

HIGH SCHOOL AGRICULTURAL EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Agricultural Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
01011	Introduction to Agriculture	9-12	<p>This applied course is designed to introduce students to agriculture, its applications, and leadership development as the core foundation of the Agriculture Education program. Individual units will familiarize the student with: basic mechanical theory and skills – emphasis will be placed on safety and proper use of tools and equipment; principles of evaluation and selection of beef, swine, sheep, horse, and dairy animals; soil and plant relationships that affect the production of food and fiber. Topics may include: soils, irrigation, land judging, plants, crop and weed identification, range management, horticulture, nursery, diseases, insects, and chemicals.</p> <p>This applied course introduces students to agricultural sciences with emphasis on technical skills, entrepreneurship, and occupational opportunities. Units may also include agricultural construction, food and fiber science, supervised agricultural experiences, and leadership development.</p> <p>Agricultural mechanics units are designed to develop skills in selection, operation, and maintenance of engines, hydraulics, and agricultural machinery and tractors. Skills in operation and maintenance of equipment, determining a bill of materials, construction techniques, metal fabrication, and joining processes of metals and alloys will be included.</p> <p>Emphasis is on problem solving and scientific reasoning applied to real world problems integrating knowledge from the life and earth sciences.</p>	<p style="text-align: center;">½ or 1</p> <p style="text-align: center;"><i>Max credit = 1</i></p>	<p>License Code: 01005-Agriculture Education ♦ 5-12 or 9-12</p>

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Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
01012	Foundations of Agriculture	9-12	<p>This applied course is designed to enhance student's perception of agriculture, its applications, and leadership development as the core foundation of the Agriculture Education program. Individual units will familiarize the student with: basic mechanical theory and skills – emphasis will be placed on safety and proper use of tools and equipment; principles of evaluation and selection of beef, swine, sheep, horse, and dairy animals; soil and plant relationships that affect the production of food and fiber. Topics may include: soils, irrigation, land judging, plants, crop and weed identification, range management, horticulture, nursery, diseases, insects, and chemicals.</p> <p>This applied course introduces students to agricultural sciences with emphasis on technical skills, entrepreneurship, and occupational opportunities. Units may also include agricultural construction, food and fiber science, supervised agricultural experiences, and leadership development.</p> <p>Agricultural mechanics units are designed to further develop skills in selection, operation, and maintenance of engines, hydraulics, and agricultural machinery and tractors. Skills in operation and maintenance of equipment, determining a bill of materials, construction techniques, metal fabrication, and joining processes of metals and alloys will be included.</p> <p>Emphasis is on problem solving and scientific reasoning applied to real world problems integrating knowledge from the life and earth sciences. Foundations of Agriculture can be a continuation of Introduction of Agriculture or can be offered in alternating years with Introduction to Agriculture.</p>	<p style="text-align: center;">½ or 1</p> <p style="text-align: center;"><i>Max credit = 1</i></p>	<p>License Code: 01005-Agriculture Education ♦ 5-12 or 9-12</p>

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Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
01021	Agriscience Technology I	9-12	<p>Agriscience Technology courses integrate biological and technological concepts with principles of agriculture. Courses are designed in sequences to provide experiences in the subject matter. Units are selected to develop knowledge and skills pertaining to nutrition, reproduction, diseases, breeding, genetics, anatomy, and physiology in animals and plants. Genetic engineering, biotechnology, plant propagation techniques, agricultural production technologies, marketing technologies, aquaculture, animal health, and small animal care are examples of units that may be taught.</p> <p>These courses integrate leadership and supervised agricultural experience programs. Career opportunities and educational preparation are examined. Learning activities are varied with classroom, laboratory and field experiences.</p> <p>Note: These courses can be taught for Agricultural Education credit only.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 01005-Agriculture Education ♦ 5-12 or 9-12</p>
01022	Agriscience Technology II	9-12	<p>Agriscience Technology courses integrate biological and technological concepts with principles of agriculture. Courses are designed in sequences to provide experiences in the subject matter. Units are selected to develop knowledge and skills pertaining to nutrition, reproduction, diseases, breeding, genetics, anatomy, and physiology in animals and plants. Genetic engineering, biotechnology, plant propagation techniques, agricultural production technologies, marketing technologies, aquaculture, animal health, and small animal care are examples of units that may be taught.</p> <p>These courses integrate leadership and supervised agricultural experience programs. Career opportunities and educational preparation are examined. Learning activities are varied with classroom, laboratory and field experiences.</p> <p>Note: These courses can be taught for Agricultural Education credit only.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	

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01023	Agriscience Technology III	9-12	<p>Agriscience Technology courses integrate biological and technological concepts with principles of agriculture. Courses are designed in sequences to provide experiences in the subject matter. Units are selected to develop knowledge and skills pertaining to nutrition, reproduction, diseases, breeding, genetics, anatomy, and physiology in animals and plants. Genetic engineering, biotechnology, plant propagation techniques, agricultural production technologies, marketing technologies, aquaculture, animal health, and small animal care are examples of units that may be taught.</p> <p>These courses integrate leadership and supervised agricultural experience programs. Career opportunities and educational preparation are examined. Learning activities are varied with classroom, laboratory and field experiences.</p> <p>Note: These courses can be taught for Agricultural Education credit only.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 01005-Agriculture Education ♦ 5-12 or 9-12</p>
01025	Agronomy Science	9-12	<p>This course provides the study of plant physiology and morphology and its relationship to growth, development and reproduction of crop and forage plants in the global environment. Topics include: seed identification, testing and grain grading, identification of agronomic crops and major weeds in crop production. Harvesting and handling will be emphasized. Supervised agricultural experience programs and leadership are integrated in the course. Career opportunities and educational preparation are examined. Learning activities are varied with classroom, laboratories and field experiences.</p> <p>Note: These courses can be taught for Agricultural Education credit only.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	

