

MAT-SU CAREER TECH HIGH SCHOOL

COURSE CATALOGUE

2022-2023



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 for 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 Catalogue may not be repeated for additional credit.

Alaska Performance Scholarship

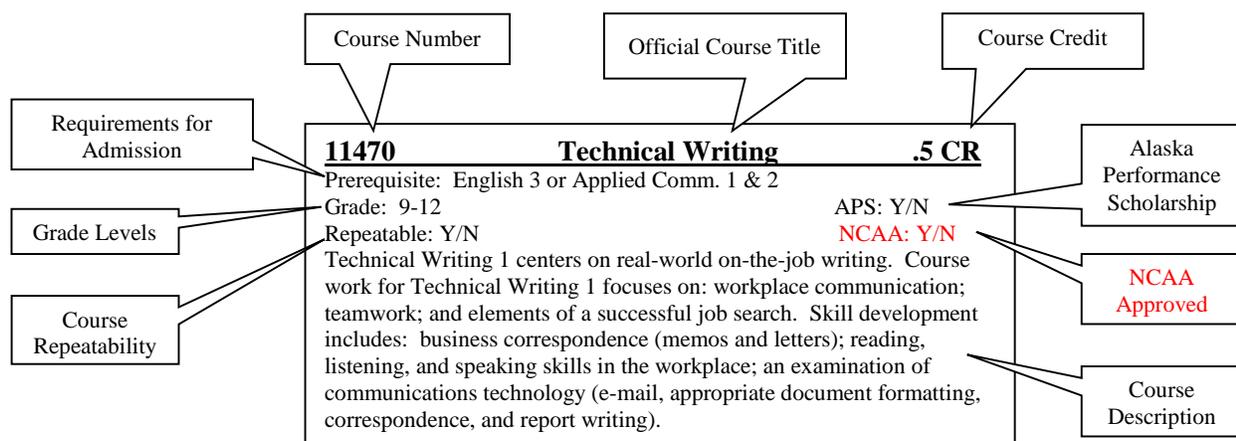
“APS: Y” indicates that the course fulfills a requirement for the Alaska Performance Scholarship.

Grade Levels

The catalogue 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

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.

1730 Contemporary Alaskan Literature .5 CR

Prerequisite: None

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

In this semester course, students will explore the rich body of recent Alaska themed literature as well as works written by Alaskan authors. Readings will be drawn from novels, historical fiction, poetry, and nonfiction, including magazine and newspaper archives. The contexts, characters, and themes of these readings will help students improve numerous academic skills including reading analysis, oral interpretation, critical thinking, written expression, and listening skills. In the process, students will gain deeper understanding of human cultures, legal and social issues, history, geography, natural resources, and ecology of our Great Land.

1560 Contemporary Literature & Issue .5 CR

Prerequisite: English 1 & 2 or Teacher Recommendation

Grade: 12 or Instructor Approval 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: None

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 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

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.

1301/1302 English 3 1 CR

Prerequisite: English 1 & English 2

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

English 3 continues the study of Language Arts: listening, speaking, writing, and reading, and focusing on multiple genres American Literature. Major authors, historical events and intellectual currents are investigated. English 3 encourages close literary analysis and critical thinking.

1451/1452 Language & Composition, AP **1 CR**

Prerequisite: English 3 and/or Teacher Recommendation

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 Literature and Composition, AP **1CR**

Prerequisite: English 3 and/or Teacher Recommendation

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 Seminar, AP **1CR**

Prerequisite: English 3 and/or Teacher Recommendation

Grade: 9-12 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.

Mathematics

2121/2122 Algebra 1 **1 CR**

Prerequisite: Intro to Algebra

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 Calculus AB, AP **1 CR**

Prerequisite: Pre-Calculus 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 Calculus BC, AP **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.

2701/2702 College Algebra 1 CR

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

Grade: 9-12 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.

