HIGH SCHOOL SCIENCE COURSE CODES
GRADES 9-12

High school (grades 9-12) courses in Science require 150 student engagement hours per credit.

Course Code	Course Name	Recommended Grade Levels & Prerequisites	Science Content Standards	Description	Credit Limit*	License Required**
13030	Physical Science	8 **(see note)**, 9-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-PS1-1, HS-PS1-2, HS-PS1-5, HS-PS1-7, HS-PS1-8 ▪ HS-PS2-1, HS-PS2-2, HS-PS2-3 ▪ HS-PS3-1, HS-PS3-2, HS-PS3-3, HS-PS3-4 ▪ HS-PS4-1	Physical Science is designed to introduce learners to chemistry and physics. Topics include scientific measurement, matter, forces, energy, and waves. ***NOTE: For 8th grade learners, this course code should only be used if the learner is receiving high school credit.***	1	13045- Physical Science 5-12 or 9-12
13020	Biology	9-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-LS1-1, HS-LS1-2, HS-LS1-3, HS-LS1-4, HS-LS1-5, HS-LS1-6, HS-LS1-7 ▪ HS-LS2-1, HS-LS2-2, HS-LS2-3, HS-LS2-4, HS-LS2-5, HS-LS2-6, HS-LS2-7, HS-LS2-8 ▪ HS-LS3-1, HS-LS3-2, HS-LS3-3 ▪ HS-LS4-1, HS-LS4-2, HS-LS4-3, HS-LS4-4, HS-LS4-5, HS-LS4-6	Biology is designed to engage learners with science processes, skills, and understandings related to a wide range of topics in biology. The course explores the nature and organization of living things. Topics of study include chemistry of life, cellular energy reactions, cell cycle, heredity, ecology and evolution.	1	13010- Biology 5-12 or 9-12

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13031	Chemistry	10-12, and have completed Algebra I	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-PS1-1, HS-PS1-2, HS-PS1-3, HS-PS1-4, HS-PS1-5, HS-PS1-6, HS-PS1-7, HS-PS1-8 ▪ HS-PS2-6 ▪ HS-PS3-1, HS-PS3-2, HS-PS3-3, HS-PS3-4 ▪ HS-PS4-1, HS-PS4-2	Chemistry covers the major concepts and theories required for an understanding of chemical phenomena. The course covers topics such as atomic and molecular structure, gas laws, stoichiometry, changes of state, chemical bonding, solutions, and energetics in chemical reactions and chemical equilibrium. The course also covers the qualitative and quantitative aspects of scientific measurement, the nature of matter, energy, properties of elements, chemical bonding, molecular structure and properties, thermochemistry, and solutions.	1	13020- Chemistry 5-12 or 9-12
13042	Physics	10-12, and have completed Algebra I	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-PS2-1, HS-PS2-2, HS-PS2-3, HS-PS2-4, HS-PS2-5 ▪ HS-PS3-1, HS-PS3-2, HS-PS3-3, HS-PS3-4, HS-PS3-5 ▪ HS-PS4-1, HS-PS4-2, HS-PS4-3, HS-PS4-4	Physics involves the study of the forces and laws of nature affecting matter, such as equilibrium, motion, momentum, and the relationships between matter and energy. The study of physics includes an examination of sound, light, and magnetic and electric phenomena.	1	13050- Physics 5-12 or 9-12
13021	Human Anatomy (Science)	10-12, and have completed Biology	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-LS1-1, HS-LS1-2, HS-LS1-3, HS-LS1-4, HS-LS1-6, HS-LS1-7 ▪ HS-LS2-3 ▪ HS-LS3-1, HS-LS3-2 ▪ HS-LS4-1	Human Anatomy presents an in-depth study of the human body and biological system. Learners study anatomical terminology, cells, and tissues and typically explore functional systems, such as skeletal, muscular, circulatory, respiratory, digestive, reproductive, and nervous systems. ***NOTE: This course can be taught for Science credit only. For Physical Education credit, the Human Anatomy (Phy. Ed.) can be found under Physical Education.***	1	13010- Biology 5-12 or 9-12

