MAT-SU CAREER TECH HIGH SCHOOL

COURSE CATALOG

2026-2027



Please note not all courses will necessarily be available during a given term

Understanding Course Descriptions:

The following information may help you to understand our school's course descriptions. Please note that not all courses listed here will necessarily be offered at a given time.

Course Length

Generally, courses which are ".5 CR" (credit) are one semester in length, and courses which are 1.0 credit are two semesters in length. Credit is awarded at the end of each semester. Some courses offer more credit per semester, as noted in the course descriptions.

Prerequisite

Some courses require that another course be passed prior to taking it.

Course Repeatability

Most courses listed in the Course Catalog may not be repeated for additional credit.

Alaska Performance Scholarship

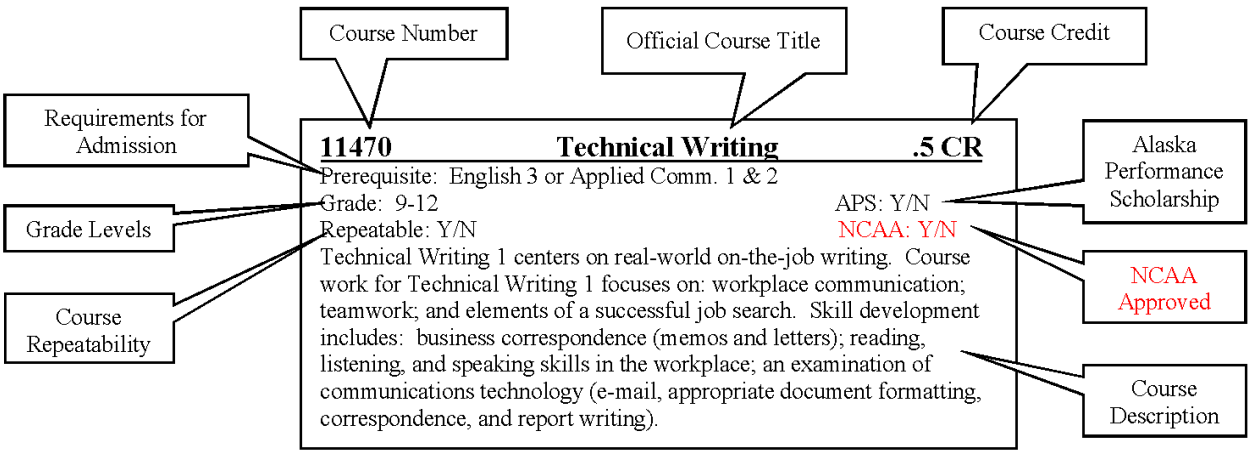
"APS: Y" indicates that the course fulfills a requirement for the Alaska Performance Scholarship.

Grade Levels

The catalog informs readers of which courses are available to which grade levels.

NCAA

"NCAA: Y" indicates that the course is recognized by the National Collegiate Athletic Association.



Language Arts

1500 American Literature .5 CR

Prerequisite: English 1 & 2

Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y

This course is designed to deal with the major writers and works of American Literature. Students will consider major social and political issues of American life as reflected in poetry, fiction, nonfiction, plays, and films. Students will examine philosophies that pervade American thought with emphasis on the relationship between literature and the growth of the United States.

1451/1452 AP Language & Composition 1 CR

Prerequisite: AP Seminar (Successful completion of English 1 & English 2)

Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y

This course is a college level course which engages students in becoming skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts and in becoming skilled writers who compose for a variety of purposes. Study will create awareness of the interactions among a writer's purposes, audience expectations, and subjects as well the ways conventions and devices of language contribute to effectiveness in writing. This course will prepare students to take the AP Language and Composition exam.

1441/1442 AP Literature and Composition 1 CR

Prerequisite: AP Seminar

Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y

This course focuses on reading, analyzing, and writing about imaginative literature (fiction, poetry, drama) from various periods. Students engage in close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, and symbolism. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works.

1431/1432 AP Seminar 1 CR

Prerequisite: Successful completion (C or better) of English 1 & English 2

Grade: 10-12 APS: Y, Repeatable: N, NCAA: Y

This is a foundational course that engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational, literary, and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments.

1881/1882 AP Research 1 CR

Prerequisite: AP Seminar

Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y

AP Capstone™ is a College Board program that equips students with the independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges. AP Capstone comprises two AP courses—AP Seminar and AP Research—and is designed to complement and enhance the discipline-specific study in other AP courses. The AP Research Course is the second in the required sequence of course in the AP Capstone program. Research is an advanced class focused on the questioning and research methods students will employ at the collegiate level. Students will deeply explore an academic topic, problem, issue, or idea, which they find intellectually stimulating. Throughout the year students design, plan, and implement a concentrated investigation of a research question that they create. Their final product culminates in an academic paper of 4,000-5,000 words and a presentation with an oral defense.

1610 Cinema as Art .5 CR

Prerequisites: English 1 & English 2

Grade: 11-12 APS: Y, Repeatable: N, NCAA: N

This course explores how films communicate and affect the viewer. Film literacy is emphasized, and films are analyzed using literacy conventions and devices. Students are expected to respond to films through writing, discussions, and projects. This class includes extensive writing.

1560 Contemporary Literature & Issue .5 CR

Prerequisite: English 1 & 2

Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y

This course emphasizes dignity and diversity and encourages students to understand more than one perspective. Students express ideas in class discussions and make connections to their own lives and culture. Reading and writing about literature complete the studies.

1630 Creative Writing .5 CR

Prerequisite: English 1 & English 2

Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y

In this course students will read, critique, and compose original poetry, essays, short fiction, and creative non-fiction. Students will examine the works of published writers as well as peers to discover, expand, and refine their own skills, voice, and repertoire. Students will share their work for both written and oral peer critique. Publication will be strongly encouraged as students develop portfolios of their writing.

1101/1102 English 1 1 CR

Prerequisite: None

Grade: 9 APS: Y, Repeatable: N, NCAA: Y

English 1 is a comprehensive course that introduces the skills necessary to analyze and evaluate literature and/or evidence while emphasizing substantiating support in an argument for the young adolescent. The English 1 student will identify and analyze the author's intent for utilizing literature elements, devices, and tone. The course includes a variety of longer compositions including deeper revisions for style, tone, subtlety, and transitions. The conventions of English are applied to increase the sophistication of sentence fluency. Proficient skills in the mechanics of the language are necessary in English 1. Content vocabulary is significantly increased. The English 1 student will also experience impromptu speaking, advanced discussions, and reads aloud.

1201/1202 English 2 1 CR

Prerequisite: English 1 (C or better if English 1 was taken in middle school)

Grade: 10 APS: Y, Repeatable: N, NCAA: Y

English 2 further develops the skills learned in English 1. Literature study continues with various genre of literature. Writing skills continue to be developed through critical analysis of written material with major emphasis on essay writing and thesis statements. Speech and presentation skills, as well as grammar skills, continue to be addressed.

1471 Technical Writing .5 CR

Prerequisite: AP Seminar or Applied Comm. 1 & 2

Grade: 11-12 APS: Y, Repeatable: N, NCAA: N

Technical Writing 1 centers on real-world on-the-job writing. Course work for Technical Writing 1 focuses on: workplace communication; teamwork; and elements of a successful job search. Skill development includes business correspondence (memos and letters); reading, listening, and speaking skills in the workplace; an examination of communications technology (e-mail, appropriate document formatting, correspondence, and report writing).

Mathematics

2121/2122 Algebra 1 1 CR

Prerequisite: Intro to Algebra (Math 8)

Grade: 9-12 APS: Y, Repeatable: N, NCAA: Y

Algebra 1 is the foundation course for the study of higher-level mathematics. Skill development will include the basic operations of real numbers, solving equations in one and two variables, writing and graphing linear equations and inequalities, the study of functions and their graphs, simplifying polynomial, rational and radical expressions, statistics, probability, problem solving, and discrete mathematics using appropriate related applications.

2321/2322 Algebra 2 1 CR

Prerequisite: Geometry or concurrent enrollment in Geometry

Grade: 9-12 APS: Y, Repeatable: N, NCAA: Y

Algebra 2 is a rigorous college preparatory course which includes an in-depth review of topics presented in Algebra 1. Emphasis is placed on writing and solving linear equations and inequalities, solving simultaneous equations and inequalities, exponents and radicals, matrices, complex numbers, conic sections, graphing, analyzing, and interpreting functions including polynomial, rational, radical, exponential, and logarithmic functions.