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01034	Agriculture Sales and Service	10-12	To provide students with skills necessary for entry into employment or furthering education in agriculture sales and service. The course deals with business organizations, business structures, job responsibilities, job applications, and interviewing, human relations, marketing, selling, displaying, using business machines, business accounting, and management skills. Learning activities are varied with classroom, laboratory, and field experiences. Leadership development and supervised agricultural experience programs are an integral part of this course.	½ or 1 <i>Max credit = 1</i>	License Code: 01005-Agriculture Education ♦ 5-12 or 9-12
01035	Agricultural Business Management	10-12	A course designed to introduce the students to agribusiness management in the free enterprise system. It includes a study of economic principles, budgeting, recordkeeping, finance, risk management, business law, marketing, and careers in agribusiness. Leadership development and supervised agricultural experience programs are an integral part of this course.	½ or 1 <i>Max credit = 1</i>	
01043	Agricultural Mechanics Technology I	9-12	Agricultural Mechanics courses are designed to reinforce and extend students' understanding of applied mechanical applications by associating scientific principles and concepts with relevant applications in fields associated with mechanics. Students will be exposed to mechanical, fluid, electrical, and thermal power that are associated with the field of agriculture. Course sequence is designed to provide students with applied activities which may include: metal fusion (welding), structures, surveying, electrical wiring principles, agricultural power and equipment, plumbing, electric motors and controls, CNC, robotics, CADD, Lasers, GIS and GPS systems. Leadership development and supervised agricultural experiences are integral to these courses.	½ or 1 <i>Max credit = 1</i>	
01044	Agricultural Mechanics Technology II	9-12	Agricultural Mechanics courses are designed to reinforce and extend students' understanding of applied mechanical applications by associating scientific principles and concepts with relevant applications in fields associated with mechanics. Students will be exposed to mechanical, fluid, electrical, and thermal power that are associated with the field of agriculture. Course sequence is designed to provide students with applied activities which may include: metal fusion (welding), structures, surveying, electrical wiring principles, agricultural power and equipment, plumbing, electric motors and controls, CNC, robotics, CADD, Lasers, GIS and GPS systems. Leadership development and supervised agricultural experiences are integral to these courses.	½ or 1 <i>Max credit = 1</i>	

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01045	Agricultural Mechanics Power Systems	9-12	Agricultural Mechanics courses are designed to reinforce and extend students' understanding of applied mechanical applications by associating scientific principles and concepts with relevant applications in fields associated with mechanics. Students will be exposed to fluid, electrical, and thermal power that are associated with the field of agriculture. Course is designed to provide students with applied activities which may include: small engine maintenance and repair, agricultural power and equipment, electric motors and controls, robotics, renewable energy and precision ag systems. Leadership development and supervised agricultural experiences are integral to this course.	½ or 1 <i>Max credit = 1</i>	License Code: 01005-Agriculture Education ♦ 5-12 or 9-12
01046	Agricultural Welding and Fabrication	10-12	This course provides students in agriculture an opportunity to reinforce and extend understanding of applied mechanical applications. Students will be exposed to mechanical, electrical and thermal power that are associated with the field of agricultural welding. Applied activities develop an understanding and skill development in metal joining and fabrication processes. Instruction will prepare students to select, operate, repair, fabricate and maintain a variety of agricultural machinery and equipment. Processes covered may include: Oxyfuel Cutting/Heating/Welding, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux-cored Arc Welding (FCAW), Gas Tungsten Arc Welding (GTAW), Air-carbon Arc Cutting, Plasma Arc Cutting, Safety and Metal Fabrication. In addition, record keeping, communication skills, employability and human relation skills will be covered. Leadership development and Supervised Agricultural Experiences (SAE's) are also integral to this course.	½ or 1 <i>Max credit = 1</i>	
01047	Advanced Ag Welding and Fabrication	10-12	This course can be a continuation of 01046 Agricultural Welding and Fabrication or can be offered in alternating years. This course provides students in agriculture an additional opportunity to reinforce and extend understanding of applied mechanical applications. Advance applications will further develop knowledge and skill development in metal joining and fabrication processes. Instruction will prepare students to select, operate, repair, fabricate and maintain a variety of agricultural machinery and equipment. Processes covered may include: Oxyfuel Cutting/Heating/Welding, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux-cored Arc Welding (FCAW), Gas Tungsten Arc Welding (GTAW), Air-carbon Arc Cutting, Plasma Arc Cutting, Safety and Metal Fabrication projects. In addition, record keeping, communication skills, employability and human relation skills will be covered. Leadership development and Supervised Agricultural Experiences (SAE's) are also integral to this course.	½ or 1 <i>Max credit = 1</i>	