83561/83562 Computer Science A, AP 1 CR

Prerequisite: Algebra 1 & Instructor Approval Math/CTE

Grade: 10-12 APS: Y, Repeatable: N, NCAA: Y
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. Rev. 08/24/17

2071/2072 Foundations of Mathematics 1 CR

Prerequisite: None

Grade: 9-10 APS: N, Repeatable: N, NCAA: N
Foundations of Mathematics 1 and 2 are intervention courses for students who have not mastered prerequisite skills necessary to be successful in Introduction to Algebra. These courses will present basic pre-algebra content including Number Theory, Decimals, Fractions, Percent's, Proportional Reasoning, Integers, Computation, Math Fact Fluency, and Area and Volume. Teachers should seek to tailor content to the individual needs of the students in their class and teach to mastery. Student who successfully complete Foundations of Mathematics 2 will be will prepare to be successful in Introduction to Algebra.

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.

2211/2212 Informal Geometry 1 CR

Prerequisite: Algebra 1 & Teacher Recommendation

Grade: 10-12 APS: Y, Repeatable: N, NCAA: N
Informal Geometry gives a thorough introduction to the fundamentals of Euclidian geometry. Topics will cover inductive and deductive reasoning, angles, lines, planes, polygons, area, volume, and constructions. Proofs are addressed but are not the primary focus. This course is primarily a study of plane geometry but may also include coordinate geometry.

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 1CR

Prerequisite: Teacher Recommendation or Proficiency Test

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.

2431/2432 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 **Statistics, AP** **1CR**

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.

Social Studies

3540 **Alaska History** **.5 CR**

Prerequisite: None

Grade: 10-12 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.

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 principals 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.

3520 **Comparative World Religion** **.5 CR**

Prerequisite: World History

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

In this course students will study the major religions of the world including Buddhism, Christianity, Hinduism, Islam, Judaism, and other traditions from Africa, Asia, the Americas, Europe, the Middle East, Australia, Oceania. Emphasis will be on objective and comparative investigation of religions--their belief systems, sacred books/scriptures, oral histories, traditional practices, origins, dynamism, and their significance in social, historical, and political contexts through the present.

3260 **Psychology 1** **.5 CR**

Prerequisite: None

Grade: 10-12 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.

3421/3422 **U.S. Government, AP** **.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 U.S. Government.

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

3331/3332 **U.S. History, AP** **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.

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

3231/3232 **World History, AP** **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.

Science

4331/4332 **Anatomy and Physiology** **1 CR**

Prerequisite: Biology/Int. Science 2 & Algebra 1

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

This course provides an in-depth study of vertebrates 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.

4350 **Bacteriology** **.5 CR**

Prerequisite: Algebra 1 & Chemistry

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.

4201/4202 Biology 1 CR

Prerequisite: Recommended Physical Science or Int. Science

Grade: 10-12 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

4431/4432 Biology, AP 1 CR

Prerequisite: Biology, Chemistry or concurrent enrollment with Teacher Recommendation

Grade: 10-12 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

4321/4322 Chemistry 1 CR

Prerequisite: Physical Science or Int. Science 1 & 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

4441/4442 Chemistry, AP 1 CR

Prerequisite: Chemistry & Algebra 2

Grade: 10-12 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 Environmental Science, AP 1 CR

Prerequisite: 2 years of high school science & 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

4710 Forensics 1 .5 CR

Prerequisite: None

Grade: 9-12 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: Concurrent enrollment in Algebra 1 or Algebra 1B

Grade: 9 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 1 CR

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.

4621/4622 Physics, AP 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.

Foreign Language

World Languages Level 1 1 CR

Russian 1 (6311/6312)

Spanish 1 (6211/6212)

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.

World Languages Level 2 1 CR

Spanish 2 (6221/6222)

Prerequisite: World Languages Level 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.

World Languages Level 3 1 CR

Spanish 3 (6231/6232)

Prerequisite: Completion of Level 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.

Fitness

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

84031/84032 Introduction to Fitness Professions 1 CR

Prerequisites: Anatomy & Physiology or Teacher Recommendation

Grade: 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

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.