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13022	Human Physiology (Science)	10-12, and have completed Biology	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-LS1-1, HS-LS1-2, HS-LS1-3, HS-LS1-4, HS-LS1-6, HS-LS1-7 ▪ HS-LS2-3 ▪ HS-LS3-1, HS-LS3-2 ▪ HS-LS4-1	Human Physiology examines all major systems, tissues, and muscle groups in the human body to help learners understand how these systems interact and their role in maintaining homeostasis. This course may also cover cell structure and function, metabolism, and the human life cycle. ***NOTE: This course can be taught for Science credit only. For Physical Education credit, Sports Physiology can be found under Physical Education and Health.***	1	13010- Biology 5-12 or 9-12
13580	Advanced Placement Biology©	10-12, and have completed Biology or Advanced Biology	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-LS1-1, HS-LS1-2, HS-LS1-3, HS-LS1-4, HS-LS1-5, HS-LS1-6, HS-LS1-7 ▪ HS-LS2-1, HS-LS2-2, HS-LS2-3, HS-LS2-4, HS-LS2-5, HS-LS2-6, HS-LS2-7, HS-LS2-8 ▪ HS-LS3-1, HS-LS3-2, HS-LS3-3 ▪ HS-LS4-1, HS-LS4-2, HS-LS4-3, HS-LS4-4, HS-LS4-5, HS-LS4-6 ▪ HS-PS1-3	AP Biology is an introductory college-level biology course. Learners cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: chemistry of life; cell structure and function; cellular energetics; cell communication and cell cycle; heredity; gene expression and regulation; natural selection; ecology.	1	13010- Biology 5-12 or 9-12
13581	Advanced Placement Chemistry©	10-12, and have completed Algebra II	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-PS1-1, HS-PS1-2, HS-PS1-3, HS-PS1-4, HS-PS1-5, HS-PS1-6, HS-PS1-7, HS-PS1-8 ▪ HS-PS2-6 ▪ HS-PS3-1, HS-PS3-2, HS-PS3-3, HS-PS3-4 ▪ HS-PS4-1, HS-PS4-2	AP Chemistry is an introductory college-level chemistry course. Learners cultivate their understanding of chemistry through inquiry-based lab investigations as they explore the following topics: atomic structure and properties; molecular and ionic compound structure and properties; intermolecular forces and properties; chemical reactions; kinetics; thermodynamics; equilibrium; acids and bases; and applications of thermodynamics.	1	13020- Chemistry 5-12 or 9-12

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13585	Advanced Placement Physics C: Mechanics©	11-12, and have completed or concurrently taking Calculus	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-PS2-1, HS-PS2-2, HS-PS2-3, HS-PS2-4 ▪ HS-PS3-1, HS-PS3-2, HS-PS3-3 ▪ HS-ESS1-4	AP Physics C: Mechanics is a calculus-based introductory college-level physics course. Learners cultivate their understanding of physics by developing models of physical phenomena through inquiry-based investigations. Learners build their understanding of physical models as they explore and solve problems in these topics: kinematics; forces and translational dynamics; work, energy, and power; linear momentum; torque and rotational dynamics; energy and momentum of rotating systems; oscillations.	1	13050-Physics 5-12 or 9-12
13584	Advanced Placement Physics C: Electricity and Magnetism©	11-12; have taken AP Physics C: Mechanics, AP Physics 1, or Physics; and have completed or concurrently taking Calculus	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-PS2-4, HS-PS2-5 ▪ HS-PS3-1, HS-PS3-2, HS-PS3-3, HS-PS3-4, HS-PS3-5	AP Physics C: Electricity and Magnetism is a calculus-based introductory college-level physics course. Learners cultivate their understanding of physics by developing models of physical phenomena through inquiry-based investigations. Learners build their understanding of physical models as they explore and solve problems in these topics: electric charges, fields, and Gauss's Law; electric potential; conductors and capacitors; electric circuits; magnetic fields and electromagnetism; electromagnetic induction.	1	13050-Physics 5-12 or 9-12

