

ROBBINSDALE ARMSTRONG HIGH SCHOOL

**10635 36th Avenue North
Plymouth, Minnesota 55441
763-504-8800 (main office)
763-504-8831 (fax) <http://ahs.rdale.org>**

PROGRAM OF STUDIES AND REGISTRATION GUIDE 2022-2023

Principal

Erick D. Norby
Erick_Norby@rdale.org

Assistant Principals

Cameron Opel
Cameron_Opel@rdale.org

Krista Range
Krista_Range@rdale.org

Robert Ware
Robert_Ware@rdale.org

Counselors

Arianna Crosby (12th grade)
Arianna_Crosby@rdale.org

Marilou Exner (9th grade)
Marilou_Exner@rdale.org

Antiwan Easley (9th grade)
Antiwan_Easley@rdale.org

Jamie Dukowitz (10th grade)
Jamie_Dukowitz@rdale.org

Melinda Vogel (11th grade)
Melinda_Vogel@rdale.org

Please call 763-504-8800 if you have any questions.

TABLE OF CONTENTS

General Registration Information for Students	3
Academic Support Services	9
Art	12
AVID (Advancement Via Individual Determination)	15
Business and Marketing Education	17
Design Engineering Technology	19
English / Communication / Language Arts	24
English Learners (EL)	28
Family & Consumer Science (FCS)	29
Health	31
Mathematics	32
Media	35
Music	36
Physical Education	41
Science	44
Social Studies	48
Theatre	52
World Languages and Cultures	53
"A" School (Armstrong Alternative Program)	55
Nondiscrimination Information	55
Hennepin Technical College Courses	56

GENERAL REGISTRATION INFORMATION FOR STUDENTS

MAKING CHOICES

Decision-making is a process that needs to be taken seriously. To make good decisions, it is important that you gather enough information and understand the guidelines within which you must operate. Staff at RAHS feel it is important that you do the following:

- Discuss your plans with parents, and/or guardians, counselors, teachers and anyone you know in the career you are considering.
- Be aware of required courses for the career and school you are considering.
- Participate in courses that will satisfy your current interests and curiosity, as well as develop your special skills and talents.
- Always keep graduation requirements, both state and local, in mind as you plan.
- Understand that you (the student) are responsible for completing the required courses and credits for graduation.

All courses are subject to availability based on course demand.

SPECIAL CLASS ASSIGNMENTS

Some students qualify for advanced placement, enriched/honors and special education classes. Counselors and teachers make recommendations for these classes. If you feel any are appropriate for you, please feel to discuss with your counselor.

PREREQUISITES

After course titles in the individual departments, prerequisites may be listed. Reasons may be: sequence courses, instructor approval, must be at a certain grade level. Some courses require you to have taken a course previous to enrollment in the one you are considering. For example, Spanish 3 cannot be taken before Spanish 2. Other courses indicate prerequisite and name the course that must have been taken. For example: AP Statistics I & II, Prerequisites: Complete Algebra II and Geometry.

COURSE REGISTRATION/DROP

Students register for the full school year in the early spring. They are required to take a minimum of six credits each semester or 12 for the year. Because registration directly influences the school's schedule, students will need to fulfill their requests unless the:

- * - student is misplaced in the class (determined by the teacher and/or counselor)
- * - student fails to meet prerequisites
- * - student with 13-14 credits elects to drop a course
 - student needs adjustment due to enrollment in postsecondary options
 - student has duplications, irresolvable schedule conflicts or a credit or course imbalance

*** Once the semester begins, changes are only made for the above reasons within the first five days. Students will have an opportunity to make changes prior to each semester.**

PASS/NO CREDIT

All required and elective courses are graded A to NC or I. However, **one elective single course per semester or one block class per year may be taken on a pass/fail basis per school year.** A "Pass" grade means a credit is awarded which has no effect on the grade point average. A "No Credit" grade means no credit is given and the "NC" counts 0.0 in the G.P.A. as a failed course. Students should always confer with the teacher to be clear about the class expectations for earning a "P" grade. Students should be aware that colleges sometimes look at P's negatively. **Please check with the individual college of your choice for their expectations. Students taking a class pass/no credit will not be eligible for an academic letter for the school year in which they take the class.**

A course taken as pass/no credit cannot be used to meet specific required credits. **A course taken as pass/no credit can only be used to meet the elective credit category.**

A student requesting to take a course P/NC must obtain a form, "Request for Pass-No Credit Basis," from the Guidance Office. It is the student's responsibility to obtain the required signatures and to return the form to the teacher for that class by Friday of the eighth week of the semester. P/NC status will not be granted after the stated deadline. At the end of the semester, the teacher notifies the data processing clerk of the student's P/NC status.

GENERAL REGISTRATION INFORMATION, continued

ADVANCED PLACEMENT (AP)

Advanced Placement, a program sponsored by the College Board, gives high school students the opportunity to take college-level courses in high school. Based on scores of AP Exams, given in May of each year, students may earn college credit, advanced placement in college, or both.

AP tests are scored on a 1-5 scale:

- 5 = extremely well qualified
- 4 = well qualified
- 3 = qualified
- 2 = possibly qualified
- 1 = no recommendation

Although each college determines its own policy for awarding AP credit, most colleges give advanced placement for scores of 3 or better and most also give credit for scores of 4 or 5.

Process for enrolling in AP classes:

Armstrong offers more than 20 AP courses. Any interested student must complete an AP Registration Form. Acceptance to an AP course is not guaranteed and some courses require prerequisite coursework.

Please note: *All students who enroll in AP courses may be required to : 1) do all summer work associated with a course, 2) acknowledge, along with a parent or guardian, they have made an informed decision regarding enrollment in AP course(s), and 3) understand that the expectation is that if a student commits to AP, he or she will not be able to drop the class.*

Timeline for enrollment in AP classes:

- First week of February

Note: *Sophomore students will only be allowed to register for one AP course (U.S. History or Biology). Special permission may be granted on an individual basis for a student to enroll in both.*

Explanation and Benefit of AP Courses

AP is a cafeteria program in which students can pick and choose which rigorous courses they would like to take. Students do not have to take a certain number of AP courses while at Armstrong nor do they need to have had experience in high-level courses at the middle school level. All students considering applying to college after their high school careers should strongly consider taking at least one AP course because research indicates that students who do so have significantly more success in college and have higher rates both in graduating from college and graduating from college in four years. Students may opt to take one AP course during high school, or they may choose to take up to nine or ten. **Typically we recommend strong students take one AP course during 10th grade, 2 during 11th grade, and 3 during 12th grade, but ultimately it is a decision the student and family must make together based on considering a student's skill level, work ethic, GPA goal, and time availability.**

AP courses require a significant amount of time outside of school for studying and students are typically successful with reading scores of 70% or higher, in the district standardized test, such as MAP or FAST. Students with lower reading scores absolutely may take AP courses but should plan for additional time to complete assignments and seek out additional support. For instance, a student with reading scores in the 75th percentile for reading may take AP courses during each academic year, while a student in the 40th percentile in reading might wait until senior year to take an AP course as an elective class, when it is less likely to influence their GPA or necessary credits to graduate.

Recognition by College Board for participation in Advanced Placement (AP) courses

Students may earn recognition from the College Board for their participation in AP courses and exams in many ways:

GENERAL REGISTRATION INFORMATION, continued

AP Scholar—Score of 3 or higher on 3 or more AP Exams

AP Scholar with Honor - Score of 3 or higher on 4 or more AP Exams with the average score for all AP Exams at 3.25 or higher

AP Scholar with Distinction—Score of 3 or higher on 5 or more AP Exams with the average score for all AP Exams at 3.5 or higher

National AP Scholar -Score of 4 or higher on 8 or more AP Exams with the average score for all AP Exams at 4 or higher

AP Capstone Diploma Program

This program signifies outstanding academic achievement and attainment of college-level academic and research skills. It is a rigorous research-based program that develops critical thinking skills, such as understanding multiple perspectives, researching a hypothesis and synthesizing an argument, and working with others to prepare and present information. Students may earn the AP Capstone Diploma or the AP Seminar and Research Certificate by completing the following requirements:

AP Capstone Diploma:

- AP Seminar I & II (English) (2 credits) (with score of 3 or higher)
 - Team Project and Presentation
 - Research-Based Essay & Presentation
 - End-of-Course Exam

- AP Research I & II (English) (2 credits) (with score of 3 or higher)
 - Research Process Documentation
 - Academic Thesis Paper (20+ pages)
 - Presentation & Oral Defense of Thesis to Academic Panel

- 4 Additional AP Courses & Exams of Student's choice (with scores of 3 or higher)

AP Seminar and Research Certificate:

- AP Seminar I & II (English) (2 credits) (with score of 3 or higher)
 - Team Project and Presentation
 - Research-Based Essay & Presentation
 - End-of-Course Exam

- AP Research I & II (English) (2 credits) (with score of 3 or higher)
 - Research Process Documentation
 - Academic Thesis Paper (20+ pages)
 - Presentation & Oral Defense of Thesis to Academic Panel

POST-SECONDARY ENROLLMENT OPTIONS ACT

The Post-Secondary Enrollment Options Act was signed into law as part of the 1985 Omnibus Education Aids Bill. It allows high school junior and senior students to attend a college, either full-time or part-time, at no cost to the student. Colleges carefully evaluate high school rank and test scores when considering high school students for enrollment. Generally, juniors must be in the top one-third of their class, while seniors must be in the top half. Tenth grade students are now eligible to enroll in one Career and Technical Education (CTE) course on a college campus through the PSEO program. If a student earns a C in the first semester, she/he can take more courses. Transportation funds are available for qualifying students based on financial need, who want to participate in PSEO. In order to be eligible, a 10th grade student must have taken the 8th grade MCA reading test in the 8th grade and have met the composite proficiency level of "meets or exceeds." Information about these options is available in the guidance office. Online PSEO courses are available.

ONLINE LEARNING AND CREDIT BY ASSESSMENT

Students in the Robbinsdale Area Schools have options for earning course credits during the regular school year and throughout the summer months including Online Learning and Credit by Assessment. Information about these options is available in the Guidance Office.

GENERAL REGISTRATION INFORMATION, continued

Credit by Assessment provides an opportunity for students who feel they have already met the course outcomes to demonstrate their knowledge and skills through a series of prepared assessments. Online learning allows students to earn course credits through an online learning provider as long as the provider has been approved by the Minnesota Department of Education. Online courses should be approved by the district 30 days before the start of the class.

BLENDED (HYBRID) COURSE INFORMATION

Robbinsdale Armstrong High School now offers blended courses. Blended courses, sometimes referred to as hybrid courses, combine the best parts of face-to-face instruction with the flexibility of rigorous online instruction.

What are blended courses?

Blended courses combine online learning with face-to-face instruction. Students do not meet in the classroom every day. For example, a blended course might meet on Monday, Wednesday and Friday, but not Tuesday and Thursday. The number of face-to-face meetings varies by course. Some course content will be delivered online using a learning system called Schoology. Many assignments are completed online.

Are blended courses easier or harder than other courses?

Blended courses offer the same challenge in a different format. The amount of time and work will be equal to the traditional course.

What are the benefits of blended courses?

Blended courses provide digital content and flexibility. This fits the learning style of some students better than traditional courses. Students learn in a format used frequently at colleges and work sites.

Should I take a blended course?

Successful students in blended courses have the following qualities/resources:

- I am self motivated and can work independently.
- I can read well and express myself clearly in writing.
- I am good at time management, especially online.
- My technology skill level is good, especially using the internet and troubleshooting.
- I have reliable internet access outside of school.

Armstrong High School: Which blended courses are available at my school?

Course Name (s)	Course Number(s)	Credits	Periods	Grade(s)
English 12 I & II (Blended)	1798-1799	2	1 or 7	12
Health (Blended)	5704	1	1 or 7	10
Physical Education (Blended)	6017	1	1 or 7	10-12

MAKING FINAL PLANS

It is recommended that students see counselors for final discussion of long-range goals and means to achieve these goals. It is very important to make wise choices now!

Registration will be **final** if there is adequate enrollment to offer all courses a student selects, if there is adequate space available in the courses chosen, and if a student continues to qualify for each course by completing the prerequisite course, if any, with a satisfactory grade. Be prepared to list alternative courses. **If students do not register on time, classes will be chosen for them.**

GRADUATION REQUIREMENTS

Please see your guidance counselor if you have questions regarding credits or graduation requirements.

GENERAL REGISTRATION INFORMATION, continued

Graduation Requirements

English	Electives 8 semester credits
Social Studies	8 semester credits (1 year each of Geography, U.S. History, World History; 1 semester each of Economics and Government)
Science	6 semester credits (1 year of Biology; 1 year of either Physics or Chemistry)
Mathematics	6 semester credits (must include Algebra II) 1 year
Physical Education	2 semester credits
Health	1 semester credit
Arts Education	2 semester credits (see list of Arts Education credits) below *
Electives	13 semester credits
	<hr/>
	46 total credits

District 281 Policy for Reporting Standardized Test Scores on Student Transcripts:

Students need to request that a copy of their ACT/SAT scores be sent to the school of their choice. These include optional college admission tests (ACT, SAT) and practice tests (PLAN, PSAT).

When applying to colleges, students should check to see if their colleges want an official ACT or SAT test score from the testing organization, American College Testing or The College Board. Some colleges want official score reports while others accept the scores from the high school transcript.

Arts Education Credits: *

7600 Drawing I	7740-7741 Varsity Vivace Choir I & II
7710 Drawing and Painting II	7840-7841 Varsity Vivace Choir/Concert Band I & II
7846 Drawing and Painting Seminar	7713-7714 Varsity Vivace Choir/Philharmonic Orchestra I & II
7601 Ceramics I (Clay)	7742-7743 Varsity Volo Choir I & II
7748 Ceramics II & III (Clay)	7842-7843 Varsity Volo Choir/Concert Band I & II
7646 Jewelry and Metalworking	7715-7716 Varsity Volo Choir/Philharmonic Orchestra I & II
7712 Mixed Media Art	7806-7807 Concert Choir I & II
7814 AP Studio Art 3D Design I	7844-7845 Cantori I & II
7815 AP Studio Art 3D Design II	7402-7403 Freshman Band I & II
7848 AP Studio Art 2D Design I	7808-7809 Concert Band I & II
7849 AP Studio Art 2D Design II	7444-7445 Freshman Band/Freshman Choir I & II
9005 Interior Design	7801-7802 Concert Band/Varsity Men's or Women's Choir & II
1704 Acting	7701-7702 Symphonic Band I & II
1746 Introduction to Theater: Theater Production	7452-7453 Freshman Orchestra I & II
1747 Introduction to Dance: A Universal Communication	7703-7704 Symphony Orchestra I & II
9641 Computer Graphic Design I	7705-7706 Philharmonic Orchestra I & II
9740 Computer Graphic Design II	7446-7447 Freshman Orchestra/Freshman Choir I & II
9642 Digital Photography	7707-7708 Philharmonic Orchestra/Varsity Volo or Vivace Choir I & II
9841 TV & Audio/Video Production	7804-7805 AP Music Theory I & II
7400-7401 Freshman Choir I & II	7746 Music Café
7442-7443 Freshman Choir/Freshman Orchestra I & II	
7440-7441 Freshman Choir/Freshman Band I & II	

GENERAL REGISTRATION INFORMATION, continued

ACT - Four tests are given in the areas of English, Math Reading and Science. Students receive four separate scores plus a composite score. Students are also encouraged to take the ACT plus writing test. Almost all colleges and universities in the United States accept the ACT. It is given on five dates throughout the year: October, December, February, April and June. Specific dates are listed at www.act.org. Please note that the registration deadlines for these tests are at least one month earlier than the test date. All juniors will take the ACT test at Armstrong.

PSAT/NMSQT (Preliminary Scholastic Assessment Test and National Merit Scholastic Qualifying Test) - Because this is the National Merit Scholarship Qualifying Test, academically superior juniors are encouraged to take the test. Those juniors in each state whose combined verbal, math and writing scores rank at the 99 percentile qualify for the next level of the National Merit competition. Those who rank from above the 98 percentile down to the 96 percentile receive a commendation, but do not continue in the Merit competition. This test is also for juniors who want to compete in the special scholarship programs for African American students. Academically superior sophomores may want to take the PSAT for practice; however, only PSAT scores taken in the junior year qualify for the National Merit Programs.

SAT I (Scholastic Aptitude Test) - This is a three-hour and 45-minute test that measures critical reading, mathematical reasoning, and writing skills. It is given on seven dates throughout the year: October, November, December, January, March, May and June. Specific dates are available in the guidance office; however, SAT I and SAT II *cannot* be taken on the same day. Please note that the registration deadlines for these tests are about one month earlier than the test date.

SAT II - These are one-hour tests measuring knowledge in specific subject areas. Some four-year colleges require three achievement tests, given the same dates as SAT. Tests are given in a variety of subject areas. Specific dates are available in the guidance office; however, SAT I and SAT II *cannot* be taken on the same day. Please note that the registration deadlines for these tests are about one month earlier than the test date.

AP (Advanced Placement Tests) - Most are three-hour examinations based on full-year college-level courses. A few are two-hour exams based on half-year college courses. Exams are given once a year in May. Currently Armstrong offers: Biology, Environmental Science, Calculus, Chemistry, English Language, English Literature, Government, Human Geography, Macroeconomics, Microeconomics, Music Theory, Physics, Psychology, Spanish Language, Spanish Literature, U.S. History, World History, Statistics, Computer Science A, and Seminar.

ARMSTRONG HIGH SCHOOL CAREER CENTER

The Career Center is available to help students prepare for their future. Services and resources available include: 1) College visits, 2) Assistance with college applications and financial aid, 3) Assistance with Naviance, and 4) ACT and SAT registration information. The Career Center is open Monday through Friday, from 7:15 a.m. to 2:30 p.m. Students and parents (or guardians) are invited to call the Guidance Office at 763-504-8819 for more information.

Naviance

Naviance is a program that assists counselors and students in managing the college and career planning process. Students are encouraged to utilize the Naviance website throughout their high school years. Go to <https://student.naviance.com/ra>, or go through the school website and click on the Guidance Office tab to access the Naviance link.

ACADEMIC SUPPORT SERVICES

Please contact the guidance office for more information on the following support services.

CREDIT RECOVERY OPTIONS

GED (General Equivalency Diploma): The Robbinsdale Adult Academic Program located in Crystal provides preparation for the GED. A certified staff of teachers helps students gain the knowledge to pass the GED test. Students cannot earn a GED until their high school class has graduated. Call 763-504-8300 to schedule an appointment.

Summer Academic Program: A three-week summer session generally available for freshmen and sophomores. An additional computer-based program is available for upperclassmen. Applications are available May 1.

Credit Recovery- an after school program for students to recover a credit they have not passed. Forms need to be filled out through the Counselor.

PROGRAMS/RESOURCES

Advisory: All students are assigned an Advisory teacher and generally stay with the same Advisory teacher all four years of high school. Advisory is used to communicate and interpret school policies, procedures and processes, distribute midterm/quarter progress reports, and disseminate information about programs, activities, and events.

