 11th, or 12th grade students.

	<u>7th/8th Grade</u>	<u>9th Grade</u>	<u>10th Grade</u>	<u>11th Grade</u>	<u>12th Grade</u>
<u>Agriscience</u>	Discovering Agriculture (1 trimester)	Introduction to Agriculture (1 trimester)	Three trimesters of Agriculture electives	Two trimesters of Agriculture electives	Two trimesters of Agriculture electives
<u>Creative Arts</u>	Multiple art offerings (over the school year)	Not required	One trimester of Art, Music, or Theatre	One trimester of Art, Music, or Theatre	Not required
<u>Language Arts</u>	Discovering Literature and Composition (3 trimesters)	Essence of English (3 trimesters)	Two trimesters of Language Arts courses	Two trimesters of Language Arts electives	Two trimesters of Language Arts electives
<u>Math</u>	Linear Algebra, Algebra 1, or Geometry* (3 trimesters)	Algebra I or Geometry* (3 trimesters)	Next higher math offering (usually Geometry or Algebra II) – (3 trimesters)	Next higher math offering – must complete through Algebra II (3 trimesters)	Next higher math offering – must complete through Algebra II (3 trimesters)
<u>Phy Ed. & Health</u>	Discovering Health & Physical Education (1 trimester)	Not required	Choice of Phy. Ed. Course (1 trimester)	Health	Not required
<u>Science</u>	Earth Science (3 trimesters)	Biology (3 trimesters)	Chemistry (2 trimesters)	Physics (2 trimesters)	Two trimesters of Science classes
<u>Social Studies</u>	Discovering United States History & Economics (2 trimesters)	Lifelong Leaders, Civics, & Government (3 trimesters)	U.S. History (2 trimesters)	World History (2 trimesters)	Economics and Geography (2 trimesters)
<u>World Language</u>	Spanish (1 trimester)	Spanish I (2 trimesters)	Spanish II (2 trimesters)	Not required	Not required
<u>Electives</u>	Not required	One elective course if student is in Geometry or higher	Choice of classes	Choice of classes	Choice of classes
<u>Terms</u>	O-term & J-term	O-term and J-term	O-term and J-term	O-term and J-term	O-term; J-term required for students who need credit toward graduation

*Students may test into higher math levels.

RECOMMENDED COURSE OF STUDY GRADES 7-12

Honors Diploma and College Prep-four year college program – with CIS –EXAMPLE

Student is prepared to enroll in a four-year college program

Dept	Grade 7/8	Grade 9	Grade 10	Grade 11	Grade 12
Science	Earth Science OR Exploring Science	Biology	Chemistry	Physics OR College NOW Chemistry*	Physics OR College NOW Chemistry*
Language Arts	Discovering Lit & Comp OR Exploring Lit & Comp	Essence of English	Composition & American OR British Literature	CIS Composition*/ CIS Literature*	CIS Composition*/ CIS Literature*
Agriscience	Discovering Agriscience OR Exploring Agriculture	Introduction to Agriculture	Floriculture & Fish and Wildlife	Landscape & Greenhouse OR CIS Animal Science*	CIS Animal Science*
Social Studies	Discovering U.S. History OR Exploring History & Culture	Citizenship & Government	US History	World History	Economics & Geography
Math	Algebra I	Geometry	Algebra II	Pre-Calculus	CIS Calculus*
World Language	Spanish	Spanish I	Spanish II	Elective (if needed)	Elective (if needed)
Arts	Variety of options	Elective (if schedule allows)	Creative Dramatics, Music Appreciation, OR 2D Art	Improvisation, Music Appreciation, OR 3D Art	Music Appreciation, Graphic Design, OR Yearbook
Phy Ed & Health	Exploring Physical Education & Health OR Discovering Education & Health		Health OR PE	Health OR PE	PE Elective (if needed and schedule allows)
Electives		Lifelong Leaders	Environmental Science	Leadership/CIS Political Science*	CIS Political Science*/Leadership

***Most CIS courses are offered on alternating years.**

Science classes: Students must complete chemistry and/or physics. Some Agriculture classes can also count toward AFSA graduation credit for science:

- | | |
|----------------------|-------------------------|
| Vet Science | Sustainable Agriculture |
| Large Animal Science | CIS Animal Science |
| Equine Science | Natural Resources |

Honors Diploma and College Prep-four year college program – no CIS- EXAMPLE

Student is prepared to enroll in a four-year college program

Dept	Grade 7/8	Grade 9	Grade 10	Grade 11	Grade 12
Science	Earth Science OR Exploring Science	Biology	Chemistry	Physics	Environmental Science
Language Arts	Discovering Lit & Comp OR Exploring Lit & Comp	Essence of English	Composition AND British OR American Literature	British OR American Literature AND Mythology	World Literature AND Professional Writing
Agriscience	Discovering Agriscience OR Exploring Agriculture	Introduction to Agriculture	Floriculture AND Leadership OR Fish & Wildlife	Landscape OR Greenhouse	Metals and Welding - OR Small Engines OR Food Microbiology
Social Studies	Discovering U.S. History OR Exploring History & Culture	Citizenship AND Government	US History	World History	Economics & Geography
Math	Linear Algebra or Algebra I	Algebra I	Geometry	Algebra II	Pre Calculus OR Statistics OR Math Modeling
World Language	Spanish	Spanish I	Spanish II	Elective (if needed)	Elective (if needed)
Arts	Variety of options	Elective (if schedule allows)	Creative Dramatics, Music Appreciation, OR 2D Art	Improvisation, Music Appreciation, OR 3D Art	Music Appreciation, OR Yearbook
Phy Ed & Health	Exploring Physical Education & Health OR Discovering Education & Health		Health OR PE	Health OR PE	PE Elective (if needed and schedule allows)
Electives		Lifelong Leaders	Food and Culture	Leadership	Field Ecology

Science classes: Students must complete chemistry and/or physics. Some Agriculture classes can also count toward AFSA graduation credit for science:

- | | |
|----------------------|------------------------------|
| Vet Science | Sustainable Agriculture |
| Large Animal Science | CIS Animal Science |
| Equine Science | Natural Resources |
| Plant Science | Introduction to Horticulture |

Honors Diploma and College Prep – 2 year college program

Student is prepared to enter a two year college or community college program.

Dept	Grade 7/8	Grade 9	Grade 10	Grade 11	Grade 12
Science	Earth Science OR Exploring Science	Biology	Chemistry	Conceptual Physics AND Environmental Science	Student Choice
<u>Language Arts</u>	Discovering Lit & Comp OR Exploring Lit & Comp	Essence of English	Teen Lit AND Composition	Science Fiction AND Creative Nonfiction	Media Studies AND Professional Writing
<u>Agriscience</u>	Discovering Agriscience OR Exploring Agriculture	Introduction to Agriculture	Floriculture AND Leadership OR Fish & Wildlife	Landscape AND Greenhouse OR Nutrition	Engineering & Metals/Welding OR Food Microbiology & Field Ecology
<u>Social Studies</u>	Discovering U.S. History OR Exploring History & Culture	Citizenship AND Government	US History	World History	Economics AND Geography
<u>Math</u>	Algebra I	Algebra I	Geometry	Algebra II	Statistics & Math Modeling
<u>World Language</u>	Spanish	Spanish I	Spanish II	Elective (if needed)	Elective (if needed)
<u>Arts</u>	Variety of options	Elective (if schedule allows)	Creative Dramatics, Music Appreciation, OR 2D	Improvisation, Music Appreciation, OR 3D Art	Music Appreciation, Graphic Design, OR Yearbook
<u>Phy Ed & Health</u>	Exploring Physical Education & Health OR Discovering Education & Health		Health OR PE	Health OR PE	PE Elective (if needed and schedule allows)
<u>Electives</u>		Lifelong Leaders	2D Art	Small Engines	Creative Dramatics