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13586	Advanced Placement Physics 1: Algebra-Based	11-12, and have completed Geometry	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-PS2-1, HS-PS2-2, HS-PS2-3, HS-PS2-4 ▪ HS-PS3-1, HS-PS3-2, HS-PS3-3 ▪ HS-ESS1-4	AP Physics 1 is an algebra-based, introductory college-level physics course. Learners cultivate their understanding of physics by developing models of physical phenomena through inquiry-based investigations. Learners build their understanding of physical models as they explore and solve problems in these content areas: kinematics; forces and translational dynamics; work, energy, and power; linear momentum; torque and rotational dynamics; energy and momentum of rotating systems; oscillations; fluids.	1	13050-Physics 5-12 or 9-12
13587	Advanced Placement Physics 2: Algebra-Based	11-12, and have completed AP Physics 1	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-PS1-1, HS-PS1-8 ▪ HS-PS2-4, HS-PS2-5 ▪ HS-PS3-1, HS-PS3-2, HS-PS3-3, HS-PS3-4, HS-PS3-5 ▪ HS-PS4-1, HS-PS4-2, HS-PS4-3, HS-PS4-4	AP Physics 2 is an algebra-based, introductory college-level physics course. Learners cultivate their understanding of physics by developing models of physical phenomena through inquiry-based investigations. Learners build their understanding of physical models as they explore and solve problems in these topics: thermodynamics; electric force; field, and potential; electric circuits; magnetism and electromagnetism; geometric optics; waves, sound, and physical optics; modern physics.	1	13050-Physics 5-12 or 9-12
13029	Advanced Biology	9-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-LS1-1, HS-LS1-2, HS-LS1-3, HS-LS1-4, HS-LS1-5, HS-LS1-6, HS-LS1-7, HS-LS2-1 ▪ HS-LS2-2, HS-LS2-3, HS-LS2-4, HS-LS2-5, HS-LS2-6, HS-LS2-7, HS-LS2-8 ▪ HS-LS3-1, HS-LS3-2, HS-LS3-3 ▪ HS-LS4-1, HS-LS4-2, HS-LS4-3, HS-LS4-4, HS-LS4-5, HS-LS4-6	Advanced Biology covers the content learned in Biology to a greater depth, and is designed to prepare learners for AP Biology. Additional topics include biochemistry, genetics, and heredity.	1	13010-Biology 5-12 or 9-12

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13032	Advanced Chemistry	10-12, and have completed or be concurrently enrolled in Algebra II	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-PS1-1, HS-PS1-2, HS-PS1-3, HS-PS1-4, HS-PS1-5, HS-PS1-6, HS-PS1-7, HS-PS1-8 ▪ HS-PS2-6 ▪ HS-PS3-1, HS-PS3-2, HS-PS3-3, HS-PS3-4 ▪ HS-PS4-1, HS-PS4-2	Advanced Chemistry covers the content learned in Chemistry to a greater depth, and is designed to prepare learners for AP Chemistry. Additional topics include organic chemistry, thermodynamics, and electrochemistry.	1	13020- Chemistry 5-12 or 9-12
13036	Forensic Science	10-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4, HS-PS1-5, HS-PS1-7 ▪ HS-PS2-1, HS-PS2-2, HS-PS2-3, HS-PS2-6 ▪ HS-PS4-1, HS-PS4-3, HS-PS4-4 ▪ HS-LS1-1, HS-LS1-2 ▪ HS-LS3-1, HS-LS3-3	Learners will learn the methodology to evaluate a crime scene, the proper lab mechanics required to evaluate evidence, and how to compare the known and unknown. Topics include the history of forensic science, collecting of evidence, analyzing results, and hands-on application of many laboratory techniques used in solving crimes.	1	13036- Forensic Science 10-12
13110	Ecology	10-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-LS1-1, HS-LS1-2, HS-LS1-5 ▪ HS-LS2-1, HS-LS2-2, HS-LS2-4, HS-LS2-5, HS-LS2-6, HS-LS2-7, HS-LS2-8 ▪ HS-LS3-1, HS-LS3-2, HS-LS3-3 ▪ HS-LS4-2, HS-LS4-3, HS-LS4-4, HS-LS4-5, HS-LS4-6 ▪ HS-ESS2-7 ▪ HS-ESS3-1, HS-ESS3-3, HS-ESS3-4, HS-ESS3-6	Ecology is the study of how organisms interact with each other and their environment at the population, community, and ecosystem levels. Topics include the interactions between plant, animal and human populations; natural resources; and environmental challenges.	1	13010- Biology 5-12 or 9-12