After-School Math Help: The Math Resource Room is open for math help on Wednesdays after school. Math help is also available after school in the Media Center on Tuesdays and Thursdays during Extended Learning Time (ELT).

AVID (Advancement Via Individual Determination): An in-house academic support program that prepares students for college eligibility and success. The program targets academically promising students (GPA of 2.0-3.5) and places them in advanced courses, while supporting them in the AVID elective. AVID services students who are traditionally underrepresented on four-year college campuses, or are 1st generation college-bound students. Students interested in the program must apply and go through the selection process.

College Possible: A nonprofit organization dedicated to helping promising low-income young people prepare for and earn admission to college. This program's mission is to identify low-income juniors and seniors who have the motivation and potential for college, and then provide them with four critical services: 1) ACT and SAT test preparation, 2) intensive guidance in preparing college applications, 3) help in obtaining financial aid, and 4) guidance in transition to college. Applicants should have earned a 2.5 GPA, passed the basic standards tests, and demonstrated a solid attendance record.

ELT (Extended Learning Time): A program open to all students who are struggling with current coursework and need extra time or help to complete assignments. ELT help sessions are offered Tuesdays and Thursdays after school in the Media Center. Both staff and peer tutors are available to assist students in their studies.

Link Crew: A high school transition program that welcomes freshmen and helps them feel comfortable throughout their first year of high school. Built on the belief that students can help students succeed, Link Crew trains members of the junior and senior classes to be Link leaders. As positive role models, Link leaders are motivators, leaders and teachers who guide the freshmen to discover what it takes to be successful during the transition to high school and help facilitate freshman success.

Resource Rooms: Available to students during their study halls. Students must get a pass from a teacher to use a resource room and to be excused from their study hall.

Armstrong High School Career Fields, Clusters & Pathways

Please find the classes offered at Armstrong High School that fit with each career field.

Business, Management and Administration

Marketing

- Intro to Marketing
- Leadership & Success for 9th Graders
- Fashion Marketing
- Sports and Entertainment Marketing
- Advertising

Business, Management and Administration

- Business and Personal Law

Finance

- Start Your Own Business
- Accounting 1 & 2
- Personal Finance
- Independent Living

Human Services

- Human Services
- Relationships
- Child Psychology
- Psychology
- AP Psychology
- Parenting

Agriculture, Food, and Natural Resources

- Agriculture, Food, and Natural Resources
- MN Ecology and Field Biology
- AP Environmental Science
- Foods 1 & 2

Engineering, Manufacturing, & Technology

- Transportation, Distribution, and Logistics
 - Know Your Car
 - Auto Mechanics
 - Advanced Auto Technology

Architecture and Construction

- Architectural Design
- Advanced Engineering/Design

Manufacturing

- Construction Technology

Science, Technology, Engineering, and Math

- Energy and Power
- Intro to Engineering
- Sewing 1 & 2

Health Science Technology

Health Science

- Insights to Health
- Advanced health
- Health Career Investigation

Arts, Communications, & Information Systems

Arts, Audio/Video Tech, and Communication

- Interior Design
- Dance Techniques for the stage
- Google for life
- Intro to theater
- Acting

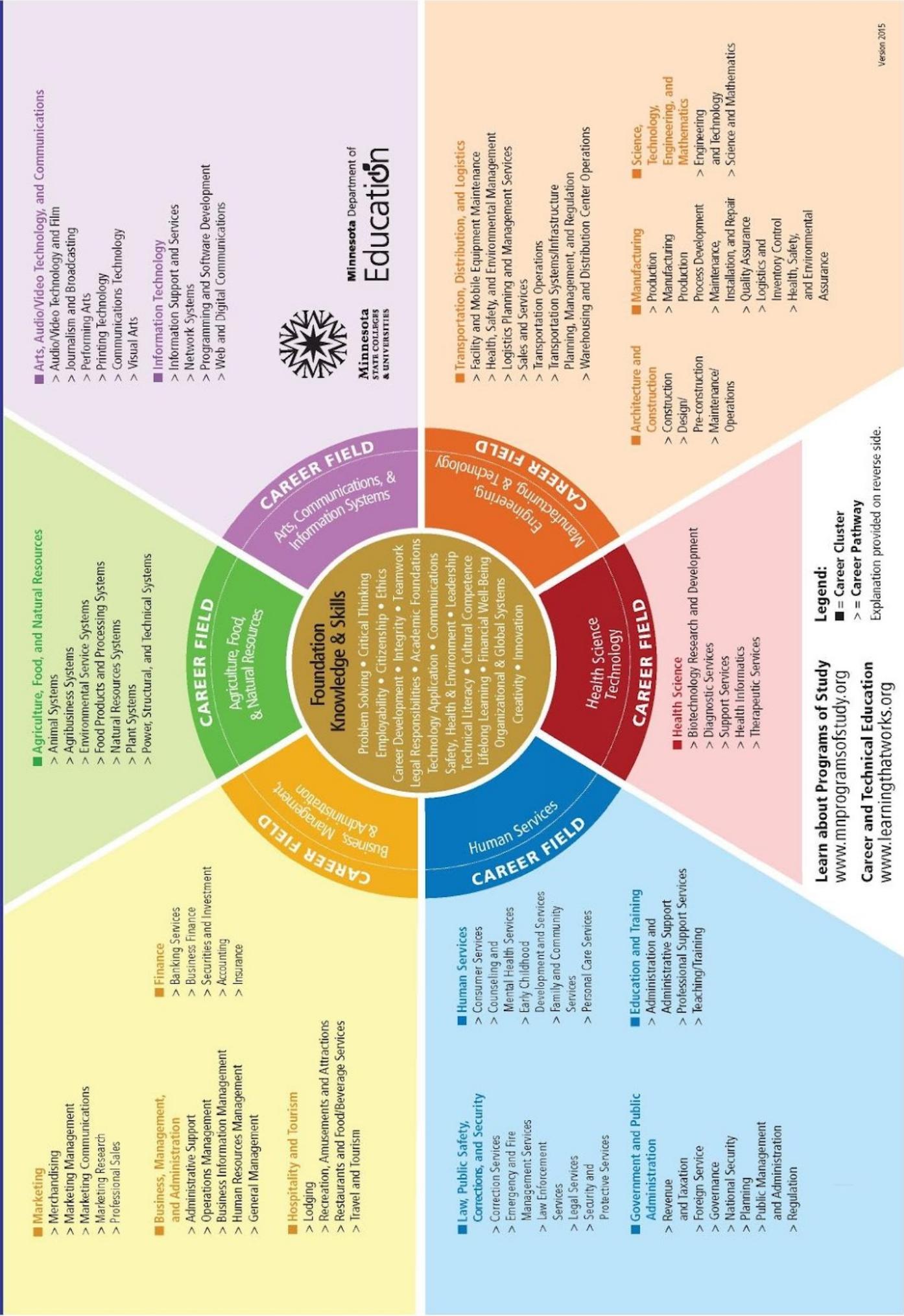
TV Audio and Video Production

- Drawing 1 & 2 and Seminar
- Ceramics 1 & 2 and Seminar
- Mixed Media Art
- Graphic Art and Design
- Digital Photography
- Web Page Design
- Computer Graphic Design 1 & 2
- Choir-multiple levels
- Band-multiple Levels
- Music Cafe
- Music Theory and AP Music Theory

Information Technology

- Applications of Computers
- Electronics
- Computer Science
- AP Computer Science
- Computer Maintenance and Repair
- Computer Networking

Minnesota Career Fields, Clusters & Pathways



ART

Credit value follows in parentheses.

7600 Drawing and Painting I (1)
7710 Drawing and Painting II (1)
7846 Drawing and Painting Seminar (1)
7601 Ceramics I (Clay) (1)
7748 Ceramics II & III (Clay) (2)
7646 Jewelry and Metalworking (1)
7712 Mixed Media Art (1)

7717 Photography 1 (1)
7718 Photography II (1)
7753 Sculpture (1)
7758 Media Arts I (1)
7759 Media Arts II (1)
7848-7849 AP Studio Arts 2D I & II (2)
7814-7815 AP Studio Arts 3D I & II (2)

Opting out of intro level courses: Students who have experience in a certain medium (drawing, painting, digital arts or clay) can schedule a portfolio review of past work with the department chair to show proficiency. If it is decided that there is enough knowledge in the media, students can advance to the next course.

COURSE DESCRIPTIONS

7600 DRAWING AND PAINTING I* (9-12)

Students use 9 subject units as a guide through the choice-based art program. These units are designed to teach students to think and work like artists, as well as apply new techniques for creating art. Students are required to keep a sketchbook to record their ideas.

The Nine: Nature, The Object, The Portrait, Architecture, Landscape, The Figure, Non-representational, Imagination, & The Concept.

Course Objectives: Observe how artists find ideas, develop themes, convey meaning, and create work in a personal style. Develop skills and techniques in a variety of drawing and painting media. Create and pursue personal artistic goals for each project. Reflect and analyze artworks, including personal works.

*Meets Arts Education requirement.

7710 DRAWING AND PAINTING II (10-12) Prerequisite: Drawing and Painting I

This course extends and enriches the fundamentals learned in Drawing and Painting I. Draw/Paint 2 students use the Artistic Behaviors as a guide through the choice-based art program. These units are generally open ended with much opportunity for students to express choice and voice. Students are challenged to work more independently both in and out of the classroom and will be required to keep a sketchbook.

Artistic Behaviors: Artists Steal, Artists Observe, Artists Solve Problems, Artists Collect & Synthesize, Artists Tell Stories.

Course Objectives: Observe how artists find ideas, develop themes, convey meaning, and create work in a personal style. Fine tune skills and techniques in a variety of drawing and painting media. Create and pursue personal artistic goals for each project. Review work. Evaluate goals. Posts weekly in digital portfolio in progress and finished work. Consider display/presentation options.

*Meets Arts Education requirement. Semester class

7846 DRAWING AND PAINTING SEMINAR (10-12) Prerequisite: Drawing and Painting I and II and review with teacher.

This is a rigorous one semester studio design class. Students demonstrate a thorough understanding of the elements of art and principles of design through an investigative experimentation of ideas, materials, and processes. Students use electronic media in conjunction with traditional art mediums, materials, and processes to fine tune techniques and develop a portfolio based on this personal investigation. Students are challenged to work more independently both in and out of the classroom and will be required to keep a sketchbook.

Major Course Goals: Students will be expected to produce portfolio-quality works in a variety of media.

*Meets Arts Education requirement.

7601 CERAMICS 1 (CLAY)* (10-12)

An introductory course in ceramics with emphasis on pottery for the beginning student. The clay unit involves the production of functional pottery such as bowls, cups, teapots and vases, using a kick wheel, as well as some hand building. Students will be challenged and motivated to create quality pots.

Major Course Goals: To develop a sense of aesthetics in three-dimensional form. Students will experience techniques used by the potter: wheel-thrown pieces along with glazing and firing experience.

Evaluation: Project evaluation is based on concept or goal of the piece, craftsmanship, organization of form, individual expression and student/teacher evaluation. A checklist and actual produced work serve as the "portfolio" for this experience.

*Meets Arts Education requirement.

ART, continued

7748 **CERAMICS II & III (CLAY)*** (10-12) Prerequisite: Complete Ceramics I (Clay) with an "A" average or teacher signature.

The emphasis in the course is on greater depth of throwing techniques, hand building proficiency and decorative techniques. Functional pottery will be created with aesthetics taken into consideration. Students will continue to be encouraged to experiment with individual ideas and a variety of materials. Researching artists' work and inspirations will also be included. Students need to be dedicated and serious about making art.

Major Course Goals: Students will be able to: 1) create a variety of pottery using both thrown and hand building techniques, 2) develop a "style" to their work through an understanding of personal expression and aesthetics, 3) use a variety of decorating techniques which will enhance their pottery, 4) incorporate ideas from both ancient and contemporary cultures.

Evaluation: Based on a portfolio of work. Students will complete twelve pieces minimum for evaluation by the instructor. Students will keep a sketchbook to record work, write critiques and develop ideas.

*Meets Arts Education requirements.

7646 **JEWELRY AND METALWORKING*** (10-12)

This course explores craft techniques of making jewelry in metals and plastics. Students learn how to design creative and original pieces of jewelry. (Basic drawing skills will be used.) Students learn: fabricating, casting, riveting, and will make at least two rings, two key chains, and a pendant.

Major Course Goals: Students will be able to design and create rings, earrings, pendants, key rings and pins.

Evaluation: Based on skills mastered such as sawing, filing, buffing and soldering. Also craftsmanship, design and quality of finished projects. Written Final.

*Meets Arts Education requirements.

7712 **MIXED MEDIA ART*** (9-12)

This course offers students a wide range of materials, skills and techniques to create art. Techniques and processes introduced in this course include the book arts (printmaking, papermaking and book binding), collage, small sculpture, assemblage and more. In mixed media students can be successful even without fine art skills such as drawing and painting. Students will be required to keep a sketchbook/journal and willing to scavenge for found objects and materials. Find your "inner artist!"

Major Course Goals: Students will use creativity and art-making skills to communicate ideas about their culture, environment, imagination and opinions.

Evaluation: Evaluation will be by portfolio review of finished products, class participation and teacher/student/peer assessment.

*Meets Arts Education requirements.

7717 **Digital Photography 1*** (9-12)

Phone with camera capabilities is REQUIRED; a DSLR camera is suggested but not required.

This course is designed to teach students the fundamentals of artistic photography. Students learn how to use and manage a digital camera, set up a successful composition, experience how lighting can affect a photograph and use photo editing software. During the course, students are expected to photograph assignments outside of class and school hours. Students interpret and analyze the direction of photography from the academic to the creative. Students learn about photographers both past and present and document their artistic learning in a sketchbook.

*Meets Arts Education requirements.

7718 **Photography 2** (10-12)

Prerequisite: Photography 1

Requirements: Students must have a phone with camera capabilities or a camera (DSLR Camera suggested but not required)

Designed to be a more independent course. Students will shoot and print independent work that reflects a commitment to developing a thematic body of work. During the semester; students are still expected to photograph the assignment out of class and school hours. Students will continue to interpret and analyze the direction of their photography. Students will continue to learn about photographers, document their artistic learning through daily use of a process journal (hybrid of a written journal and sketchbook) started in Photography 1.

7753 **Sculpture** (11-12)

Prerequisite: Design In Clay 1

Students will experience 3-dimensional design and visual problem solving through the exploration of diverse materials, techniques and themes. Materials used may include: Clay, Mosaics, Embroidery, Wire, Cardboard,

Found Objects, Plaster, Books, Snow, Soap and Toothpicks. Students will gain proficiency in techniques such as: Hand-building, Carving, Installation and Assemblage. Student will work realistically and abstractly and are expected to participate in class discussions, peer critiques, written reflections, acquisition of project specific vocabulary and do work outside of class if necessary. Students will use a process journal.

7758 Media Arts 1 (Formerly Digital Arts I) (9-12)

In this exploratory course, students learn the elements and principles of design, as well as foundational concepts of visual communication. While surveying a variety of media and art, students use image editing, animation, and digital drawing to put into practice the art principles they've learned. They explore career opportunities in the design, production, display and presentation of digital artwork.

Major Course Goals: Students respond to the artwork of others, and learn how to combine artistic elements to create finished pieces that effectively communicate their ideas. Students continue to document their artistic learning in a sketchbook

7759 Media Arts 2 (Formerly Digital Arts II) (10-12)

Prerequisite: Media Arts 1

This course is designed for Media Arts 1 students who wish to continue their study within the Media Arts. In this class, students will use and continue to build on their knowledge of Adobe Photoshop skills in addition to learning Illustrator to help them create and develop projects that are more student-driven and independent. Students will apply their expertise by creating a series of digital artworks based on a Social Issue that they have chosen. Students will continue to explore different styles of Media Art as well as continue to develop a portfolio. Finally, Media Art students will continue to document their artistic learning through daily use of a process journal (a hybrid of a written journal and a sketchbook).

ART, continued

7848 **AP STUDIO ART 2D I**

7849 **AP STUDIO ART 2D II (gr.11-12)**

7814 **AP STUDIO ART 3D I**

7815 **AP STUDIO ART 3D II (gr.11-12)**

These year-long (2 Credit) courses are designed for highly-motivated students who are interested in the study of art; the program demands a significant commitment. AP Studio Art is not based on a written exam; instead students submit portfolios for evaluation at the end of the school year for an option to earn a college credit. The portfolios will have two sections: Sustained Investigation and Selected Works. Students will submit fewer required works of art, giving them more time to focus on in-depth, inquiry-based art and design making. There is a fee, similar to an exam fee for portfolio work submissions to earn AP Credit. (average fee is \$60). This Studio Art program consists of two choices for portfolio work — **3D Design** in ceramics and sculpture or **2D Design**, which may include painting, drawing, photography, mixed-media and printmaking. There is an emphasis on critical analysis and innovative art-making processes and products. Summer assignments are required.

Prerequisites for 3D STUDIO ART include Ceramics I (grade A). Prerequisite for 2D STUDIO ART includes sharing portfolio work with the teacher to obtain approval signature. Drawing and Painting I would also be beneficial before taking AP 2D. Portfolio work may include, drawings, sketchbook work, paintings or photography. (Portfolio does not need to be shared before registering for course.)

AVID
(Advancement Via Individual Determination)

AVID COURSE DESCRIPTION

Course Overview:

Grades: 9-12

Length: 4 years

Prerequisites: Middle School/High School AVID and/or interview/application process.

0024-0025 9th Grade

0082-0083 11th Grade

0080-0081 10th Grade

0084-0085 12th Grade

What is AVID

AVID is an acronym which stands for **Advancement Via Individual Determination**. It is an in-house academic program that prepares students for college eligibility and success. The program targets academically promising students (GPA of 2.0-3.5) and places them in advanced courses, while supporting them in the AVID elective. AVID levels the playing field for underserved students without a college-going tradition in their families.

Mission of AVID

AVID is designed to increase school-wide learning and performance. The mission of AVID is to close the achievement gap by preparing all students for college readiness and success in a global society. Students in this class will:

- Take rigorous courses;
- Participate in mainstream activities of the school;
- Apply for enrollment in two-year & four-year colleges; and
- Become educated and responsible participants and leaders in a democratic society.

The AVID Student—Eligibility Requirements

In order to be eligible for AVID, students must be performing in the academic "middle" but have strong potential. Students must apply and interview for the program. The typical AVID student will have average to high test scores, a 2.0-3.5 GPA, college potential with support, and desire and determination. They also must meet at least one of the following criteria:

- First generation to attend college from their family
- Historically underserved in four-year colleges
- Low income
- Special circumstances (loss of guardian, foster care, etc.)

Why AVID Works

AVID works because:

- The selection process ensures only those with ability, desire and determination participate
- It accelerates underachieving students
- Intensive support is provided
- Focuses on helping all students achieve at high levels, especially students of color
- Specific needs of underachieving students are targeted
- Teacher is redefined as an advocate and guide
- Communication and sharing between teachers, administrators and counselors occurs
- All strategies are research-based

Course Philosophy

The AVID curriculum is offered as an elective course that prepares students for entrance into four-year colleges. It is based on rigorous standards developed by middle and high school teachers and college professors. It is driven by analytical writing, inquiry, collaboration, organization and reading (WICOR), and in addition focuses on study skills, test taking skills, note taking, research, organization, critical thinking, goal setting, choosing a college, and preparing for college entrance and placement exams.