2441/2442 AP Calculus AB 1 CR

Prerequisite: Precalculus with Trigonometry

Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y

This year-long course follows the guidelines of the College Board for Advanced Placement Calculus AB. It covers differential and integral Calculus with elementary functions. Topics include limits, differentiation, and integration of algebraic, trigonometric, logarithmic, and exponential functions of a single variable. An intuitive approach will be used in presenting the foundations, theory, methods, and applications of calculus. Students will be prepared to take the College Board advanced placement exam.

2451/2452 AP Calculus BC 1 CR

Prerequisite: Teacher Recommendation

Grade: 11-12 APS: Y Repeatable: N NCAA:Y

Calculus BC is a year-long university course in the calculus of functions of a single variable. This course includes all topics covered in Calculus AB, plus additional topics such as parametric, polar, and vector functions, applications of integrals, and polynomial approximations and series. Students will be prepared to take the College Board advanced placement exam. The content of Calculus BC is designed to qualify students for placement and credit in a course that is one course beyond that granted for Calculus AB.

2431/2432 AP Pre-Calculus/Trigonometry 1 CR

Prerequisite: Geometry & Algebra 2

Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y

Pre-Calculus reviews and expands linear and quadratic functions, polynomial functions, inverse functions, exponential and logarithmic functions, the remainder and factor theorems, sequences, and series. Trigonometry is the study of the six trigonometric functions, inverse identities, solving trigonometric equations, graphing on the rectangular and polar coordinate systems, solving triangles, and the unit circle.

2531/2532 AP Statistics 1 CR

Prerequisite: Algebra 2

Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y This is an advanced placement course in Introductory Statistics. Students are introduced to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students will prepare to take the College Board AP exam.

2701/2702 College Algebra 1 CR

Prerequisite: Algebra 2 (C or higher) and meet the math cut-score, as defined by Mat-Su College for Math 107.

Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y

This course covers equations and inequalities; function theory and applications; solution of equations greater than second degree; determinants and matrices; systems of inequalities, including applications; logarithmic and exponential functions, including applications; graphs and equations of conic sections, including applications; binomial theorem' sequences and series; mathematical induction and combinatoric notation.

2221/2222 Geometry 1 CR

Prerequisite: Algebra 1

Grade: 9-12 APS: Y, Repeatable: N, NCAA: Y

Geometry includes an in-depth analysis of plane, solid, and coordinate geometry as they relate to both abstract mathematical concepts and real-world problem situations. Topics include inductive and deductive logic and proof, parallel lines, polygons, perimeter and area analysis, volume and surface area analysis, similarity and congruence, and geometric probability. Emphasis will be placed on developing critical thinking skills as they relate to logical reasoning and argument.

86110G/86210G Geometry in Construction 2 CR

Prerequisite: Algebra 1 1 Math Credit and 1 Elective Credit

Grade: 9-12 APS: Y, Repeatable: N, NCAA: N

This Course is an interdisciplinary course that integrates Geometry and Construction topics through the building of a significant construction project. This course will provide students with proficiency in geometric concepts that will endure throughout the mathematics courses that students will take. Students would also gain knowledge and skills that would allow them to take advanced courses in the Construction Trades program. G.I.C. is a double blocked course (two class periods back to back) that fulfills both the Geometry (1.0 credit) requirement along with a CTE elective (1.0). This class is taught by a Geometry and a Building Pathway teacher.

2191/2192 Intermediate Algebra 1 CR

Prerequisite: Algebra 1 & Geometry requirements fulfilled

Grade: 10-12 APS: Y, Repeatable: N, NCAA: N

This course will provide remediation of topics covered in Algebra 1 as well as an introduction to some topics covered in Algebra 2. Emphasis is placed on the skills needed to successfully complete Algebra 2 such as operations of real numbers, solving equations in 1 or 2 variables, writing, and graphing linear and quadratic equations/functions, radical expressions, rational functions, and discrete mathematics with appropriate applications. Students who successfully complete this course should be well prepared to take Algebra 2 and/or College Algebra

2111/2112 Introduction to Algebra 1 CR

Prerequisite: Teacher Recommendation or Proficiency Test (Does not fulfill Algebra requirement for graduation)

Grade: 9-12 APS: N, Repeatable: N, NCAA: N

Introduction to Algebra is designed to expose students to algebraic topics and improve basic mathematical skills necessary for success in Algebra 1. Skill development will include operations with fractions, decimals, percent's, proportions, positive and negative numbers, solving and graphing linear equations and inequalities, using formulas, basic statistics, and probability.

Social Studies

3540 Alaska History .5 CR

Prerequisite: World History, US History Sem1

Grade: 12 APS: Y, Repeatable: N, NCAA: Y

This course is a geographic, economic, and historical study of Alaska's past and present. Emphasis is to be placed on cultural/ethnic, diversity, natural resources, politics, and strategic location of Alaska.

3511/3512 AP Human Geography 1 CR

Prerequisite: None

Grade: 9-12 APS: Y, Repeatable: N, NCAA: Y

This is a year-long course that focuses on the distribution, processes, and effects of human population on the planet. This course covers the units of study found in the AP Human Geography Course Description published by the College Board by following chapters found in the primary text. The chapter studies include population, migration, culture, identity, language, religion, political geography, urban geography, development, agriculture, industry and services, and human environmental interaction. Students learn about the methods and tools geographers use in their science and practice. Case studies from around the globe are compared to the situation in both the USA and locally in Alaska. If students score a 3 or higher on the AP exam, they may earn college credit for the course in addition to the elective Social Studies high school credit.

3421/3422 AP U.S. Government .5 CR

Prerequisite: Teacher Recommendation

Grade: 12 APS: Y, Repeatable: N, NCAA: Y

This course is designed for the student who is capable of lower division college work. The AP American Government and Politics class will address the following topics: 1) constitutional underpinnings of United States government; 2) political beliefs and behaviors; 3) political parties and interest groups; 4) the three branches of national government; 5) public policy making; and 6) civil liberties and civil rights. This course will prepare students for the advanced placement test in United States Government and Politics and will fulfill the graduation requirements for the U.S. Government.

3331/3332 AP U.S. History 1 CR

Prerequisite: Teacher Recommendation

Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y

This college level course is a comprehensive, in-depth study of United States History from 1780 to the present. This course is designed to provide students the analytic skills and factual knowledge necessary to assess historical material, weigh evidence and interpretations presented in historical material, arrive at conclusions based on informed judgment, and to present reasons and evidence clearly and persuasively. At the completion of this course, students are eligible to take the College Board advanced placement test. Successful completion of this course earns the required United States History credit.

3231/3232 AP World History 1 CR

Prerequisite: Teacher Recommendation

Grade: 10 APS: Y, Repeatable: N, NCAA: Y

This course is designed to challenge the ambitious student who has the ability and interest in world history and is capable of lower division college level work. The purpose of this course is to develop greater understanding of the evolution of global processes and contacts, in interaction with different types of human societies beginning with 8000 B.C. through the present age. The course highlights the nature of changes in international frameworks and their causes and consequences, as well as comparisons among major societies. Students will be prepared to take the College Board advanced placement test upon the completion of this course. Successful completion of this course earns the required World History credit.

3450 Civics .5 CR

Prerequisite: None

Grade: 9-12 APS: Y, Repeatable: N, NCAA: Y

In Civics students will learn the foundations of the American democratic system. This course will introduce the principles of our society's free market economy and basic consumer skills. The course will focus on civic involvement in the government process in action and identify the various parts and functions of the justice system. Students will gain an understanding of their basic rights and their responsibility and roles as participating citizens of the United States.

3100 Legal Systems/Law Related Studies .5 CR

Prerequisite: None

Grade: 10-12 APS: , Repeatable: N, NCAA: Y

This course will expose students to the American legal system. Students will learn the differences between civil and criminal courts, explore how and why laws are made, enforced and reviewed by the courts. Students will also look at the purposes and forms of punishment in the legal system as well as changing trends in how crimes are punished in America such as three strikes laws, the death penalty, and mandatory minimums. Units will also cover national, state, and local laws, how city councils work, current events, politics, and social issues like abuse, runaway teens, family violence, drug abuse, and drug laws.

3260 Psychology 1 .5 CR

Prerequisite: None

Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y

This course is an introduction to the study of human behavior. The focus of the course will be the theories of psychology as well as research in the areas of perception, learning, personality development, and human behavior.