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13065	Environmental Science	10-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-ESS2-2, HS-ESS2-4, HS-ESS2-5, HS-ESS2-6 ▪ HS-ESS3-1, HS-ESS3-2, HS-ESS3-3, HS-ESS3-4, HS-ESS3-5, HS-ESS3-6 ▪ HS-LS2-1, HS-LS2-2, HS-LS2-4, HS-LS2-5, HS-LS2-6, HS-LS2-7 ▪ HS-LS4-4, HS-LS4-5, HS-LS4-6	Environmental Science examines the mutual relationships between organisms and their environment. Topics include photosynthesis, recycling and regeneration, ecosystems, population and growth studies, pollution, and conservation of natural resources.	1	13025-Environmental Science 10-12
13582	Advanced Placement Environmental Science©	10-12, and have completed Algebra I and Biology	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ESS1-5 ▪ HS-ESS2-2, HS-ESS2-3, HS-ESS2-4, HS-ESS2-5, HS-ESS2-6, HS-ESS2-7 ▪ HS-ESS3-1, HS-ESS3-2, HS-ESS3-3, HS-ESS3-4, HS-ESS3-5, HS-ESS3-6 ▪ HS-PS1-8 ▪ HS-LS2-1, HS-LS2-2, HS-LS2-4, HS-LS2-5, HS-LS2-6, HS-LS2-7 ▪ HS-LS4-4, HS-LS4-5, HS-LS4-6	The AP Environmental Science course is designed to engage learners with the scientific principles, concepts, and methodologies required to understand the interrelationships within the natural world. The course requires that learners identify and analyze natural and human-made environmental problems, evaluate the relative risks associated with these problems, and examine alternative solutions for resolving or preventing them. Topics include ecosystems; biodiversity; populations; Earth systems and resources; land and water use; energy resources and consumption; atmospheric pollution; aquatic and terrestrial pollution; global change.	1	13025-Environmental Science 10-12

13024	Botany/Horticultural Science I	9-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-ESS2-5, HS-ESS2-6 ▪ HS-ESS3-1, HS-ESS3-2, HS-ESS3-3, HS-ESS3-4 ▪ HS-LS1-1, HS-LS1-2, HS-LS1-3, HS-LS1-5, HS-LS1-7 ▪ HS-LS2-1, HS-LS2-2, HS-LS2-4, HS-LS2-5, HS-LS2-7 ▪ HS-LS3-1, HS-LS3-2 ▪ HS-LS4-1, HS-LS4-2, HS-LS4-3, HS-LS4-4, HS-LS4-5, HS-LS4-6	This course prepares learners to produce greenhouse/ nursery plants and to maintain plant growth and propagation structures. Topics include soils, plants, plant identification, and plant entomology. Courses examine the importance of plant cell structures, functions of cells, plant processes, nonvascular plants, vascular plants, roots, stems, leaves, flowers, and reproduction of plants. Learners may be introduced to the biological, environmental, conservation, and ecological concepts encountered in our environment. Landscape design units will prepare learners to design, construct, and maintain planted areas and devices for the beautification of home grounds and other areas of human habitation and recreation. This course will reinforce and extend learners' understanding of science by associating basic scientific principles and concepts with relevant applications in agriculture. Leadership development and supervised agricultural experience programs are also integral to this course. ***NOTE: This course can be taught for Science credit only. Botany/Horticultural Science I can be found under Agricultural Education for CTE credit.***	1	13010- Biology 5-12 or 9-12

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13025	Botany/ Horticultural Science II	9-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-ESS2-5, HS-ESS2-6 ▪ HS-ESS3-1, HS-ESS3-2, HS-ESS3-3, HS-ESS3-4 ▪ HS-LS1-1, HS-LS1-2, HS-LS1-3, HS-LS1-5, HS-LS1-7 ▪ HS-LS2-1, HS-LS2-2, HS-LS2-4, HS-LS2-5, HS-LS2-7 ▪ HS-LS3-1, HS-LS3-2 ▪ HS-LS4-1, HS-LS4-2, HS-LS4-3, HS-LS4-4, HS-LS4-5, HS-LS4-6	This course prepares learners to produce greenhouse/nursery plants and to maintain plant growth and propagation structures. Topics include soils, plants, plant identification, and plant entomology. Courses examine the importance of plant cell structures, functions of cells, plant processes, nonvascular plants, vascular plants, roots, stems, leaves, flowers, and reproduction of plants. Learners may be introduced to the biological, environmental, conservation, and ecological concepts encountered in our environment. Landscape design units will prepare learners to design, construct, and maintain planted areas and devices for the beautification of home grounds and other areas of human habitation and recreation. This course will reinforce and extend learners' understanding of science by associating basic scientific principles and concepts with relevant applications in agriculture. Leadership development and supervised agricultural experience programs are also integral to this course. ***NOTE: This course can be taught for Science credit only. For CTE credit, Botany/Horticultural Science II can be found under Agricultural Education.***	1	13010- Biology 5-12 or 9-12