Science classes: Students must complete chemistry and/or physics. Some Agriculture classes can also count toward AFSA graduation credit for science:

Vet Science
Large Animal Science
Equine Science

Sustainable Agriculture
CIS Animal Science
Natural Resources

COLLEGE COURSES AT AFSA

1. UMN College in the Schools program: Website: <http://cce.umn.edu/college-in-the-schools> CIS courses are University of Minnesota courses that are offered at AFSA. CIS classes are open to qualified students in grades 10-12, as determined by the UMN guidelines. To qualify, students need to meet eligibility requirements set by each department, including course prerequisites.
 - a. Composition: University Writing (WRIT 1301)
 - b. Introduction to Literature: Poetry, Drama, Narrative (ENGL 1001W)
 - c. CSE Calculus 1 (MATH 1371)
 - d. Introduction to Animal Science (ANSC 1101)
 - e. Political Science: American Democracy in a Changing World (POL 1001)
 - f. Creative Problem Solving (DES 1111)
2. Southwest Minnesota State University's College Now program: Website: <http://www.smsu.edu/academics/collegenow>
 - g. General Chemistry - Completed High School Chemistry and completed Algebra 2.

CIS and College Now Courses that will be offered during the **2023-2024** school year:

- CIS Calculus (4 college credits)
- CIS Literature (4 college credits)
- CIS Animal Science (4 college credits)
- CIS Problem Solving (3 college credits)

POSTSECONDARY ENROLLMENT OPTIONS

Postsecondary Enrollment Options (PSEO) is a program that allows some 10th, and qualified 11th- and 12th-grade students to earn both high school and college credit while still in high school, through enrollment in and successful completion of college-level, nonsectarian courses at eligible participating postsecondary institutions.

AFSA offers PSEO courses at AFSA from the University of Minnesota (UMN) and Southwest Minnesota State University (SMSU). PSEO courses are also offered on the campus of the postsecondary institution; some courses are offered online. Each participating college or university sets its own requirements for enrollment into the PSEO courses. Eleventh and 12th-grade students may take PSEO courses on a full- or part-time basis; 10th graders may take one career/technical PSEO course. If they earn at least a grade C in that class, they may take additional PSEO courses. Exceptional 9th and 10th grade students are able to take certain CIS classes.

There is no charge to students for tuition, books, or fees for items that are required to participate in a course. Students must meet the PSEO residency and eligibility requirements and abide by participation limits specified in Minnesota Statutes, section 124D.09. If a school district determines a pupil is not on track to graduate, she/he may continue to participate in PSEO. Funds are available to help pay transportation expenses for qualifying students to participate in PSEO courses on college campuses.

Schools must provide information to all students in grades 8-11 and their families by March 1, every year.

Students must notify their school by May 30 if they want to participate in PSEO for the following school year. For current information about the PSEO program, [visit the Minnesota Department of Education's Postsecondary Enrollment Options \(PSEO\) webpage.](#)

If students are interested in taking PSEO classes on a college or university's campus, it is recommended that students take CIS courses at AFSA during their junior year and then take PSEO courses through their preferred college or university as a senior. Students enrolling in PSEO on a college or university's campus must be making adequate progress towards graduation and must meet all graduation requirements as set by AFSA. All students enrolled at AFSA must be working towards the AFSA Honors Diploma.

When students are accepted into a PSEO program, they are making a commitment to abide by the rules of the postsecondary institution they are attending as well as the rules of AFSA. Students are expected to enroll as a full-time student (can be part-time at AFSA and part-time at college), attend all classes, participate, and maintain satisfactory progress. The postsecondary credits students earn will apply towards graduation requirements at AFSA High School and become part of their official college transcript.

PSEO (cont.)

Important to remember:

- Students are responsible for contacting the postsecondary institution they are planning to attend and obtain and complete application materials.
- Students must make sure they are taking the required courses towards AFSA graduation requirements. These requirements will not automatically match what the postsecondary institution requires, so students need to check credit requirements on a regular basis..
- Students taking PSEO classes must fulfill AFSA requirements every year: Science Fair, 3 presentations, 12 hours of community service, and a final senior portfolio.
- Students participating in PSEO have the option to participate in AFSA extra-curricular activities.
- Students who will miss class time at AFSA must develop a graduation plan.
- Students must provide a PSEO schedule to AFSA.
- Students are responsible for checking with the Registrar's office and requesting a transcript be sent to AFSA at the end of each quarter or semester. Post-secondary institutions do not automatically send them (if AFSA does not receive the final PSEO transcript prior to graduation, the student’s diploma will not be issued until the transcript is received.)

GRADING

The following grading scales have been approved and adopted.
All classes in grades 7-12 will use the traditional (A- F) letter grading system.

AFSA 7-12 Courses Grading Scale		CIS and College Now Grading Scale	
100%	A+	A+	100%
93% - 99%	A	A	93%-99%
90%-92%	A-	A-	90%-92%
88 - 89%	B+	B+	87%-89%
83%-87%	B	B	80%-86%
80%-82%	B-	B-	78%-79%
78%-79%	C+	C+	74%-77%
73%-77%	C	C	67%-73%
70%-72%	C-	C-	65%-66%
68%-69%	D+	D+	61%-64%
63%-67%	D	D	54%-60%
60% - 62%	D-	D-	52%-53%
59% and below	F	F	52 % and below

SCHEDULE PLANNING SHEET FOR GRADES 7-12

- Each year, a student may take up to 15 classes (five classes each of the three trimesters) and must participate in O-term and J-Term.
- Students must take Language Arts, Math, Science, Agriscience, and Social Studies each year; other classes can be taken as they are available and fit into the schedule (courses in grey are already filled in.)
- Check the course descriptions to see how many trimesters each class is. Each trimester is worth .5 credits unless otherwise noted.
- This is not a registration form or class schedule, this is for student reference only. The class periods vary from year-to-year and trimester-to-trimester.

Classes	7th/8th Grade	9th Grade	10th Grade	11th Grade	12th Grade
Trimester 1					
Class 1	Exploring Lit & Comp	Biology	Math	Math:	Math:
Class 2	Math	Essence of English	English:	English:	English:
Class 3	Exploring Science	Math	Ag:	Ag:	Ag:
Class 4	Art	Introduction to Agriculture	Science:	Science	Science:
Class 5	Exploring Spanish	Lifelong Leaders	History:	History:	Geography or Elective:
O-term	TBD	TBD	TBD	TBD	TBD
Trimester 2					
Class 1	Exploring Lit & Comp	Biology	Math	Math	Math:
Class 2	Math	Essence of English	English:	English:	English:
Class 3	Exploring Science	Math	Ag:	Ag:	Ag:
Class 4	Exploring History & Culture	Spanish	History	History	Science:
Class 5	Exploring Agriculture	Citizenship/ Government	Physical Education	P.E. or Health	Economics or Elective:
Trimester 3					
Class 1	Exploring Lit & Comp	Biology	Math:	Math:	Math:
Class 2	Math	Essence of English	Spanish	Science:	Economics or Elective:
Class 3	Exploring Science	Math	Science:	Spanish:	Geography or Elective:
Class 4	Exploring History & Culture	Citizenship/ Government	Elective:	P.E. or Health	Elective:
Class 5	Exploring Health & PE	Spanish	Elective:	Elective:	Elective:
J-Term	TBD	TBD	TBD	TBD	TBD

2023-2023 7-8 GRADE COURSE LOOPING

Middle school level courses are taught in two year loops at AFSA. Our 7th and 8th grade students will have the same advisory teacher for 2 years, allowing growth and skill development to be tracked over a longer term and relationships to be a solid foundation for learning.