AVID, continued

Course Description/Structure

AVID meets five hours per week as follows:

Students receive two hours of instruction per week in college entry skills:

- Lessons on test-taking skills
- Instruction in math and English language concepts frequently seen on college entrance tests
- Practice on "mock" SAT and ACT tests
- In eleventh and twelfth grades, students take the SAT (Scholastic Aptitude Test) and/or the ACT (American College Test)

Two hours per week in tutor-led study groups:

- Students work with college tutors in small groups with academic questions that students bring to the tutorial
- Students are required to take notes during tutorial and use class and textbook notes to inform their discussions during tutorial
- Tutors help students with the process of learning through inquiry, rather than giving students the answers to their questions
- Students learn the value of working with others in tutorial

One hour per week in motivational activities and academic survival skills:

- AVID students learn skills such as time management, note taking, textbook reading, library research, and maintaining the AVID binder
- Students are expected to maintain an organized binder, including an assignment calendar, class and textbook notes, assignments and homework, which is graded regularly
- In AVID, students learn that writing is a process. Students are expected to use this process in all grade level writing assignments
- Students also participate in motivational activities including college and career research, college and career outreach speakers, field trips to colleges and businesses and other education opportunities in their communities, and service learning experiences. These activities provide students with the resources they need to learn about many positive opportunities available to them in the community that will impact their future.

Assessment Procedures

Students will be assessed using a variety of performance-based assessments. They are required to develop and present the Multi-Grade Level Portfolio at the end of each year, representing their work in the AVID program. Contents will include but are not limited to the following:

- Grade-level AVID writing curriculum
- Four-year plan
- Timed writing with rubrics
- Analytical essays with rubrics
- Notes taken in content areas
- Semester reflections

BUSINESS AND MARKETING EDUCATION

Credit value follows in parentheses.

9703 College R.O.C.K.S.! (1)	9010 Personal Finance (1)
9007 Accounting and Finance I (1)	9011 Start Your Own Business (1)
9844 Accounting and Finance II (1)	9034 Google For Life I (1)
9012 Business and Personal Law (10-12) (1)	9453 Google For Life II (1)
9008 Sports and Entertainment Marketing (1)	
9009 Career Investigations (1)	

COURSE DESCRIPTIONS

9703 COLLEGE R.O.C.K.S.! (12)

Seniors, are you unsure about your education after high school? Don't know what to choose for a major? Stressed out about picking a college? We have a course for you. **College R.O.C.K.S.!** is a course designed to help you work through this process as students will investigate various majors and colleges, fill out college applications, and learn about financial aid and scholarships. Assessments include participation and major projects.

Major Course Goals: Students will identify potential majors, research possible colleges, prepare a plan for paying for college, interacting with college admission reps and applying for scholarships.

9007 ACCOUNTING I (10-12)

A must class for any business major! This introductory course provides students with a fundamental understanding of the basic accounting concepts and procedures. The information introduced in this course will prepare you for further study in college level business as well as for a wide range of business career opportunities. Assessments include practice packets and tests. Students have the option of taking this course for college credit through Hennepin Tech.

Major Course Goals: Students will be able to record and post journal entries, prepare worksheets and closing entries, and create income statements, balance sheets and statements of owner's equity.

9844 ACCOUNTING II Prerequisite: C+ or better in Accounting and Finance I

Strongly recommended for business majors. A continuation course that focuses on more complex and advanced accounting issues and concepts. Assessments include practice packets and tests.

Major Course Goals: Students will be able to prepare bank reconciliations, describe uncollectible receivables, calculate adjusting entries, compute inventory, calculate depreciation, record loan and payroll entries, and record entries in special journals.

9012 BUSINESS AND PERSONAL LAW (10-12)

Do you ever wonder why school rules are different from the real world or what happens after you turn 18? Through this course, you will learn what it takes to sue someone, entering a contract, and supporting your argument through case research, class discussions, and mock trials. You will research laws and evaluate proposed positions and solutions. Topics include criminal and civil law, courts and trials, consumer protection, insurance, torts, contracts and liability.

Major Course Goals: 1) Students will be able to differentiate the difference between a crime and a tort 2) support their arguments 3) support their arguments 4) identify the critical requirements of a contract 5) prepare and conduct a mock trial based on what they have learned throughout the semester

BUSINESS AND MARKETING EDUCATION, continued

9009 CAREER INVESTIGATIONS (10-12)

What do you want to be when you grow up? This course will help guide you through career interest tests, activities, and research. You will create sample resumes, cover letters, applications, thank-you notes and school-based learning. Students will develop a career plan to integrate knowledge, skills and abilities you need to achieve your career goals. ***This class is highly recommended for sophomores and juniors.***

Major Course Goals: Students will be able to effectively utilize soft skills (interpersonal, communication, goal setting) that they will use to pursue a career.

9011 START YOUR OWN BUSINESS (11-12)

Do you want to be your own boss? This class focuses on how to recognize and start up a business opportunity, as well as operate and maintain that business. Being able to recognize new business opportunities is not only necessary for the entrepreneur but for everyone seeking to be successful in the 21st century. Students will create a business plan to start a business of their choice. You could be the next Oprah Winfrey or Bill Gates. Students have the option of taking this course for college credit through the Hennepin Tech and the MNSCU system.

Major Course Goals: Students will be able to 1) Identify the characteristics of an effective place to distribute products. 2) Determine exactly what product you are selling 3) Evaluate various pricing strategies 4) Assess the various promotion vehicles that can be used for your product.

9010 Personal Finance (10-12)

Show me the money! Learn basic financial concepts required for managing, using and investing your money. Skills everyone needs to manage their family's finances. Course subjects include budgeting, credit, taxes, consumerism and major purchases (cars, college and life events like a Wedding). Assessments— Participation in class discussions and activities, as well as major projects and tests.

Major Course Goals: Students will develop basic money management skills - filling out an individual tax return, recognizing scam scenarios, identifying investing options, preparing budgets, understanding credit cards and utilizing a decision making process for major purchase decisions.

9008 SPORTS AND ENTERTAINMENT MARKETING (11-12)

What do the Wild and Beyoncé have in common? Take this class and find out. Learn everything you ever wanted to know about promotion, careers, opportunities and marketing techniques used by your favorite team and music performers. Students will research, develop, create and test their own sports teams. Assessments -Participation in class discussions as well as major projects. Students have the option of taking this course for college credit through Hennepin Tech.

Major Course Goals: Students will be able to create a comprehensive marketing plan by utilizing the 4 Ps of marketing.

9034 GOOGLE FOR LIFE I (9-12)

This is a beginning course in Google Applications designed to understand and utilize apps to make the most efficient use of your time. The skills learned will be used in everyday life, both in and out of school. Students will learn Google Docs, Forms, Sheets, Website and other time management tools.

Major Course Goals: Students will be able to 1) utilize all aspects of Google Applications in real world situations as well as in school required projects 2) apply keyboarding skills throughout the semester through online exercises to increase accuracy and speed.

9453 GOOGLE FOR LIFE II (9-12) Prerequisite: C+ or better in Google For Life I

This is a continuation of Google For Life I where students will dig deeper into the functions of the Google Applications. Students will have fun editing and manipulating Google Photos. They will explore functions of Google Sheets, integrate charts and graphs into slideshow presentations and Google Docs. Students will also spend time learning about mail merge and the uses within the world of work and learn about email etiquette.

Major Course Goal: Students will be able to apply Google Applications within daily life and work

engineering careers, 3) recognize the relationships between engineering and other areas such as science, mathematics, and impacts upon both the social and physical environment, 4) understand the impact of engineering on the production and consumption of resources and products and the impact of engineering on the quality of life.

Evaluation: Students will be graded by means of performance tests, computer aided drawings and projects completed. Group and individual activities will be evaluated.

DESIGN ENGINEERING TECHNOLOGY, continued

9845 ADVANCED ENGINEERING/ARCHITECTURAL DESIGN I (10-12)

Prerequisite: 9643 Architectural Design or 9647 Introduction to Engineering Design I

This semester class is for students interested in learning the fundamentals of planning and designing; manufacturing, production; basic construction and building techniques. This is a great course for those who want to be involved in technology challenges like MTEEA Supermileage, FIRST Robotics, or MN Renewable Energy's Solar Boat Regatta. Safe and proper use and application of hand tools, power tools, machine tools, construction practices, materials handling and finishing techniques will be learned. Designing, estimating, purchasing materials, and project planning will be a part of project development. Students will work with basic woodworking, electrical, metalworking and finishing technologies.

Major Course Goals: Students will be able to: 1) plan a project using the design process, 2) select materials, tools, and processes to complete a project, 3) demonstrate safe and proper use of tools, processes, and materials, 4) understand the economic, environmental, and social impacts of the application of construction technologies, and 5) contribute in the process of bringing a project from a concept to a finished reality.

Evaluation: Students will be evaluated with written tests, performance tests, and the quality of work on assigned and planned projects. Attendance, citizenship and other course requirements will be considered.

Materials Fees: Students will pay to cover miscellaneous supplies for their projects. Additional cost may be incurred by the student to pay for materials used in the production of the class projects (wood, metals, electrical supplies, etc.). Fees not to be more than \$10/Project.

Typical Projects: Students in Architecture may plan, design and build a small structure such as a storage building or detached workshop. Engineering students may be involved with planning, designing and building a vehicle to meet a need or requirement.

9042 CONSTRUCTION TECHNOLOGY (10-12)

This one-semester class is for students interested in learning the fundamentals of basic construction, manufacturing and building techniques. Students would apply the skills to areas like basic carpentry, mass production, and building construction. Safe and proper use and application of hand tools, power tools, machine tools, construction practices, materials handling and finished techniques will be learned. Designing, estimating, purchasing materials and project planning will be a part of project development. Students will work with basic woodworking, electrical, metalworking and finishing technologies.

Major Course Goals: Students will be able to: 1) plan a project using the design process, 2) select materials, tools, and processes to complete a project, 3) demonstrate safe and proper use of tools, processes and materials, 4) understand the economic, environmental, and social impacts of the application of construction technologies, 5) contribute in the process of bringing a project from a concept to a finished reality.

Evaluation: Students will be evaluated with written tests, performance tests and the quality of work on assigned and planned projects. Attendance, ability to work and other course requirements will be considered.

ENERGY, POWER AND TRANSPORTATION TECHNOLOGY CLUSTER

9644 KNOW YOUR CAR (10-12)

This beginning course is open to all students who have had little or no previous automotive experience. During this course students learn how a car operates, from the engine to the tires. Students learn how to perform some of the routine maintenance and repair procedures, such as changing tires, replacing spark plugs, and changing oil and filter. Students also learn how to purchase common automotive products such as tires, batteries, and other accessory items. Purchasing an automobile, insurance coverage, and automobile service and repair options are also covered in this class. This course is the fundamental course for students interested in automotive technology.

Major Course Goals: Students will be able to: 1) have a working knowledge of the automobile, its systems and components, 2) understand and follow safe work practices that apply to automotive repair, 3) intelligently make decisions regarding purchase of parts, service and automobiles, both new and used.

Evaluation: Worksheets on reading assignments and performance and oral tests will be used for evaluation. Grading is 60 percent on shop work and 40 percent on written worksheets and tests.

DESIGN ENGINEERING TECHNOLOGY, continued

9742 AUTO MECHANICS (10-12) Prerequisite: 9644 Know Your Car

This is an in-depth course in automobile mechanics. In this class students will study the ignition system, fuel, tune-up, lubrication, cooling and emission-control systems.

Major Course Goals: Students will be able to: 1) understand and follow safe work practices that apply to automobile repair, 2) diagnose and repair problems found in the systems and their components, 3) develop skills in the use of hand tools, automotive test and power equipment.

Evaluation: Written tests and worksheets on assignments, performance tests and oral tests will be used for evaluation. Grading is 60 percent on shop work and 40 percent on written work and examination.

9843 ADVANCED AUTO TECHNOLOGY (10-12) Prerequisite: 9742 Auto Mechanics

Students continuing their experience to an advanced level will select this semester-long, two credit block class. Advanced students will work on auto body projects, engine rebuilding, auto drive trains, and other areas of special interest. This course combines the previous courses Advanced Auto Mechanics, Auto Body Repair and Refinishing, Auto Engine Rebuilding and Drive Trains. Students will work on projects both assigned and of their own choice.

Major Course Goals: Students will be able to: 1) understand and follow safe work practices that apply to automotive repair processes, 2) analyze, diagnose, and determine sources of problems and propose corrective procedures, 3) use tools, materials, and processes to repair, restore, and maintain the proper function of automotive systems and structures.

Evaluation: Worksheets on reading assignments, tests on filmstrips and video, Oral and performance tests on processes and information will be used in evaluation. Grading is 60 percent on performance skills and 40 percent on written assignments and tests.

9044 ENERGY AND POWER (9-12)

A one-semester course that will involve the student in activities that look at sources of energy, how it is used and how it is controlled. Activities in transportation will include study of the internal combustion gasoline engine and other types of engines. The course will cover energy options, methods of controlling energy and power, uses of energy and the environmental impact of energy use. Power and transportation systems of today and the future world of technology will be compared. Projects will be constructed in energy and power, some of which might involve student expense.

9045 ELECTRONICS (9-12)

This one-semester class is for students interested in learning the fundamental concepts involved in electricity and electronics. Students will explore topics related to the basics of electricity, electrical circuits, electronic components, electronic circuits, and the kinds of applications of electricity and electronics in daily living. Students will complete a series of experiments to develop an understanding of circuit types, component use, and circuit performance. Students will learn to build basic electrical and electronic circuits and devices.

Major Course Goals: Students will be able to: 1) understand and demonstrate the fundamentals of electrical circuits, 2) identify and describe the purpose of electrical and electronic circuit components, 3) construct basic electrical and electronic circuits to perform a task, 4) demonstrate safe and proper procedures in building and working with electrical and electronic circuits, 5) understand the economic, environmental, and social impacts of the use of electricity and electronics in daily living.

Evaluation: Students will be evaluated with written tests, performance tests, completion of lab experiments, and quality of work on assignments and project work. Attendance, citizenship, and other course requirements will be considered.

Materials Fee: Students will pay for costs of some project work.

INFORMATION AND COMMUNICATIONS TECHNOLOGY CLUSTER

9041 APPLICATIONS OF COMPUTERS (9-12)

Computer literacy for school, work, home and recreation. This course is for **all students** who want to be prepared for a technology-driven future. Knowledge of computer applications and hardware choices will be a requirement for life in the future. Students will learn to use graphic design, desktop publishing, drawing and drafting, technical simulation and other problem-solving applications to extend and enhance math, science and other curriculum-area concepts. Students will learn the basics of INTERNET access and use. Peripheral equipment such as scanners, video input devices, plotters, conventional, color and laser printers and other appropriate hardware will be utilized in the applications. **Learn to use the computer for more than just typing!**

Major Course Goals: 1) Understand fundamentals of hardware and software design and application, 2) demonstrate knowledge and skill in selection and use of computer hardware and software choices, 3) be able to solve problems and produce products consistent with computer applications for pursuits in school, work, personal and recreational needs.

Evaluation: Based on participation, written work, tests and products produced

DESIGN ENGINEERING TECHNOLOGY, continued

9641 COMPUTER GRAPHIC DESIGN I* (9-12)

This course applies the computer to production of typical printed products used in business, industry and the home. Students will use the computer to produce notepads, letterheads, business cards, multicolor products, posters, signs, advertisements and other typical graphic products. Students will use computers, video image digitizers, flat bed digitizers, laser printer, color printer, CD-ROM and other computer peripheral devices to produce the graphic products. A variety of software programs are utilized by every student in the production of the graphic design and product. This class is especially suited to the future graphic artist, technical writer, computer graphic designer and animator, engineer, scientist and anyone with an interest in computers and graphic art or design.

Major Course Goals: The student will be able to: 1) design graphic products to meet the needs of society, 2) use the computer and other hardware to produce the product, 3) use a variety of software to produce graphics and text for the design, 4) print sample, press-ready copies of the design with conventional, laser and color printers, 5) understand and demonstrate the process of designing and producing graphic products.

Evaluation: Students will be evaluated on the basis of completion of assigned projects, quality of work on all products, and the degree to which students meet attendance, ability to work and other course requirements.

*Meets Arts Education requirements.

9740 COMPUTER GRAPHIC DESIGN II* (9-12) Prerequisite: 9641 Computer Graphic Design I (no approval needed for registration)

This course is an extension of the application of the computer to designing and producing press-ready graphic products. The emphasis will be to utilize computer technology to do the pre-press operations common in the graphic arts and printing industries. Digital photography, color graphic design, desktop publishing and technical writing are some activities that students will complete in both individual and group assignments. The variety of computer hardware and software utilized will give students the knowledge and skill to use the computer as a tool for future careers. Computers are a reality for almost all careers and jobs.

Major Course Goals: The student will be able to: 1) research, design and produce graphic products to meet the needs of society, 2) select and use computer hardware and software appropriate to the assigned tasks, 3) utilize computer technology in work, education and recreation applications, 4) apply knowledge, skills and experience gained to aid in making educational and career decisions.

Evaluation: Students will be evaluated on the basis of completion of assigned projects, quality of work on all products, demonstrated skill and knowledge and the degree to which students meet attendance, ability to work and other course requirements.

*Meets Arts Education requirements.

9043 WEB PAGE DESIGN (9-12)

This is a one-credit semester course that focuses on website design, construction and management— Students will work hands on to design, construct and maintain web pages on the internet and be involved with maintaining their own personal web sites.

Major Course Goals: Students will be able to: 1) demonstrate a working knowledge of using the internet, 2) explain the impact of the internet on society, 3) understand and apply principles of computer networking, 4) demonstrate principles of web page construction.

Evaluation: Students will be evaluated through the use of tests, quizzes, lab and project work and performance tests. Grading is 60% lab work and 40% written worksheets and tests.

9642 DIGITAL PHOTOGRAPHY* (9-12)

This exploratory hands-on course deals primarily with black-and-white processes. Elements covered include camera selection, handling, exposure, composition and pictorial expression and appreciation. Photographic prints will be produced with digital camera technology. Scanned print images will be used to convert to digital technology. Digital editing and presentation methods will be explored.

Major Course Goals: Students will be able to: 1) use photographic equipment and materials safely and effectively to convey a visual message, 2) understand and explain the basic principles of black-and-white and basic color photo technology, 3) recognize how application of photography can solve new technical problems, 4) develop a pride in work well done and an understanding of good design.

Evaluation: Students will be graded on completion of assignments, quality of work, attendance, citizenship and other course requirements.

*Meets Arts Education requirements.