3400 US Government .5 CR

Prerequisite: None

Grade: 12 APS: Y, Repeatable: N, NCAA: Y

This course is designed to ensure that students are prepared to function as participating citizens in our society. The content will focus on the purposes of government, various theories of government, and how the political process works in the United States, both in the historical and contemporary contexts.

3301/3302 US History 1 CR

Prerequisite: None

Grade: 11 APS: Y, Repeatable: N, NCAA: Y

This course is designed to be a survey of the history of our nation from reconstruction through the growth of the United States of America up to modern times.

3201/3202 World History 1 CR

Prerequisite: None

Grade: 10 APS: Y, Repeatable: N, NCAA: Y

This course is designed to examine non-western and western area cultures of the world. The course will cover Ancient Greek and Roman civilizations, world religions, nation-building, the Age of Reason, Revolutions, the World Wars, and Contemporary Issues

Science

4550 AK Wildlife .5 CR

Prerequisite: Biology, Physical Science/Chemistry
Grade: 11-12 APS: Y, Repeatable:N, NCAA: Y
In this course, students will have the opportunity to learn more about the animals of Alaska, both how they live and how we live with them. It includes an overview of the wildlife and fisheries resources in Alaska, their management and economic benefit to the state. This will NOT count as a laboratory science for college entrance requirements.

4331/4332 Anatomy and Physiology 1 CR

Prerequisite: Biology, Physical Science/Chemistry & Algebra 1
Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y
This course provides an in-depth study of vertebrate body systems and physiological processes. Topics include classification, biochemistry, genetics, and comparative anatomy. Included are lab exercises with an emphasis on vertebrate animals, their systems and their comparisons, and relationships to humans. Dissections are a requirement of this course. Lab Science.

4431/4432 AP Biology 1 CR

Prerequisite: Biology, Algebra 2, Chemistry, or concurrent enrollment with Teacher Recommendation
Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y
This course is designed to be the equivalent of a college introductory biology course usually taken by biology majors during their first year. The two main goals of AP Biology are to help students develop a conceptual framework for modern biology and to help students gain an appreciation of science as a process. The following ideas will be developed: a grasp of science as a process rather than as an accumulation of facts; personal experience in scientific inquiry; recognition of unifying themes that integrate the major topics of biology; and application of biological knowledge and critical thinking to environmental and social concerns. Students will be prepared to take the AP Biology exam. Lab Science Updated 01/17

4441/4442 AP Chemistry 1 CR

Prerequisite: Chemistry & Algebra 2
Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y
This course is designed to be the equivalent of the general chemistry course usually taken during the first college year. AP Chemistry is a rigorous and challenging course, which builds upon the foundation established in the first-year high school chemistry course. Chemistry topics are covered in great depth and laboratory work and chemical problem solving make up and integral part of the course. Students will be prepared to take the AP Chemistry exam. Lab Science

4521/4522 AP Environmental Science 1 CR

Prerequisite: Biology & Chemistry or Teacher Recommendation
Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y
This course is designed to be the equivalent of a general environmental science course usually taken during the 1st year of college. AP Environmental Science provides students with the scientific principles, concepts and methodologies required to understand the interrelationships of the natural world. This course is interdisciplinary; it embraces a wide variety of scientific topics and areas of study. Students will be prepared to take the AP Environmental Science exam. Lab Science

4621/4622 AP Physics 1 CR

Prerequisites: Algebra 2 & 2 credits of Science
Grades: 11-12 APS: Y, Repeatable: N, NCAA: Y
Elective science: first semester covers uncertainty in labs, vectors, Newtonian mechanics-how objects interact (force, linear, circular and rotational motion, energy, momentum, statics, etc.) using algebra and trigonometry. Application includes internal forces as observed in fluids. Second semester covers thermodynamics (heat, temperature, phases of matter, engines), simple harmonic motion, wave mechanics, electricity, magnetism, special relativity, quantum mechanics, and nuclear/particle physics. Students will work individually and in small and large groups. Assessments will be done based on individual work. Class participation and lab work is an integral part of the class.

4201/4202 Biology 1CR

Prerequisite: NONE

Grade: 9 APS:Y,Repeatable: N, NCAA: Y

Biology introduces the basic foundations and principles of life science. Topics include methods of investigation, classification, cell biology, DNA, genetics, biodiversity, and ecology. Students will become familiar with the proper use of microscopes and dissection tools. Lab Science

4321/4322 Chemistry 1 CR

Prerequisite: Biology, Algebra 1 or Teacher Recommendation

Grade: 10-12 APS: Y, Repeatable: N, NCAA: Y

In this course the student studies the composition of matter including reaction of common elements, atomic structure, chemical bonding, and theories. Students are expected to develop skills in problem solving and safe laboratory techniques and report writing. Lab Science

4710 Forensics 1 .5 CR

Prerequisite: Biology, Physical Science/Chemistry & Algebra 1

Grade: 10-12 APS: Y, Repeatable: N, NCAA: Y

Forensic science is the application of basic biological, chemical and physical science principles and technological practices for the purposes of justice in the study of criminal and civil issues. The course is designed to integrate the core scientific disciplines while giving students both theory and hands-on experience with the skills and knowledge required of a forensic crime scene investigator. This multidisciplinary approach will highlight topics in genetics, anatomy, chemistry, physics, and investigative techniques with supplemental subject matter through case studies, technology, and sociology. In addition, the ethical, legal, and social concerns surrounding forensics will be discussed. A strong emphasis will be placed on developing critical thinking skills.

4101/4102 Physical Science 1 CR

Prerequisite: NONE

Grade: 10 APS: Y, Repeatable: N, NCAA: Y

This course is an introduction to physics and chemistry. Topics include SI units, structure of matter, the periodic table, chemical and physical change, laws of motion, mechanics, electricity, forces, and energy. Students will develop quantitative, reasoning and research skills. Lab Science.

4421/4422 Physics 1CR

Prerequisite: Algebra 2 or concurrent enrollment

Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y

Students will develop an understanding of the basic principles of Newtonian Mechanics, fluids, thermodynamics, sound, light and optics and electromagnetism. The course is both conceptual and quantitative. It is meant for students who plan to pursue careers in math, science, engineering, and technology. Lab Science.

Foreign Language

Spanish 1 (6211/6212) World Language 1 CR

Prerequisite: None

Grade: 9-12 APS: Y, Repeatable: N, NCAA: Y

This course is an introduction to the target language with major emphasis on spoken language, listening comprehension, and elementary reading and writing skills. Units introduce the culture of the target language. Student participation and good attendance are critical elements to successfully complete this course.

Spanish 2 (6221/6222) World Language 1 CR

Prerequisite: Spanish 1 completion with a "C" or better grade.

Grade: 9-12 APS: Y, Repeatable: N, NCAA: Y

Building on what was learned in Level 1, students expand their ability to speak, read, write, and listen in the target languages through extensions in vocabulary, grammatical structures, and culture. Student participation and good attendance are critical elements to successfully complete this course.

Spanish 3 (6231/6232) World Languages 1 CR

Prerequisite: Spanish 2 with a "C" or better grade.

Grade: 9-12 APS: Y, Repeatable: N, NCAA: Y

Students continue to develop proficiency in listening, speaking, reading, and writing. They expand their vocabularies and learn more complex language functions to communicate in more sophisticated ways. Cultural topics are integrated throughout this course. Student participation and good attendance are critical elements to successfully complete this course.

Physical Education & Health

5211/5212 Cross Training .5 CR

Prerequisite: None

Grade: 9-12 Repeatable: Y

Cross Training is a fitness program that incorporates a variety of activities in a systematic way to promote balanced fitness. Students will concentrate on swimming, running, weight training skills and plyometrics for lifetime fitness. Fitness testing will be done to monitor progress. Students will also learn skeletal and muscular composition and the importance of proper nutrition.

5100 Health Education .5 CR

Prerequisite: None

Grade: 9-12 Repeatable: N

Students will know, understand, and relate their personal wellness to the 6 Center for Disease Control Identified Adolescent Risk Behaviors as well as the 7 National Health Education Standards. Topics covered will include community, consumer, and environmental health, family life, mental and emotional health, injury prevention, safety, nutrition and personal health, prevention and control of disease, and substance use and abuse.

5541/5542 Outdoor Recreation .5 CR

Prerequisite: None

Grade: 9-12 Repeatable: Y

This course stresses - through student experiences and activities the skills - knowledge and behaviors necessary for outdoor recreation. Outdoor recreation activities such as snowshoeing, cross-country skiing, orienteering, hiking, etc., will be determined by the instructor and student interest.