7th and 8th grade standards are taught in two year loops, with half of the standards for each content area being addressed in Year A and the second half of the 7th/8th grade standards addressed in Year B. This allows students in 7th and 8th grade to be placed in class groupings together based on appropriateness of the course level and individual student ability rather than grade level alone. At the end of the two year looping period 8th grade students will enter high school having learned all of the standards needed to ensure their success.

Year A	Year B
Discovering Life & Environmental Science Discovering Literature & Composition CPM CC1-CC3 Math Ag: Discovering Agriculture Discovering US History Art, Theatre, Spanish, PE, & Health	Exploring Physical & Earth Science Exploring Literature & Composition CPM CC2-CCA Math Ag: Exploring FFA Exploring World History & Cultures Art, Theatre, Spanish, PE, & Health

2023-2024 COURSE DESCRIPTIONS GRADES 7-8

AgriScience Department

Students complete a Supervised Agricultural Experience (SAE) project in each agriscience class they take.

Discovering Agriculture – 1 trimester

Students will be introduced to a variety of agricultural topics including: What is Agriculture and Why is it important History of Agriculture, Figures in Minnesota Agriculture, Global Agriculture, Horticulture, Animal Science, and the FFA. The course is designed to allow students to explore a broad range of topics for future study.

Exploring Careers and the FFA – 1 trimester

This course is the foundation from which all other agriculture courses are based. Students will discover the importance of agriculture in everyday life, historical significance, and career opportunities. Students will spend significant time learning about the National FFA Organization. This will benefit all students, as it will focus on their potential to develop leadership skills. Students will also gain skills in basic record keeping through the introduction of the Supervised Agricultural Experience (SAE) Program.

Creative Arts Department

Discovering Music – 1 trimester

Students will expand their knowledge of music and experience an in-depth study into commercial/movie/television music, world music, the history of jazz, and also the history of rock 'n roll. Focus is upon listening and the appreciation of all kinds of music.

Discovering Theater – 1 trimester

This course is designed to help students develop an appreciation of the art form by understanding the relationship of theatre to society and diverse cultures. Students become familiar with components of stage art including play-writing, acting, directing, and design through practical experiences and viewing of live productions and films. Students will be prepared for greater enjoyment of theatre by developing a more critical eye for the many facets of the art form.

Language Arts Department

Discovering Literature and Composition – 3 trimesters

Students in this year-long class will read a variety of fiction and non-fiction materials in the forms of articles, biographies, drama, essays, novels, poems, and short stories and investigate the qualities that make good writing and literature. An emphasis on multi-cultural texts will be presented. In addition to reading texts, students will also continue developing their writing skills by completing a variety of traditional and multi-media writing assignments that will use research, critical thinking, and analytical, persuasive, and conventional writing skills. As students complete reading and writing assignments they will work on team building and goal setting, preparing them for additional opportunities at AFSA.

Exploring Literature and Composition – 3 trimesters

During this year-long course, students will continue developing the reading, writing, listening and speaking skills they have already learned. Throughout the school year, students will complete a variety of assignments related to specific reading, writing listening and speaking skills. These assignments will help students refine what they know and provide them with opportunities to practice new skills that they learn in research, critical thinking, collaborative learning while exploring text and writing.

Science Department

Discovering Science: Life and Environmental Science – 3 trimesters

The course is designed to give students the necessary skills for a smooth transition from elementary life science standards to high school biology standards. The purpose is to give all students an overview of common strands in life science including, but not limited to, diversity of living organisms, structure and function of cells, heredity, ecosystems, and biological evolution.

Exploring Science: Earth and Physical Science – 3 trimesters

Trimester 1 –Scientific Processes and Procedures: This section is an introduction to the process of scientific thought. Experimental design, science as a process and the role of science in our history and future will be discussed. Students will work to complete an original science fair project.

Trimester 2 – Physical Science: This section is an introduction to the physical sciences. Students will utilize scientific processes to explore the physical environment and natural phenomena.

Trimester 3 –Earth Science: This section applies concepts of physical science to explain major processes of the earth and the universe.

Social Studies Department

Discovering United States History and Economics – 2 trimesters

This course introduces the key people and events in the five eras of United States History. Era 1 will cover European discovery of the Americas through the Revolutionary War. The second era will begin with the westward expansion of the U.S. and conclude with the Civil War and Reconstruction. Between eras 1 and 2 there will be a mini unit introducing the structure of the United States Constitution and the roles of the three branches. Era 3 is an overview of the Gilded Age and World War I. Era 4 will begin with the Great Depression and conclude with World War II. The final era will cover U.S. history from the end of World War II to Modern Day. The course will end with a unit introducing the key concepts of micro and macro-economics.

Exploring the Development of World History & Cultures – 2 trimesters

This course introduces the key people and events in the seven units of World History. Unit 1 explores the development of early societies, economic systems, and agriculture. Unit 2 examines classical traditions, belief systems and giant empires. Units 3 & 4 explore the post-classical and medieval civilizations and expanding zones of exchange to create the first global age. Unit 5 explores

the emergence of the age of revolutions with specific focus on the causes and effects of changes in government and economic theory. Unit 6 focuses on the half century of crisis and achievement at the turn of the twentieth century. Finally, unit 7 will focus on the new global era with specific focus on issues of unity, resources distribution, and population with regards to modern economics and government. The class will also examine the geopolitical factors and resources of each region as well as the development of different forms of government.

World Language Department

Spanish Culture Connections – 1 trimester

Students will gain a knowledge and understanding of other cultures, and will develop insight into the nature of language and culture. Students will continue to develop beginner language speaking skills. In this level, students will also reinforce and further their knowledge of other disciplines through the Spanish language.

Exploring Spanish – 1 trimester

Students will continue to build on their basic language skills. Students will acquire language through music, authentic materials and acting out skits. They will continue building the foundation of their conversational skills and develop writing skills through practical writing assignments. They will draw comparisons and make connections with the Spanish speaking world. They will demonstrate their language proficiency through verbal assessments and projects.

Mathematics Department

Mathematical Connections- 3 trimesters

This course is structured around problems and investigations that build conceptual understanding of these topics and an awareness of connections between different ideas. Students are encouraged to investigate concepts, communicate their thinking and generalize. Lessons are structured for students to collaborate actively by working in study teams. During class time, students work in study teams on challenging problems that introduce new material. The teacher provides guidance as needed and helps to consolidate topics.

Discovering Mathematics – 3 trimesters

This course helps students to develop multiple strategies to solve problems and to recognize the connections between concepts. Some strategies students will be able to remember and apply are : Analyze data, model integers and operations, compute area and perimeter, use linear models and equal ratios, solve percent problems, compare ratios, calculate unit rates and slope ratios, use the triangle inequality and the Pythagorean theorem.

Algebra 1 – 3 trimesters

This course will prepare students for higher-level mathematics courses and gives the background to utilize more advanced algebra in their everyday lives. The specific topics include: linear relationships, quadratics, inequalities, simplifying and solving, as well as functions and relations. This course will stress not only key mathematical skills, but also the importance of problem solving, reasoning, critical thinking, and teamwork. Students will solve, analyze, and critique other students ideas as they work together to develop mathematical thought.