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13061	Astronomy	9-12, and have completed Algebra I	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-ESS1-1, HS-ESS1-2, HS-ESS1-3, HS-ESS1-4, HS-ESS1-6 ▪ HS-ESS2-6 ▪ HS-PS1-8, HS-PS2-4, HS-PS4-1	Astronomy explores the basic principles of astronomy, the solar system, and the galaxy.	½	13035- Earth Science 5-12 or 9-12
13062	Geology	9-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-ESS1-5, HS-ESS1-6 ▪ HS-ESS2-1, HS-ESS2-2, HS-ESS2-3; HS-ESS2-5, HS-ESS2-6, HS-ESS2-7 ▪ HS-ESS3-1, HS-ESS3-2, HS-ESS3-3, HS-ESS3-4, HS-ESS3-6	Geology provides an in-depth study of the forces that formed and continue to affect the earth's surface. Topics include regional landforms, glaciation, and geological history, chemical and physical weathering processes, plate tectonics, and topographic maps.	1	13035- Earth Science 5-12 or 9-12
13063	Earth and Space Science	9-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-ESS1-1, HS-ESS1-2, HS-ESS1-3, HS-ESS1-4, HS-ESS1-5, HS-ESS1-6 ▪ HS-ESS2-1, HS-ESS2-2, HS-ESS2-3, HS-ESS2-4, HS-ESS2-5, HS-ESS2-6, HS-ESS2-7 ▪ HS-ESS3-1, HS-ESS3-2, HS-ESS3-3, HS-ESS3-4, HS-ESS3-5, HS-ESS3-6	Earth and Space Science engages learners in the concepts and principles essential to learners' understanding of the dynamics and history of the Earth. Topics include Earth systems, Earth's place in the universe, and weather and climate.	1	13035- Earth Science 5-12 or 9-12

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13064	Meteorology	9-12, and have taken or be concurrently enrolled in Algebra I	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-ESS2-2, HS-ESS2-4, HS-ESS2-5 ▪ HS-ESS3-1, HS-ESS3-5, HS-ESS3-6	Meteorology examines the properties of the earth's atmosphere. Topics may include atmospheric layering, changing pressures, winds, water vapor, air masses, fronts, temperature changes, and weather forecasting.	½	13035- Earth Science 5-12 or 9-12
13074	Ocean Sciences	10-12, and have completed Biology	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-LS1-3 ▪ HS-LS2-1, HS-LS2-2, HS-LS2-3, HS-LS2-4, HS-LS2-5, HS-LS2-6, HS-LS2-7 ▪ HS-LS4-4, HS-LS4-5, HS-LS4-6 ▪ HS-ESS1-5 ▪ HS-ESS2-1, HS-ESS2-2, HS-ESS2-3, HS-ESS2-4, HS-ESS2-5, HS-ESS2-6 ▪ HS-ESS3-1, HS-ESS3-2, HS-ESS3-3, HS-ESS3-4, HS-ESS3-5, HS-ESS3-6	Ocean Sciences focuses on the properties, features, and ecological relationships within Earth's oceans.	½	13035- Earth Science 5-12 or 9-12

13150	STEM Seminar (Science)	9-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4	STEM Seminar provides learners with a project-based, integrated, holistic experience with Science, Technology, Engineering, and Math. Taught by an interdisciplinary team of teachers, the course demonstrates the blurring of content areas when solving an authentic problem. It focuses on engaging learners in hands-on, interdisciplinary application of the Engineering Design Process. Learners engage in authentic projects, create products and presentations, and network with local STEM industry experts. In this course, learners uncover and acquire a cohesive set of concepts, competencies, and dispositions of science, technology, engineering, and mathematics that they transfer and apply in both academic and real-world contexts to be globally competitive in the 21st Century. This course curriculum infuses academic content from Math, Science, Language Arts, and Social Studies. It utilizes state standards and technical skills and develops 21st Century Skills such as communication, networking, collaboration, decision-making, creativity, and critical thinking. ***NOTE: This course can be taught for Science credit only. For Mathematics credit, use STEM Seminar (Math) under Mathematics. For Technology and Engineering credit, use STEM Seminar (Tech-Ed) under Technology and Engineering.***	2	Any Science License 5-12 or 9-12