5271/5272 Weight Training .5 CR

Prerequisite: Completed at least 1 semester of PE in the building

Grade: 10-12 Repeatable: Y

This course will provide the opportunity for students to explore different lifting styles such as lifting for athletics, bodybuilding, and powerlifting. In addition, this course will offer increased intensity based on the individual's body strength development in weight training.

THE PATHWAY COURSES

CAREER & TECHNICAL EDUCATION

All courses in this section are CTE for the purposes of APS

Building

(Architecture, Manufacturing, Construction & Engineering)

86050 Architectural Drafting 1 .5 CR

Prerequisite: Technical Drafting 1 - 4

Grade: 11-12 APS: Y, Repeatable: N, NCAA: N

Architectural Drafting 1 provides the basic information necessary for planning single level residential dwellings. It presents basic instruction in preparing architectural working drawings using computer-based methods. It is intended to help develop the necessary technical skills to communicate architectural ideas in an understandable, efficient, and accurate manner. Students who are interested in careers in construction; for example, architects, computer- aided drafters, surveyors, planners, and designers would benefit from this course. Rev. 12/10/18

86060 Architectural Drafting 2 .5 CR

Prerequisite: Architectural Drafting 1 MATH

Grade: 11-12 APS: Y, Repeatable: N, NCAA: N

Architectural Drafting 2 provides the basic information necessary for planning multi-level single family dwellings. It presents advanced instruction in preparing architectural working drawings, sites, pictorials, elevations, and floor plans using computer-based methods. It is intended to help develop the necessary technical skills to communicate architectural ideas in an understandable, efficient, and accurate manner. Students who are interested in careers in construction; for example, architects, computer-aided drafters, surveyors, planners, and designers would benefit from this course.

86070 Architectural Drafting 3 .5 CR

Prerequisite: Architectural Drafting 2 MATH

Grade: 11-12 APS: Y, Repeatable: N, NCAA: N

Architectural Drafting 3 covers multi-family commercial dwellings. Emphasis is placed on individual design problems. Students will explore 3D modeling design. Students who are interested in careers in construction; for example, architects, computer-aided drafters, surveyors, planners, realtors, and designers would benefit from this course. Rev. 12/10/18

86080 Architectural Drafting 4 .5 CR

Prerequisite: Architectural Drafting 3 MATH

Grade: 11-12 APS: Y, Repeatable: N, NCAA: N

Architectural Drafting 4 is designed to teach students commercial applications and to take students farther in advanced individual design problems. Students will develop projects in 3D modeling in commercial applications. The course poses problems for students to resolve (these are provided by the Women in Construction, American Institute of Architecture, and SkillsUSA). Students who are interested in careers in construction; for example, architects, computer-aided drafters, surveyors, planners, and designers would benefit from this course.

86210 Cabinet Making & Woodwork 1 .5 CR

Prerequisite: None

Grade: 10 -12 Repeatable: N

Cabinet Making and Woodworking 1 is a semester-long class which introduces students to the woodworking industry. Highlights will include completion of a project, measuring, blueprints, power tool safety, basic woodworking processes, SkillsUSA, and career opportunities. Students who are interested in careers in home construction or furniture production would benefit from this class.

86220 Cabinet Making and Woodwork 2 .5 CR

Prerequisite: Cabinet Making and Woodworking 1

Grade: 10 -12 Repeatable: N

Cabinet Making and Woodworking 2 is the second semester class in which students will choose and build a major project, modifying the design as needed. Steps in this process will include the selection of materials, use of advanced joining, and application of a finish. Students who are interested in careers in home construction or furniture production would benefit from this class.

86230 Cabinet Making and Woodwork 3 .5 CR

Prerequisite: Cabinet Making and Woodworking 2 MATH

Grade: 11-12 Repeatable: N

Cabinet Making and Woodworking 3 is a semester-long class designed to give students advanced skills in woodworking careers. Emphasis is placed on hand and power tool maintenance, advanced machine processes, joining methods, and finishing techniques. Students who are interested in careers in home construction or furniture production would benefit from this class.

86240 Cabinet Making and Woodwork 4 .5 CR

Prerequisite: Cabinet Making and Woodworking 3 MATH

Grade: 11-12 Repeatable: N

Cabinet Making and Woodworking 4 is a semester-long class which is a continuation of Woods 3. Emphasis is placed on cabinet and furniture styles, drawers and doors, special materials and processes, advanced finishing applications, and career opportunities related to the woods industry. Students who are interested in careers in home construction or furniture production would benefit from this class.

86131/86132 Construction Trades Part 1 2 CR

Prerequisite: Algebra 1 MATH S2

Grade: 11 (1 credit per sem) APS: Y, Repeatable: N, NCAA: N

Construction Trades—Part 1 introduces the concepts of residential construction by providing hands-on training to students who will learn about safety, hand power tools, and materials. Students will build footings, frame walls, and apply siding, roofing, and trim. All work is done “in the field” on a job site of a marketable residential home. Recommended Courses: Introduction to Construction, Cabinet Making and Woods 1 or Technical Drafting 1. Rev. 12/10/18

86141/86142 Construction Trades Part 2 2 CR

Prerequisite: Construction Trades Part 1 MATH

Grade:12 (1 credit per sem) APS: Y, Repeatable: N, NCAA: N

Construction Trades—Part 2 focuses on the finish side of residential construction. Students will actively participate in finishing the framed house built by the first part of construction trades. Students will learn how the various parts of a house integrate to make a marketable, street appealing, energy efficient home. In addition, students will have an opportunity to gain expert advice by working together with private specialty contractors throughout various phases of the project.

82050 Interior Design .5 CR

Prerequisite: None

Grade: 10 -12 Repeatable: N

Interior Design students will create and evaluate a variety of living environments, using the principles and elements of design. They will create and evaluate floor plans based on utilization of space, individual and family needs. Emphasis is placed on individual expression and consumer awareness of one’s living environment. Students interested in architecture, drafting, technical illustration, interior design, or set design would benefit from this class.

86401/86402 Introduction to Engineering Design 1 CR

Prerequisite: None

Grade:10-12 Repeatable: N, APS: Y

Introduction to Engineering Design is a course that teaches problem-solving skills using a design development process. Models of product solutions are created, analyzed and communicated using solid modeling computer design software. Rev.12/10/18

84140 Industrial Safety and First Aid .5 CR

Prerequisites: None

Grade: 9-12 Repeatable: N

Industrial Safety and First Aid provides instruction on emergency first aid awareness and techniques. Students acquire knowledge and skills necessary for managing emergencies in a medical/dental office and other clinical or industrial settings as well as for personal use. The course includes CPR training with AED, control of bleeding and shock management, recognizing heart problems, stroke, poisoning, burns, diabetes, seizures, trauma injuries, hypothermia, frost bite and insect stings. Students will be introduced to Mine Safety Health Administration (MSHA) Certification requirements. OSHA and NIOSH safety requirements in a variety of work settings are included. Personal safety is stressed. Upon satisfactory completion of the course, students will receive an American Heart Association First Aid and 'CPR for Adults, Children, and Infants' card, including AED.

86411/86412 Principles of Engineering 1 CR

Prerequisite: Intro to Engineering or Teacher Recommendation

Grade: 11-12 APS: Y, Repeatable: N, NCAA: N

Principles of Engineering is a course that helps students understand the field of engineering/engineering technology. Exploring various technology systems and manufacturing processes help students learn how engineers and technicians use math, science, and technology in an engineering problem-solving process to benefit people. The course also includes concerns about social and political consequences of technological change. This course is part of the PLTW (Project Lead the Way) Pre-Engineering Program

84730 Robotics .5 CR

Prerequisite: None SCI

Grade: 10 -12 APS: Y, Repeatable: N, NCAA: Y

The Robotics course teaches 9th through 12th grade students the science/technology/engineering process using mechanisms, machines, and robotic systems. Students progress at their own pace while studying and performing tasks independently and in small groups. Hands-on activities supplemented with demonstrations, mentorship, and study tips familiarize students with the concepts and application of robotic technologies. Performing laboratory experiments, students will gain firsthand knowledge of simple machines, fabrication, and logic systems. Students will learn how to program complex robotic systems to perform a variety of interesting and useful tasks.