DESIGN ENGINEERING TECHNOLOGY, continued

9841 TV & AUDIO/VIDEO PRODUCTION* (9-12)

Students will use a variety of technologies to produce audio and video projects. Class projects will include the creation of: short videos, music videos, iPod tunes, cell phone ring styles, cartoon shorts, video games and much more. Students will also participate in the new Armstrong Campus Radio Station (KAHS) as production engineers, DJ's, directors, copywriters, and be involved in the daily operations of the station. They will have an opportunity to produce audio/video shorts, commercials, and programs for the morning announcements as well as for several KAHS radio shows. This is a great course for students seeking careers in TV, radio, or entertainment. Advanced photography/video composition skills will be demonstrated. An audio/video portfolio will be developed and produced as a final project.

Evaluation: Students will be evaluated on the basis of completion of assigned projects, quality of work on all products, demonstrated skill and knowledge and the degree to which students meet attendance, citizenship and other course requirements.

*Meets Arts Education requirements.

9645 COMPUTER MAINTENANCE AND REPAIR (10-12)

Students will utilize self-directed "hands on" computer-assisted curriculum to develop knowledge and skills which leads to A+ Certification. Learn how to set up, maintain, and fix computer hardware, set up and install software, and work toward an industry standard certification.

Evaluation: Students will be evaluated on the basis of completion of assigned projects, quality of work on all products, demonstrated skill and knowledge and the degree to which students meet attendance, citizenship and other course requirements.

9045 Electronics course is recommended.

9646 COMPUTER NETWORKING (10-12)

Students will utilize self-directed "hands on" computer-assisted curriculum to develop knowledge and skills which leads to Net+ Certification. Learn how to set up, maintain, and fix computer networks, set up and install software, and work towards an industry standard certification.

Evaluation: Students will be evaluated on the basis of completion of assigned projects, quality of work on all products, demonstrated skill and knowledge and the degree to which students meet attendance, citizenship and other course requirements.

9045 Electronics course is recommended.

9746 COMPUTER SCIENCE A (11-12)

Students will design and implement computer based solutions to problems, use common data structures, and code in an object-oriented paradigm using Java. In addition, students will get hands-on experience in the lab and learn about the ethical and social implications of computer use.

Evaluation: Students will be evaluated on the basis of completion of assigned projects, quality of work on all products, demonstrated skill and knowledge and the degree to which students meet attendance, citizenship and other course requirements.

Prerequisite for the course is Algebra 2.

9847 AP COMPUTER SCIENCE A (11-12)

AP Computer Science A will help students develop analytical, problem-solving, and abstraction skills relevant to today's technologically evolving society. Furthermore, students will develop communication skills in conveying solutions to problems relevant to today's society. Students will take the AP Exam in May.

Evaluation: Students will be evaluated on the basis of completion of assigned projects, quality of work on all products, demonstrated skill and knowledge and the degree to which students meet attendance, citizenship and other course requirements.

Prerequisites for the course are Algebra 2 and Computer Science A.

ENGLISH / COMMUNICATION / LANGUAGE ARTS

COURSES FOR FRESHMEN:

Credit value follows in parentheses.

1700-1701 English 9 I & II

COURSES FOR SOPHOMORES:

Credit value follows in parentheses.

1702-1703 English 10 I & II: American Literature (2)

1848-1849 AP Seminar 11 I & II

COURSES FOR JUNIORS AND SENIORS:

Credit value follows in parentheses.

1740-1741 English 11 I & II: Modern World Literature and Composition (2)

1844-1845 AP English I & II: Language and Composition (2)

1742 English 12: Classic World Literature and Composition (Semester I) (1)

1743 English 12: Fundamentals of Speech (Semester II) (1)

1798-1799 English 12 I & II (Blended)** (2)

1846-1847 AP English I & II: English Literature (2)

1848-1849 AP Seminar 11 I & II

1848-1849 AP Seminar (2)

1805-1806 AP Research (2)

*Elective credit only; see counselor for credit recovery information.

**See page 6 for blended course information.

Below are suggested courses for students of different abilities and interests. Consult English instructors about the appropriateness of the course for you.

ADVANCED PLACEMENT LEVEL COURSES:

Recommended program:

AP English: Language and Composition

AP Seminar

AP English: English Literature

AP Research 12

REGULAR LEVEL COURSES:

Recommended program:

English 9

English 10: American Literature

English 11: Modern World Literature and Composition

English 12: Classic World Literature and Composition (Semester I);

Fundamentals of Speech (Semester II)

Blended

ELECTIVES: Fine Arts Electives

Introduction to Theater

ENGLISH / COMMUNICATION / LANGUAGE ARTS, *continued*

COURSES FOR FRESHMEN

1700 ENGLISH 9 I & II

1701 English 9 offers a rich study of a wide variety of fiction and includes some selections of nonfiction. It includes quality readings, and accompanying writing and speaking opportunities. Students will begin the year with a writing workshop, learn high school readiness skills and techniques, and study grammar and usage conventions.

Essential Outcomes: Students will: 1) use the conventions of language when writing and speaking, 2) use the writing process, 3) write narratives and creative texts, 4) prepare for and participate in discussion as both speaker and listener, 5) summarize key supporting ideas and details, 6) close read and make inferences from a text, and 7) use technology responsibly, ethically, and safely to present their work. English 9 is a rigorous course designed to give all incoming 9th graders the requisite language arts skills necessary to succeed in subsequent high school English courses, AP classes and in post secondary colleges and careers.

COURSES FOR SOPHOMORES

1702 ENGLISH 10 I & II: AMERICAN LITERATURE

1703 English 10 is a year-long class that examines American literature. Students will study a wide variety of fiction along with a few selections of non-fiction. Students will also develop their argumentation skills by learning the course's essential outcomes.

Essential Outcomes: Students will: 1) state a claim, 2) provide supporting evidence, 3) identify audience and purpose, 4) identify credible sources, and 5) use multimedia to respond and connect to literature.

1848 AP SEMINAR I & II (Advanced) (10-11)

1849 In this class, students will examine cross-curricular topics and explore the complexities of academic and real-world topics. At the core of the content is the QUEST pedagogical framework of Question/Explore, Understand/Analyze, Evaluate, Synthesize and Team. The objective of this course is about exploring topics, evaluating multiple perspectives and forms of evidence, synthesizing ideas, and communicating those ideas effectively. Assessment for this course includes a team project and presentation, an individual research-based essay and presentation, and an end-of-the-year AP exam.

Sections are limited. For more information about AP Capstone refer to pages 5-6.

COURSES FOR JUNIORS AND SENIORS

1740 ENGLISH 11 I & II: MODERN WORLD LITERATURE AND COMPOSITION (Regular) (11)

1741 This course explores modern literature from diverse perspectives. Students will also respond to novels, poetry and non-fiction through a variety of writing activities. This language arts class encompasses composition and literature as well as speaking and listening. Topics include global social and cultural issues, immigrant experiences and international perspectives.

Essential Outcomes: Students will: 1) demonstrate use of tone, both in identification in literature and use in their own writing, 2) learn to use and properly format in-text citations for research projects and papers, 3) understand and use the idea of refutation in crafting argument/persuasion, and 4) analyze visual images to identify the persuasive and informative details within the images and the perspectives present within those images.

1844 AP ENGLISH: LANGUAGE AND COMPOSITION I & II (Advanced) (11-12)

1845 This course is designed for students who are strong readers and writers. Students complete a number of challenging, multi-draft compositions as well as working toward mastery of Rhetorical Devices, Patterns of Development, Ethos-Pathos-Logos and syntax and diction. In addition, students will learn skills needed to take the AP Language and Composition exam. Students will read non-fiction texts including a few complex texts focused on cultural issues. The final quarter will focus on literary criticism in preparation for AP English Literature.

Essential Outcomes: Students will: 1) demonstrate use of tone, both in identification in literature and use in their own writing, 2) understand and use the idea of refutation in crafting argument and persuasion, 3) learn to use and properly format in-text citations for research projects and papers, and 4) analyze visual images to identify the persuasive and informative details within the images and the perspectives present within those images.

NOTE: Students who register for AP English Language and Composition will be expected to complete a summer reading assignment

ENGLISH / COMMUNICATION / LANGUAGE ARTS, continued

1742 ENGLISH 12: CLASSIC WORLD LITERATURE AND COMPOSITION (Semester I) (Regular) (12)

1743 ENGLISH 12: FUNDAMENTALS OF COMMUNICATION (Semester II) (Regular) (12)

This course explores classical literature from diverse world cultures and will also focus on additional areas of composition not covered in English 11. Students will read plays, novels, short stories and poems. Second semester is devoted to speech, and students will complete demonstration, informative, persuasive and entertainment speeches as well as other speech-related activities.

Essential Outcomes: Students will: 1) interpret complex words and phrases to assess meaning, 2) demonstrate the fundamentals of public speaking, 3) write in a variety of styles with short- and long-term deadlines, and 4) demonstrate independent research skills.

1798 **ENGLISH 12 I & II (BLENDED) (12)** Prerequisite: Written permission of parent/guardian and counselor,
1799 reliable internet access at home/outside of school.

This is an alternate way to take English 12. Consider this option if you are an organized, responsible, task-oriented and independent learner who needs flexibility in scheduling. There will be weekly assignments and tasks to turn in electronically, along with the usual reading and writing activities of the standard English 12 course. You will have ongoing online interaction with the instructor and at least one face-to-face meeting per week, but with more as needed.

Major Course Goals: Same as for 1742-1743 English 12 (see course description).

Evaluation: Same as for 1742-1743 English 12 (see course description).

1846 AP ENGLISH: ENGLISH LITERATURE I & II (Advanced) (11-12)

1847 This yearlong course is designed for advanced readers and writers. Students will read texts from the ancient world through the 20th century, and students will complete several analytical compositions that encompass a variety of literary criticisms. In addition, students will learn skills needed to take the AP Literature exam. Public speaking will be a component of this class as well.

Essential Outcomes: Students will: 1) interpret complex words and phrases to assess meaning, 2) demonstrate the fundamentals of public speaking, 3) write in a variety of styles with short- and long-term deadlines, and 4) demonstrate independent research skills.

NOTE: Students who register for AP English Literature will be expected to complete a summer reading assignment.

1848 AP SEMINAR I & II (Advanced) (10-11)

1849 In this class, students will examine cross-curricular topics and explore the complexities of academic and real-world topics. At the core of the content is the QUEST pedagogical framework of Question/ Explore, Understand/Analyze, Evaluate, Synthesize and Team. The objective of this course is about exploring topics, evaluating multiple perspectives and forms of evidence, synthesizing ideas and communicating those ideas effectively. Assessment for this course includes a team project and presentation, an individual research-based essay and presentation, and an end-of-the-year AP exam.

1805 AP RESEARCH I & II (Advanced) (11-12)

1806 In this course, students will cultivate the skills and discipline necessary to conduct independent research needed to complete scholarly academic essays. Students will develop analytical thinking, teamwork and collaboration, synthesis and evaluation, and communication skills. Students will further their development of skills used in AP Seminar and further explore ethical research practices. The culminating project for the course is a 4,000-5,000 word scholarly essay, and to present and defend that essay to a panel of evaluators for 15-20 minutes.

Prerequisite for this course is AP Seminar.

For more information about AP Capstone refer to pages 5-6.

ENGLISH LEARNERS (EL)

Credit value follows in parentheses.

EL 1&2 I & II (2 elective credits each semester)

1020-1021 EL 1-2 I & II (2 elective credits each semester)

1040-1041 EL 3 I & II (1 elective credits each semester)

COURSE DESCRIPTIONS

1020 **EL 1-2 I & II** (9-12) (2 credits each semester)

1021 This course is designed for students who are in the early stages of learning the English language. Students will be introduced to English literature and grammar, and develop basic skills in reading, writing, speaking, and listening.

1040 **EL 3 I & II** (9-12) (1 credit each semester)

1041 Students will develop academic English through the study of literature, grammar and communication skills.

FAMILY & CONSUMER SCIENCE (FCS)

Credit value follows in parentheses.

Grades 9-12

9001 Sewing I (1)
9048 Sewing II (1)
9006 Parenting (1)
9600 Foods I (1)
9750 Foods II - International Foods (1)
9040 Foods For Fitness (1)

Grades 11-12 only

9005 Housing and Interior Design (1)
9002 Child Psychology/Child Care Occupations (2)
9004 Independent Living (1)

COURSE DESCRIPTIONS

9001 SEWING I (9-12)

This course provides knowledge and understanding of textiles, fashions, and fabrics necessary in meeting the clothing needs of individuals, families, and the general public.

Major Course Goals: Students will: apply math and scientific applications that correspond to the industry; demonstrate the ability to read and apply information to operate a sewing machine and computerized embroidery machine; analyze fabric construction and pattern terminology.

Evaluation: Include but are not limited to: a wardrobe budget, sewing a tote bag or pajama pants from a pattern, redesigning/recycling a clothing item, accessory, or home fashion item, student choice independent project, and a final portfolio.

9048 SEWING II (9-12) Prerequisite: Sewing I with a passing grade.

This class is taught during the same period as Sewing I. Students will have the opportunity to choose their own projects based on their sewing skill. Projects will grow increasingly more difficult as students advance their skills. Students will assist the Sewing 1 class with their projects.

Major Course Goals: Students will: analyze their current sewing ability and choose a project appropriately; create a project through technical reading of a commercial pattern and proper fabric choice; design and create a project for donation

Evaluation: Use of time, samples and projects.

Students will purchase their own fabric for projects they will take home.

9005 HOUSING AND INTERIOR DESIGN* (11-12) Meets Arts Education requirement.

Students learn to design beautiful, efficient, and effective interior living and working spaces. Students study and practice applying the elements and principles of design to interior spaces. Other areas of study include floor plans, housing options and styles, lighting, textiles, traffic flow and furniture arrangement, sustainable options in housing materials, accessibility, and universal design principles.

Major Course Goals: Students will: understand and apply elements and principles of design; acquire knowledge of styles and options for furniture arrangements in a given living space to maximize universal design.

Evaluation: Written evaluations and reflections; performance in application of portfolio design projects

*Meets Arts Education requirements.

9440 FOODS I (9-12)

Students learn the basics of food safety and sanitation, common measurements, abbreviations and equipment, skills for purchasing, storing, handling, and preparing a variety of fruits, vegetables, grains, sweets, and proteins. Students increase cooking technique and terminology vocabulary and apply it by interpreting and following new recipes. Students learn about nutrients needed by the body as well as how to make informed dietary and consumer choices.

Major Course Goals: Students will: identify food safety and kitchen sanitation practices; research and explore food nutrients.

Evaluations: Written work and reflections; group lab experiences and participation.

FAMILY & CONSUMER SCIENCE (FCS), continued

9750 FOODS II - INTERNATIONAL FOODS (9-12) Prerequisite: Foods I with a passing grade.

This course is an excellent choice for students wishing to experience and appreciate international cuisine. Take a tour through regional foods of the United States and explore food heritage of the world as you prepare new and exciting foods. Exploration into culinary arts and international cuisine. Careers in the Food industry will be discussed and researched.

Major Course Goals: Research selected countries and explore current food issues.

Evaluation: Food preparation, lab work, teamwork, pre-planning, tests and research projects.

9040 FOOD FOR FITNESS (9-12) Prerequisite: Foods 1 with a passing grade

Students will be equipped with nutrition principles that are necessary to support and build a healthy body to maximize their performance before, during, and after their exercise, training sessions and practices, and games. Students discuss digestion and major essential nutrients, body size and weight, nutrient guidelines, physical health and fitness, weight management, sports and fitness, how choices affect our health across the lifespan, and how to prepare and serve nutritious foods. This course emphasizes an understanding of today's food and eating trends and gives students the capacity to intelligently evaluate all sources of information and make informed decisions.

Major Course Goals: Students will: review food safety and kitchen sanitation practices; research and explore food nutrients as they relate to exercise and sports; analyze food choices and their effects over the lifespan.

Evaluations: Written work and reflections; group lab experiences and participation.

9002 CHILD PSYCHOLOGY/CHILD CARE OCCUPATIONS (11-12)

This block course emphasizes the study of the physical, intellectual, emotional and social development of children from 2 1/2 to 10 years. Emphasis is placed on developmental and guidance theory and effective parenting skills based on research and observation. Students will actively work with children in a preschool program. During this experience, the student will plan, implement and evaluate activities for the preschool children. Students continue study of children in a laboratory situation with internships in the community elementary school setting. Students will investigate childcare trends and career choices. This advanced course is designed for students who are interested in careers such as elementary education, day care, pediatrics, child psychology or any career that works with children.

Major Course Goals: Students will: 1) use the inquiry method to understand the physical, emotional, social and intellectual development of children from birth to five, 2) demonstrate teaching and guidance skills with children in the preschool lab, 3) explore child care issues, 4) use the decision-making process to select good child care institutions, 5) internship in elementary.

Evaluation: Traditional assessments (written work, projects, reports). Performance assessments (individual and group participation in lab experience and completed case study paper). **Technical college credit available to those who earn greater than 88%, and teacher approval.**

9004 INDEPENDENT LIVING (11-12)

This course helps students learn to live on their own. Areas of study may include personal finance, budgeting, taxes and investments, car-purchasing, insurance, renting, job interviewing, resumes, consumerism and career exploration. Students will have the opportunity to learn from professional speakers in our community.

Major Course Goals: Students will: 1) learn to manage their resources, 2) research career choices, 3) learn practical skills of life.

Evaluation: Traditional assessments (participation, projects, written work). Performance assessments.

9446 PARENTING (9-12)

Understand the role of a parent from the adolescent perspective, and that of a future parent. Students will learn about families, pregnancy, labor, delivery, parenting styles, positive and negative parenting characteristics, infancy and toddlers, child safety and child play as it relates to physical, intellectual, emotional and social development. Students learn that parenting begins at conception and continues through adulthood. This course will provide students with the knowledge and training to become effective parents, capable of establishing a strong family unit. Students will have the opportunity to practice overnight parenting with a Real Care Computerized Infant.

Major Course Goals: Student will: Analyze roles and responsibilities of parenting; Analyze physical and emotional factors related to beginning the parenting process; Evaluate external support systems that provide services for parents.

Evaluation: Class participation, written work, research and presentation projects.

HEALTH

Credit value follows in parentheses.

5700 Health Science (1 Health Credit)

5702 Health Careers Investigation (1 Elective Credit)

5704 Health Science Blended (1 Health Credit)*

*See page 6 for blended course information.

COURSE DESCRIPTIONS

5700 HEALTH SCIENCE (10) (Required)

The main objective for Health Education at Armstrong High School is to provide students with the knowledge and opportunity to develop skills necessary to move toward optimum health. This course focuses on students' ability to learn and improve their critical thinking, problem solving and decision making skills within the 6 adolescent health priority areas identified by the *Center for Disease Control and Prevention*.

The National Health Education Standards are used as the foundation of the Health Science Course.