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01053	Botany/ Horticultural Science I	9-12	<p>These courses prepare students to produce greenhouse/nursery plants and to maintain plant growth and propagation structures. Topics to be covered 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. Students may be introduced to the biological, environmental, conservation, and ecological concepts encountered in our environment. Landscape design units will prepare students to design, construct, and maintain planted areas and devices for the beautification of home grounds and other areas of human habitation and recreation. These courses will reinforce and extend students' understanding of science by associating basic scientific principles and concepts with relevant applications in agriculture. Leadership development and supervised agricultural experience programs are also an integral part of this course.</p> <p>Note: These courses can be taught for Agricultural Education credit only. For Science credit, Botany/Horticultural Science I can be found under Science.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 01005-Agriculture Education ♦ 5-12 or 9-12</p>
01054	Botany/ Horticultural Science II	9-12	<p>These courses prepare students to produce greenhouse/nursery plants and to maintain plant growth and propagation structures. Topics to be covered 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. Students may be introduced to the biological, environmental, conservation, and ecological concepts encountered in our environment. Landscape design units will prepare students to design, construct, and maintain planted areas and devices for the beautification of home grounds and other areas of human habitation and recreation. These courses will reinforce and extend students' understanding of science by associating basic scientific principles and concepts with relevant applications in agriculture. Leadership development and supervised agricultural experience programs are also an integral part of this course.</p> <p>Note: These courses can be taught for Agricultural Education credit only. For Science credit, Botany/Horticultural Science II can be found under Science.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	

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Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
01061	Livestock Production	10-12	This course is designed to prepare students for careers in the field of animal science and production in species including, but not limited to, beef cattle, dairy cattle, swine, sheep, goats, and poultry. The student will demonstrate technical skills relating to the interrelated human, botanical, scientific, and technological dimensions of animal systems and be able to assess the importance of the United States impact on world commodity markets while applying the principles of livestock breeding and nutrition in predicting the impact of current advances in genetics. The student is expected to describe common veterinary procedures and skills, practice proper animal restraint techniques, demonstrate identification techniques, and demonstrate effective management strategies. The student will learn the anatomy and physiology related to nutrition, reproduction, health, and management of domesticated animals while understanding the nutritional requirements of ruminant and non-ruminant animals. The student is expected to discuss feeding practices and feed quality issues, explain animal genetics and reproduction, and research current and emerging technologies in animal reproduction. The student identifies animal pests and diseases and methods of disease control, treatment, and prevention. The student knows the factors impacting commodity prices and costs.	½ or 1 <i>Max credit = 1</i>	License Code: 01005-Agriculture Education ♦ 5-12 or 9-12
01062	Equine Science	10-12	This course is designed to provide students with opportunities to learn, reinforce, apply, and transfer their knowledge and skills of animal systems (including, but are not limited to, horses, donkeys, and mules.) The student will analyze the selection of horses, how to provide proper nutrition using accepted protocols and processes, describe the anatomy and physiology of horses, and select equipment and facilities which demonstrate methods of handling and breeding horses safely. The student will compare and contrast issues affecting the industry and describe issues concerning biotechnology related to the equine field. The student will also learn the employability characteristics of a successful employee in the field of equine science by participating in laboratory-based, or other supervised, agricultural experiences, and learn from the challenging hands-on approach in equine activities.	½ or 1 <i>Max credit = 1</i>	

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01063	Natural/ Environmental Resources	9-12	This course provides an opportunity for students to increase awareness of the close ties among living organisms. Natural and environmental concerns with the interrelationships of living organisms and the world around us. Leadership development and supervised agricultural experience programs are also an integral part of this course.	½ or 1 <i>Max credit = 1</i>	License Code: 01005-Agriculture Education ◆ 5-12 or 9-12
01066	Small Animal Care	9-12	This course is designed to teach students about the management of small animals, which may include, but are not limited to, small mammals, amphibians, reptiles, avian, dogs, and cats. The student will understand the importance of responsible small animal ownership by explaining the domestication and use of small animals, the influence small animals and the small animal industry on society, and the hazards associated with working in the small animal industry (including transmittance of disease and handling of dangerous chemicals). The student will evaluate current topics in animal rights and animal welfare, thus understanding the care and management requirements for a variety of small animals and be able to discuss the physical characteristics for each species studied; list the breeds or types of each species; discuss the habitat, housing, and equipment needs for each; compare and contrast nutritional requirements; describe and practice common methods of handling; and use available laboratory equipment to perform procedures.	½ or 1 <i>Max credit = 1</i>	

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01067	Veterinary Science	11-12	This course is designed to prepare students for careers in the field of animal science by introducing them to veterinary practices as they relate to both large and small animal species. The student will participate in laboratory and field investigations and demonstrate safety by using critical thinking, scientific reasoning, and problem solving to make informed decisions. They will research and describe the history of veterinary medicine, current topics, the importance of animals in society, and the professional ethics and laws that relate to veterinary medicine. The student will learn to explain the human-animal bond and describe the legal aspects of animal welfare. The student will identify anatomical structures and systems of animals and correct terminology while exploring animal management as it relates to animal identification, animal characteristics, and behavioral temperament (i.e. normal behavior compared to sick.) The student will evaluate animal diseases and identifies internal and external parasites and can evaluate an animal's health during a clinical examination while safely operating and maintaining equipment used in veterinary science. The student will also learn to determine nutritional requirements and the importance of nutrition in maintaining a healthy animal. The student will thereby be conscious of procedures, skills, and objectives that are included in the job description of an animal care assistant.	½ or 1 <i>Max credit = 1</i>	License Code: 01005-Agriculture Education ◆ 5-12 or 9-12
01068	Agricultural Processing	10-12	This course is designed to introduce students to the processing of agricultural products. The course will include the processing of food, fiber, and material product processing for the global economy will be emphasized. Personal communication skills, human relation skills, leadership development skills, and supervised agricultural experiences will be emphasized.	½ or 1 <i>Max credit = 1</i>	
01069	World Agricultural Science and Technology	10-12	A course designed to introduce students to global agriculture. This course also includes agricultural career development, leadership, communications, and personal finance. Note: This course can be taught for Agricultural Education credit only.	½ or 1 <i>Max credit = 1</i>	