84740 Robotics, Advanced (Robotics 2) .5 CR

Prerequisite: Robotics, Algebra 1 SCI

Grade: 10 -12 APS: Y, Repeatable: N, NCAA: Y

The advanced robotics class is designed to offer students and opportunity to complete a project with instructor guidance in the areas of land, water, air, or medical robotics. Each project will involve the designing, construction, programming, and presentation/promotion of their final robotics project. All projects will be based on a common grading rubric that will encompass Science, Technology, Engineering, Math, and Language Arts standards.

86010 Technical Drafting 1 .5 CR

Prerequisite: None

Grade: 9-12 APS: Y, Repeatable: N, NCAA: N

Technical Drafting 1 covers the principles of drafting design and computer-assisted drawing. In industry, ideas about a design are often communicated through a special kind of technical drawing process called drafting. Drafting provides many career opportunities in engineering design and communication. Students will learn how products are conceived, designed, and prepared for manufacturing. Emphasis is placed on accuracy, neatness, and time management, while representing objects in technical drawings. Rev. 12/10/18

86020 Technical Drafting 2 .5 CR

Prerequisite: Technical Drafting 1 MATH

Grade: 9-12 APS: Y, Repeatable: N, NCAA: N

Technical Drafting 2 covers the advanced drawing methods and techniques related to engineering design and computer-assisted drawing. Emphasis is placed on methods of fastening products together and on developing working drawings. It is recommended for students wishing to continue with the technology courses as well as for students going into the field of engineering or other design drafting related occupations or educational programs. Examples would be interest in civil engineering, welding, and automotive design.

86030 Technical Drafting 3 .5 CR

Prerequisite: Technical Drafting 2 MATH

Grade: 10-12 APS: Y, Repeatable: N, NCAA: N

Technical Drafting 3 introduces and develops 3-D modeling skills. Emphasis is in welding, cams, gears, surface developments and intersections. This course would be helpful for a student who is exploring careers in construction, electricity, electronics, computers, welding, or machining. Students wanting careers in engineering design, automotive design, civil design, or 3-D modeling would also be interested in the class. Rev.12/10/18

86040 Technical Drafting 4 .5 CR

Prerequisite: Technical Drafting 3 MATH

Grade: 10-12 APS: Y, Repeatable: N, NCAA: N

Technical Drafting 4 covers the advanced drawing methods and techniques related to engineering design, basic descriptive geometry, and computer-assisted drawing. It is recommended for students exploring the career fields of engineering or other design drafting-related occupations or educational programs. This course would also be helpful for a student who is exploring careers in electricity, electronics, computers, welding, or machining. Technical Drafting 4 refines the skills learned in Technical Drafting 3 on an individual project related to the student's interest. Rev.12/10/18

86441/86442 3D Solid Modeling 1 CR

Prerequisite: Principles of Engineering, Intro to Engineering or Teacher Recommendation

Grade: 11-12 Repeatable: N, NCAA: N

Learning 3D design is an interactive process. Students learn best when they can explore the practical applications of the concepts that they learn. This STEM course has many activities and exercises that enable students to put design concepts into practice. Students create their ideas such as artificial heart components, extreme sports equipment, hip replacement parts, robotic arm components, musical instruments, and their parts as well as many others. Ideas become reality in this course.

Business

(Information Technology, Management, & Administration)

83110 Accounting 1 .5 CR

Prerequisite: None

Grade: 10-12 Repeatable: N

Accounting 1 is designed to provide students with the fundamental skills needed to understand the basic accounting cycle for a service business organized as a sole proprietorship and a merchandising business organized as a partnership. Double-entry accounting is the major emphasis of this course. Simulations incorporating source documents reinforce the entire accounting cycle concept. This course would benefit students interested in careers as bookkeepers, accountants, business managers or wanting to be self-employed.

83120 Accounting 2 .5 CR

Prerequisite: Accounting 1 MATH

Grade: 10-12 Repeatable: N

Accounting 2 students will be able to further refine the basic concepts and skills introduced in accounting 1. Students will be provided with an overview of accounting for a merchandising business organized as a corporation as well as an overview of the legal environment of business. Guest speakers are used to expose students to the wide range of accounting careers. Automated accounting is introduced in this course. This course would benefit students interested in careers as bookkeepers, accountants, business managers or wanting to be self-employed.

83130 Accounting 3 .5 CR

Prerequisite: Accounting 2 MATH

Grade: 11-12 Repeatable: N

Accounting 3 is an advanced accounting course which expands on topics learned in the first-year course. New topics include management accounting, cost accounting, not-for-profit accounting, and financial analysis. A comprehensive capstone project is included in this course. The project is both manual and computerized. This course is an excellent background and preparation for college business and accounting courses and business majors. This course would benefit students interested in careers as bookkeepers, accountants, business managers or wanting to be self-employed.

83140 Accounting 4 .5 CR

Prerequisite: Accounting 3 MATH

Grade: 11-12 Repeatable: N

Accounting 4 continues with an in-depth study of management accounting, cost accounting, not-for-profit accounting, and financial analysis. A computer-oriented culminating project is used as a final exam. This course is an excellent background and preparation for college business and accounting courses and business majors. This course would benefit students interested in careers as bookkeepers, accountants, business managers or wanting to be self-employed.

84831/84832 AP Computer Science Principles 1 CR

Prerequisite: Algebra 1 (C or better) & Instructor Approval

Grade: 9-12 Repeatable: N

This course is meant to be the equivalent of a first-semester college- level course in computer science. The course uses JAVA language. Students produce software to solve business and real-world problems. The primary structures of computer science are used, with an emphasis on programming methodology, block-structured languages, data structures, business and mathematical algorithms, and computer systems. Students will be prepared to take the AP Computer Science A exam.

83080 Business Skills Lab 1 .5 CR

Adobe Illustrator [graphic design] or Adobe Premiere Pro [video editing]

Prerequisite: For Premier Pro - Photoshop (Desktop Publishing 2) or teacher approval

Grade: 10-12 Repeatable: Y

- Adobe Illustrator is a vector graphics editor and design software used for creating logos, icons, illustrations, and other visual content, known for its ability to produce scalable, high-quality images. Key features include vector graphics, drawing tools, typography tools, and color and effects.
- *Adobe Premiere Pro* is industry-leading, timeline-based video editing software used for creating and editing videos for film, TV, and the web, offering a comprehensive suite of tools for editing, audio mixing, and special effects.

83090 Business Skills Lab 2 .5 CR

Adobe After Effects

Prerequisite: Premier Pro (Business Skills Lab 1)

Grade: 10-12 Repeatable: N

Adobe After Effects is a powerful software application used for creating motion graphics, visual effects (VFX), and animating images and text, commonly used in film, television, and video post-production.

83200/83210 Desktop Publishing 1 .5 CR

Adobe InDesign [page layouts and publications, yearbooks, magazines, newspapers, etc.]

Prerequisite: None

Grade: 9-12 Repeatable: Y

Adobe InDesign lets you design and publish a broad range of content and layouts for print, web, and tablet apps. InDesign is built for designers, prepress and production professionals, and print service providers who work for magazines, design firms, advertising agencies, newspapers, book publishers, and retail/catalog companies, as well as in corporate design, commercial printing, and other leading-edge publishing environments.

83200/83210 Desktop Publishing 2 .5 CR

Adobe Photoshop [photo editing]

Prerequisite: None

Grade: 9-12 Repeatable: Y

Adobe Photoshop is a widely used, industry-standard software for image editing and manipulation, allowing users to create, enhance, and manipulate images, artwork, and illustrations. Key features include image editing, digital art creation, layer-based editing, raster graphics, versatile tools, and seamless integration with other Adobe applications.

82110 Digital Media 1 0.5 CR

Prerequisite: None

Grade: 9-12 Repeatable: N

This course will cover topics such as careers in journalism, writing processes, planning a production, and ethics and legal issues in the industry. The focus in this course will be on the creation of digital video as a medium for communicating stories and information. You will learn about basic film theory, video production from inception to distribution, and the various forms and genres of digital media. When you've completed this class you will have knowledge of the history of storytelling through moving pictures, the language and vocabulary of the craft, and a firm understanding of the pre-production, production, and post-production processes of film/videomaking. You should feel confident in your ability to tell a compelling story using digital video as your medium. We're going to have some fun!

82131/82132, 82141/82142 Digital Media 2 & 3 1 CR

Prerequisite: None

Grade: 9-12 Repeatable: N

In this class, you will put into practice the knowledge and skills you attained in Digital Media 1. You will apply your expertise to produce the daily morning announcements and news show, Tiger TV. You will be given the opportunity to gain expertise in all aspects of the daily production: information gathering, writing, camera, sound, directing, performing, graphics, editing, and publishing the show.