1. Students will comprehend concepts related to health promotion and disease prevention to enhance health.
2. Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.
3. Students will demonstrate the ability to access valid information, products, and services to enhance health.
4. Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
5. Students will demonstrate the ability to use decision-making and goal-setting skills to enhance health.
6. Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
7. Students will demonstrate the ability to advocate for personal, family and community health. These standards are integrated into each of the Five Units of Study for Health Science Course.
 - **Health Literacy**— Risk and Wellness Behaviors, Accessing Valid Information, CDC, Goal Setting, Advocacy and Interpersonal Communication
 - **Nutrition**— Basic Nutrients, USDA Dietary Guidelines, Evaluating Food Choices, MyPlate Guidelines, Food Labels and Healthy Food Choices
 - **Mental Health**— Stress Management, Depression/Suicide Awareness, Eating Disorders, Self-Esteem, Mental Disorders, Examining Personal Values and Self Esteem.
 - **Drugs and Alcohol**— Risks of Drug / Alcohol Use, Drug Classifications, Refusal Skills, Current Trends, Benefits of a Drug-Free Lifestyle
 - **Human Sexuality**— Reproductive Anatomy, Pregnancy Prevention, Relationships, Sexually Transmitted Infections, HIV/AIDS and Abstinence

5704 HEALTH SCIENCE (BLENDED) (10-12)

Blended Health Science covers the same topics, standards and units of study as the traditional Health Science course. This course combines online-learning with face to face instruction. It is an alternative format for taking required Health Science class in 10th grade or to make up the required health credit in grades 11-12. Most content and instruction is delivered online via Schoology. Assignments are completed and submitted electronically. The amount of time spent, workload and rigor will be equal to that of the traditional course. Students will meet with the teacher face-to-face about once a week. Consider this option if you are an organized, task-oriented, independent learner who needs flexibility in your schedule. Students who are successful in blended courses are good time managers, effective communicators and have solid technology skills.

5702 HEALTH CAREERS INVESTIGATION (11-12)

This class is designed for students interested in exploring careers in a healthcare field. The topics covered in the units are designed to provide students with the basic knowledge and core skills required for many different health care occupations. Students also reach several of the National Health Care Skill Standards in preparation for work in a healthcare field. Topics include: Legal and ethical issues in healthcare, medical terminology, safety in health care occupations, vital signs, body systems and basic first aid, CPR and AED training. This course also presents information regarding post-high school education needs for many health careers and the schools that offer such programs.

MATHEMATICS

Credit value follows in parentheses.

Standard Courses:

- Math Squeeze Option:
- 4840-4841 Geometry/Algebra 2 I & II (2)
- 4844-4845 Algebra 2/Pre-Calculus I & II (2)
- 4012-4013 Geometry I & II (2)
- 4448-4449 High School Algebra 1 & 2 (2)
- 4047-4048 Algebra 2 Extended I & II (2)
- 4010-4011 Algebra 2 I & II (2)
- 4014-4015 Pre-Calculus I & II (2)
- 4842-4843 Calculus I & II (2)

Advanced Placement Courses:

- 4605-4606 Statistics I & II (2)
- 4805-4806 AP Statistics I & II (2)
- 4801 AP Calculus 1 & 2 (2) (Block)
- 4803 AP Calculus 3 (1)
- 4804 AP Calculus 4 (1)

*See page 5 for general information regarding blended courses.
 See below for specific information regarding math blended courses.
Graduation Requirement: 6 standard or advanced placement credits.

ARMSTRONG MATH SEQUENCE OPTIONS

Four years of math in high school are strongly recommended by the Math Department and required by most colleges.

AHS Math Sequence from 8th grade to 12th grade				
8th grade	9th grade	10th grade	11th grade	12th grade
Algebra 1-8	Geometry	HS Algebra	Algebra II	Pre-Calc AP Statistics Statistics
		Algebra II	Pre-Calculus AP Statistics Statistics	AP Calculus AB AP Calculus BC AP Statistics
	(Geometry) + (Algebra II) + (Pre-Calc) 3-courses in 2-years		AP Calculus AB AP Statistics	
Geometry	Algebra II	Pre-Calc	AP Calculus AB AP Statistics	AP Calculus AB AP Calculus BC and/ or AP Statistics

MATHEMATICS, continued

Qualifying for the Squeeze Option: Students, parents/guardians and teachers can request or recommend a student's participation in the Squeeze Option. However, students and parents/guardian should completely understand and commit to the extra workload required to successfully complete three years of math in two years. **In the math squeeze option students complete 3 years of math in 2 years for a total of 4 credits.**

The **regular sequence** is for all students. There is no remedial sequence. Students who need extra math support can be assigned to an additional support math course in lieu of an elective. In such cases students also remain in their regular math class.

All courses meet current Minnesota Academic Standards for Mathematics 2009

STANDARD COURSE DESCRIPTIONS

MATH SQUEEZE OPTION: (grades 9 &10) Prerequisites: Signature from current math teacher and an A/B in current math course

4840-4841 **GEOMETRY/ALGEBRA 2 I & II**

4844-4845 **ALGEBRA 2/PRE-CALCULUS I & II**

This course is for students who have excelled in High School Algebra and desire a fast-paced coursework. Students will cover three traditional courses in two years. All essential topics covered in Geometry, Algebra II and Pre-Calculus will be covered in the four semesters. Registering for this class is a two-year commitment.

4012 **GEOMETRY I & II** (9-12) Prerequisite: High School Algebra or teacher recommendation

4013 Learning to reason correctly is an important objective of this course. In the study of geometry, students develop and discover important facts concerning figures composed of points, lines, surfaces and solids. Algebraic skills and properties are used throughout the course.

Major Course Goals: Students will be able to: 1) understand and apply the essential vocabulary of points, lines, planes and angles and their properties to solve problems, 2) understand and apply properties of similar and congruent triangles and polygons to solve problems, 3) apply the Pythagorean theorem and trigonometric ratios to solve real world problems, 4) calculate and apply area, surface area, and volume to figures, 5) apply probability concepts including basic counting principles, intersections, unions, compliments and conditional probabilities to solve problems.

4448 **HIGH SCHOOL ALGEBRA STANDARD I & II** (9-12)

4449 This course begins with a review of linear relationships. Main topics covered include working with polynomials using the four basic operations, solving first- and second-degree equations, solving first-degree inequalities, factoring polynomials, working with irrational numbers and algebraic fractions. The course is for students who may not have mastered all arithmetic skills and to strengthen their linear skills. The course will also strengthen their skills in more abstract concepts.

Major Course Goals: Students will be able to: 1) solve quadratic equations algebraically, 2) sketch quadratic and exponential equations, 3) compare/contrast tables, graphs and equations, 4) write exponential equations, 5) perform operations with polynomials (evaluating, addition, subtraction, multiplication and factoring), 6) establish a problem-solving procedure through math applications and by being an effective math learner, 7) evaluate data by using data displays and finding summary statistics.

4047 **ALGEBRA 2 EXTENDED I & II** (9-10) (see description for Algebra 2)

4048

4010 **ALGEBRA 2 I & II** (9-12) Prerequisite: High School Algebra or teacher recommendation

4011 Advanced treatment of topics presented in High School Algebra is given. Considerable emphasis is placed on the structure of number systems generalized throughout algebraic expressions. Higher-order equations are examined graphically and algebraically. Algebra II is required for Pre-Calculus and all college math courses.

Major Course Goals: Students will be able to: 1) identify properties of advanced algebraic functions, including shape, domain and range, and transformations, 2) solve and graph quadratic equations, and translate between a graph, table, function, and verbal representation, 3) simplify and solve advanced algebraic expressions including those that are polynomial, radical, exponential, and rational, 4) draw conclusions, make predictions, and justify results using normal distributions, confidence intervals, margin of error, and evaluate and write arithmetic and geometric series and sequences.

MATHEMATICS, continued

4014 **PRE-CALCULUS I & II** (9-12) Prerequisite: Geometry and Algebra II

4015 This course is an overview of applications of functions.

Major Course Goals: Students will be able to: 1) identify and graph relations and linear functions, 2) solve systems of equations using matrices, 3) use trigonometry functions and the unit circle to solve triangles, 4) graph trigonometric functions, 5) use vectors to solve problems, 6) understand equations and graphs of conics, 7) manipulate exponential and logarithmic functions, 8) apply data analysis, 9) basic limit properties

4605 **STATISTICS I & II** (11-12) (2 credit, year-long class) Prerequisite: Complete Algebra II

4606 **Major Course Goals:** Students will learn methods to 1) explore, organize, and examine data graphically and numerically, 2) use data to make predictions and draw conclusions, 3) collect data, and 4) calculate probabilities related to given data. Students will also be introduced to inference and also plan and complete a statistical study.

4842 **CALCULUS I & II** (11-12) Prerequisite: Pre-Calculus/Squeeze II teacher recommendation

4843 This course is designed to be an introduction to calculus. Topics include differentiation, applications of derivatives and integration. This course does **not** prepare students for AP Calculus tests.

Major Course Goals: Students will be able to: 1) use limits of a function to help determine instantaneous rates of change, 2) use derivatives to sketch graphs using slopes, critical points and inflection points, 3) understand the use of the product, quotient and chain rules to find derivatives, 4) integrate functions involving algebraic, and trigonometric.

ADVANCED PLACEMENT COURSE DESCRIPTIONS

4805 **AP STATISTICS I & II** (11-12) (2 credit, yearlong class) Prerequisite: Complete Algebra II

4806 Pre-Calculus is not required, but would be beneficial. Students who have not completed these prerequisites need consent of the teacher and a recommendation from your current math teacher.

Major Course Goals: Students will learn methods to 1) explore, organize, and examine data graphically and numerically, 2) use data to make predictions and draw conclusions, 3) collect data, 4) calculate probabilities related to given data, and 5) draw conclusions with confidence (inference).

4801 **AP CALCULUS AB I** (11-12) (**block class**) (first semester only) Prerequisite: Pre-Calculus I & II/ Squeeze II or teacher recommendation A first course in differential and integral calculus.

Major Course Goals: Students will be able to: 1) understand the use of functions and their inverses, including algebraic, trigonometric, logarithmic functions and composition of functions, 2) use derivatives to sketch graphs using slopes, critical points and inflection points, 3) understand the use of the product, quotient and chain rules to find derivatives, 4) integrate functions involving algebraic, trigonometric, and logarithmic functions, 5) evaluate definite integrals and use integration techniques to find areas, volumes and solve differential equations, 6) use graphing utilities to determine solutions to a problem and to support results determined from analytic solutions to a problem.

4803 **AP CALCULUS AB II** (11-12) (second semester only) Prerequisite: AP Calculus 1 & 2

A continuation of differential and integral calculus. A fairly intense review of the entire calculus course is provided before the students take the AP Calculus AB exam.

Major Course Goals: Students will be able to: 1) apply techniques of integration to evaluate indefinite integrals, 2) evaluate definite integrals using numerical methods, 3) apply the concepts of integration to work problems and to do problems relating to rates of growth and decay, 4) use graphing utilities throughout the course to solve problems.

4804 **AP CALCULUS BC** (12) (second semester only) Prerequisite: AP Calculus 3

A continuation of differential and integral calculus. Students will take the AP Calculus BC exam in the spring.

Major Course Goals: Students will be able to: 1) evaluate proper integrals, 2) solve problems using parametric and polar equations, 3) solve problems using infinite sequences and series.

MEDIA

0700 STUDENT TECH TEAM (9-12)

This is an elective course equivalent to one credit toward graduation. The primary purpose of the Student Tech Team program is to provide face-to-face tech support for students and staff. They also serve a larger purpose in helping to create a culture of collaboration and high level use of technology. Evaluation: Students will:

- 1) use technology to take an active role and design individual goals for learning and sharing learning throughout the semester.
- 2) create and model effective methods for digital communication that are safe, legal and ethical.
- 3) create and curate digital resources to share meaningful learning experiences for students and teachers.
- 4) use the various technologies available to identify and design solutions.
- 5) utilize computational thinking to create and test solutions.
- 6) identify and use the right tool for the job to communicate common solutions and innovative ideas.
- 7) connect with the larger community of student tech teams to keep up with the most current issues and solutions while contributing their own ideas and approaches.

Occasionally, our Student Tech Team(s) will connect with Senior Communities in a tech help capacity in a program called "Students Mentoring Seniors."

Space is limited to 1-3 students per class period and students are chosen by application and interview process. This is a 1-credit non-graded course. If interested in this option, students should sign up for a study hall and visit the media center for more information and how to apply.

MUSIC

7400-7401 Freshman Choir I & II *	7715-7716 Varsity Volo Choir/Philharmonic Orchestra 1 & II
7740-7741 Varsity Vivace Choir I & II (2)	7452-7453 Freshman Orchestra I & II (2)
7742-7743 Varsity Volo Choir I & II (2)	7705-7706 Philharmonic Orchestra I & II (2)
7806-7807 Concert Choir I & II (2)	7703-7704 Symphony Orchestra I & II (2)
7844-7845 Cantori I & II (2)	7804-7805 AP Music Theory I & II (2)
7402-7403 Freshman Band I & II (2)	7746 Music Café
7808-7809 Concert Band I & II (2)	
7701-7702 Symphonic Band I & II (2)	

Credit value follows in parentheses.

7442-7443 Freshman Choir/Freshman Orchestra I & II (1/2 credit each) **and**
7446-7447 Freshman Orchestra/Freshman Choir I & II (1/2 credit each) for ninth graders who wish to take both orchestra and choir, meeting each on alternating days.

7440-7441 Freshman Choir/Freshman Band I & II (1/2 credit each) **and**
7444-7445 Freshman Band/Freshman Choir I & II (1/2 credit each) for ninth graders who wish to take both band and choir, meeting each on alternating days.

7840-7841 Varsity Vivace Choir/Concert Band I & II (1/2 credit each) **and**
7801-7802 Concert Band/Varsity Vivace Choir I & II (1/2 credit each) for 10th through 12th graders who wish to take both band and choir, meeting each on alternating days.

7713-7714 Varsity Vivace Choir/Philharmonic Orchestra I & II (1/2 credit each) **and**
7707-7708 Philharmonic Orchestra/Varsity Vivace Choir I & II (1/2 credit each) for 10th through 12th graders who wish to take both orchestra and choir, meeting each on alternating days.

7842-7843 Varsity Volo Choir/Concert Band I & II (1/2 credit each) **and**
7801-7802 Concert Band/Varsity Volo Choir I & II (1/2 credit each) for 10th through 12th graders who wish to take both band and choir, meeting each on alternating days.

7715-7716 Varsity Volo Choir/Philharmonic Orchestra I & II (1/2 credit each) **and**
7707-7708 Philharmonic Orchestra/Varsity Volo Choir I & II (1/2 credit each) for 10th through 12th graders who wish to take both orchestra and choir, meeting each on alternating days.

NOTE: Instrumental music performance classes have scheduled sectionals for which there is no additional credit.

COURSE DESCRIPTIONS

CHOIRS

The Armstrong Choirs are open to all students in grades 9-12. Each level of choir prioritizes music reading, skill development and vocal technique. All ensembles perform high quality, balanced repertoire (sacred/secular, accompanied/acapella, historical/modern/global). Attendance is required for daily work, special rehearsals and all performances which may occur during and outside of the school day. Specific performance attire is required for each ensemble. Participation in the Armstrong Choirs demands quality teamwork and a high level of individual contribution to meet performance goals.

Evaluation: Grading is based on daily contribution, skill evaluations and performances.

*Meets/provides 2 arts education credits (1 credit/semester)

7400 **FRESHMAN CHOIR I & II*** (SATB 9) Prerequisite: None

7401 *Membership is restricted to 9th grade singers. Classes are divided into two sections which meet during 4th & 7th hours. The choirs meet every day and perform in the Winter and Spring Concerts.*

Attendance is required for assigned performances. Participation is anticipated for both consecutive semesters during Freshman year.

*Meets Arts Education requirements.

7442 **FRESHMAN CHOIR/FRESHMAN ORCHESTRA I & II*** (1/2 credit each) Prerequisite: None

7443 See course description under Freshman Choir. Must take with 7446-7447 Freshman Orchestra/
Freshman Choir. Students are responsible for all required coursework and performances in both courses.

*Meets Arts Education requirement

MUSIC, continued

7440 **FRESHMAN CHOIR/FRESHMAN BAND I & II*** (1/2 credit each) Prerequisite: None

7441 See course description under Freshman Choir. Must take with 7444-7445 Freshman Band/Freshman Choir. Students are responsible for all required coursework and performances in both courses.
*Meets Arts Education requirements.

7740 **VARSITY VIVACE CHOIR I & II*** (SSA 10-12) Prerequisite: None

7741 Vivace is non auditioned. The choir meets every day and performs in the Winter Concert, Masterworks, Region 6AA Contest and Spring Concerts. Attendance is required for assigned performances and choir activities. Participation is anticipated for both consecutive semesters.
*Meets Arts Education requirement and/or additional elective credits for graduation.

7840 **VARSITY VIVACE CHOIR/CONCERT BAND I & II*** (1/2 credit each)

7841 See course description under Varsity Vivace. Must be taken with Concert Band/Varsity Vivace. Students are responsible for all required coursework and performances in both courses.
*Meets Arts Education requirements.

7713 **VARSITY VIVACE CHOIR/PHILHARMONIC ORCHESTRA I & II*** (1/2 credit each)

7714 See course description under Varsity Vivace. Must be taken with Philharmonic Orchestra/Varsity Vivace. Students are responsible for all required coursework and performances in both courses.
*Meets Arts Education requirement and/or additional elective credits for graduation.

7742 **VARSITY VOLO CHOIR I & II*** (TTB 10-12) Prerequisite: None

7743 Volo is non auditioned. The choir meets every day and performs in the Winter Concert, Masterworks, Region 6AA Contest and Spring Concerts. Attendance is required for assigned performances and choir activities. Participation is anticipated for both consecutive semesters.
*Meets Arts Education requirement and/or additional elective credits for graduation

7842 **VARSITY VOLO CHOIR/CONCERT BAND I & II*** (1/2 credit each)

7843 See course description under Varsity Volo. Must be taken with Concert Band/Varsity Volo. Students are responsible for all required coursework and performances in both courses.
*Meets Arts Education requirement and/or additional elective credits for graduation. .

7715 **VARSITY VOLO CHOIR/PHILHARMONIC ORCHESTRA I & II*** (1/2 credit each)

7716 See course description under Varsity Volo. Must be taken with Philharmonic Orchestra/Varsity Volo. Students are responsible for all required coursework and performances in both courses.
*Meets Arts Education requirement and/or additional elective credits for graduation.

7806 **CONCERT CHOIR I & II*** (SATB 11-12) Prerequisite: Audition

7807 Members are required to audition. They are chosen for advanced musicianship, vocal ability and high quality workmanship. Members are required to participate in all public concerts, music contests and festivals, and performance tours.
*Meets Arts Education requirement and/or additional elective credits for graduation..

7844 **CANTORI I & II*** (SSAA 11-12) Prerequisite: Audition

7845 Members are required to audition. They are chosen for advanced musicianship, vocal ability, and high quality workmanship. Members are required to participate in all public concerts, music contests and festivals, and performance tours
*Meets Arts Education requirement and/or additional elective credits for graduation.