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01073	Agriculture III	10-12	This course develops agricultural skills necessary for employment, entrepreneurship, or further education in agriculture and agricultural occupations. Units may include: crop and livestock production, farm business management, agribusiness, horticulture, natural resources, agricultural mechanics, aquaculture, and water management. Leadership development and supervised agricultural experiences will also be emphasized.	½ or 1 <i>Max credit = 1</i>	License Code: 01005-Agriculture Education ◆ 5-12 or 9-12
01074	Agriculture IV	10-12	This course develops agricultural skills necessary for employment, entrepreneurship, or further education in agriculture and agricultural occupations. Units may include: crop and livestock production, farm business management, agribusiness, horticulture, natural resources, agricultural mechanics, aquaculture, and water management. Leadership development and supervised agricultural experiences will also be emphasized. This course can be a continuation of Agriculture III or can be offered in alternating years with Agriculture III.	½ or 1 <i>Max credit = 1</i>	
01990	Individual Agricultural Studies	9-12	This course provides students in agriculture an opportunity to expand and explore the fields of agriculture, leadership, and personal development on an individual basis.	½ or 1 <i>Max credit = 1</i>	
01080	CASE Introduction to AFNR	9-12	Introduction to AFNR (Agriculture, Food, and Natural Resources) will introduce students to the world of agriculture, the pathways they may pursue, and the science, mathematics, reading, and writing components they will use throughout the CASE curriculum. Student experiences will involve the study of communication, the science of agriculture, plants, animals, natural resources, and agricultural mechanics.	1 <i>Max credit = 1</i>	License Code: 01080-CASE Introduction to AFNR ◆ 9-12
01081	CASE Principles of Agricultural Science - Animal	9-12	Principles of Agricultural Science – Animal is a foundation-level course designed to engage students in hands-on laboratories and activities to explore the world of animal agriculture. Student experiences will involve the student of animal anatomy, physiology, behavior, nutrition, reproduction, health, selection and marketing.	1 <i>Max credit = 1</i>	License Code: 01081-CASE Introduction to AFNR ◆ 9-12
01082	CASE Principles of Agricultural Science - Plant	9-12	Principles of Agricultural Science – Plant is a foundation-level course that will teach students about the form and function of plant systems. Students are immersed in inquiry-based exercises filled with activities, projects and problems to teach them plant concepts through laboratory and practical experiences. Student experiences will include soils, hydroponics, plant anatomy and physiology, taxonomy, growing environments, sexual reproduction, asexual reproduction, insects and diseases, and production and marketing. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA programs and activities.	1 <i>Max credit = 1</i>	License Code: 01082-CASE Introduction to AFNR ◆ 9-12

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01083	CASE Agricultural Power & Technology	9-12	Agricultural Power and Technology is a foundation-level course designed to prepare students for the wide array of career opportunities in agricultural engineering. Students are immersed in inquiry-based exercises that tie in the math and science of agricultural mechanics and engineering. Students apply technical skill while becoming competent in the process used to operate, repair, engineer and design agricultural tools and equipment.	1 <i>Max credit = 1</i>	License Code: 01083 -CASE Agricultural Power and Technology ◆ 9-12
01084	CASE Natural Resources & Ecology	9-12	Natural Resources and Ecology course is a foundation-level course that provides students a variety of experiences in the fields of natural resources and ecology. Students will explore hands-on projects and activities while studying topics such as land use, water quality, stewardship and environmental agencies. Study of the natural world included biomes, land, air, water, energy, use and care as well as a focus on issues surrounding man's interaction with the earth will be addressed in this course.	1 <i>Max credit = 1</i>	License Code: 01084 - CASE Natural Resources and Ecology ◆ 9-12
01085	CASE Animal & Plant Biotechnology	9-12	Animal and Plant Biotechnology, a specialization course that provides students with experiences in industry appropriate applications of biotechnology related to plant and animal agriculture. Students are expected to become proficient at biotechnological skills involving micro pipetting, bacterial cultures and transformations, electrophoresis, and polymerase chain reaction. Research and experimental design will be highlighted.	1 <i>Max credit = 1</i>	License Code: 01085 CASE Animal & Plant Biotechnology ◆ 9-12
01086	CASE Food Science & Safety	9-12	Food Science and Safety is a specialization course that students will complete hands-on activities, projects and problems that simulate actual concepts and situations found in the food science and safety industry, allowing students to build content knowledge and technical skills. Students will investigate areas of food science including food safety, food chemistry, food processing, food product development and marketing	1 <i>Max credit = 1</i>	License Code: 01086 CASE Food Science and Safety ◆ 10-12
01087	CASE Agricultural Business Foundations	9-12	Agricultural Business Foundations introduces students to business management in agriculture, mathematics, reading and writing components are woven in the context of agriculture and students will use the introductory skills and knowledge developed in this course throughout subsequent CASE courses. The course includes concepts in starting a business, financial documents, risk management and writing a business plan.	1 <i>Max credit = 1</i>	License Code: 01087 CASE Agricultural Business Foundations ◆ 9-12