Geometry – 3 trimesters

Geometry is a fun and hands on class. Students will use their established computation and algebra skills to investigate shapes, including their transformations, angles, and areas. We will also explore topics such as Pythagorean Theorem, similarity and congruence, probability, trig functions, and many more. Prerequisite: Alg I

Physical Education Department

Exploring Health & Physical Fitness – 1 trimester

Students study a variety of individual, dual, team and recreational sports concentrating on skills and rules involved in each activity. Units include physical fitness, volleyball, soccer, basketball, floor hockey, softball and recreational games. Emphasis in class is on the development of mental, social and physical learning through movement. This course includes a health component covering topics on nutrition, human sexuality, first aid, bus safety, tobacco, and physical fitness. Correlations are made with each topic and its relationship toward maintaining a healthy lifestyle.

Terms

O-term - .25 credits - 1 week in October

J-term - .25 credits - 1 week in June

Students will select their O-term or J-term activity from a list of 12-16 choices planned by AFSA staff members. Some options will involve out-of-town travel and overnight stays; some will be in-town only. Some selections have additional costs for transportation, materials or supplies, some have no additional fees. Scholarships are available to help with the cost. The purpose of term activities is to foster the development of student friendships and a positive school climate, provide experiential learning activities and to offer students the chance to do something they have never done before. All students are required to participate in an O-term and J-term activity. Parent signatures are required to enroll in terms.

2023-2024 COURSE OFFERINGS GRADES 9-12

The following courses are offered at AFSA for the 2023-2024 school year. All classes at AFSA are taught by highly qualified teachers licensed in their subject area by the State of Minnesota.

AgriScience Department

Students complete a Supervised Agricultural Experience (SAE) project in each agriscience class they take. SAEs are projects or work experiences that students participate in and keep records on for approximately 10 hours. Examples include taking care of a garden, caring for a pet, building bird houses, helping with home remodeling, working at a job and more.

Introduction to Agriculture – 1 trimester –required for 9th grade

Are you ready to experience something new? Explore the five agricultural pathways offered at the school through this required course. Students will receive a basic overview of all areas of agriculture including animal science, plant science, environmental science, food science, and ag mechanics/engineering. Course topics include the preparation and delivery of effective speeches and presentations, using parliamentary procedure to run efficient meetings, and writing emails and letters.

Fundamental Work Skills - 1 trimester

Fundamental Work Skills will be focused on learning important skills in order to prepare for and obtain a job and career. We will also be touching on all the Agricultural Food and Natural Resources (AFNR) pathways including: Agriculture Business Systems Pathway, Animal Systems Pathway, Biotechnology Systems Pathway, Food Products and Processing Systems Pathway, Natural Resource and Environmental Service Systems Pathway, Plant Systems Pathway and Power, Structural and Technical Systems Pathway. This class is a great class to take for students interested in Work-based Learning.

Work-based Learning – 1 trimester

The Work-Based Learning class is designed to give students the tools and skills they need to pursue a career of their choosing while giving them real life work experience at a job placement. Students must find a job that they will get paid for performing. Work-Based Learning gives students the unique opportunity to get high school credit and a grade outside of the traditional classroom.

Capstone Class - 1 trimester

Students will work on an independent agriculture project that is guided and supported by an agriculture teacher. This class is great for students who are working toward an FFA degree, proficiency, or who want to take their agricultural learning to the next level.

Animal Science Courses

Vet Science - 1 trimester

This course will investigate scientific concepts relating to the care of animals. Students will study the nutrition, safety, training, health, and general care of companion animals. The course will focus on dogs, cats, rabbits, birds, reptiles, and fish. Laboratory activities will provide opportunities for problem-solving through practical applications to learn scientific concepts. Application to current issues will also be explored.

Large Animal Science- 1 trimester

Click, Clack, Moo is a common story book many of us probably grew up on, but what do we really know about the cows that say moo? In this course, we will learn all about cattle, swine, sheep and goats; what common breeds are, where these animals originated, about their diets, and their bodies. We will learn that brown cows don't produce chocolate milk, that pigs really aren't pink, and that sheep and goats aren't really all fluffy. At the end of this course, you might be saying , click, cack,, moo, oink, and ball.

CIS Animal Science – 2 trimesters (UMN: Animal Science 1101) This course emphasizes genetics, physiology and nutrition. This course includes a study of production systems relative to the horse, dairy, sheep, poultry, swine and beef industries. Additional topics include people's relationship to animals, current issues and future perspectives of animal agriculture. Students will experience laboratories at the University of Minnesota relating to Animal Science. Prerequisite: Juniors or Seniors, (top 50% of class or instructor approval)..

Environmental Science Courses

Fish & Wildlife - 1 trimester

Lions and tigers and bears, oh my! In this class, you will explore Minnesota's fish, wildlife, and bird populations. You will notice the wildlife in our own backyard as you put your boots to the ground to see what wildlife call the wooded and wet areas around AFSA's home. If hunting and fishing are something you like, learn more about these hobbies and up your game for the upcoming season!

Natural Resources – 1 trimester

As the world population continues to grow, the strain on the earth's natural resources continues to multiply. Students in this course will study the consumption of food, energy, minerals, wood and other raw materials by countries around the world, as well as understand the processes used to extract these resources from the Earth. Emphasis will be placed on discussion of current environmental topics such as global warming, pollution, population growth, biodiversity, and deforestation.

Food Science Courses

Food Science - 1 trimester

There is so much to discover when talking about food. Food science will involve learning the history of the food industry, exploring the food supply in the world, and how science is involved in causing food products to look, taste, feel, and smell the way they do.

Food Processing – 1 trimester

A way to a person's heart is through their stomach. Knowing about how food is cooked and processed is an important part of cooking and eating food. In this class, you will work in teams to learn about food preservation and processing and work to develop your own new food product to compete with others in the class. Don't worry about coming to class on an empty stomach, taste testing is allowed!

Mechanical Sciences Courses

Construction – 1 trimester - may be additional materials fee, depending on student projects

Become a handyman or woman by learning about various construction materials and applications. Safety comes first in the shop, so you will start off by learning the proper way to handle tools, work with large equipment and get the job done. Experiences could relate to: wood, concrete, and/or electrical.

Metals & Welding - 1 trimester - \$25 materials fee

Metals and Welding class introduces students to one of the most exciting and lucrative career skills offered at AFSA. Students will become familiar with gas and plasma cutting, brazing, arc welding, wire feed welding and TIG welding. Whether a student is interested in metal art, engineering, or project construction this class will provide an excellent introduction to the world of welding and metal fabrication.

Engineering & Robotics - 1 trimester In this course, students take on the roles of mechanical engineers, computer scientists and electrical engineers. Through step-by-step activities covering robot assembly and programming, teams learn to build and program a competitive robot for both autonomous and operator control. Activities enable teams to understand and apply the concepts of encoders, ultrasonic, line followers and PID control.

Plant Science Courses

Floriculture - 1 trimester may be additional materials fee, depending on student projects

Through this course, students will be able to further their studies in plant science while learning useful skills that can be used throughout their life. Students will be exposed to the principles of floral design while they are creating their own floral masterpieces including boutonnieres, corsages, table arrangements, and holiday decorations. In addition, students will learn how to grow and handle potted plants, bedding plants, and cut flowers and foliage.

Greenhouse Management - 1 trimester

Put your green thumb to the test as you learn to grow and care for plants in AFSA's greenhouse. This course is designed for students to learn about the characteristics of plants, get their hands dirty, and learn all about the greenhouse. Hands-on opportunities will include operating and managing the hydroponic system and the spring plant sale.