13023	Health	9-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-LS1-2, HS-LS1-3 **This course must meet or exceed the following North Dakota** Health Content Standards ▪ 1.12.1, 1.12.2, 1.12.3, 1.12.4, 1.12.5, 1.12.6, 1.12.7, 1.12.8, 1.12.9, 1.12.10, 1.12.11, 1.12.12 ▪ 2.12.1, 2.12.2, 2.12.3, 2.12.4, 2.12.5, 2.12.6, 2.12.7, 2.12.8 ▪ 3.12.1, 3.12.2, 3.12.3, 3.12.4 ▪ 4.12.1, 4.12.2, 4.12.3, 4.12.4, 4.12.5, 4.12.6 ▪ 5.12.1, 5.12.2, 5.12.3, 5.12.4, 5.12.5, 5.12.6, 5.12.7 ▪ 6.12.1, 6.12.2, 6.12.3, 6.12.4 ▪ 7.12.1, 7.12.2, 7.12.3 ▪ 8.12.1, 8.12.2, 8.12.3., 8.12.4	Topics covered within Health Education courses may vary widely but typically include personal health (nutrition, mental health, stress management, drug/alcohol abuse prevention, disease prevention, and first aid) and consumer health issues. The course may include brief studies of environmental health, personal development, and/or community resources. ***NOTE: This course can be taught for Science credit only. For CTE credit, Health (Individual and Family Health) can be found under Family and Consumer Science. For Physical Education credit, Health can be found under Physical Education and Health. This course may also satisfy the health requirement for graduation.***	1	13010- Biology 5-12 or 9-12

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13034	Applied Biology/Chemistry	10-12, and have completed both Physical Science and Biology	**If taught using Chemistry concepts, this course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-PS1-1, HS-PS1-2, HS-PS1-5, HS-PS1-7, HS-PS1-8 ▪ HS-PS3-1, HS-PS3-2, HS-PS3-3, HS-PS3-4 ▪ HS-PS4-1 **If taught using Biology concepts, this course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4, ▪ HS-LS1-1, HS-LS1-2, HS-LS1-3, HS-LS1-4, HS-LS1-5, HS-LS1-6 ▪ HS-LS2-1, HS-LS2-2, HS-LS2-4, HS-LS2-6, HS-LS2-7, HS-LS2-8 ▪ HS-LS3-3 ▪ HS-LS4-1, HS-LS4-2, HS-LS4-3, HS-LS4-4, HS-LS4-5, HS-LS4-6	This course may be taught as applied biology, applied chemistry, or a combination of applied biology and applied chemistry, and may be offered for a maximum total of two credits. This course is intended for learners choosing not to pursue a career in science. Content standards covered in this course will depend on whether the course is taught using chemistry concepts, biology concepts, or both. ***NOTE: This course may not be substituted for the physical science or biology courses required for graduation.***	2	13010-Biology 5-12 or 9-12 **OR** 13020-Chemistry 5-12 or 9-12
13044	Applied Physics	10-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-PS2-1, HS-PS2-2, HS-PS2-3, HS-PS2-4, HS-PS2-5 ▪ HS-PS3-1, HS-PS3-2, HS-PS3-3, HS-PS3-4, HS-PS3-5 ▪ HS-PS4-1, HS-PS4-2, HS-PS4-3, HS-PS4-4	Applied Physics introduces learners to mechanical, fluid, electrical, and thermal principles and systems on which modern equipment operates. Learner activities examine the similarities of force, work, rate, resistance, energy, power, and force transformers in mechanical, fluid, electrical, and thermal systems. This course meets the same high school graduation requirements as physics, and is intended for learners choosing not to pursue a career in science.	1	13050-Physics 5-12 or 9-12