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01993	Community Development	9-12	This course provides students in agriculture an opportunity to understand the principles and fundamentals of the community development and gain an appreciation of essential community needs. Students will have the opportunity to study the community development process and select, plan, and implement a community development project or projects. Community leadership development and service learning are integral to the success of this course.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	License Code: 01005-Agriculture Education ♦ 5-12 or 9-12
01995	Supervised Agricultural Experience Program	9-12	This course provides credit for student agricultural experience exploration. Fulfillment of the standards outlined in the Policy Statement for Supervised Agricultural Experience Programs in agricultural education in North Dakota. All students are required to complete a minimum program of supervised agricultural experience; those who wish to exceed the minimum may earn $\frac{1}{4}$, $\frac{1}{2}$, or 1 credit each year.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 2</i>	License Code: 01005-Agriculture Education ♦ 5-12 or 9-12
01999	Cooperative Work Experience	11-12	This course provides students with a regularly scheduled, supervised employment opportunity related to agriculture occupations in order to develop and improve work skills. The employment must be preceded by, or concurrent with, classroom instruction related to the work experience, consistent with the students' occupational goals, and related to the Agriculture Education program area. There shall be a training agreement among all partners to the work experience (school, employer, student, and parents/guardians) outlining the expectations of each party. The instructor shall also develop a specific training plan with the employer for each student placed. The training plan shall include provisions for assessment of student progress and for on-site visits by the instructor during the student's placement. NOTE: Students must be at least 16 years old and may be paid a wage by the employer.	Maximum of $\frac{1}{2}$ credit per semester, not to exceed 4 credits while in high school <i>Max credit = 4</i>	License Code: 01005-Agriculture Education ♦ 5-12 or 9-12

* *High school curricular requirements are spelled out in NDCC 15.1-21-02 and High school unit - instructional time is NDCC 15.1-21-03. Maximum credit refers to the maximum units of credit a student may earn for a course over four years of high school. (Example: Band - a student 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).*

Credentials are obtained from the Department of Public Instruction (DPI) and are issued to individuals holding a current teaching license.

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Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
14010	Accounting I	9-12	Students in Accounting I will learn the fundamentals of Accounting principles that include: terminology, accounting cycle, basic concepts, financial statements, roles of accountants and ethics in accounting. Simulation packets are often integrated in the course.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 03020-Business Ed/General Business ♦ K-12, 1-12, 5-12, 9-12 OR 03025-CTE Business Education ♦ K-12, 1-12, 5-12, 9-12
14011	Accounting II ♦ Prerequisite: Accounting I	9-12	Students in Accounting II will continue learning the fundamental concepts of Accounting. Topics covered include terminology, accounting cycle, basic concepts, financial statements, roles of accountants and ethics in accounting.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
14012	Accounting III ♦ Prerequisite: Accounting II	10-12	Students in Accounting III will acquire a more thorough, in-depth knowledge of accounting procedures and techniques utilized in solving business problems and making financial decisions. Students will develop skills in analyzing and interpreting financial information common to businesses. A contemporary business simulation set that lets the student put accounting skills into practice is often included.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
14013	Accounting IV ♦ Prerequisite: Accounting III	10-12	Students in Accounting IV will continue to develop skills in analyzing and interpreting information common to corporate forms of organization, preparing formal statements and supporting schedules, and using inventory and budgetary control systems. Higher level corporate, managerial and cost accounting concepts are presented in this course. A contemporary business simulation set that lets the student put accounting skills into practice is often included.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
14014	Forensic Accounting ♦ Prerequisite: Accounting IV	11-12	Students in Forensic Accounting, sometimes called investigative accounting, will explore the application of accounting concepts and techniques to legal problems. Forensic accountants investigate and document financial fraud and white-collar crimes such as embezzlement. They also provide litigation support to law enforcement agencies investigating financial wrongdoing.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
14015	Entrepreneurial Accounting ♦ Prerequisite: Accounting IV	10-12	Students in Entrepreneurial Accounting will examine the principles, techniques, and uses of accounting in the planning, control, and decision-making of business organizations from an entrepreneurial perspective.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	