MUSIC, continued

INSTRUMENTAL MUSIC COURSES

Major Course Goals: Instrumental music band and orchestra students will be able to: 1) Develop an appreciation of music through playing an instrument, 2) learn the proper approach to the instrument of choice such as hand position, bowing technique and proper breathing, 3) learn how to play scales on a musical instrument, 4) develop the ability to play repertoire alone and in the group situation, 5) learn good rehearsal and performance etiquette, 6) develop good practice habits and the discipline needed to perform, 7) recognize and develop a good tonal concept, 8) demonstrate the ability to understand and interpret musical terms, 9) apply the use of increasingly difficult rhythmic patterns in a musical performance, 10) understand and perform dynamics, tempo and articulation, 11) experience solo and small-ensemble participation, 12) learn to perform music with varied tempos and complex harmonies, 13) apply knowledge of pitch and tuning to performance, 14) learn to recognize pulse in music, 15) develop a sense of appropriate style, and be aware of origin with regard to the different periods of music such as baroque, classical, romantic and modern, 16) develop vibrato and its appropriate usage, 17) learn how to read and interpret a printed score, 18) develop a rehearsal plan for a minimum of three music performances, and 19) prepare and perform at least three music selections at state region solo and ensemble contest and/or a concert situation.

Evaluation: Grades will be determined by written and playing tests, listening tests, class participation and performance.

BANDS

At Robbinsdale Armstrong, students in grades 10-12 with background in band are enrolled in Concert Band or are accepted, by audition, into Symphonic Band. Band students in grade nine will be enrolled in the Freshman Band. Each band receives full credit. Each member is required to participate in all concert and contest performances and are required to perform several times in Pep Bands at athletic events.

7402 **FRESHMAN BAND I & II*** (9) Prerequisite: Previous instrumental music experience

7403 Members are made up of ninth grade students and generally meets during 4th period of the school day.

The group meets every day and performs at three concerts, pep band games and at graduation.

Students attend two sectionals a quarter. Freshman Band students in choir alternate days between band and Freshman Choir. Attendance is required at assigned performances. Marching Band is optional, but students are encouraged to participate.

*Meets Arts Education requirements.

7808 **CONCERT BAND I & II*** (10-12) Prerequisite: 10th-12th graders with prior band experience in high school.

7809 This band is the middle band made up mostly of 10th and 11th graders and some 12th grade students and generally meets every third period of the school day. The group performs in three school concerts, pep band and graduation. Sectionals are during class time. Students in this band may rotate with third hour Varsity Choir. Attendance is required at assigned performances. Marching Band is optional, however students are encouraged to participate.

*Meets Arts Education requirements.

7444 **FRESHMAN BAND/FRESHMAN CHOIR I & II*** (1/2 credit each)

7445 See description for Freshman Band. Must take with 7440-7441 Freshman Choir/Freshman Band.

*Meets Arts Education requirements.

7801 **CONCERT BAND/VARSITY VOLO OR VIVACE CHOIR I & II*** (1/2 credit each)

7802 Prerequisite: 10th-12th graders with prior band experience; this course generally meets 3rd period and students alternate days between Concert Band and the Men's or Women's Varsity Choir.

See description for Concert Band. Must take with either 7842-7843 Varsity Men's Choir/Concert Band or 7840-7841 Varsity Women's Choir/Concert Band.

*Meets Arts Education requirements.

7701 **SYMPHONIC BAND I & II*** (10-12) Prerequisite: Members are required to audition for this band.

7702 Members are chosen for advanced musicianship in brass, woodwind or percussion and the ability to fully participate in preparing advanced band literature. In addition to school concerts, pep band and graduation, this top band at Armstrong performs at Orchestra Hall, Conference Festivals and Region VIAA Contests. Attendance is required at assigned performances. Members of Symphonic Band are required to participate in Marching Band in the Fall.

*Meets Arts Education requirements.

MUSIC, continued

ORCHESTRA

At Robbinsdale Armstrong, the orchestras are open to students in grades 9-12. All 9th graders must register for Freshman Orchestra. Philharmonic Orchestra is open to students in grades 10-12 and the Symphony Orchestra is open by audition to 10th through 12th graders. Each orchestra stresses the development of music theory, familiarization with varying styles of orchestral literature and attaining a general knowledge of the current performing scene, as well as historical components of orchestral music. Each orchestra member is required to participate in all concerts, contest/festival performances, and sectionals.

Evaluation: Grading is based on contribution to the orchestra, musical development on instrument, written and playing tests and concert attendance. Personal practice is required in each orchestra.

7452 **FRESHMAN ORCHESTRA I & II*** (9) Prerequisite: Previous instrumental music experience or 7453 permission of instructor

Members are made up of ninth grade students and generally meets during 4th period of the school day.

The group meets every day and performs in four concerts: a Fall Concert, a Winter Concert, a Spring Concert and the district Orchestra Rock Concert. Students also attend three sectional per semester, and students participate in a local solo-ensemble event. Attendance is required at assigned performances.

*Meets Arts Education requirements.

7705 **PHILHARMONIC ORCHESTRA I & II*** (10-12) Prerequisite: Previous instrumental music experience or 7706 permission of instructor

Members are made up of 10-12th grader students and generally meets during 1st and 3rd period of the school day. The group meets every day and performs in four concerts: a Fall Concert, a Winter Concert, a Spring Concert and the district Orchestra Rock Concert. Students also attend three sectional per semester, and students participate in a regional solo-ensemble event. Students may rotate with 3rd hour Varsity Choirs. Attendance is required at assigned performances.

*Meets Arts Education requirements.

7703 **SYMPHONY ORCHESTRA I & II*** (10-12) Prerequisite: Members are required to audition for this 7704 orchestra.

Members are made up of the 10-12th grade students and generally meets during 6th period of the school day. Students are chosen based on their ability to fully participate in preparing advanced orchestral literature. The group meets every day and performs in five concerts: a Fall Concert, the District Music Festival at Orchestra Hall, a Winter Concert, a Spring Concert and the district Orchestra Rock Concert. Students also attend three sectionals per semester, and students participate in the regional solo-ensemble event. Attendance is required at assigned performances.

*Meets Arts Education requirements.

7446 **FRESHMAN ORCHESTRA/FRESHMAN CHOIR I & II*** (1/2 credit each)

7447 Orchestra students are responsible for all course work, sectionals and performances of both courses. Must take with 7442-7443 Freshman Choir/Freshman Orchestra.

*Meets Arts Education requirements.

7707 **PHILHARMONIC ORCHESTRA/VARSITY VOLO OR VIVACE CHOIR I & II*** (1/2 credit each)

7708 Prerequisite: 10th-12th graders with prior orchestra experience; this course generally meets 3rd period and students alternate days between Philharmonic Orchestra and the Men's or Women's Varsity Choir.

See description for Philharmonic Orchestra. Must take with either 7715-7716 Varsity Volo Choir/Philharmonic Orchestra or 7713-7714 Varsity Vivace Choir/Philharmonic Orchestra.

*Meets Arts Education requirements.

ADDITIONAL COURSES

7804 **AP MUSIC THEORY I & II***

7805 This is a college level music theory course with the AP Exam being only one significant part of many aspects of the program. Students can earn college credit and be granted advanced placement in college. The AP music theory builds upon content by adding additional content at a greater depth. Time is devoted to: 1) the analysis of score study, 2) aural listening skills, sight singing, keyboard harmony, and 3) two-part and four-part writing harmonization. Students will be very active in the computer lab working with MIDI keyboards and learning to write music with the Finale printing program, and working with many other drill and practice software programs.

Major Course Goals: Students will demonstrate an understanding of music fundamentals including notation, scales, intervals, transposition, and chords. Students will analyze cadences and nonharmonic tones, melodic organization, textures, voice leading, harmonic progression, seventh chords, secondary dominants and form. Students will compose a major composition in the second semester.

Evaluation: Required assignments, compositions, short tests, melodic dictation and the AP exam.

*Meets Arts Education requirement

MUSIC, continued

7746 MUSIC CAFÉ*

This course is open to all students at Armstrong High School in **grades 10 through 12**. No past musical experience is required for this course. Registration may be limited. During the first half of class, students will study and perform African drumming and other world music. The second half of the course features the following aspects of American music: acoustic guitar performance, Native American flute performance, film music study, and history of jazz and rock. Throughout this course we will examine different music career options available in today's society.

*Meets Arts Education requirements.

**EXTRA CURRICULAR MUSICAL GROUPS
(NO CREDIT COURSES)**

Freshman Madrigal Singers (9)

Varsity Madrigal Singers (10-12)

Diva Voce (10-12)

Armstrong Chamber Singers (11-12)

Jazz Ensemble I & II (10-12)

Armstrong Marching Band (9-12)

Armstrong Chamber Strings (9-12)

Please refer to the Armstrong Activities Guide Book for more information, along with how to participate details, about these additional music groups

PHYSICAL EDUCATION

Credit value follows in parentheses.

6401 Physical Education 9 (Required) (1)	6009 Competitive Team and Partner Sports (12) (1)
6503 Physical Education 10 (Required) (1)	6005 Weight Training: Beginning to Intermediate Level (11-12) (1)
6022 Team and Lifetime Sports (9-10) (1)	6006 Advanced Weight Training (11-12) (1)
6023 Net and Racquet Sports (9-10) (1)	6003 Net and Racquet Sports (11-12) (1)
6025 Weight Training: Beginning to Intermediate Level (9-10) (1)	6001 Sports and Leisure (9-12) (1)
6002 Team and Lifetime Sports (11-12) (1)	
6017 Physical Education (Blended) (10-12) (1)*	

***See page 6 for blended course information.**

COURSE DESCRIPTIONS

6401 PHYSICAL EDUCATION (9 only—Required)

Ninth grade physical education classes include many fitness activities in the following categories: cardiovascular endurance, muscle endurance, muscle strength and flexibility. Team and lifetime activities are also experienced.

Major Course Goals: Students shall use decision-making processes to select appropriate physical activities to achieve fitness and shall demonstrate understanding of the training necessary to improve fitness and the rules and skills associated with physical activities.

Evaluation: 80% of grade is based on participation in class activities and written assignments; 10% of grade is based on a comprehensive final test; 10% of grade is based on enrichment points.

6503 PHYSICAL EDUCATION (10 only—Required)

Tenth grade physical education classes include many fitness activities in the following categories: cardiovascular endurance, muscle endurance, muscle strength and flexibility. Team and lifetime activities are also experienced.

Major Course Goals: Students shall use decision-making processes to select appropriate physical activities to achieve fitness and shall demonstrate understanding of the training necessary to improve fitness and the rules and skills associated with physical activities.

Evaluation: 80% of grade is based on participation in class activities and written assignments; 20% of grade is based on a comprehensive final assessment.

ELECTIVE COURSES FOR FRESHMEN AND SOPHOMORES:

6022 TEAM AND LIFETIME SPORTS (9-10 only)

This class will be modified from the section for 11th and 12th graders to meet the needs and skill levels of 9th and 10th graders.

Sports activities concentrate on both team competition and recreational activities. Activities include badminton, flag football, softball, volleyball, soccer, bowling, floor hockey and basketball.

Emphasis is placed on advanced skills and strategy.

Major Course Goals: Students will be able to: 1) develop a sense of physical, mental and social well-being, self-discipline, cardiovascular endurance, an enjoyment of lifetime leisure activities and a respect for the differences and abilities of others, 2) understand the benefits of physical and mental relaxation in a stressful environment, 3) participate in a variety of lifetime leisure activities.

Evaluation: 80% of grade is based on participation, attendance and skills; 20% of grade is based on a comprehensive final test.

6023 NET AND RACQUET SPORTS (9-10 only)

This class will be modified from the section for 11th and 12th graders to meet the needs and skill levels of 9th and 10th graders.

Individual, dual, and team activities allow students to work on skills and fundamentals of sports that include a racquet and/or net. These activities include tennis, indoor volleyball, soccer, badminton, pickle ball, table tennis, floor hockey and basketball.

Major Course Goals: Students will be able to: 1) develop a sense of physical, mental and social well-being, self-discipline, cardiovascular endurance, and an enjoyment of lifetime activities that involve a net or racquet, 2) will experience the competitive nature of individual, partner, and group activities, 3) will develop strategies and skills for each activity that will enhance their creativity in a competitive environment.

Evaluation: 80% of grade is based on participation in class activities; 20% of grade is based on a comprehensive final test.

PHYSICAL EDUCATION, continued

6025 WEIGHT TRAINING: BEGINNING TO INTERMEDIATE LEVEL (9-10 only)

This is a physical education class intended for those who would like to learn how to use "free" weights and weight machines correctly in order to enhance their current level of strength, physical fitness and self-esteem. Class will include weekly strength and endurance competitions.

Major Course Goals: Students will be able to: 1) set up their own individualized programs by the end of the semester, 2) work on weight training programs to improve their current level of strength and fitness, 3) demonstrate basic knowledge about the muscular system as it relates to weight training, 4) learn to execute power cleans, bench and squats.

Evaluation: 80% of grade will be earned through attendance and participation; 20% of grade will be evaluated by practical tests on exercise technique of the weight training exercises (bench, power clean, squat).

ELECTIVE COURSES FOR JUNIORS AND SENIORS:

6002 TEAM AND LIFETIME SPORTS (11-12 only)

Sports activities concentrate on both team competition and recreational activities. Activities include badminton, flag football, softball, volleyball, soccer, bowling, floor hockey and basketball.

Emphasis is placed on advanced skills and strategy.

Major Course Goals: Students will be able to: 1) develop a sense of physical, mental and social well-being, self-discipline, cardiovascular endurance, an enjoyment of lifetime leisure activities and a respect for the differences and abilities of others, 2) understand the benefits of physical and mental relaxation in a stressful environment, 3) participate in a variety of lifetime leisure activities.

Evaluation: 80% of grade is based on participation, attendance and skills; 20% of grade is based on a comprehensive final test.

6017 PHYSICAL EDUCATION (BLENDED) (10-12) *Reliable internet access required outside of school*

Physical education blended students will record workouts/activities done at home or in the community interactively from their district issued device as well as on a home computer, iPad, or smartphone.

Students will meet with physical education teacher around 10 times to complete physical fitness testing. Any quizzes, tests, or assignments will be done online. This class will fulfill 1 credit of the student's required 2 physical education credits to graduate.

6009 COMPETITIVE TEAM AND PARTNER SPORTS (12 only)

This class can be taken by seniors only.

This is a physical education class that offers a high level of competition in team and partner sports for senior students. The units will include football, soccer, softball, Frisbee golf, basketball, badminton, volleyball, pickleball, and floor hockey.

Major Course Goals: Students will be able to: 1) participate in a variety of activities with an emphasis on competitive team and partner play and tournaments, 2) experience competition and advanced play through team, partner and individual sport activities, 3) develop a sense of physical, mental, and social well being through the enjoyment of sports and recreational activities.

Evaluation: 80% of grade is based on participation, attendance, and being prepared for class (clothing); 20% of grade is based on a comprehensive final test.

6005 WEIGHT TRAINING: BEGINNING TO INTERMEDIATE LEVEL (11-12 only)

This is a physical education class intended for those who would like to learn how to use "free" weights and weight machines correctly in order to enhance their current level of strength, physical fitness and self-esteem. Class will include weekly strength and endurance competitions.

Major Course Goals: Students will be able to: 1) set up their own individualized programs by the end of the semester, 2) work on weight training programs to improve their current level of strength and fitness, 3) demonstrate basic knowledge about the muscular system as it relates to weight training,

Evaluation: 80% of grade will be earned through attendance and participation; 20% of grade will be evaluated through practical tests on exercise technique of the weight training exercises and Olympic lifts taught.

PHYSICAL EDUCATION, continued

6006 ADVANCED WEIGHT TRAINING (11-12)

Prerequisite: The Beginning to Intermediate Weight Training class must be taken before you can take the Advanced lifting class.

Major Course Goals: Students will be able to: 1) design and follow intermediate to advanced level weight training programs, 2) understand how to set up and follow a training program to maintain strength and prevent injuries. The class will include fun weekly strength and endurance competitions.

Evaluation: 80% of grade is based on participation and in classes activities. 20% of the grade is based on a comprehensive final test.

6003 NET AND RACQUET SPORTS (11-12 only)

Individual, dual and team activities allow students to work on skills and fundamentals of sports that include a racquet and/or net. These activities include tennis, indoor volleyball, soccer, badminton, pickleball, table tennis, floor hockey and basketball.

Major Course Goals: Students will be able to: 1) develop a sense of physical, mental and social well-being, self-discipline, cardiovascular endurance, and an enjoyment of lifetime activities that involve a net or racquet, 2) will experience the competitive nature of individual, partner, and group activities, 3) will develop strategies and skills for each activity that will enhance their creativity in a competitive environment.

Evaluation: 80% of grade is based on participation in class activities; 20% of grade is based on a comprehensive final test.

6001 SPORTS AND LEISURE (9-12)

This class offers exposure to recreational and leisure lifetime activities, as well as core sports.

Recreation and leisure activities include bocce ball, table tennis, bowling, volleyball, basketball, floor hockey, tennis, badminton, board games and pickle ball. Students may be required to change clothing for some units.

Major Course Goals: Students will be able to: 1) develop a sense of physical, mental and social well-being, self-discipline and enjoyment of lifetime leisure activities, 2) participate in numerous indoor and outdoor sports and recreation lifetime activities.

Evaluation: 80% of grade is based on participation and attendance; 20% of grade is based on exams.

SCIENCE

Credit value follows in parentheses.

3401-3402 Regular Physical Science I & II (2)	3742 Intro to Organic Chemistry (1)
3501-3502 Biology I & II (2)	3046-3047 AP Environmental Science I & II (2)
3540-3541 AP Biology I & II (2)	3848-3849 Physics I & II (2)
3014-3015 Minnesota Ecology I & II (2)	3842 Enriched Physics (calculus based) (2)
3705-3706 Principles of Chemistry I & II (2)	3843 AP Physics (calculus based) (1)
3701-3702 Modern Chemistry I & II (2)	3001 Anatomy and Physiology 1 (1)
3740 Enriched Chemistry (2)	3008 Anatomy and Physiology 2 (1)
3741 AP Chemistry (1)	3002 Earth and Space (1)

COURSE DESCRIPTIONS

3401 **REGULAR PHYSICAL SCIENCE I & II** (9)

3402 Physical Science is a two semester course. Semester will cover concepts from physics that include lab safety, scientific instruments, motion, forces and energy. Physics semester will involve lab experiments, scientific research, and group projects. Semester focuses on chemistry and will cover matter, the atom, the periodic table, chemical bonding, chemical reactions and will conclude with a 10 day final lab experiment that will bring all of the concepts of chemistry together. Semester is aligned with current state science standards for the nature of science and engineering and physical science. The purpose of this course is to use standards-aligned laboratory-based science experiments to prepare all students for the rigor of biology, chemistry and physics courses that are graduation requirements.

Major Course Goals: Students will be able to: 1) practice lab safety, 2) understand the practice of science 3) explain the interactions among science, technology, engineering, mathematics, and society, 4) describe motion of objects, 5) identify how energy transforms, 6) evaluate human interactions with physical systems, 6) use the engineering process, and 7) analyze the properties of matter

3501 **BIOLOGY I & II** (10-12)

3502 In this course we will use class work, inquiry, laboratory study and independent study skills to explore the following essential outcomes: 1) students will be able to design, implement, and analyze a scientific investigation, 2) students will demonstrate an understanding of the characteristics of life and what is required to maintain life, 3) students will demonstrate an understanding of the relationship between the structure and function of living systems, 4) students will demonstrate an understanding that organisms and living systems change over time, 5) students will demonstrate an understanding of the ways in which humans impact living systems.