HIGH SCHOOL SCIENCE COURSE CODES
GRADES 9-12

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13026	Ornithology	9-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-LS2-1, HS-LS2-2, HS-LS2-6, HS-LS2-7, HS-LS2-8 ▪ HS-LS3-1, HS-LS3-2, HS-LS3-3, HS-LS3-4 ▪ HS-LS4-1, HS-LS4-2, HS-LS4-3, HS-LS4-4, HS-LS4-5, HS-LS4-6	Ornithology is the study of birds. Learners will explore topics including structure and function, evolution, classification, behavior, habitat, and conservation of bird species. ***NOTE: This course may not be substituted for the biology course required for graduation.***	½	13010-Biology 5-12 or 9-12
13027	Entomology	9-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-LS2-1, HS-LS2-2, HS-LS2-6, HS-LS2-7, HS-LS2-8 ▪ HS-LS3-1, HS-LS3-2, HS-LS3-3, HS-LS3-4 ▪ HS-LS4-1, HS-LS4-2, HS-LS4-3, HS-LS4-4, HS-LS4-5, HS-LS4-6	Entomology is the study of insects. Learners will explore topics including structure and function, evolution, classification, behavior, habitat, life cycle, and conservation of insect species. ***NOTE: This course may not be substituted for the biology course required for graduation.***	½	13010-Biology 5-12 or 9-12
13028	Real World Biology	9-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-LS1-1, HS-LS1-2, HS-LS1-3, HS-LS1-4 ▪ HS-LS2-1, HS-LS2-2, HS-LS2-3, HS-LS2-4, HS-LS2-5, HB-LS2-6, HS-LS2-7, HS-LS2-8 ▪ HS-LS3-1, HS-LS3-2, HS-LS3-3	Real World Biology is a lab course designed around real-world issues. Learners will explore and propose solutions related to topics such as (but not limited to) population growth, ecology, genetics, epidemiology, and forensics through application of the science and engineering practices. ***NOTE: This course may not be substituted for the biology course required for graduation.***	1	13010-Biology 5-12 or 9-12
13045	Principles of Technology	10-12, and have taken both Algebra I and Physical Science	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-PS2-1, HS-PS2-3, HS-PS2-5, HS-PS2-6 ▪ HS-PS3-1, HS-PS3-3 ▪ HS-PS4-1, HS-PS4-3, HS-PS4-4	Principles of Technology explores the forces and laws of nature as applied to modern technology by using science and engineering practices . Topics explored may include electronics, robotics, telecommunications, and other technological fields.	1	13050-Physics 5-12 or 9-12

HIGH SCHOOL SCIENCE COURSE CODES
GRADES 9-12

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13052	Biotechnology	9-12	**This course must meet or exceed the following North Dakota** Science Content Standards ▪ HS-ET1-1, HS-ET1-2, HS-ET1-3, HS-ET1-4 ▪ HS-LS1-1, HS-LS1-2 ▪ HS-LS3-1, HS-LS3-2, HS-LS3-3	Learners will explore the development and challenges of advances in biotechnology, including topics such as: medicine and health sciences; nutrition, crop and food sciences; and genetic analysis.	1	13010- Biology 5-12 or 9-12
13099	Science GED Equivalent	9-12	Because this course code is used to issue credit for learners that have passed the science portion of the GED assessment, it is aligned to standards that can be found in the GED Assessment Guide for Science.	GED Equivalent Science is intended for learners who earn the required credits for graduation by passing the science GED exam, as allowed by NDCC 15.1-21-02.2 (2) and NDCC 15.1-21-02.3 (2). This course is intended for learners significantly behind in the required credits in science for graduation. This course can be used as either preparation to take the science GED exam for high school credit or to award high school credit upon completion of the science GED exam. This course CANNOT be used as preparation for a GED exam for purposes of obtaining a GED certificate. School board approval is required for schools to award credit for this course.	3	Any Science License 5-12 or 9-12

** High school curricular requirements are spelled out in NDCC 15.1-21-02. Maximum credit refers to the maximum units of credit a learner may earn for a course over four years of high school. (Example: Band - a learner may be enrolled in band all four years of high school -- earning a possible total of four units of credit.)*

*** Please refer to the second page of the teacher's North Dakota Educator's Professional license to verify which subject areas a teacher is qualified to teach. Licenses and endorsements are obtained on a teaching license from the Education Standards and Practices Board (ESPB).*