HIGH SCHOOL BUSINESS EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Business Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
14016	Business Finance ♦ Prerequisite: Accounting I	9-12	Students in Business Finance will focus on a business's financial behavior; examine the financial side of running a business, keeping records, investing, protecting against loss, obtaining credit, and making strategic decisions.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 03020-Business Ed/General Business ♦ K-12, 1-12, 5-12, 9-12 OR 03025-CTE Business Education ♦ K-12, 1-12, 5-12, 9-12
14022	Web Design ♦ Prerequisite: Keyboarding or equivalent skill	9-12	Students in Web Design will be introduced to a variety of ways to create and maintain web pages. Course topics will focus on overall production processes with an emphasis on design elements involving layout, navigation, and interactivity. Understanding of proper ethics, copyright laws, social networking, and cyber security topics will be integrated. The basic language of web design and software will be taught along with the additional media inputs within a website (e.g. video, animation, sound, scrolling marquees, forms, contacts, and other additional components).	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
14024	Business Computer Applications ♦ Prerequisite: Keyboarding or equivalent skill	9-12	Students in Business Computer Applications will continue to develop skills in various computer applications and using various input and output devices in order to gather information, design, present, and evaluate projects. The course will include ethical uses of computers and information. The course would be helpful for all students.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
14025	Spreadsheets ♦ Prerequisite: Keyboarding or Business Computer Applications	9-12	Students in Spreadsheets will be introduced to spreadsheet software/applications to analyze business trends, solve problems for business, and personal use. This course will include the design and use of worksheets, writing formulas, analyzing data, charting data, managing data, using pivot charts/tables, creating macros, and displaying information on web pages.	$\frac{1}{4}$ or $\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
14026	Database ♦ Prerequisite: Keyboarding or Business Computer Applications	9-12	Students in Database will use database software to organize and automate file handling. These files will be used to analyze business trends and solve problems. Students will create tables, queries, forms, reports, templates, and web pages to understand the functionality of a database.	$\frac{1}{4}$ or $\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
14028	Communication Technologies	9-12	Students in Communication Technologies will study the history of the Internet, Internet safety and etiquette, appropriate research techniques, online communication, video conferencing, social networking, network security, and a study of e-business.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL BUSINESS EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Business Education require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
14060	Business Communications ◆ Prerequisite: Keyboarding or equivalent skill	9-12	Students in Business Communications will learn to integrate oral and written communication in a clear, courteous, concise, complete and correct manner on both personal and professional levels. Listening skills, learning styles, and teamwork will be incorporated to provide students with a solid base so they are able to communicate effectively. Note: This course can be taught for Business Education credit only.	½ or 1 <i>Max credit = 1</i>	License Code: 03020-Business Ed/General Business ◆ K-12, 1-12, 5-12, 9-12 OR 03025-CTE Business Education ◆ K-12, 1-12, 5-12, 9-12
14079	Business Technology and Procedures ◆ Prerequisite: Word processing skill	10-12	Students in Business Technology and Procedures will analyze productivity throughout the workforce, which imposes on all workers the need for effective and efficient information management, problem solving, and communication tasking. This class provides practical office simulations including information processing systems, job search skills, preparation of business presentations, and other technology procedures.	½ or 1 <i>Max credit = 1</i>	
14090	Business Law	9-12	Students in Business Law will be introduced to the fundamental background of the development and enforcement of laws, the difference between criminal and civil law, and our present court system and how it works. Topics to be discussed include laws concerning contracts, sales, consumers, property, computers, family, environment, wills and trusts, and bankruptcy.	½ or 1 <i>Max credit = 1</i>	
14094	Keyboarding	9-12	Students in Keyboarding will develop skills to operate a keyboard using the touch system and to compose formal and informal documents.	¼ or ½ <i>Max credit = ½</i>	
14095	Financial Literacy	9-12	Students in Financial Literacy will study the impact of financial choices on personal and occupational goals and future earnings potential. Real world topics include checking accounts, budgeting, saving for large purchases, using credit cards, figuring interest and fees, being a responsible consumer, earning power, learning about taxes and paycheck withholding, college costs, mortgages, retirement savings, and investments. This course will provide a foundational understanding for making informed personal financial decisions.	½ or 1 <i>Max credit = 1</i>	
14096	Word Processing ◆ Prerequisite: Keyboarding or equivalent skill	9-12	Students in Word Processing will use word processing software to create and edit documents such as business letters, envelopes, labels, flyers, reports and newsletters. Improved productivity will be developed by using timesaving shortcuts including templates, merging, tables, and key commands. Students will continue to practice formatting, editing, composition and proofreading.	¼, ½, or 1 <i>Max credit = 1</i>	

HIGH SCHOOL BUSINESS EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Business Education require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
14098	Desktop Publishing ◆ Prerequisite: Keyboarding or equivalent skill	9-12	Students in Desktop Publishing will use desktop publishing software to create publications such as newsletters, banners, catalogs, brochures, letterheads, business cards, and programs. They will learn design techniques using multimedia integration, formatting skills, page layout, and templates. Students will explain the purposes, functions, and common features of desktop publishing software.	¼, ½, or 1 Max credit = 1	License Code: 03020-Business Ed/General Business ◆ K-12, 1-12, 5-12, 9-12 OR 03025-CTE Business Education ◆ K-12, 1-12, 5-12, 9-12
14099	Multimedia I	9-12	Students in Multimedia will use digital images and videos to create meaningful documentation, production, and presentations. Images, logos, backgrounds, and navigation tools for digital display will be used in multimedia and Internet applications. The topics of image-editing, animation, file compression, digital audio/video editing, and planning for multimedia applications will also be discussed. Enhancements include proper format and appropriate use of graphics, animations, and transitions.	½ or 1 Max credit = 1	
14100	Multimedia II ◆ Prerequisite: Multimedia I	9-12	Students in Multimedia II will continue to use digital images and videos to create production and presentations using advanced skills and industry-recognized software. Students will learn advanced skills in image editing, animation, file storage, digital audio/video editing, and planning for multimedia applications for use in multimedia production including broadcasting (recorded and live), interactive media, and computer animation. The topics of careers in multimedia and copyright/fair use will also be discussed.	½ or 1 Max credit = 1	
14111	Entrepreneurship	9-12	Students in Entrepreneurship will develop skills needed to effectively organize, develop, create, and manage their own business. Topics covered include entrepreneurial concepts, characteristics of business organizations, business opportunities, entrepreneurial career examples, individual career assessment and planning, and entrepreneurial projects and simulations.	½ or 1 Max credit = 1	
14151	Economics (CTE)	9-12	Economics is the study of economic principles and their application. This may include types of business ownership, theory of the free enterprise system, general economic principles, role of the government, cooperative marketing, economic terms and definitions, world conditions and how they affect the American Free Enterprise Systems. NOTE: This course can be taught for Career and Technical Education – Business Education credit only. For Social Studies credit, Economics (15060) can be found under Social Studies.	¼, ½ or 1 Max credit = 1	