This course will provide appropriate preparation for additional science coursework in college.

3540 **AP BIOLOGY I & II** (Enriched) (10-12) Prerequisite: Teacher recommendation.

3541 This biology course includes the content of the Biology course with additional context and dept. Enrollment qualifies you to take the Advanced Placement Biology test given in May.

3014 **MINNESOTA ECOLOGY I & II** (11-12) Prerequisite: Completion of Biology or AP Biology

3015 This course focuses on Minnesota's freshwater ecosystems and the state's three major land biomes (prairies, deciduous forests, and boreal forests). We will study the interactions of organisms within these environments, along with the physical environments themselves. In addition, we compare these systems to the ecology in other parts of the world. Course includes lab activities, outside field work, field trips, individual research and projects to study Minnesota's natural resources. Medicine Lake serves as one of our field research areas. This is an activity-based class. We will participate in outdoor learning. This class will follow a hybrid model, with students working independently on assignments 1-2 days per week.

SCIENCE, continued

3705 **PRINCIPLES OF CHEMISTRY I & II** (11-12) Prerequisite: Minimum math requirements - successful completion of HS Algebra

This course is designed for students who have an interest in attending post-secondary school, but are **not** planning to pursue a career in science-related fields. The mathematics emphasis of this course is not as strong as Modern Chemistry. Students wanting to attend college for science-related fields, including medicine and engineering, are encouraged to take the college prep Modern Chemistry class. Students in this class study atomic structure, bonding, formula writing, chemical reactions, states of matter, solutions, gases, and calculations involving elements and compounds.

Major Course Goals: Students will be able to: 1) follow written and verbal directions in a laboratory situation, 2) analyze data collected in laboratory work and draw conclusions from data collected, 3) understand the ideas and basic concepts of matter, 4) understand the concepts of chemistry in order to solve problems relating to chemical laws in a logical procedure, 5) solve problems using the factor-label method.

3701 **MODERN CHEMISTRY I & II** (11-12) Prerequisite: Minimum math requirements - Completion of HS Algebra with a B or higher or currently enrolled in Algebra II

3702 This course is a college prep course intended to teach the concepts of chemistry. This course is a must for students considering a four-year degree in a science field or for students who have been successful in previous science and math classes. The mathematics emphasis of the course is stronger than Principles of Chemistry. Students study metric measurements, atomic structure, periodic classification, bonding, formula writing, chemical nomenclature, chemical equations, types of chemical reactions, calculations involving element and compounds, solids/liquids/gases, water, solutions, acids and bases, reaction rates and equilibrium, organic chemistry, and nuclear chemistry.

Major Course Goals: Students will be able to: 1) follow written and verbal directions in a laboratory situation, 2) analyze data collected in laboratory work and draw conclusions from data collected, 3) understand the ideas and basic concepts of matter, 4) understand the concepts of chemistry in order to solve problems relating to chemical laws in a logical procedure, 5) solve problems using the factor-label method and significant figures.

3740 **ENRICHED CHEMISTRY** (11-12) Prerequisite: Currently enrolled in Algebra II, minimum or teacher recommendation

Enriched Chemistry provides a self-motivated and academically enthusiastic student a highly intellectual approach to the study of chemistry. This course moves at an accelerated pace and has the same content as the initial 2/3 of a first year college chemistry course. Topics include, but are not limited to, stoichiometry, solutions, thermochemistry, quantum chemistry, periodicity, bonding, gas laws, phase changes and intermolecular forces, kinetics, equilibria, and acid/base chemistry. The ability to problem solve is emphasized. This is a block course only offered in the first semester. Enriched Chemistry is a prerequisite to AP Chemistry, which is a continuation of this course.

3741 **AP CHEMISTRY** (11-12) Prerequisite: Completion of Enriched Chemistry

A continuation of Enriched Chemistry concentrating on the content contained in the final 1/3 of a first year college chemistry course. Topics include acid/base equilibria, thermodynamics, electrochemistry, nuclear chemistry, metals and nonmetals, and organic chemistry. This is a singleton course only offered during second semester. Both Enriched Chemistry and AP Chemistry must be completed to take the AP test.

3742 **INTRO TO ORGANIC CHEMISTRY** (11-12) Prerequisite: One year or one full block of general chemistry

This elective course introduces some of the topics of carbon chemistry. In this course you will learn about the basic structure, naming, functions and reactions of various classes of organic compounds. This one-semester course will review the importance of bonding and focus on alkanes and cycloalkanes, alkenes and alkynes, aromatic compounds, halogen compounds, etc. The course will also focus on the development of specific organic laboratory skills such as determining melting and boiling points and separation techniques. Throughout the course you will develop skills in critical thinking, analysis of consumer products, writing lab reports, and proper and safe laboratory techniques. This course is a valuable background for students planning on majoring in chemistry or another science at college or planning on going into a medically-related field such as medical technology, nursing, veterinary science, dentistry or medicine.

SCIENCE, continued

3046 AP ENVIRONMENTAL SCIENCE I & II (9-12)

3047 This is a college-level course for students with an interest in environmental science. We will study the interrelationships of the natural world, identify and analyze environmental problems (both natural and human created), and examine alternative solutions for resolving or preventing them. Topics include earth systems, energy, ecosystems, pollution, global environmental issues, and land and water use. This is a year-long class. This course will prepare students for the AP Environmental Science test in the spring.

3848 **PHYSICS I & II** (11 or 12) Prerequisite: Current enrollment in Algebra II or higher; current enrollment 3849 in Pre-Calculus. Is recommended.

This year-long course is for students intending to go to college but not necessarily major in science or engineering. This course uses math every day; **a scientific calculator is required**, with a Texas Instruments (Ti-83 or above) recommended. Students will have the opportunity in the spring to participate in a field trip to Valley Fair to observe and experience how the laws of physics relate to creating and engineering amusement park rides.

Major Course Goals: Students will be able to: 1) accurately predict future movements of a particle or system of particles, 2) apply the laws of conservation of energy, 3) predict and describe the movements and interactions of a particle oscillating in simple harmonic motion, 4) apply principles of electric circuits, light, and magnetic induction to describe everyday technology. This class covers the same materials as Enriched Physics with more support at every opportunity.

3842 **ENRICHED PHYSICS (calculus based)** (12) Prerequisites: Completion of or current enrollment in Calculus required, as well as completion of Modern or AP Chemistry

This block first-semester course contains the same topics and labs as Physics. The topics are covered in greater depth and with less support than in Physics. Past students have described the course as follows: Physics is a challenging class that is actually worth the work. Play with sharp things. Make things that shoot things at other things and others. The sky's the limit, or the ground. Find your potential and your kinetic. Fall down, again and again and again, and then get up. Dizziness; learn how and why. Lift others in the air with only one hand, or shock them with one hand. Learn a whole new sayings for SOHCAHTOA. Positives and negatives are not values, they are just perspectives. Expound your vocabulary with a plethora of superfluous "f-words."

Major Course Goals: Same as Physics, just more challenging at every opportunity.

3843 **AP PHYSICS (calculus based)** (12) Prerequisites: Completion of Enriched Physics and current enrollment in Calculus

This single-hour, second-semester course completes the first year of algebra-based college physics—which is intended for students majoring in anything except physics or engineering. In the Spring, you may take either the AP Physics I and/or AP Physics C: Mechanics exam which is intended for physics and engineering students; this is a calculus based physics test.

This course will review the entire Enriched Physics course topics at a higher level, and then cover the remaining topics found on both the **AP Physics 1 and AP Physics C: Mechanics Exams**. There are 4 possible different AP Physics exams that can be taken in the Spring, we will discuss and select the best one for you. Students will have the opportunity in the spring to participate in a field trip to Valley Fair to observe and experience how the laws of physics relate to creating and engineering amusement park rides.

Major Course Goals: Students will prepare to earn a 5 on the AP test in the Spring. Additional topics include: 1) heat and kinetic theory, 2) quantum theory, 3) atomic and nuclear theory.

SCIENCE, continued

3001 **ANATOMY AND PHYSIOLOGY I** (11-12) Prerequisites: Biology or AP Biology, Modern Chemistry or AP Chemistry (Principles of Chemistry with teacher recommendation)

This course investigates the structure, function and chemistry of the human body. Emphasis is placed on the understanding of human systems. Extensive dissection (sheep heart, cat) occurs during quarter 2. Students are required to participate in dissections during this course. This is a challenging course designed for students planning on post-secondary education in a science-related field after high school.

Major Course Goals: Students will be able to describe and explain the structure and function of the major human body systems including: 1) integumentary, 2) skeletal, 3) muscular, 4) nervous, 5) endocrine, 6) cardiovascular, 7) lymphatic, 8) respiratory, 9) digestive, 10) urinary, 11) body biochemistry.

3008 **ANATOMY AND PHYSIOLOGY II** (11-12) Prerequisite: Successful completion of Anatomy and Physiology I.

This course investigates the structure and function of the human body. Emphasis is placed on further understanding human systems. Dissection and laboratory experiments are a required part of this class. Dissections include: Sheep lungs, liver, and kidneys. This is a challenging fast-paced class designed for students who are planning on post-secondary education in a science.

Major Course Goals: Students will be able to describe and explain the structure and function of the major human body systems including: respiratory, urinary, endocrine and digestive. Great emphasis will be placed on metabolism and biochemistry.

Evaluation: Based on tests, quizzes and lab work.

3002 **EARTH AND SPACE** (11-12) Prerequisite: None

This is a one-semester course. The class investigates the solar system, galaxy, quasars, pulsars, black holes and more by means of lecture, demonstrations, labs, and videos. If weather permits, there will be night star observations. We will also learn about the weather, wind and clouds, along with the atmosphere; additional topics covered as time permits include telescopes and optics.

Major Course Goals: Students will be able to: 1) cite data concerning planets of the solar system, the sun and other objects beyond the solar system, 2) explain observed phenomena, 3) explain current cosmological theories, 4) effectively use a telescope for astronomical observation, 5) follow directions given in order to complete a diagram, model or calculation that illustrates various physical concepts.

Evaluation: Based on classwork, homework, project, quizzes and tests.

SOCIAL STUDIES

Credit value follows in parentheses.

2700-2701 Human Geography I & II (2)	
2840-2841 AP Human Geography I & II (2)	
2702 U.S. History I (1)	2712 Ethnic Studies I (1)
2703 U.S. History II (1)	2713 Ethnic Studies II (1)
2800-2801 AP U.S. History I & II (2)	2846 AP United States Government and Politics (1)
2704 World History I (1)	2847 AP Microeconomics (1)
2705 World History II (1)	2848 AP Macroeconomics (1)
2744-2745 AP World History I & II (2)	2708 Psychology (1)
2706 American Government (1)	2802 AP Psychology (1)
2707 Economics (1)	2709 World Religions (1)

*See page 5 for blended course information.

Minnesota State Graduation Requirements for Social Studies:

- 8 credits (4 years of Social Studies)
- 9th grade: 2 credits Geography
- 10th grade: 2 credits U.S. History
- 11th grade: 2 credits World History
- 12th grade: 1 credit Economics; 1 credit U.S. Government

COURSE DESCRIPTIONS

NINTH GRADE

REQUIRED COURSES:

2700 **HUMAN GEOGRAPHY I & II** (9) (1 credit each)

2701 This course uses both regional and topical approaches to meet Minnesota Academic Standards in Geography.

2840 **AP HUMAN GEOGRAPHY I & II** (9) (in place of Human Geography I & II) (1 credit each)

2841 Prerequisites: Application, instructor approval, MCA reading scores will be considered for admission
This single period year-long course is designed to prepare students to take the required Advance Placement exam in Human Geography. This course is taught at a college level and emphasizes reading, writing and discussion. The purpose of this course is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use and alteration of the earth's surface. Students employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences.

Evaluation: Daily work, formative and summative assessments, and a final exam.

Essential Outcomes: Students will: 1) identify, label, and synthesize information using maps, 2) use information to create maps, and use maps to analyze and compare information about countries, 3) compare and contrast cultures around the world, 4) understand the impact of cultural diffusion on countries, 5) identify and analyze the factors that influence population patterns, 6) understand the impact of political and economic systems on the people of the world.

Evaluation: Based on formative and summative assessments of class assignments, discussion, participation, projects, writings, tests, and a final exam.

TENTH GRADE

REQUIRED COURSES:

2702 **U.S. HISTORY I** (10) (1 credit)

This course in the history of the United States is divided into two parts, the first of which will cover the period of exploration through 1918.

Essential Outcomes: Students will be able to: 1) distinguish main ideas from supporting ideas through note taking and understand multiple types of texts, 2) express their historical understanding in writing, 3) use critical historical skills, such as perspective, cause and effect, as well as change and consistency over time.

Evaluation: Based on daily work, projects, tests, quizzes, participation in class activities, and a final exam.

SOCIAL STUDIES, continued

2703 **U.S. HISTORY II** (10) (1 credit)

The second portion will begin with the 1920s and reach the present day. See U.S. History I for information regarding essential outcomes and evaluation criteria.

2800 **AP U.S. HISTORY I & II** (10 - in place of U.S. History I & II) (1 credit each)

2801 Prerequisites: Application, recommendation from previous social studies and/or English teacher(s), and instructor approval

This single-period, yearlong course is designed to prepare students for the AP exam in United States history. Students will study, at a collegiate level, the political, economic, social and cultural history of the United States.

Essential Outcomes: Students will: 1) read a college level text, 2) read historical narratives for understanding, 3) construct written responses to questions using historical evidence, 4) evaluate past decisions in United States history.

Evaluation: Based on required assignments, essays, exams, and a final exam.

ELEVENTH GRADE

REQUIRED COURSES: (also see Elective Courses)

2704 **WORLD HISTORY I** (11) (1 credit)

This single-period, semester-long course offered in the first semester emphasizes the major powers, dramatic changes and influential ideas in World History from the organization of society through the late 1700s. Topics covered are: 1) Conventions of History and Prehistory, 2) Ancient Civilizations, 3) Ancient India and China, 4) Ancient Greece, 5) Ancient Rome, 6) Rise of Islam, Conflict and Contact with Europe, Middle Ages and the Crusades, 7) Renaissance and Reformation and 8) Age of Kings.

Major Course Goals: At the end of the course students will be able to: 1) identify, describe and evaluate key events and ideas in World History, 2) explain how the world has changed over time politically, socially and culturally, 3) analyze how historical events were both unique to their historical context and influential on the present. 4) articulate the similarities and differences between civilizations of the world throughout time.

Evaluation: Based on tests, class assignments, class discussions, projects, and a final exam.

2705 **WORLD HISTORY II** (11) (1 credit)

This single-period, semester-long course offered in the second semester emphasizes the major powers, dramatic changes and influential ideas in World History from the early Chinese and African civilizations to the modern era. Topics covered are: 1) The Americas and the Age of European Exploration and Columbian Exchange, 2) Spread of Islam and Muslim Empires, 3) China, Japan and Korea, 4) Enlightenment and French Revolution, 4) Africa and the Age of European Imperialism, 5) Europe After Napoleon, 6) Africa and the Age of European Imperialism, 7) World War I and the Russian Revolution, 8) The Interwar Period and the Rise of Nationalism, 9) World War II and the Holocaust, and 10) The Postwar World.

Major Course Goals: At the end of the course students will be able to: 1) identify, describe and evaluate key events and ideas in World History, 2) explain how the world has changed over time politically, socially and culturally, 3) analyze how historical events were both unique to their historical context and influential on the present. 4) articulate the similarities and differences between civilizations of the world throughout time.

Evaluation: Based on tests, class assignments, class discussions, projects, and a final exam.

2744 **AP WORLD HISTORY I & II** (11 - in place of World History I and II) (1 credit each)

2745 Prerequisites: Application and instructor approval

This single-period, year-long course is designed to prepare students to take the required Advanced Placement exam in World History. This course is taught at a college level and emphasizes reading, writing and discussion. The major focus will be on historical inquiry as studied through the following five themes: 1) interactions between humans and their environment, 2) development and interaction of cultures, 3) state building and conflict, 4) economic systems, 5) social structures. Major historical thinking skills: 1) crafting historical arguments from evidence, 2) chronological reasoning, 3) comparison and contextualization, 4) interpretation and synthesis.

Evaluation: Based on examinations, writing assignments, projects, participation, assignments, and a final exam.

SOCIAL STUDIES, continued

TWELFTH GRADE

REQUIRED COURSES: (also see Elective Courses)

2706 U.S. GOVERNMENT (12) (1 credit)

This course emphasizes the foundations of American government and politics, and the responsibilities of U.S. citizenship. Encouraging students to identify political issues, think reflectively about these issues, and apply this thinking to constructive action is a major course goal.

Essential Outcomes: In this course, students will: 1) describe fundamental Constitutional principles and analyze their continued importance in the political arena, 2) explain the scope and limits of rights protected by the Constitution, 3) analyze the purposes, organization, functions and processes of the three branches of government, 4) examine various forms of political participation that people use to affect public policy decisions and elections, 5) analyze how the United States political system is shaped by elections and the election process, including the caucus and primary systems and procedures involved in voting, 6) evaluate sources of information and various forms of political persuasion for validity, reliability and bias.

Evaluation: Based on tests, class assignments, discussions, projects, and a final exam.

2707 ECONOMICS (12) (1 credit)

This course begins with a study of how scarce resources are utilized to satisfy the economic wants of society. A major focus of the course is placed on the microeconomic models of supply and demand, the price system, and how consumers can make educated decisions regarding investing and the use of credit. Macroeconomic concepts covered deal with measuring the economic performance of the economy and analyzing policy decisions, which affect output and prices in the national economy. This course also recognizes the global nature of economics; students will examine the impact of international trade and international finance on national economies.

Evaluation: Based on classroom activities, tests, unit projects and a final exam.

2846 AP U.S. GOVERNMENT AND POLITICS (12 - in place of American Government) (1 credit)

Prerequisites: Application and instructor approval.

AP United States Government and Politics is designed to encourage students to develop a critical perspective on politics and government. The course involves both the study of general concepts used to interpret United States politics and government and the application of those concepts to current topics. Student will become familiar with the various institutions, groups beliefs and ideas that make up the American political reality. The reading assignments, projects, test and pacing will be more similar to that of a college-level introductory Political Science course than the corresponding high school course. The goal of the course is to prepare students to take the required Advanced Placement exam in U.S. Government and Politics. AP U.S. Government and Politics is offered second semester and satisfies the government graduation requirement.

Evaluation: Based on tests, class assignments, quizzes, class discussions, projects, and a final exam.

2847 AP MICROECONOMICS (12 - in place of Economics) (1 credit)

Prerequisites: Application and instructor approval

AP Microeconomics is the study of economics that applies to individual decision-makers, both consumers and producers, within the economic system. Students will learn about different types of businesses and how they function. This class also places emphasis on how goods and services are priced in an economy, and also the role of government in promoting greater efficiency and equity in the economy. AP Microeconomics is offered first semester and satisfies the economics requirement for graduation.