83700 Entrepreneurship .5 CR

Prerequisite: None

Grade: 10-12 Repeatable: N

Entrepreneurship is designed for students who plan to form, manage, and/or operate a small business enterprise. Students will explore and prepare for work as an entrepreneur, small business planner and/or manager. Course elements will include a general overview of the legal issues of owning, managing, and starting a small business. Students will develop skills and abilities to run a small business, learn and use marketing skills and participate in the actual operations of a small business. This course will enhance a student's skill and ability to use technical communication and writing skills.

83410 Internet of Everything .5 CR

Prerequisite: None

Grade: 10-12 Repeatable: N

Internet of Everything covers the basic information about computers and how they impact us in our everyday lives. The class explores where we are going in the computer industry and reviews where we have been with computers. The class gives the background and framework for the A+ certification class as well as the impact of computers in our daily work and play. IT provides a broad overview of safety, ethics, operating systems, personal computers, software, hardware, and networks. This is a beginning course for students who want careers in information services, network systems, software engineering, programming, or interactive media.

83010 Introduction to Business .5 CR

Prerequisite: None

Grade: 10-12 Repeatable: N

Introduction to Business is designed for students who plan to form, manage, and/or operate a small business. Students will explore small business planning, management, insurance, banking, and legal issues. Students will learn to expand the application of interpersonal relationships as applied to the employer/employee relationship. Students will be able to select appropriate speaking, writing, and listening techniques and demonstrate the ability to work with others while using appropriate interpersonal skills.

83710 Marketing .5 CR

Prerequisite: None

Grade: 10-12 Repeatable: N

Marketing introduces students to marketing concepts. Business operations, product distribution, marketing communications skills, product display, cash register operations, inventory, and career education are presented in this course. The Alaska Career Information System is used to identify careers in this area. Some career specialties in this pathway include e-marketing, management and entrepreneurship, professional sales, buying and merchandising, communications, and promotion, marketing research, and distribution.

83610 Networking 1 (CISCO Academy) 1 CR

Prerequisite: Algebra 1 or Int. Math 1 and related IT class

Grade: 11-12 (sem course) MATH Repeatable: N APS: Y NCAA: N

Networking 1 (CISCO Academy) is the first of four semester courses designed to provide students with classroom and laboratory experience in current and emerging networking technology that will empower them to enter employment and/or further education and training in the information technology field. It includes instruction in OSI model and industry standards, networking topologies, IP addressing, networking devices, and basic network design. This course is designed to prepare students for the Cisco Certified Network Associate Certification. Sample job possibilities include tech desk, network technician, network analyst, and network support specialist. This course is a two-hour block. Rev.12/10/18

83620 Networking 2 (CISCO Academy) 1 CR

Prerequisite: Networking 1 (CISCO Academy)

Grade: 10-12 (sem course) MATH Repeatable: N APS: Y NCAA: N

Networking 2 (CISCO Academy) is the second of four semesters designed to provide students with classroom and laboratory experience in current and emerging networking technology that will empower them to enter employment and/or further education and training in the information technology field. Instruction includes beginning router configurations, Cisco IOS Software management, routing protocol configuration, TCP/IP and access control lists. This course is designed to prepare students for the Cisco Certified Network Association Certification. Sample job possibilities include tech desk, network technician, network analyst, and network support specialist. Rev. 12/10/18

83250 Personal Finance .5 CR

Prerequisite: Algebra 1 MATH

Grade: 11-12 Repeatable: N

Personal Finance is designed to help students prepare for real-world financial decisions. Basic math skills will be used in computing payroll, federal taxes, budgets, credit, and banking. Also included are decision-making skills when choosing housing, automobiles, insurance, and investments. Students will begin by exploring general occupational clusters and then narrowing their focus to match their personal aptitudes and interests. All students would benefit from this class no matter what career interests they have. Recommended for juniors and seniors.

83030 Technology Applications 1 .5 CR

Prerequisite: NONE

Grade: 9-12 Repeatable: N

Technology Applications 1 provides students the opportunity to learn introductory applications in word processing, database, spreadsheet, Internet, multimedia presentation, and using the Microsoft Office Suite. As computers become more critical in today's world, this course provides the beginning experiences used for high school through career applications.

83040 Technology Applications 2 .5 CR

Prerequisite: Technology Applications 1

Grade: 9-12 Repeatable: N

Technology Application 2 provides students the opportunity to learn advanced applications and integration of word processing and spreadsheets. This course prepares students to take the Microsoft Office Specialist exam. This certification is recognized by industry worldwide as proficiency in office applications.

83050 Technology Applications 3 .5 CR

Prerequisite: Technology Applications 1

Grade: 9-12 Repeatable: N

Technology Applications 3 provides students the opportunity to learn advanced applications and integration of database and multimedia. This course prepares students to take the Microsoft Office Specialist exam. This certification is recognized by industry worldwide as proficiency in office applications.

83440 Web Page Authoring .5 CR

Prerequisite: Technology Applications 1 or Teacher Recommendation

Grade: 10-12 Repeatable: N

Web Page Authoring covers the background of the World Wide Web, basic HTML coding, and the essentials of design and layout for publishing documents online. Sample occupations in this pathway are web designer, webmaster, 3D animator, multimedia producer, or graphic artist. *Note title change from "Intro to Web Design."

89941/89942 Yearbook 1 CR

Prerequisite: Teacher Recommendation/Application required

Grade: 9-12 Repeatable: Y

This course requires the skills of creative writing, copywriting, interviewing, caption-writing, lay-out and design, darkroom black and white photography, advertising, sales, finances, bookkeeping, and recordkeeping. This class requires responsibility and the ability to conceptualize a project and take it to completion. Art, typing, computer skills, creative writing, and photographic abilities are recommended but not required.

89967 Employment Orientation 0.5 CR

Prerequisite: None

Grade: 9 Repeatable: N

Employment Orientation is an introductory course to be used in all pathways. This class is to explore a variety of career opportunities and employability skill sets. Self-exploration, career research, employment document preparation, interview preparation, and CTSO participation will be emphasized. Students will also be instructed in the documents required for employment in today's job market.

Culinary & Tourism

85200 Culinary (Arts) 1 & 2 (offered Sem. 1) 1 CR

Prerequisite: None

Grade: 11-12 Repeatable: N

Culinary Arts 1 & 2 introduces students to careers in food service and teaches them the basic skills and knowledge needed for success in the food service industry. The following seven units from Culinary Arts 1 will be covered during Semester 1: 1) Successful Customer Relations, 2) Preparing and Serving Safe Food, 3) Preventing Accidents and Injuries, 4) Kitchen Basis, 5) Food Service Equipment, 6) Nutrition, and 7) Preparing for a Successful Career. Also, the following six units from Culinary Arts 2 will be covered: 1) Breakfast Foods and Sandwiches, 2) Working with People, 3) Salads and Garnishes, 4) Business Math, 5) Fruits and Vegetables, and 6) Controlling Foodservice Costs. Culinary Arts 1 & 2 is a ProStart curriculum developed by the National Restaurant Association as part of the school-to-career approach to learning. Students who are interested in becoming chefs or working in the restaurant industry would benefit from this course. Recommended Course: Survey of Home Economics 1.

85201 Culinary (Arts) 3 & 4 (offered Sem. 2) 1 CR

Prerequisite: None

Grade: 11-12 Repeatable: N

Culinary Arts 3 & 4 introduces students to careers in food service and teaches the basic skills and knowledge needed for success in the food service industry. The following six units from Culinary Arts 3 will be covered during Semester 2: 1) The History of Food Service, 2) Potatoes and Grains, 3) The Lodging Industry, 4) The Art of Service, 5) Desserts and Baked Goods, and 6) Marketing and the Menu. Also, the following six units from Culinary Arts 4 will be covered: 1) Purchasing and Inventory Control, 2) Meat, Poultry and Seafood, 3) Standard Accounting Practices, 4) Stocks, Soups, and Sauces, 5) Tourism and the Retail Industry, and 6) Communicating with Customers. A minimum of 20 lab activity/cooking hours will be included. Culinary Arts 3 & 4 is a ProStart curriculum developed by the National Restaurant Association as part of the school-to-career approach to learning. Students who are interested in becoming chefs or working in the restaurant industry would benefit from this course. Recommended Course: Survey of Home Economics1.

