

**Advanced Math:** Advanced Math combines the study of Trigonometry, Elementary Functions, Analytic Geometry, and Algebra topics as preparation for calculus. Topics typically include the study of complex numbers; polynomial, logarithmic, exponential, rational, right trigonometric, and circular functions, and their relations, inverses and graphs; trigonometric identities and equations; solutions of right and oblique triangles; vectors; the polar coordinate system; conic sections; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity.

**Algebra I:** Algebra I includes the study of properties and operations of the real number system; evaluating rational algebraic expressions; solving and graphing first degree equations and inequalities; translating word problems into equations; operations with and factoring of polynomials; and solving simple quadratic equations.

**Algebra II:** Algebra II topics typically include field properties and theorems; set theory; operations with rational and irrational expressions; factoring of rational expressions; in-depth study of linear equations and inequalities; quadratic equations; solving systems of linear and quadratic equations; graphing of constant, linear, and quadratic equations; properties of higher degree equations; and operations with rational and irrational exponents. The course may introduce topics in discrete math, elementary probability and statistics; matrices and determinants; and sequences and series.

**Anatomy:** Human Anatomy (Science) presents an in-depth study of the human body and biological system. Students study such topics as anatomical terminology, cells, and tissues and typically explore functional systems, such as skeletal, muscular, circulatory, respiratory, digestive, reproductive, and nervous systems.

**Auto Body Technology:** This is the course for students interested in auto body repair. It is part of a sequential series of courses covering repair of damaged bodies, fenders and replacement parts. Students will be introduced to painting preparation and painting methods.

**Auto Mechanics Technology II:** Continued preparation in vehicle engine, power transmission, steering, brakes and electrical systems will be provided. Included in training is the use of diagnostic and testing equipment and tools used in the repair process. Students completing this sequential course will be prepared to enter college Automotive programs and can become eligible for ASE certification in 3-4 areas as noted by NATEF guidelines.

**Biology:** Biology is designed to provide information regarding the fundamental concepts of life and life processes. This course includes (but are not restricted to) such topics as cell structure and function, general plant and animal physiology, genetics, and taxonomy.

**Business English:** Business English teaches students communication skills—reading, writing, listening, speaking—concentrating on “real-world” applications. This course usually emphasizes the practical application of communication as a business tool—using technical reports and manuals, business letters, resumes, and applications as examples—rather than emphasize language arts skills as applied to scholarly and literary materials.

**Chemistry:** Chemistry involves studying the composition, properties, and reactions of substances. This course typically explores such concepts as the behaviors of solids, liquids, and gases; acid/base and oxidation/reduction reactions; and atomic structure. Chemical formulas and equations and nuclear reactions are also studied.

**Citizenship:** Citizenship examines the general structure and functions of American systems of government, the roles and responsibilities of citizens to participate in the political process, and the relationship of the individual to the law and legal system. This course does not typically delve into the same degree of detail on constitutional principles or the role of political parties and interest groups as do comprehensive courses in U.S. Government.

**Construction Technology I:** Construction Technology I provides an orientation to the construction trade that meets industry standards. The course is standards based beginning with the Core Curriculum which includes Basic Safety, Construction Math, Introduction to Hand and Power Tools, Introduction to Blue Prints, Basic Rigging, Communication and Employability Skills. Fundamentals of Construction are introduced including Floor, Wall and Roof Systems and Structure Enclosure. Construction Technology I is a prerequisite to Construction Technology II.

**Consumer Math:** Consumer Math reinforces general math topics (such as arithmetic using rational numbers, measurement, ratio and proportion, and basic statistics) and applies these skills to consumer problems and situations. Applications typically include budgeting, taxation, credit, banking services, insurance, buying and selling products and services, home and/or car ownership and rental, managing personal income, and investment.

**English 9:** English 9 builds upon students' prior knowledge of grammar, vocabulary, word usage, and the mechanics of writing and usually include the four aspects of language use: reading, writing, speaking, and listening. Typically, this course introduces and defines various genres of literature, with writing exercises often linked to reading selections.

**English 10:** English 10 usually offers a balanced focus on composition and literature. Typically, students learn about the alternate aims and audiences of written compositions by writing persuasive, critical, and creative multi-paragraph essays and compositions. Through the study of various genres of literature, students can improve their reading rate and comprehension and develop the skills to determine the author's intent and theme and to recognize the techniques used by the author to deliver his or her message.

**English 11:** English 11 continues to develop students' writing skills, emphasizing clear, logical writing patterns, word choice, and usage, as students write essays and begin to learn the techniques of writing research papers. Students continue to read works of literature which often form the backbone of the writing assignments. Literary conventions and stylistic devices may receive greater emphasis than in previous courses.