Evaluation: Based on tests, class assignments, quizzes, class discussions, projects, and a final exam.

2848 AP MACROECONOMICS (12 - in place of Economics) (1 credit)

Prerequisites: Application and instructor approval

AP Macroeconomics is the study of economics that applies to an economic system as a whole. This course places particular emphasis on the study of national income and price-level determination, measurement of economic performance, the financial sector, government policies to help the economy, economic growth, and international economics. It places emphasis on the different philosophies and theories associated with Macroeconomic policies. Students will also analyze the economic effects of international trade and globalization. AP Macroeconomics is offered second semester and satisfies the economics requirement for graduation, and also may be taken as an elective for those students who have taken AP Microeconomics first semester.

Evaluation: Based on tests, class assignments, quizzes, class discussions, projects, and a final exam.

SOCIAL STUDIES, continued

ELEVENTH & TWELFTH GRADE

ELECTIVE COURSES: These elective courses will be offered if enrollment is sufficient to hold the class. If enrollment in any course is too great and needs to be limited, 12th graders will receive priority of admittance.

2708 PSYCHOLOGY (11-12) (1 credit)

Psychology is the scientific study of behavior and mental processes. This course focuses on such topics how psychological research is conducted, the study of personality, learning and memory, sleep, personality, emotional and psychological disorders. The major course goal is for students to develop and demonstrate an understanding of human behavior that they can apply to real-life situations.

Evaluation: Based on daily work, formative assessments and summative assessments, and a final exam.

2802 AP PSYCHOLOGY (11-12) (1 credit) Prerequisites: Application and instructor approval

AP Psychology is a course which introduces students to the systematic and scientific study of human behavior and mental processes. Additionally, it prepares students to take the required Advanced Placement Psychology exam in May. Though it covers many of the same topics as Psychology, students should be prepared for a significantly more rigorous course. The reading for this course is at collegiate level. The major course goal is that the student develops a meaningful understanding of key concepts in the field of psychology and their relation to human behavior.

Evaluation: Based on performance on projects, discussions, tests, and a final exam.

2709 WORLD RELIGIONS (11-12) (1 credit)

World Religions is an elective one-credit course designed to examine the religious traditions and history of Hinduism, Buddhism, Judaism, Christianity and Islam. Primary sources, speakers from the various traditions and class discussions are used to explore questions common to the human experience. These questions include such topics as the nature of humankind, the quest to understand that which is beyond, morality, functions served by religion and the nature of religious belief itself.

Major Course Goals: Students will be able to: 1) recognize the commonality of the human quest for understanding and meaning, 2) develop greater sensitivity to and understanding of other religious traditions, 3) develop a method of studying belief systems.

Evaluation: Based on examinations, papers, projects, participation, other assignments, and a final exam.

2712 ETHNIC STUDIES I & II (9-12) (1 credit each)

2713 The major purpose of this course is to educate students to be politically, socially, and economically conscious about their personal connections to local and national history. Ethnic Studies focuses on themes of social justice, social responsibility, and social change. The course spans from past to present, from politics to social reform, allowing students to identify similar social patterns and universal qualities present in other societies, including their own. This course will focus on the experiences of African Americans, Asian Americans, Latinx Americans, and Indigenous Americans. This course will also include an identity section where students will consider concepts related to their own personal, group, and/or national identity.

Major Course Goals: Students will be able to: 1) demonstrate knowledge and understanding of traditional values that formed the foundation of cultural identity of multiple ethnic groups in the United States. 2) demonstrate knowledge and understanding of issues faced by multiple ethnic groups as a result of historical events and movements throughout the history of the United States. 3) explain how multiple ethnic groups are promoting their cultural heritage and confronting contemporary social issues in the United States.

Evaluation: Based on summative written examinations, research project (semester 1), community outreach project (semester 2), participation in class discussions, and daily journaling.

THEATRE

Credit value follows in parentheses.

1704 Acting* (1) (Grades 10-12)

1746 Introduction to Theater: Theater Production* (1) (Grades 9-12)

1747 Introduction to Dance: A Universal Communication* (1) (Grades 9-12)

1704 **ACTING*** (10-12) (**Fine Arts Electives**) Prerequisite: Introduction to Theater or consent of instructor

This course centers on the basic skills of acting. It includes the actor's internal preparation for playing a role and the development of his or her external techniques for projecting the role to the audience.

Diction, body movement, pantomime and creative exercises in the use of imagination and improvisational activities are included. Projects include presentation of one-act plays.

Memorization of scene work is an expectation of this class.

Major Course Goals: The student will experience and explore various techniques used to create characters for the stage.

Evaluation: 70 percent on performance; 30 percent on tests and written evaluations.

*Meets Arts Education requirement.

1746 **INTRODUCTION TO THEATER: Theater Production 1,2** (9-12) (**Fine Arts Electives**)

Students examine all aspects of theater arts. They learn about theater history and study the particulars of play production: acting, costuming, set construction, properties, make-up, sound, lights and publicity. They read and discuss plays; they evaluate live and filmed performances. Students may register for this class more than once. This course is designed to give students a basic understanding of theater that is useful in enjoying theater both as a leisure-time activity and as a potential career.

Major Course Goals: The student will gain understanding and experience in all aspects of theater including performance, technical skills and evaluation.

Evaluation: 50 percent on assignments; 50 percent on classroom participation.

*Meets Arts Education requirement.

1747 **INTRODUCTION TO DANCE: A Universal Communication*** (9-12) (**Fine Arts Elective**)

This course introduces dance as a form of communication, creativity, and physical development.

Students will practice communicating ideas through dance performance and by writing about their thoughts and ideas related to their dance practice. Participants are not expected to have dance experience but are expected to want to dance daily. Some research will be required at the beginning of each new dance style we learn. Students will learn introductory stretching strategies, strength building techniques, and body movement foundations. Some of the dance styles will include physical yoga -based techniques, ballet, jazz, swing, contemporary, ballroom, popular, and regional world dance traditions. Students must be willing to participate in all dance styles, partner-dance with peers, and keep a written reflection journal.

Major Course Goals: learn body movement as a form of communication, create choreography, learn about dance in the context of cultural traditions, write about the dance experience

Evaluation: Assessment is based on daily physical participation, written reflections and research, and group dance performance projects.

*Meets Arts Education requirement

WORLD LANGUAGES & CULTURES

Bonjour! Hola! In World Languages & Cultures classes, students learn how to communicate in French, or Spanish. Armstrong offers five levels of Spanish and French, and a 9th-12th grade Spanish Immersion program which is an extension of the elementary and middle school Spanish Immersion program.

Coursework ranges from beginning to advanced college-level study. Students have the opportunity to prepare for the following Advanced Placement exams: French Language and Culture, Spanish Language and Culture, and Spanish Literature and Culture.

All World Languages & Cultures classes incorporate music, film studies, literature, conversation, stories, cultural activities and the use of a state-of-the-art language lab. Block classes in upper levels allow motivated students to take more than one level of language in a year or study two languages in the same year.

Heritage speaking and students with considerable lived experience in the language they wish to study should contact a World Languages & Cultures teacher for appropriate course placement.

Many colleges and universities offer college credit and/or accelerated studies for World Languages & Cultures proficiency achieved in high school.

Credit value follows in parentheses.

8600-8601 French 1 I & II (2)	8743 Spanish 4 (2)
8602-8603 French 2 I & II (2)	8841 Spanish 5 (2)
8740 French 3 (2)	8050-8051 Advanced Spanish Language and Culture 9 I & II (2)
8741 French 4 (2)	8552-8553 AP Spanish Language and Culture I & II (2)
8840 French 5 (2)	8054-8055 Advanced Spanish Literature and Culture 11 I & II (2)
8608-8609 Spanish 1 I & II (2)	8056-8057 AP Spanish Literature and Culture I & II (2)
8610-8611 Spanish 2 I & II (2)	
8742 Spanish 3 (2)	

Students may take more than one language at a time. With block classes students may take two levels in the same year, for example French 3 and French 4, or Spanish 4 and Spanish 5.

COURSE DESCRIPTIONS

8600-8601 **FRENCH 1 I & II**

8608-8609 **SPANISH 1 I & II** (9-12) Prerequisite: None, however, it is recommended that students have previously passed the MSRT basic skills English reading test

These are introductory courses in which students learn to speak, read, write, and listen through classroom instruction and language laboratory practice. Students who earned a grade of "C" or lower in middle school French 1 or Spanish 1 should enroll in this course rather than enrolling in French 2 or Spanish 2.

Major Course Goals: Students will be able to: 1) demonstrate an understanding of the basic structures of the language, 2) compare and contrast another culture with their own.

8602-8603 **FRENCH 2 I & II**

8610-8611 **SPANISH 2 I & II** (9-12) Prerequisite: A passing grade in French 1 or Spanish 1 (a minimum grade of "C" is recommended), or department permission

Students continue development of communication skills—speaking, reading, writing, and listening.

Students who earned a grade of "C" or lower in middle school French 2 or Spanish 2 should enroll in this course rather than enrolling in French 3 or Spanish 3.

Major Course Goals: Students will be able to make statements and ask "get-to-know-you" questions with reasonable accuracy.

8740 **FRENCH 3**

8742 **SPANISH 3** (9-12) Prerequisite: A passing grade in French 2 or Spanish 2 (a minimum grade of "C" is recommended), or department permission

Students practice conversational skills through the use of the language in realistic situations and increase their comprehension skills. More emphasis is placed on structural aspects and guided composition. Students continue to expand their cultural competencies.

Major Course Goals: Students will be able to: 1) demonstrate increased vocabulary acquisition, 2) communicate with increased spontaneity in the target language.

8741 **FRENCH 4**

8743 **SPANISH 4** (10-12) Prerequisite: A passing grade in French 3 or Spanish 3 (a minimum grade of "C" is recommended), or department permission

Students will deepen their knowledge of language and culture by engaging with original literary works, film, art, and historical and current events. Classroom interactions are conducted primarily in the target language.

Major Course Goals: Students will be able to: 1) speak at a more advanced level of communication, 2) participate in more challenging conversations.

WORLD LANGUAGES & CULTURES, continued

8840 FRENCH 5

8841 SPANISH 5 (11-12) Prerequisite: A passing grade in French 4 or Spanish 4 (a minimum grade of "C" is recommended), or department permission

Through a variety of units that incorporate short literary works, music, history, or art, students will further develop and refine their communicative skills with frequent opportunities for practice. Classroom interactions are conducted primarily in the target language. Students who successfully complete this course have the option to take the Advanced Placement French or Spanish Language and Culture Exam, and/or universities' graduation proficiency tests, and/or the SAT subject test and expect good results, potentially allowing them to receive both college and high school credit. Spanish students desiring further study should enroll in AP Spanish Language and Culture as their next course.

Major Course Goals: Students will be able to: 1) increase their speaking, reading, writing, and listening skills, 2) increase their appreciation of literature, language, and culture.

AP French Language and Culture Exam (optional)

AP Spanish Language and Culture Exam (optional)

8050-8051 ADVANCED SPANISH LANGUAGE AND CULTURE 9 I & II Prerequisite: A grade of "C" or higher in the middle school Advanced Spanish 8 class, or department permission

This is the first course in the Spanish Immersion sequence at the high school level, designed for students who have been part of the Spanish Immersion program in elementary and middle school, also designed for qualified advanced students or heritage speakers. All classroom interaction is conducted in Spanish. Through a variety of literary works and contemporary themes, students develop specific skills emphasized in the Advanced Placement Spanish Language and Culture Exam and become acquainted with the foundational literary concepts of the Advanced Placement Spanish Literature and Culture Exam.

Major Course Goals: Students will be able to: 1) refine communication skills, 2) increase their appreciation of literature.

8552-8553 AP SPANISH LANGUAGE AND CULTURE I & II Prerequisite: A passing grade in Advanced Spanish Language and Culture 9 or Spanish 5 (a minimum grade of "C" is recommended), or department permission

This is the second course in the Spanish Immersion sequence at the high school level, also designed for qualified advanced students or heritage speakers. All classroom interaction is conducted in Spanish. Through a variety of literary works and contemporary themes, students further develop specific skills emphasized in the Advanced Placement Spanish Language and Culture Exam and become more acquainted with the literary concepts of the Advanced Placement Spanish Literature and Culture Exam.

Major Course Goals: Students will be able to: 1) refine communication skills, 2) increase their appreciation of literature, 3) achieve success on the AP Spanish Language and Culture Exam.

AP Spanish Language and Culture Exam

8054-8055 ADVANCED SPANISH LITERATURE AND CULTURE 11 I & II Prerequisite: A passing grade in AP Spanish Language and Culture (a minimum grade of "C" is recommended), or department permission

This is the third course in the Spanish Immersion sequence at the high school level. All classroom interaction is conducted in Spanish. This course is aligned with the AP Spanish Literature and Culture course to prepare students for the Advanced Placement Spanish Literature and Culture Exam. These two courses and the exam are based on a third-year college survey course in which students explore major works of literature in all the principal literary genres from the Middle Age through our current time—short stories, drama, novels, essays, and poetry—by writers from around the Spanish-speaking world. Students explore the relationship between literature and culture by engaging with major literary and philosophical movements throughout history. Students also experience art, music, film, and other cultural products that help them further prepare for the Advanced Placement Spanish Literature and Culture Exam.

Major Course Goals: Students will be able to: 1) refine advanced communication skills, 2) expand verbal and written communication, and 3) prepare further for the AP Spanish Literature and Culture Exam.

8056-8057 AP SPANISH LITERATURE AND CULTURE I & II Prerequisite: A passing grade in Advanced Spanish Literature and Culture 11 (a minimum grade of "C" is recommended), or department permission.

This is the fourth course in the Spanish Immersion sequence at the high school level. All classroom interaction is conducted in Spanish. Students will complete their study of a representative body of Chicano/Latino, Latin American, and peninsular Spanish literature in preparation for the Advanced Placement Spanish Literature and Culture Exam. Students will have ongoing and varied opportunities to further develop their proficiencies across the full range of language skills—with special attention to critical reading and analytical writing—and will reflect on the many voices, cultures, and contexts reflected in these diverse works in Spanish. In a historical context, students will examine the following six themes of the course: societies in contact, the construction of gender, time and space, literary creation, interpersonal relationships, and the duality of being. Students will demonstrate the ability to think critically by making connections between literary and artistic works produced in different times and in different places, and by finding connections between these works and students' own experiences.

Major Course Goals: Students will be able to: 1) refine advanced communication skills, 2) expand verbal and written communication, and 3) achieve success on the AP Spanish Literature and Culture Exam.

AP Spanish Literature and Culture Exam

NONDISCRIMINATION INFORMATION

District 281 does not discriminate on the basis of race, color, national origin, sex or handicap in admission, treatment or access to its programs and activities, or in employment in its programs and activities. The district has designated two individuals to coordinate efforts to comply with federal laws and regulations.

The district's designated coordinator under Title IX of the Educational Amendments of 1972 (nondiscrimination on the basis of sex in educational programs and activities, including employment and admission) is responsible for coordinating district efforts to comply with Title IX, including investigation of complaints alleging noncompliance or alleging any actions prohibited by Title IX.

The district's designated coordinator under Section 504 of the Rehabilitation Act of 1973 (nondiscrimination on the basis of handicap including admission, treatment or access to programs and activities, including employment in its programs or activities) is responsible for coordinating district efforts to comply with Section 504.

Inquiries concerning Title IX and Section 504 may be directed to Independent School District 281, 4148 Winnetka Avenue North, New Hope, Minnesota 55427-1288, phone number (763) 504-8000.

Career and Technical Education (CTE) course These courses are offered by Hennepin Technical College

Please see your Guidance Counselor for information on how to register for these courses offered by HTC. These courses are open to grades 9-12.

EMERGENCY MEDICAL TECHNICIAN (BP/EP) OCCUPATIONAL CERTIFICATE

The Emergency Medical Technician (EMT) Certificate provides entry-level job training for employment in a Basic Life Support (BLS) ambulance service or satisfies Fire and Police Department requirements for training at the Emergency Medical Technician (EMT) level. Included in the program is the opportunity for 10 patient contacts as required by the Minnesota EMS Regulatory Board. Areas covered include those identified in the National Emergency Medical Services Education Standards for Emergency Medical Responder and EMT. Cleared criminal background check and completed Mantoux skin test required for clinical training.

Award Outcomes

Demonstrate his/her role and responsibilities as a member of the emergency medical team. Apply emergency medical safety principles in the workplace. Apply critical thinking skills in care management. Assess patients for traumatic injuries. Assess patients for medical illnesses.

Demonstrate clear oral communications.

Exhibit personal, professional and academic ethics. Apply quality improvement concepts.

Classify patient conditions for treatments needed. Demonstrate effective treatment skills. Demonstrate safe transport of patients.

Demonstrate skills for the National Registry of EMTs.

HEALTH UNIT COORDINATOR (BP/EP) OCCUPATIONAL CERTIFICATE

The Health Unit Coordinator (HUC) Certificate concentrates on coursework directly related to working on the nursing unit in health care facilities. The Health Unit Coordinator is an important member of the professional health care team. HUC's provide a crucial role in disseminating communication throughout the nursing unit and assisting the nursing staff by performing non-clinical duties, as directed. The professional responsibilities of Health Unit Coordinators include answering the telephone and intercom, initiating records for new patients, performing patient admission, transfer and discharge procedures, operating unit equipment, ordering daily diets and laboratory tests, scheduling diagnostic studies, recording patient data for departmental records into the patient's record and ordering of unit supplies. In the workplace, the HUC communicates with various departments within the facility via the telephone, fax machine, pagers, pneumatic tube systems and computers. This program will consist of an internship at a local health care facility. Required coursework will focus on HUC practices and procedures, health care core concepts, computer operations, communication skills and medical terminology. Graduates are eligible to sit for the National Association of Health Unit Coordinators (NAHUC) certification exam. Personal qualities considered essential for this occupation are the ability to detail oriented with a high degree of accuracy while managing the workload in a very busy environment. The HUC should be able to solve problems logically and critically, be self-motivated, conscientious and demonstrate good customer service skills. Health Unit Coordinators are expected to protect the confidentiality of patient information, demonstrate a high degree of ethics, and exhibit professionalism.

Prerequisite: Students must achieve a score of 78 or above on the reading assessment test or successfully complete ENGL0921 prior to entering the Health Unit Coordinator Program. A score of 74 or above on the writing test is recommended. Students are required to maintain a "C" (80%) or above in all Health Unit Coordinator courses to remain in the program.

Award Outcomes

Demonstrate knowledge of medical terms needed to perform job duties. Differentiate between hospital departments. Exhibit professionalism.

Utilize computer software effectively.

Demonstrate skills and knowledge needed to process physician orders. Demonstrate customer service and telephone etiquette skills.

Function as a member of the health care team.

Operate unit equipment.

Manage clerical duties on the nursing unit.

Understand HIPAA and patient confidentiality requirements.