Landscape Management - 1 trimester

Landscapes are around us whether it is in our front yards, the parks we walk through or in front of our school. In this course, learn the art and technique of designing and installing landscapes. This hands-on course will allow us to get our hands dirty as we work with plants, hardscape materials, or are busy working up a plan!

Creative Arts Department

2D Art Design - 1 trimester - \$25 materials fee

2D Art Design is a studio project-orientated class exploring different media areas of 2-Dimensional design. The emphasis of this course is to expose students to 2D art mediums and to build their creative skills through the elements and principles of design. Students will discover the connections between drawing, other arts, disciplines, and the human condition as sources of inspiration for making art. Projects may include: Abstract Drawing, Perspective Drawing, Portrait Drawing, Collage, Charcoal, Optical Art, Pastel Drawing, Scratchboard, and painting art some of the projects that could be covered

3D Art Design- 1 trimester - \$25 materials fee

3D Art Design is a studio project-orientated class exploring different media areas of 3-Dimensional design. The emphasis of this course is to expose students to 3D art mediums and to build their creative skills through the elements and principles of design. These projects will be mostly sculptural based for 3D work. Projects may include: Ceramic projects, Cardboard creation, soap carving, Duct Tape, Cardboard Shoe design, and recycled art.

Music Appreciation - 1 trimester

This class is designed to give students a basic understanding of music and to inspire an appreciation for music from a variety of genres and cultures. We will explore music from a variety of cultures and countries, including Indonesia, India, Ireland, China, West Africa, and the Middle East. Students will demonstrate their knowledge through various hands-on activities, including bucket drumming.

Music Fundamentals - 1 trimester

This class is intended for students who are interested in learning about the technical side of music. Students will learn how to read music through the study of rhythm and pitches. We will apply our knowledge through playing bucket drums and other various instruments. We will also discuss chords and how to read chord symbols on a keyboard or stringed instrument.

Theater History - 1 Trimester

Intermediate Acting - 1 Trimester

Improv Acting - 1 Trimester

Technology Department

Yearbook - 1 trimester

Yearbook is a hands-on course where the students and teacher work closely together to produce AFSA High School's annual. If you enjoy graphic design, photography and writing, this is the perfect class for you. Plan to work hard but have fun while doing it. You'll learn the principles of good design, journalism writing techniques and other basics. You will also help choose the theme for the yearbook and incorporate it throughout. Students will learn many aspects of publication production as the yearbook is designed and produced. The yearbook is a workshop-based class that is taught in the computer lab. Be a part of a hard working group that brings AFSA's yearbook to life!

Graphic Design- 1 trimester - \$25 materials fee

In Graphic Design 1 students will get a thorough introduction to Adobe Illustrator and Photoshop. This is a studio project class that will explore design through computer programs. Visual design for communication is a focus for the course. Projects may include: Logo designs, Advertisement designs, photograph manipulation, and creation of graphics. Students will learn about and use different

resources on the Internet that can be used outside of the classroom. File management and organization will prepare the digital student for their future.

Programming – 1 trimester

Are you interested in computers? Do you want to learn a new language? Are you interested in coding in order to create the next big game? This course will teach a foundation to computer science and basic programming. Students will spend time in the classroom discussing computer science as well as individual time in the computer lab to practice programming. No prior programming knowledge is needed.

Language Arts Department

Composition: The Art of Essay – 1 trimester

This course focuses on developing and refining essay writing skills. While following the writing process, students will complete a variety of writing assignments (research essay, expository essay, persuasive essay, personal essay, etc.) and sharpen their writing skills. This course is recommended as a precursor for students who wish to take CIS Composition their junior or senior year.

Land in Literature – 1 trimester

This course will examine how the land and nature are depicted in literature. We will read a wide variety of texts that examine how the natural world has been imagined and portrayed. We will write fiction, as well as nonfiction, that incorporates what we learn. Texts we will study include fiction, nonfiction, poems, films, etc. The goal of this class is to develop and enhance students' abilities as literary and cultural critics, and as writers.

Mythology - 1 trimester

Students will read and analyze several myths from around the world while learning about prominent Greek, Roman and modern mythological figures. They will further their understanding of the stories and figures through reading multiple versions of the stories as well as scholarly interpretations of the stories and figures. This is an excellent course for those interested in furthering their knowledge of mythological references in other stories.

Teen Literature - 1 trimester

This course features novels about real-life teen issues told from the point of view of teens. While reading these novels, students will complete research and discuss their ideas about many of the topics presented in the novels.

Writing for the Professional World – 1 trimester

Students will learn and practice formal writing used in the business world. As students write memos, letters, resumes, personal statements, emails, instruction manuals and other professional materials, they will also look at professional samples and give feedback to one another. In addition, students will learn technical writing guidelines, and strategies for keeping their own writing clear and concise.

Creative Writing - 1 trimester

Students in this course will complete their own poems, stories and dramas (plays). As students complete writing workshops with their peers, they will study works by published authors. By the end of the trimester, students will have completed a variety of writing to be placed in a final portfolio that will demonstrate their growth as writers.

College in the Schools Literature - 2 trimesters (4 college credits through UMN: ENGL 1001W)

Introduction to Literature: Poetry, Drama, Narrative. Basic techniques for analyzing/understanding literature. Readings of novels, short stories, poems, plays Would you like to discuss excellent classical and modern fiction with people who love to read? Would you like to learn in a collegiate environment and earn college credit for it? If you are ready to work hard and think deeply then CIS Literature is for you. Prerequisite: Must be a Junior or Senior with instructor recommendation.

Media Studies - 1 trimester

Throughout the trimester this course will look at the many forms of media: film, radio, internet, advertising, periodicals, news sources, and television. Given how pervasive media is in the lives of students now, they will build the critical thinking skills required to analyze the effect media has on their lives. Students will also develop skills to make them savvy and responsible digital citizens.

World Literature – 1 trimester

In this course, students will study a variety of literary works from diverse cultures and authors. Students will work to understand the wide array of traditions, perspectives and cultures that are represented in course texts and apply this understanding to critique, analysis and discussion. Students will work to develop a global perspective as well as understand their place in our diverse and complex world.

The Story Within: Creative Nonfiction – 1 trimester

Students in this course will read and write a variety of creative non-fiction texts based on actual events and people. As students complete their own creative nonfiction works (biography, memoir, profile, nature writing, etc.), they will also study samples of creative nonfiction writing. By the end of the trimester, students will have a body of *work that will demonstrate their growth as writers*.

Mathematics Department

****Placement Test:** All incoming students will take a placement test during their class registration. The results of the placement test will determine which math class they will start in.

Linear Algebra– 3 trimesters

In this course students will use problem-solving strategies, as well as questioning, investigating, and analyzing skills. They will be asked to gather and construct evidence and communicate rigorous arguments justifying their thinking. Students will learn in collaboration with others while sharing information, expertise, and ideas. The course helps students to develop multiple strategies to solve problems and to recognize the connections between concepts. Topics include: representing a linear function with a graph, table, rule, and context, solving two variable equations, collecting and analyzing data and make predictions, and an introduction to some geometry topics.

Algebra 1 – 3 trimesters

This course will prepare students for higher-level mathematics courses and gives the background to utilize more advanced algebra in their everyday lives. The specific topics include: linear relationships, quadratics, inequalities, simplifying and solving, as well as functions and relations. This course will stress not only key mathematical skills, but also the importance of problem solving, reasoning, critical thinking, and teamwork. Students will solve, analyze, and critique other students ideas as they work together to develop mathematical thought.