**English 12:** English 12 blends composition and literature into a cohesive whole as students write critical and comparative analyses of selected literature, continuing to develop their language arts skills. Typically, students primarily write multi-paragraph essays, but they may also write one or more major research papers.

**General Physical Education:** Physical Education provides students with knowledge, experience, and an opportunity to develop skills in more than one of the following sports or activities: team sports, individual/dual sports, recreational sports, and fitness/conditioning activities.

**Health:** Topics covered within Health Education courses may vary widely, but typically include personal health (nutrition, mental health and stress management, drug/alcohol abuse prevention, disease

prevention, and first aid) and consumer health issues. The course may also include brief studies of environmental health, personal development, and/or community resources.

**Health Careers:** The Health Careers course is designed to assist students interested in the medical field in determining an occupation that will best suit their capabilities and interests. The program uses a competency based curriculum that is fundamental to a variety of careers in the health care industry. “CORE” knowledge and skills are introduced the first semester to the students as a foundation in such areas as; Medical Terminology, Anatomy and Related Disorders, Professional Standards, Safety, Monitoring Body Functions, Disease Prevention, CPR and First Aid Certification and Introduction to Health Careers. The second semester provides the students the opportunity to expand their skills and knowledge in specific areas of career interest. Career choices such as Physical Therapy, Occupational Therapy, Pharmacy, Optometry, Radiology, Respiratory Therapy, Medical Records and Secretarial, Dental Careers, Medical Lab, Medical Assisting, Child Care, Nursing, Nursing Assisting and others will be offered. Students may be placed in the community health care setting for on-the-job career experience any time after completion of the CORE segment. Emphasis on academics, professional development, leadership, and organizational skills are integrated throughout the curriculum.

**Instrumental Music:** Instrumental Music (Band) develops students’ technique for playing brass, woodwind, and percussion instruments and cover a variety of nonspecified band literature styles (concert, marching, orchestral, and modern styles).

**Lifetime Fitness Education:** Lifetime Fitness Education emphasizes acquiring knowledge and skills regarding lifetime physical fitness; content may include related topics such as nutrition, stress management, and consumer issues. Students may develop and implement a personal fitness plan.

Multimedia

**Machine Tooling Technology:** To prepare students to enter the machine tool operation. Covers the theory and shop work related to the teaching of safe and intelligent operation of machines found in industry are emphasized. Included is practical application of theory which is required by the occupation. Units of instruction include safety, measurement, tools, cutting tools and speeds, lathes, milling shapers, grinders, and other machine operation. Emphasis on applied academics, professional development, leadership, and organizational skills are integrated throughout the curriculum.

**ND Studies:** North Dakota Studies courses examine the history, politics, economics, society, and/or cultures of the state in the United States. This course may focus primarily on the history of this state or may take an interdisciplinary approach to the contemporary issues affecting it.

**Physical Science:** Physical Science involves the study of the structures and states of matter. Typically (but not always) offered as introductory survey courses, they may include such topics as forms of energy, wave phenomenon, electromagnetism, and physical and chemical interactions.

**Physiology:** Physiology examines all major systems, tissues, and muscle groups in the human body to help students understand how these systems interact and their role in maintaining homeostasis. This course may also cover such topics as cell structure and function, metabolism, and the human life cycle.

**PreAlgebra:** Prealgebra increases students' foundational math skills and prepare them for Algebra I by covering a variety of topics, such as properties of rational numbers (i.e., number theory), ratio,

proportion, estimation, exponents and radicals, the rectangular coordinate system, sets and logic, formulas, and solving first-degree equations and inequalities.

**Spanish I:** Designed to introduce students to Spanish language and culture, Spanish I emphasizes basic grammar and syntax, simple vocabulary, and the spoken accent so that students can read, write, speak, and understand the language at a basic level within predictable areas of need, using customary courtesies and conventions. Spanish culture is introduced through the art, literature, customs, and history of Spanish-speaking people.

**US History:** U.S. History provides students with an overview of the history of the United States, examining time periods from discovery or colonialism through World War II or after. This course typically includes a historical overview of political, military, scientific, and social developments. Course content may include a history of the North American peoples before European settlement.

**Vocal Music:** Vocal Music (chorus) provides the opportunity to sing a variety of choral literature styles for men's and/or women's voices and are designed to develop vocal techniques and the ability to sing parts.

**World History:** World History provides students with an overview of the history of human society from early civilization to the contemporary period, examining political, economic, social, religious, military, scientific, and cultural developments. World History may include geographical studies, but often these components are not as explicitly taught as geography.