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 commonly 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

5281/5282 Weight Training, Advanced .5 CR

Prerequisite: PE in Building

Grade: 10-12 Repeatable: Y

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

Other

0675/0676 Academic Assistance .5 CR

Prerequisite: Active IEP/RTI

Grade: 9-12

Repeatable: Y

This course is designated for students whose best learning environment is in the regular classroom, but who need additional support or assistance from resource staff. This class will include a Special Education teacher that will monitor study skills, peer coach involvement, communication between home and school, and organizational techniques. Students will also have time to work on homework assignments or receive tutoring. Student responsibility, self-advocacy and accountability will be stressed. Students will use their time wisely and continue to address their IEP/RTI goals and objectives, based on Alaska State Standards.

THE PATHWAY COURSES

TRADES & INDUSTRIES EDUCATION

Building

(Architecture, Manufacturing, & Construction)

86050 Architectural Drafting 1 .5 CR

Prerequisite: Technical Drafting 1 & 2 MATH/CTE

Grade: 10-12

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 .5CR

Prerequisite: Architectural Drafting 1 MATH/CTE

Grade: 10-12

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/CTE

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/CTE

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 (Woods 1) .5 CR

Prerequisite: None

Grade: 9-12 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 (Woods 2) .5 CR

Prerequisite: Cabinet Making and Woodworking 1

Grade: 9-12 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 (Woods 3) .5 CR

Prerequisite: Cabinet Making and Woodworking 2

Grade: 10-12 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 (Woods 4) .5 CR

Prerequisite: Cabinet Making and Woodworking 3

Grade: 10-12 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 or Int. Math 1 or concurrent enrollment MATH/CTE

Grade: 10-12 (1 credit per semester) Repeatable: N, APS: Y, 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/CTE

Grade: 10-12 (1 credit per semester) 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.

86120 Housing Concepts .5 CR

Prerequisite: None

Grade: 9-12 Repeatable: N

Housing Concepts covers aspects of the housing/building industry and includes site selection, plan design, and development of a marketable product. Students will help provide information/choices to the Mat-Su Construction Trades Program to develop a fully functional residential building. This class will work with the Architectural Drafting and Interior Design classes to provide the MSCT Program with a functional set of working drawings with help from a civil engineer. A simulated building code inspector process is used from the site selection to the open house to reinforce the industry expectations. Careers associated with this process will be emphasized; for example, home builder, computer-aided drafter, interior designer, real estate agent, and building inspector. Recommended Courses: Technical Drafting 1 and Interior Design.

82050 Interior Design .5 CR

Prerequisite: None

Grade: 9-12 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 MATH/CTE

Grade: 9 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

86411/86412 Principles of Engineering 1 CR

Prerequisite: Intro to Engineering or Teacher Recommendation

Grade: 10 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/CTE

Grade: 9-12 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/CTE

Grade: 9-12 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 MATH/CTE

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/CTE

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/CTE

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/CTE

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)

83550 A+, Microcomp. Maintenance & Repair .5 CR

Prerequisite: Technology Applications 1 or Teacher Recommendation and Information Technology

Grade: 10-12 Repeatable: N

A+ (Microcomputer Maintenance and Repair) will help prepare students for taking the industry recognized A+ certification test. The instruction will be primarily lecture with a hands-on lab component. Students will discuss hardware, software, operating systems, troubleshooting, networks, printers, and basic safety. Customer service and care are strongly emphasized.

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.

83010 Introduction to Business .5 CR

Prerequisite: None

Grade: 9-12

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.

83410 Intro. to Computer Science (Internet of Everything) .5CR

Prerequisite: None

Grade: 9-12 LA/CTE

Repeatable: N, APS: Y

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. Rev: 05/01/19

83030 Technology Applications 1 .5 CR

Prerequisite: Keyboarding or Teacher Recommendation

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.

83710 Marketing .5 CR

Prerequisite: None

Grade: 9-12

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.

83600 Network (N+) .5 CR

Prerequisite: A+ and Information Technology

Grade: 10-12

Repeatable: N

Network + is designed to familiarize students with the network information needed to manage a computer system. It will offer students training in the field of network administration. It is a precursor to the Network + Certification offered in industry. This class will cover Novell, Microsoft, Unix, and Cisco information. Careers in this area include network technicians, network analysts, network and systems administrators, network support, and tech desk support.