Geometry – 3 trimesters

This course will prepare students for higher-level mathematics courses and gives the background to utilize Geometry concepts in their everyday lives. Students will use their established computation and algebra skills to investigate shapes, including their transformations, angles, and areas. We will also explore topics such as Pythagorean Theorem, similarity and congruence, probability, trig functions, proofs, and many more. Scientific calculators are highly utilized in Geometry and the prerequisite is Algebra 1.

Algebra 2 – 3 trimesters

Numbers are all around us – in data, in patterns and in relationships. From the simplest patterns to more complex function relations, you will build your knowledge of linear, power, exponential and logarithmic functions and even experience transforming them. Along with working with equations and graphs, you will also learn to apply the many tools you obtain. Prerequisites: Algebra I and Geometry

Pre-Calculus– 3 trimesters

This course provides the base for college calculus. Students will explore advanced math topics as well as have the opportunity to share their understanding with others through the use of challenging teamwork sets. Topics include elementary and trigonometric functions, exponentials and logarithms, limits, area under a curve, college algebra, average and instantaneous rates of change, vectors and parametric equations. Prerequisites: Geometry, Algebra 2.

Integrated Mathematics – 3 trimesters

Integrated Math is designed to prepare students for higher-level mathematics courses and give them background to utilize more advanced math in their everyday lives. The specific topics include: functions, transformations, modeling two-variable data, sequence,

systems of equations, and inequalities. This course will stress not only key mathematical skills, but also the importance of problem solving, reasoning, critical thinking, and teamwork. Students will solve, analyze, and critique other students' ideas as they work together to develop mathematical thought.

CIS Calculus – 3 trimesters (4 college credits through UMN: Math 1371)

This course covers college calculus I and students may earn 4 credits through the University of Minnesota. Topics include differentiation and integration of single-variable functions. Applications include: max-min, related rates, area, curve-sketching. The course will emphasize the use of calculators and cooperative learning. Textbook: *Stewart, Single Variable Calculus Early Transcendentals, 6th Ed.* Prerequisites: grade of A or A- in Trigonometry and Advanced Mathematical Analysis or instructor consent.

Physical Education Department

Group and Personal Fitness - 1 trimester - fulfills P.E. Requirement

Students will acquire the basic knowledge about how to become fit and why it is important in a fun group setting. Instruction will focus on the components of fitness and how they contribute to optimal health. Principles of strength training and elements of cardiovascular health will be incorporated through group activities such as Kickboxing, Crossfit style workouts, Zumba, and Circuit Training. This is a great off-season or in-season conditioning program that can be done during school for many of our students with multiple after-school commitments. Any student wishing to improve their fitness levels would benefit from this course.

Team Sports and Activities (Fall, Winter, and Spring) - 1 trimester each- fulfills P.E. Requirement

Team Sports and Activities provides students with the opportunity to experience a variety of team sports and other activities you can participate in as a group. Activities may include flag football, soccer, volleyball, ultimate games, yoga, speedball, basketball, pilates, floor hockey, dance, and lacrosse. Content includes a comparison of various field invasion games examining strategies, proper sportsmanship, refereeing, rules, and skills. This class is designed for the competitive student.

Comprehensive Health - 1 trimester - fulfills Health Requirement

This course is designed to help students obtain accurate information, develop lifelong positive attitudes and behaviors, and make wise decisions related to their personal health as well as the health of others. Central themes include personal responsibility for lifelong health, respect for and promotion of the health of others, understanding for the process of growth and development, and informed use of health-related information, products, and services.

Science Department

Biology I - 3 trimesters

This life science class will focus on the language of science and the scientific approach to knowing and understanding the Universe. Students will gain a broad understanding of science and relationships in nature, history, and society. The first half of the class will focus on ecology, cellular structure, function and reproduction. The second half of the class will focus on genetics, evolution, biodiversity and developmental biology.

Chemistry - 2 trimesters

This college preparatory class will focus on general topics in the Central Science: Chemistry. Topics covered and discussed include: matter, energy, types of changes, atomic structure, periodic table, elements, dimensional analysis, covalent and ionic bonding, nomenclature, types of reactions and equations, stoichiometry, intermolecular forces, gases, solutions, chemical equilibrium, acids and bases, and oxidation-reduction reactions.

Physics - 2 trimesters

Through projects, competitions, and problem solving students will explore forces, work and energy, and momentum. Students will develop a deep understanding for the interplay which exists between theoretical science and engineering as they explore how physics relates to the real world of cars, computers, and satellites. The relationship between mathematics and the natural Universe will be a substantial component of the course. Specific topics for the first half of the course will be one dimensional, and two-dimensional

motion, the Laws of Motion, momentum and collisions, and relativity. During the second half of the course students will explore electricity, magnetism, waves sound, and optics.

Environmental Chemistry – 2 trimesters

The natural physical environmental systems are studied. Alterations to environmental systems are caused by the use of energy and mineral resources. The use of these resources can lead to air pollution, water pollution and solid waste disposal. Solutions to these problems depend on the progress in science and technology, as well as political decisions and prevailing ethical value systems. Students will investigate several of these problems and their evolving solutions.

Environmental Science - 1 trimester

Is your water safe to drink? Worry about hotter climates, holes in the ozone layer, pesticide residues in food, and extinction of species? This course is designed to give the student a better scientific background for understanding the environment from a chemical viewpoint and do hands-on laboratory investigations to better appreciate the ecosystem in which we live.

Conceptual Physics – 2 trimesters

Through projects, and problem solving, students will explore Newton's Laws of Motion, momentum & collisions, rotational motion, electricity, and waves. Students will develop a deep, conceptual understanding of physics as they explore how physics relates to the real world.

Field Ecology - 1 trimester

This course will review major ecological concepts, identify the techniques used by ecologists, provide an overview of local and global environmental issues, and examine individual, group and governmental activities important for protecting natural ecosystems. A large portion of this class will be spent in the field, in varying weather conditions, for data collection and observation.

Social Studies Department

Lifelong Leaders - 1 trimester - 9th grade class

This course is one trimester and worth one-half credit. In this course students will develop those personal attributes necessary to be successful in and after high school. These skills include: constructing an argument, finding and assessing sources, identifying expected behavior in a range of scenarios, public speaking, and etiquette.

Civics: Citizenship-1 trimester

This class will focus on the rights and responsibilities of American citizens. The rights that will be central to our study is the right to vote, the right to run for office and the right to participate in the governmental process at different levels. Along with our rights we will be studying our responsibilities as well. Responsibilities will include things such as: voting, being an informed and involved citizen, and examining the needs of the greater community.

Civics: U.S. Government - 1 trimester

U.S. Government will focus on the Constitution and Bill of Rights. Students will examine, in detail, the roles of the legislative, executive and judicial branches. During our examination of the legislative branch we will discuss how a bill becomes a law and the role of members of Congress. While studying the executive branch, students will have an opportunity to study a president in depth and see how he fulfilled the roles prescribed by the Constitution. Finally, while learning about the Supreme Court, students will research cases that impacted our rights guaranteed by the Bill of Rights.