HIGH SCHOOL BUSINESS EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Business Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
14230	Business Fundamentals	9-12	Students in Business Fundamentals will be introduced to the world of business and prepare for the economic roles of consumer, worker, and citizen. The content may include a study of the business environment and strategies for creating, financing, marketing and managing a business. This course will also serve as a background for other business courses you may take in high school and college.	½ or 1 <i>Max credit = 1</i>	License Code: 03020-Business Ed/General Business ♦ K-12, 1-12, 5-12, 9-12 OR 03025-CTE Business Education K-12, 1-12, 5-12, 9-12
14231	Management I	9-12	Students in Management I are introduced to the field of management and organizational theory. Topics include: leadership, motivation, planning, teamwork, and goal setting. The course will develop a mastery of theory and research findings about organizations and people within the organizations.	½ <i>Max credit = ½</i>	
14232	Management II ♦ Prerequisite: Management I	9-12	Students in Management II will continue the study of management functions and theories. Topics include: business organization, personal and management skills, ethics and social responsibility, human resource management, technology and information management, financial decision making, industry analysis, markets and prices, and organized labor.	½ <i>Max credit = ½</i>	
14233	Global Management ♦ Prerequisite: Management II	10-12	Students in Global Management will explore the challenges and risks of entering into international business enterprises; including political, legal, and cultural differences.	½ <i>Max credit = ½</i>	
14234	Operations Management ♦ Prerequisite: Management II	10-12	Students in Operations Management will gain an understanding of the principles and procedures necessary to manage and operate a business. Topics include: staffing decisions, inventory control, financial decision-making, ethical decision-making, and social responsibility. Students will have an opportunity to plan, operate, and manage an event.	½ <i>Max credit = ½</i>	

HIGH SCHOOL BUSINESS EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Business Education require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
14999	Cooperative Work Experience	11-12	<p>Provides students with a regularly scheduled, supervised employment opportunity related to Business and Office Technology Occupations in order to develop and improve work skills. The employment must be preceded by, or concurrent with, classroom instruction related to the work experience, consistent with the student's occupational goals, and related to the Business and Office Technology program area. There shall be a training agreement among all partners to the work experience (school, employer, student, and parents/guardians) outlining the expectations of each party. The instructor shall also develop a specific training plan with the employer for each student placed. The training plan shall include provisions for assessment of student progress and for on-site visits by the instructor during the student's placement.</p> <p>NOTE: Students must be at least 16 years old and may be paid a wage by the employer.</p>	<p>Maximum of ½ credit per semester, not to exceed 4 credits while in high school</p> <p style="text-align: center;"><i>Max credit = 4</i></p>	<p>License Code: 03020-Business Ed/General Business ♦ K-12, 1-12, 5-12, 9-12 OR 03025-CTE Business Education ♦ K-12, 1-12, 5-12, 9-12</p>

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HIGH SCHOOL CAREER CLUSTERS COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Career Clusters **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
37020	Architecture and Construction	9-12	The Career Cluster for Architecture and Construction encompasses careers in designing, planning, managing, building and maintaining the built environment. Career opportunities are available in the pathways of Design/Pre-Construction, Construction and Maintenance/Operations.	½ or 1 <i>Max credit = 1</i>	License Code: 37020-CTE Architecture and Construction ◆ 9-12 OR 37021-Provisional/CTE-Architecture and Construction ◆ 9-12
37030	Arts, A/V Technology and Communications	9-12	The Career Cluster for Arts, Audio-Video Technology and Communications encompasses designing, producing, exhibiting, performing, writing and publishing multimedia content including visual and performing arts and design, journalism and entertainment services. Career opportunities are available in the pathways of Audio and Video Technologies, Printing Technologies, Visual Arts, Performing Arts, Journalism and Broadcasting and Telecommunications Technologies.	½ or 1 <i>Max credit = 1</i>	License Code: 37030-CTE Arts, A/V Technology and Communication ◆ 9-12 OR 37031-Provisional/CTE Arts, A/V Technology and Communication ◆ 9-12
37080	CTE Health Careers	9-12	The Career Cluster for Health Careers encompasses planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development. It will provide an introduction to health careers through an examination of occupations within the health sciences industry.	½ or 1 <i>Max credit = 1</i>	License Code: 37080-CTE Health Careers ◆ 9-12 OR 37081-Provisional/CTE Health Careers ◆ 9-12
37140	Manufacturing	9-12	The Career Cluster for Manufacturing encompasses planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering. Career opportunities are available in the pathways of Production; Manufacturing Production Process Development; Maintenance, Installation and Repair; Quality Assurance; Logistics and inventory control and Health, Safety and Environmental Assurance.	½ or 1 <i>Max credit = 1</i>	License Code: 37140-CTE Manufacturing ◆ 9-12 OR 37141-Provisional/CTE Manufacturing ◆ 9-12

HIGH SCHOOL CAREER CLUSTERS COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Career Clusters **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
37170	Transportation, Distribution, and Logistics	9-12	The Career Cluster of Transportation, Distribution and Logistics encompasses planning, management and movement of people, materials and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance. Career opportunities are available in the pathways of Transportation Operations; Logistics Planning and Management Services; Warehousing and Distribution Center Operation; Facility and Mobile Equipment Maintenance; Transportation Systems/Infrastructure Planning, Management and Regulation; Health, Safety and Environmental Management and Sales and Service.	½ or 1 <i>Max credit = 1</i>	License Code: 37170-CTE Transportation, Distribution, and Logistic ◆ 9-12 OR 37171-Provisional/CTE Transportation, Distribution, and Logistics ◆ 9-12