86470 Sports Nutrition .5 CR

Prerequisite: NONE SCI

Grade: 10-12 Repeatable: N

Students that take this course will examine nutrition guidelines and nutrient intakes, emphasizing nutrition and athletic performance. This course explores nutrition in sports, weight management, disease prevention, and has a career exploration component for those interested in a career in Sports Medicine or Fitness.

85161 Introduction to Baking .5 CR

Prerequisite: None

Grade: 10-12 Repeatable: N

This course will introduce students to the field of baking by introducing the basics of food safety, kitchen safety, and sanitation along with the importance of personal hygiene. Students will learn equipment identification and use. Each student will produce breads and cookies using formulas and mixing methods learned in theory. They will also learn the basics of selling and displaying their products in the school café. This course covers the basics of cake decorating in theory and in practice. All students are introduced to liquid measure and instruction in the importance or proper measuring as it relates to baking and culinary arts. Technology, related mathematics, reading, writing and proper vocabulary are integrated throughout the course.

83300 START .5 CR

Prerequisite: Tourism 1 or Teacher Recommendation

Grade: 10-12 Repeatable: N

In S.T.A.R.T. (Skills, Tasks, and Results Training), students learn essential knowledge in the areas of hospitality, rooms, and food and beverage service. Attention is given to customer service, facilities management, guest services, and food and beverage management. Students gain practical experience in the hospitality industry through a variety of training opportunities. This course is for those students seeking exposure to the hospitality industry, but whose career pathway may be geared to a supporting job opportunity.

Fitness

86470 Sports Nutrition .5 CR

Prerequisite: NONE SCI

Grade: 10-12 Repeatable: N

Students that take this course will examine nutrition guidelines and nutrient intakes, emphasizing nutrition and athletic performance. This course explores nutrition in sports, weight management, disease prevention, and has a career exploration component for those interested in a career in Sports Medicine or Fitness.

84031/84032 Intro to Fitness Professions 1 CR

Prerequisites: Anatomy & Physiology or Teacher Recommendation

Grade: 11-12 Repeatable: N

Introduction to Fitness Professions introduces exercise physiology, biomechanics, and kinesiology in regard to sport and safe exercise. Prescription and Assessment of exercise for both individuals and groups will be covered. Students will explore careers and professional development opportunities in the sports and fitness industry. Students who are interested in being personal trainers, physical education teachers, athletic trainers and coaches, or physical therapists would benefit from this class. Apvd.04/10/2008

84091/84092 Physiology of Exercise & Fitness 1 CR

Prerequisite: Biology, Anatomy & Physiology, Athletic Medicine, or Teacher Recommendation

Grade: 11-12 Repeatable: N

Physiology of Exercise and Fitness introduces anatomy, physiology, and injuries most encountered on the athletic field, gymnasium, or sports arena. Techniques used in the initial management and rehabilitation of those injuries are also covered. This course is recommended for students interested in fitness and sports medicine. Apvd.12/01/2006

Health

4350 Bacteriology (Microbiology) .5CR

Prerequisite: Algebra 1 & Biology

Grade: 11-12 APS: Y, Repeatable: N, NCAA: Y

The skills and concepts of microbiology will be expanded with an emphasis on specialized laboratory techniques utilized to identify and classify bacteria. Lab Science.

84050 Certified Nursing Assistant (CNA) 2 CR

Prerequisite: Algebra 1, Biology, Physical Science or Chemistry SCI

Grade: 11-12 (semester course) APS: Y, Repeatable: N, NCAA: N

Certified Nursing Assistant meets the educational requirements for certification of a Certified Nursing Assistant in the state of Alaska. The course will train students to measure and record vital signs, provide personal care and hygiene, position, transfer and ambulate, provide unit care, and other activities of daily living. CPR and First Aid will be included. The training will enable students to work in long term care and acute care facilities. Training will include both classroom activities and clinical experiences with industry partners in hospitals, nursing homes and extended care facilities. This class is good for students considering careers in health care and/or nursing. This course is a double block or 2 periods in a day. It requires each student to have a minimum of 48 hours of clinical practice in an industry setting. Rev.11/26/18

84300 Dental Assistant 1 CR

Prerequisite: Algebra 1 SCI

Grade: 11-12 APS: Y, Repeatable: N NCAA: N

The Dental Assistance program prepares students to become skilled members of the dental health care team. Assistants greatly increase the efficiency of the dentist in the delivery of oral health care and are valuable members of the dental care team. Rev.11/26/1

84020-W Health Occupations .5 CR

Prerequisite: Biology

Grade: 10-12 Repeatable: N

Health Occupations includes roles and responsibilities of health care workers, job and educational opportunities, medical terminology, medical/legal ethics, confidentiality, infection control, microbiology, first aid and CPR, anatomy, and physiology. Health Occupations is designed to provide the beginning health occupations student with the basic knowledge and entry level skills for a variety of health occupations. Field trips to health care facilities and selected health workers will be included as part of this class. Students interested in being a certified nursing assistant, medical assistant, medical technician, or pharmacy technician will find this course beneficial.

84070 Introduction to Pharmacy .5 CR

Prerequisites: None

Grade: 10-12 Repeatable: N

This course introduces pharmacy practice and the technician's role in various pharmacy settings. The course emphasizes the history of pharmacy, pharmacy law and ethics, pharmacy terminology, symbols, and dosage forms and 100 often prescribed drugs. Students with an interest in becoming a certified nursing assistant, medical assistant, medical, pharmacy, or dental technician, nurse, dentist physician or pharmacist will find this course beneficial. Apvd.04/10/2008

84121/84122 Medical Terminology A and B 1 CR

Prerequisite: None SCI

Grade: 11-12 APS: Y, Repeatable: N, NCAA: N

Medical Terminology A and B is a year-long class which presents medical terminology through a combination of anatomy and physiology, word building principles, and phonetic "sound like" pronunciations. Content is organized according to body systems and is designed to prepare students who have interest in careers in health care or medicine. Rev.12/10/18

84100 Medical Math .5 CR

Prerequisites: Algebra 1 MATH

Grade: 10-12 APS: Y, Repeatable: N, NCAA: N

This course provides students with the interpretive skills to read, decode and process a variety of prescriptions requiring mathematical computations. The course introduces the basic concepts needed to calculate oral, parenteral, pediatric and elderly drug dosages. Skills for interpreting intravenous flow rates, compounding, commercial and office management calculations are also included. Students with an interest in becoming a certified nursing assistant, medical assistant, medical, pharmacy, or dental technician, nurse, dentist physician or pharmacist will find this course beneficial. Rev.12/10/18

84081/84082 Pharmacy Technician 1 CR

Prerequisite: Health Occupations, Anatomy & Physiology or Teacher Recommendation SCI

Grade: 11-12 APS: Y, Repeatable: N, NCAA: N

Introduction to Pharmacology introduces students to how drugs are organized by classifications that include their purpose, side effects, cautions, and interactions. Instruction will include lectures, labs, guest speakers, and field trips. This class is recommended to students interested in health careers such as nursing and medicine. Rev. 12/10/18

Human Services

85340 Classroom Management/Plan .5 CR

Prerequisite: Educational Development & Psychology

Grade: 12 Repeatable: N

Classroom Planning and Management is the third course in the Teacher Ed Series. This course focuses on the learning environments that facilitate student growth. Students will explore how educators create an engaging learning environment that provides culturally relevant learning opportunities and the instructional strategies that support students' self-efficacy. Students will develop lesson plans and facilitate instruction in classrooms within their school or community.