Economics - 1 trimester

Why is there world hunger or why is energy so expensive? How are natural resources distributed and how are wildlife populations managed? How does ethanol, or additional alternative uses for commodities, affect agriculture and food prices? Economics is the study of how people coordinate their wants and desires, given scarce resources and the decision-making mechanisms, social customs, and political realities of their societies. Decisions made by consumers, farmers, agricultural businesses, investors and the government

interact to determine the allocation of scarce resources. The basics of supply, demand, price determination, world trade, public policy, and the economics of food safety will all be covered in this course. The economics of day-to-day living, saving and investing for your future, and the use of the stock market will also be included in this course. These concepts will be taught using hands-on learning activities, market simulations, and interactive group scenarios.

U.S. History: Discovery through Reconstruction - 1 trimester

This course examines the underlying causes and effects of events through US History, broken into six eras. This trimester covers the first three eras. Era one addresses the European discovery of the Americas, the development of the English colonies, the declaring of independence and the resulting Revolutionary War. Topics in era two and three include the expansion of the United States, the Civil War and the following reconstruction.

U.S. History: Westward Expansion through Modern Day - 1 trimester

This trimester continues examination of the underlying causes and effects of key events in US History. The course continues the investigation of the final three Eras. We will begin with a study of the Gilded Age and World War I. Next, era four includes a study of the causes and effects of Great Depression and World War II. Finally, era six examines U.S. History post World War II. The themes that will be focused on include: the Cold War, the Civil Rights Movement, and the making of modern America.

World Geography - 1 trimester

The purpose of Geography is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences. They also learn about the methods and tools geographers use in their science and practice.

World History - 2 trimesters

The first half of the class will focus on the beginning of human existence in the Fertile Crescent and the birth of agriculture to the end of the Middle Ages in Europe, Asia, & Africa. The second half of the class begins with the Age of Exploration and concludes with the dawn of new millennium. Each week the class will focus on a unique time and region in world history. Students will study each region's history from the perspective of the people that live there as well as the American perspective. It is important to view many of the world events from other points of view so students are able to develop their own opinions of causes and effects of historical events. The study of each region will be developed through projects and hands-on learning.

World Language Department

Spanish I - 2 trimesters

In this class, students will build a foundation in language skills, including conversation, comprehension, cultural understanding, grammar, reading, and writing. During the year, Spanish I students will participate in various activities, like paired conversations, dialogues, and role-playing, as well as actively participate in conversations and write about their daily lives, personal interests, preferences, and feelings. Through reading and writing, students will increase their vocabulary and grammar skills, and their understanding of other cultures. Students will also participate in a variety of creative activities and projects utilizing the Spanish language.

Spanish II – 2 trimesters

In this language-intensive class, students will review and expand on the skills learned in Spanish I. During the year, Spanish II students will participate in various activities, like paired conversations, dialogues, and role-playing, as well as actively participate in conversations and write about a variety of themes. Through reading and writing, students will increase their vocabulary and grammar skills, and their understanding of other cultures. Students will also participate in a variety of creative activities and projects utilizing the Spanish language.

Additional courses

Supervised Agricultural Experience (by permission) - 1 trimester --Independent study-requires consent of instructor and school director

Students enrolled in this course will have the utmost input on course direction. Each student will submit a project proposal and timeline for completion. Students will work under the guidance of a teacher-facilitator in collaboration with community members, business representatives and other school-based personnel

Independent Study (by permission) - 1 trimester - All curriculum areas-requires permission from the school director

Students who wish to earn credit for an independent project will need to submit detailed plans for approval to the school director prior to the start of the trimester in which they wish to work independently. Juniors and Senior standing required.

Teacher Assistant/Tutoring (by permission)- .25 elective credits per trimester, requires permission of instructor and school director, grades 11, 12 only. - 1 trimester

Work closely with an AFSA staff person to prepare lessons, clean lab areas, correct papers and other duties to assist the educational process. Students will need to gain permission from instructor (instructor may sign the schedule planning form) prior to registering. Juniors and Senior standing required.

O-term - .25 credits - 1 week in October**J-term - .25 credits - 1 week in June**

Students will select their O-term or J-term activity from a list of 12-16 choices planned by AFSA staff members. Some options will involve out-of-town travel and overnight stays; some will be in-town only. Some selections have additional costs for transportation, materials or supplies, some have no additional fees. Scholarships are available to help with the cost. The purpose of term activities is to foster the development of student friendships and a positive school climate, provide experiential learning activities and to offer students the chance to do something they have never done before. All students are required to participate in an O-term and J-term activity. Parent signatures are required to enroll in terms.

Study Hall - no credit - 1 trimester

Students who need additional school time to work on assignments may have the option of signing up for study time. Students will need their advisor's permission or permission from school administration to register for this option.

****The courses listed below are not offered for the 2023-2024 school year, but may be offered in 2024-2025. AFSA rotates several courses in order to provide expanded curriculum choices for our students.***

Ag Structures - 1 trimester - may be additional materials fee, depending on student projects

This course will focus on electrical wiring, carpentry, arc welding, plumbing and small engines. Students will explore technologies commonly used in the industry of agriculture. Students will explore solutions to emerging technologies related to energy, power, bio-systems, and the environment. Students will utilize knowledge and skills they have developed to design and construct a project relating to agriculture. Students will be expected to develop a plan, write a bill of materials, follow accepted shop safety practices and procedures, and present a completed project. The projects can be wood, metal, welding, surveying, equipment maintenance, or other projects that are instructor approved. Some prior knowledge of tools and shop procedures is necessary.

Agriculture Communications and Technology - 1 trimester

Agricultural Communications is a course that focuses on identifying current issues affecting the agricultural industry both locally and nationally. We will concentrate on individual forms of communication and utilizing it for the betterment of a group. We will learn about all types of agricultural communications such as speech writing, discussions, presentations, marketing, salesmanship, etc. By the end of the course, students will have built an understanding of agriculture and be able to share that knowledge with others - increasing awareness and making an influence on the field of agriculture.

Food Microbiology - 1 trimester

Salmonella, *E. coli* 0157:H7, *Listeria*. Do these words sound familiar? Through this course, we will look at the safety of our country's food supply, and the laws put in place to ensure that our food supply is safe. Furthermore, students will study the biology and potential danger of different microorganisms that cause food borne illnesses in humans and spoilage in food products. As the global concern rises for the safety of the world food supply, this area of food science continues to grow and offer exciting career possibilities which will also be explored in this course!

Sustainable Agriculture – 1 trimester

This course helps students develop an understanding of sustainable agriculture by examining the environmental and human aspects of conventional and alternative agricultural practices. Included will be a study of the trends in the sustainable and organic food industry and the new technologies that drive them.

Introduction to Engineering - 1 trimester

Engineering is acquiring and applying scientific and technical knowledge to the design, analysis, and/or construction of works for practical purposes. Students will explore engineering fields, fabrication, power and will design and build models to represent the different areas being taught. Students will design a final project and create a model of that project.

Leadership - 1 trimester

This course is designed to give students a competitive advantage in the working world. This course will provide the student with valuable leadership and communication skills that a person will use in their everyday lives. During this course, a student will develop their own personal leadership portfolio (resume'), learn to develop their speaking skills, develop team-building skills and plan school and community activities. This course is recommended for students involved in student organizations in and out of school.

Companion Animals - 1 trimester

This course will investigate scientific concepts relating to the care of animals. Students will study the nutrition, safety, training, health, and general care of companion animals. The course will focus on dogs, cats, rabbits, birds, reptiles, and fish. Laboratory activities will provide opportunities for problem-solving through practical applications to learn scientific concepts. Application to current issues will also be explored.

Equine Science – 1 trimester

A survey of equine science, including equine evolution, breeds and breeding, selection and conformation, nutrition and feeding, facilities, handling, and health management. Students also will explore careers in the equine industry. Emphasis on sound management practices. For students exploring the equine industry as a career or in just having a horse as a hobby.