83610 Networking 1 (CISCO Academy) 1 CR

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

Grade: 10-12 (semester course) MATH/CTE 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) 1CR

Prerequisite: Networking 1 (CISCO Academy)

Grade: 10-12 (semester course) MATH/CTE 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: None

Grade: 10-12

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.

83450 Web Design, Advanced .5 CR

Prerequisite: Web Page Authoring

Grade: 10-12

Repeatable: N

Advanced Web Design covers how to create and manage Web sites with tools such as Macromedia Dreamweaver and Flash, Frontpage, and Dynamic HTML. Students will also implement design strategies in developing a Web site for a customer. The course focuses on theory, design, and Web construction, along with information architecture concepts, Web project management, and scenario development and performance evaluation. Sample occupations in this pathway are web designer, webmaster, 3D animator, multimedia producer, or graphic artist.

83440 Web Page Authoring .5 CR

Prerequisite: Technology Applications 1 or Teacher Recommendation

Grade: 9-12

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

Grade: 9-12 (Not for core credit, elective credit only), LA/CTE Repeatable: Y

This course requires the skills of creative writing, copy writing, 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.

Culinary & Tourism

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

Prerequisite: None

Grade: 10-12

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 Food Service 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: 10-12

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 Economics 1.

85160 Culinary (Arts) 1 .5 CR

Prerequisite: Intro to Baking

Grade: 10-12

Repeatable: N

Culinary Arts 1 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 will be covered: 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. Culinary Arts 1 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.

85161 Introduction to Baking .5 CR

Prerequisite: None

Grade: 9-12

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.

Health

84050 Certified Nursing Assistant (CNA) 2 CR

Prerequisite: Algebra 1 or Int. Math 1 SCI/CTE

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 2 hour 15-minute block or 3 periods in a day. It requires each student to have a minimum of 48 hours of clinical in an industry setting. Rev.11/26/18

84140 Industrial Safety and First Aid .5 CR

Prerequisites: None

Grade: 10-12 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.

84070 Introduction to Pharmacy .5 CR

Prerequisites: None

Grade: 9-12 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/CTE

Grade: 10-12 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: None MATH/CTE

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/CTE

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

84300 Dental Assistant 1 CR

Prerequisite: Algebra 1 SCI/CTE

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.11/26/18

84020 Health Occupations .5CR

Prerequisite: Biology or concurrent enrollment

Grade: 9-12 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.

81040 Introduction to Veterinary Science .5 CR

Prerequisite: None SCI/CTE

Grade: 9-12 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 day care or boarding facility would be interested in this class. Recommended Course: Intro to Animal Science. Rev. 07/24/19

84400 Veterinary Assistant 1 1 CR

Prerequisite: Algebra 1 SCI/CTE

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 Veterinary Clinic.

Human Resources

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

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 influence 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

Natural Resources (Agriculture)

81140 Forest Health & Protection 1 CR

Prerequisite: None SCI/CTE

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 strongly influence forest ecosystem health.

81060 Forestry .5 CR

Prerequisite: Introduction to Agriculture and Natural Resources

Grade: 9-12

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/CTE

Grade: 9-12

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.

81130 Wildland / Firefighting 1 CR

Prerequisite: Algebra 1 SCI/CTE

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 CR

Prerequisite: None CTE

Grade: 11-12

APS:Y, 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 including 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.

86910 Hydraulics/Pneumatics Diesel Power 1 CR

Prerequisite: Algebra 1 SCI/CTE

Grade: 11-12

APS: Y, Repeatable: N, NCAA: N

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

86720 Introduction to Aviation Technology .5 CR

Prerequisite: None

Grade: 9-12

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 "hands-on," covering the basic elements of Professional Piloting, Air Traffic Control, and Aviation Administration.

86351/86352 Occupational Safety & Health 1 CR

Prerequisite: None

Grade: 10-12

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: 9-12

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. This class will prepare students to pass the FAA knowledge test.

86341/86342 Process Technology 1 CR

Prerequisite: None SCI/CTE

Grade: 10-12

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.