85330 Educational Development & Psychology .5 CR

Prerequisite: Leadership Development

Grade: 11-12 Repeatable: N

Educational Development and Psychology is the second course in the Teacher Ed series. Students will explore the development of students across the learning continuum and the importance of understanding students as learners. Students will learn about the diversity of learners in an education system and how educators prepare to meet the needs of all students. In preparation for teaching in a culturally diverse system, students will explore the role of the educator in developing a classroom of respect that embraces diversity and empowers students. Apvd.02/07/18

85000 Introduction to Career Pathways .5 CR

Prerequisite: None

Grade: 9 Repeatable: N

Introduction to Career Pathways is an orientation to the variety of career opportunities organized as career pathways. Through experiences in the technical classrooms, field trips, guest speakers and self-exploration, participants will obtain a better understanding of career opportunities within the pathways offered in the MSBSD. Career pathways which will be included are automotive technology, agriculture and natural resources, business and information technology, construction/architecture/pre-engineering, hospitality/ tourism, health occupations, outdoor power equipment, sports medicine and fitness, and welding technology. This is a 9th grade class recommended for all students. Apvd.12/01/2006

81040 Introduction to Veterinary Science .5 CR

Prerequisite: None SCI

Grade: 10-12 APS: Y, Repeatable: N, NCAA: N

Introduction to Veterinary Science (formerly Companion Animal Science) explores the relationship between pets and their owners and working animals and their roles. The class covers pet care including health maintenance and disease prevention. Students who want to become veterinarians, vet technicians, animal trainers or work in an animal daycare or boarding facility would be interested in this class. Recommended Course: Intro to Animal Science. Rev. 07/24/19

85320 Leadership Development .5 CR

Prerequisite: None

Grade: 11- 12 Repeatable: N

Leadership Development is the essential first course in preparing students to become educators. Students will develop skills to become reflective, self-aware learners while building capacity as school and community leaders. Focused on the skills and dispositions required to lead, students will explore equity in education and how personal bias influences how they teach and learn. Students will explore their personal values identifying passions, strengths, and challenges to build a career and learning plan. Apvd.02/07/18

9711/9712 Peer Mentor (Partners PE) .5 CR

Prerequisite: Counselor/Teacher Recommendation

Grade: 11-12 Repeatable: N

Peer Mentoring is a course designed to provide students with an opportunity to build a relationship with students who have an IEP by assisting them in adaptive courses. The peer mentor is not enrolled in the class to produce their own work, but rather there to support the student on the IEP in finding success in their classwork. This one-on-one socialization is intentionally designed to benefit both students by building long lasting relationships and helping the peer mentor develop tutorial skills and to assist the teacher with students who need one-on-one support. Peer Mentoring is an elective credit that would be partnered with classes such as Adaptive Art.

85350 The Professional Teacher .5 CR

Prerequisite: Classroom Planning & Management

Grade: 12 Repeatable: N

The Professional Teacher is the fourth and final course in the Teacher Ed Series. In the course, a focus is placed on student clinical experiences and the continued development of the education professional. Using reflective practices, students develop and deliver lesson plans that pull together all the elements learned in previous courses. Students will spend time building their professional portfolio and network while developing a learning and career plan.

84400 Veterinary Assistant 1 1 CR

Prerequisite: Algebra 1 SCI

Grade: 11-12 APS: Y, Repeatable: N, NCAA: N

The Veterinary Assistant course will introduce students to careers in Veterinary science. Veterinary Assistants assist in a Veterinary office with a variety of tasks to increase the efficiency of the office.

Rev. 11/26/18

84410 Veterinary Assistant 2 1 CR

Grade: 11-12 APS: Y, Repeatable: N, NCAA: N

Veterinary Assistant 2 will expand from the Introduction of Veterinary Assistant 1. Students will gain a deeper knowledge of how to work in a Veterinary Clinic. In addition to gaining knowledge of specific animal systems. Students will prepare to work as an assistant in a Vet. Clinic.

Natural Resources

81140 Forest Health & Protection 1 CR

Prerequisite: None SCI

Grade: 11-12 APS: Y, Repeatable: N, NCAA: N

This course introduces students to the concepts of natural agents such as insects, fire, wind, drought, and ice storms that strongly influence forest ecosystem health.

81060 Forestry .5 CR

Prerequisite: Introduction to Natural Resources

Grade: 10-12 Repeatable: N

Forestry examines and determines the relationships of forests to the natural ecosystems and recommended practices for utilizing forest resources. Careers in this pathway might include park managers or technicians, forest managers or technicians, natural history interpreters, and forest workers or loggers.

81070 Introduction to Natural Resources .5 CR

Prerequisite: None SCI

Grade: 10-12 APS: Y, Repeatable: N, NCAA: N

Introduction to Natural Resources introduces forestry, wildlife, land management, marine science, aquaculture, production agriculture and mineral extraction. Students are also introduced to careers as foresters, soil and water managers, environmental scientists, and fish and wildlife managers.

81010 Plant Science .5 CR

Prerequisite: NONE SCI

Grade: 10-12 Repeatable: N

Introduction to Plant Science creates a foundation of knowledge for students to use in exploration of advanced plant science courses. Students will learn about basic functions of plant growth, categorizing systems for plants, and propagation. The student will also learn how plants are used to enhance our living environs by making landscape designs and flower arrangements. Students who are interested in being botanists, golf course workers, greenhouse managers or workers, soil and water specialists, and plant breeders would be interested in this course.

84320 Wilderness First Aid .5 CR

Prerequisite: None SCI

Grade: 10-12 APS: Y, Repeatable: N, NCAA:N

Wilderness First Aid is a semester course developed for non-medical professionals to have the basic knowledge to assist medical professionals, or keep injured persons safe while waiting for medical help. This course will focus on learning about body systems, how injuries can happen in various environments, and short term survival skills. This course will help prepare people to work in the wilderness, in connection to other careers in the medical and emergency fields.

81130 Wildland / Firefighting 1 CR

Prerequisite: Algebra 1 SCI

Grade: 11-12 NCAA: N, Repeatable: N

This course prepares students to work with a wildland fire crew. They will learn the methods of operation for wild land fire chainsaws and pumps and how to work safely in a wildland fire environment.

Transportation

86731/86732 Airframe Structures 1 1 CR

Prerequisite: None

Grade: 11-12 APS: N, Repeatable: N, NCAA: N

Introduces sheet metal and fabric work, its properties and uses in fabrication of structural and nonstructural components of aircraft. Inspection techniques are addressed along with fabrication and repair processes of bending, cutting, forming, drilling, and riveting aluminum sheet metal parts. The basics of fabric work include cutting, gluing, and shrinking of different types and thicknesses of fabric. Repair techniques will also be addressed. Students will learn the core concepts of aircraft maintenance careers, terminology, safety practices, FAA requirements, and weight and balance.

86741/86742 Airframe Structures 2 1 CR

Prerequisite: None

Grade: 11-12 APS: N, Repeatable: N, NCAA: N

Continues the course of study in Airframe Structures 1 of sheet metal and fabric work, its properties and uses in fabrication of structural and nonstructural components of aircraft as well as the systems associated with the construction of Airframe Structures. Emphasis will again be placed on safety in the shop and the use of tools. Students will learn the core concepts of aircraft maintenance careers, terminology, safety practices, FAA requirements, and weighted and balance. In addition, students will be taught the importance of power plant systems, fuel systems, electrical systems, avionics systems, fluid lines and fittings, and non-destructive testing.

86910 Hydraulics/Pneumatics Diesel Power 1 CR

Prerequisite: Algebra 1 SCI

Grade: 11-12 APS: Y, Repeatable: N, NCAA: N

This course introduces students to fluid power systems. Students will learn the components, design, assembly and troubleshooting of both hydraulic and pneumatic systems.

86720 Introduction to Aviation Technology .5 CR

Prerequisite: None

Grade: 10-12 Repeatable: N

Designed as an exploratory class, this course prepares students for an entry level position in the air transportation industry, by introducing them to a wide variety of available career options. This course is designed to be “hands-on,” covering the basic elements of Professional Piloting, Air Traffic Control, and Aviation Administration.

86351/86352 Occupational Safety & Health 1 CR

Prerequisite: Process Technology

Grade: 11-12 Repeatable: N

This course is an introduction to the field of safety, health, and environment within the process industry. It will cover various types of plant hazards, safety and environmental systems equipment, and applicable government regulations, and industry standards. It is designed to prevent injuries, fatalities, fires, explosions, or unexpected releases of hazardous materials.

86711/86712 Private Pilot Ground School 1 CR

Prerequisite: None

Grade: 11-12 or application? Repeatable: N

Designed as an exploratory class, this course prepares students for an entry level position in the air transportation industry, by introducing them to a wide variety of available career options. This course is designed to be “hands-on,” covering the basic elements of Professional Piloting, Air Traffic Control, and Aviation Administration. This class will prepare students to pass the FAA knowledge test.

86341/86342 Process Technology 1 CR

Prerequisite: None SCI

Grade: 11-12 APS: Y, Repeatable: N, NCAA: N

This course is an introduction to process options in the Process Technology industry through an overview of general information, processes, procedures, and equipment. Processing techniques used in oil and gas, chemical, mining, power generation, pulp and paper, wastewater, food and beverage, and the pharmaceutical industries will be investigated. In addition, workplace information such as safety, quality, and team building are introduced. Finally, basic processing equipment such as piping, valves, pumps, compressors, turbines, motors, etc. will also be introduced.