Nutrition- 1 trimester

In this introductory nutrition course, students will explore the newest frontiers in nutrition and learn how to apply nutrition principles to food choices. Solidly based on science, this course will help students understand how key nutrients (carbohydrates, lipids, proteins, amino acids, vitamins, water, and minerals) affect health, disease, energy balance, and weight control. Students will learn how nutrition needs change from infancy to adulthood and into the later years, and students will explore such global issues as food safety, food technology, and world hunger.

Small Engines - 1 trimester -\$25 materials fee

This course offers an intensive study of the operation, maintenance, and repair of small gasoline and diesel engines. Instructional topics include principles of operation of gasoline and diesel engines, tune-up and maintenance procedures, and disassembly, overhaul, and reassembly. Instruction may also include the operation of two cycle and four-cycle engines commonly found on lawn mowers, garden tractors, snow blowers, rotary tillers, chainsaws, and other equipment.

Classics for the College Bound: British Literature – 1 trimester

Through the study of classic and modern British texts, students will further their appreciation for challenging literature. While studying great British selections, students will also discover the origins of English literature and observe how it has evolved into many eras (Medieval, Elizabethan, Romantic). This course is an excellent choice for those interested in taking CIS Literature.

Science Fiction - 1 trimester

Science fiction investigates exciting stories with futuristic settings and concepts. The stories of Asimov, Rand, Crichton, Bradbury and others will reveal the imaginative possibilities of science. In addition, students will learn the elements of science fiction while exploring connections to historical and current events.

Journalism - 1 trimester

Throughout the trimester, students will learn to write and edit for journalistic style, all while learning about how a newspaper is run. Students will examine and critique sample articles and newspapers as models for their own journalistic writing. The news, editorial, and feature articles students write will be part of AFSA's newspaper!

World Mythology – 1 trimester

This course is designed to explore a variety of myths from various cultures including Egyptian, Norse, African, Far Eastern, and the Americas to name a few. Students will read, analyze, and respond to selected stories, novel excerpts, plays, movies, etc. Students will also gain academic and experiential knowledge of a variety of world cultures and arts. Work in this class will involve academic and creative papers as well as creative projects. This course is reading and writing intensive, and involves working with others. NOTE: This course does not include the Greek myths, as those are studied in the Mythology course.

Outcasts in Literature - 1 trimester

This course examines the stories of those who live outside conventional society, whether by choice or after exile. Students will discuss how outcasts cope with adversity, why we often admire outcasts, why we condemn them, and why they continue to intrigue us. Students will examine their own experiences with not fitting in and/or seeing others who do not fit in. Students will read a wide variety of texts, including several short stories by different authors. Additional media may also be used. Students will also do a wide variety of writing activities and other projects associated with the reading.

Math Modeling

This course covers the modeling process, a process that uses mathematics to represent, analyze, and make predictions to provide insight into real-world phenomena. Modeling is used in a variety of scientific disciplines and can be the foundation to help make informed decision. Models may include linear, polynomial, rational, exponential, and logarithmic functions. Students will have to use their mathematical background as well as writing skills to create a model and defend their choice to make decisions.

Statistics - 2 trimesters

While most of mathematics is based on universal truths ordained by nature, the applications of Statistics have been created primarily for their practical uses. In a world full of data, Statistics is becoming even more practical and hence, more important. This course is structured around investigations and problem solving. Students will explore concepts and develop mathematical relationships through observation and application. Lessons are designed to facilitate teamwork and encourage students to pose conjectures, justify solutions, and defend their thinking. Students will represent both quantitative and categorical data. We will represent experiments with normal and probability distributions. Students will also draw conclusions from sampling, categorical, and quantitative data. Prerequisite: Algebra 2

Chemistry of Life - 1 trimester

This course will dive into the chemical nature of life with emphasis on biological macromolecules such as proteins, nucleic acids, lipids, carbohydrates, and enzymes. We will also look at the processes that take advantage of these macromolecules such as metabolism and photosynthesis. If time permits, we may also touch on how humans have used these macromolecules to develop new technologies.

Art History - 1 trimester

Art History will provide an overview study of art history and basic art concepts. Students will examine a variety of aspects of art history including themes and purposes of art; styles of art; the elements of art; design principles; two-dimensional media; western and non-western art history. Art History course is a part of Fine-Arts subject, in which students will be given exposure to the community through museums, galleries and local artists.

Theater Production - 1 trimester

Exploring the world of a play. Students will work together to produce a play from start to finish. Students will either act in or be a member of the crew for a play production. Students will perform the play for the community.

Stage and Script - 1 trimester

Students analyse, create, and act from scripts that will be read or written in class. Different acting techniques will be explored along with creative playwriting.

Theater Design - 1 trimester

Students will practice creating different forms of theatrical designs. They will create sets, costumes, and lighting designs based on scripts or from original ideas.

Spanish III – 2 trimesters

Students will continue to build and improve on their written and verbal skills. Students will acquire vocabulary and grammar concepts through Spanish language media, such as newspapers and news broadcasts, and music. Students will also explore the agricultural practices and cultural customs of a Spanish-speaking country. Language proficiency will be demonstrated through presentations, papers, and their communication during field trips.

Spanish IV – 2 trimesters

In the culmination of their high school language study, students will hone and refine their communication skills. Authentic materials, such as books and newspapers, will be the primary resources. They will recognize and analyze perspectives unique to Spanish speaking cultures. Students will demonstrate their language skills by reading and analyzing literature, producing a formal written essay, and interacting with native Spanish speakers in real life situations. Students will explore local Spanish speaking communities and resources.

Worldwide Wellness - 1 trimester - fulfills elective

This course will introduce you to a variety of wellness practices, activities, and games from around the world.

Lifelong Recreational Activities - 1 trimester - fulfills P.E. Requirement

Lifelong Recreational Activities provides students with an opportunity to incorporate physical activity and life-long leisure experiences into their lifestyle through game play and practice. Focus units may include archery, badminton, golf, pickleball, tennis, volleyball, walking/jogging. Some team sports will be incorporated as non-competitive activities. Skills, common concepts, and safety of each lifelong activity will be presented and developed through practice and match play. Students of all skill and experience levels are encouraged to enroll in this course.

CIS Political Science - 1 trimester (3 college credits through UMN; POL 1001)

American Democracy in a Changing World - Introduction to politics and government in the United States. Constitutional origins and development, major institutions, parties, interest groups, elections, participation, public opinion. Ways of explaining politics and the nature of political science. Recent trends emphasized.

CIS Composition - 2 trimesters (4 college credits through UMN; WRIT 1301)

This course involves critical reading, writing, and thinking as students practice the types of academic writing they may expect in their college career, such as summaries, essays, academic arguments, bibliographies, and research papers. The course is designed to help students develop a clear thesis in a written paper and support that thesis with appropriate sources, evidence, and documentation. Time is spent discussing rhetorical elements of writing such as audience, purpose, and argumentative structure. In addition, students practice steps in the writing process such as invention, research, organization, drafting, revision, and editing. Students report, synthesize, and draw conclusions regarding the significance of what they read. Prerequisite: Must be a Junior or Senior with instructor recommendation.

College Now (CHEM 231) - General Chemistry - 2 trimesters (4 College Credits from SMSU)

First course in chemistry for students majoring in a science field. Topics include chemical and physical properties of matter, atomic and molecular structure, bonding, chemical notation, inorganic nomenclature, stoichiometry, and periodic laws.