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HIGH SCHOOL CAREER AND TECHNICAL SUPPLEMENTARY SERVICES COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Career and Technical Supplementary Services **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Grade Level	Description	High School Credit Options*	License/credential Required**
26010	CTE Resource Education	9-12	<p>Career and technical students at risk or members of special population groups who require assistance to succeed in their education programs are eligible for career and technical special needs programming.</p> <p>Students eligible for career and technical resource education must be identified by personnel qualified to complete the required assessment.</p> <p>Services in career and technical education include a) career counseling; b) consultation with career and technical education teachers in making necessary adaptations in content, methods, and equipment; and c) student support in the learning process.</p>	$\frac{1}{2}$ to 2 <i>Max credit = 2</i>	License Code: 26000-CTE Resource Educator ♦ 5-12
26011	CTE Resource Education: Service Learning	9-12	<p>CTRE/Service Learning is a vital part of the CTRE program. This component will help at-risk students make a smooth, successful transition from high school to the world of work and will allow students to earn an elective credit toward graduation requirements.</p>	$\frac{1}{2}$ to 2 <i>Max credit = 2</i>	
28010	CTE Basic Skills Education	9-12	<p>Career and technical students at risk or members of special population groups who require assistance to succeed in their educational programs are eligible for career and technical special needs programming.</p> <p>Students eligible for career and technical education must be identified by personnel qualified to complete the required assessment.</p> <p>Services in career and technical education include a) career counseling; b) consultation with career and technical education teachers in making necessary adaptations in content, methods, and equipment; and c) student support in the learning process.</p>	$\frac{1}{2}$ to 2 <i>Max credit = 2</i>	License Code: 28000-CTE Basic Skills Educator ♦ 5-12
28011	CTE Basic Skills Education: Service Learning	9-12	<p>CTBS/Service Learning is a vital part of the CTBS program. This component will help at-risk students make a smooth, successful transition from high school to the world of work and will allow students to earn an elective credit toward graduation requirements.</p>	$\frac{1}{2}$ to 2 <i>Max credit = 2</i>	

HIGH SCHOOL CAREER AND TECHNICAL SUPPLEMENTARY SERVICES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Career and Technical Supplementary Services require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Grade Level	Description	High School Credit Options*	License/credential Required**
29010	CTE Mentorship Education	9-12	<p>Career and technical students at risk or members of special population groups who require assistance to succeed in their educational programs are eligible for career and technical special needs programming.</p> <p>Services in career and technical education include student support in the learning process.</p>	<p>½ to 2</p> <p><i>Max credit = 2</i></p>	<p>License Code: 29000-CTE Teacher/Student Mentor ◆ 5-12</p>

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HIGH SCHOOL DIVERSIFIED OCCUPATIONS COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Diversified Occupations **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
25010	Diversified Occupations I	9-12	To provide students with pre-employment skills and labor market information. This course covers the following: career development, basic employment skills, job attainment, job survival, leadership and self-development, and personal employment skills.	½ or 1 <i>Max credit = 1</i>	License Code: 25000-Diversified Occupations ◆ 9-12
25020	Diversified Occupations II	10-12	To provide students with pre-employment skill and labor market information. This course covers the following: advanced employment skills, personal finance, preparing for advanced education, communication skills, and electronic employment programs.	½ or 1 <i>Max credit = 1</i>	
25999	Cooperative Work Experience	11-12 (see note)	Provides students with a regularly scheduled, supervised employment opportunity related to Diversified Occupations in order to develop and improve work skills. The employment must be preceded by, or concurrent with, classroom instruction related to the work experience, consistent with the student's occupational goals, and related to the Diversified Occupations program area. There shall be a training agreement among all partners to the work experience (school, employer, student, and parents/guardians) outlining the expectations of each party. The instructor shall also develop a specific training plan with the employer for each student placed. The training plan shall include provisions for assessment of student progress and for on-site visits by the instructor during the student's placement. Note: Students must be a minimum of 16 years old and may be paid a wage by the employer.	Minimum of ½ credit per semester, not to exceed 2 credits while in high school <i>Max credit = 2</i>	

* *High school curricular requirements are spelled out in NDCC 15.1-21-02 and High school unit - instructional time is NDCC 15.1-21-03. Maximum credit refers to the maximum units of credit a student may earn for a course over four years of high school. (Example: Band - a student may be enrolled in band all four years of high school -- earning a possible total of four units of credit.)*

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HIGH SCHOOL FAMILY AND CONSUMER SCIENCE COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Family and Consumer Science **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
09022	Family and Consumer Sciences I	9-12	<p>To introduce students to basic concepts in all areas of Family and Consumer Sciences. This course may include: availability of personal resources**; organization of resources to provide for needs; making consumer decisions; creation of personal living environment; developing satisfying interpersonal relationships; understanding and caring for children; meeting personal nutritional needs; managing food resources; maintaining good health; clothing and textile selection, care, and construction; contributing to satisfying and family life; career orientation and occupational information; work readiness skills; leadership development.</p> <p><i>*The ¼ credit option should be used only when this course is part of a rotation of courses designed to introduce students to new course options.</i></p> <p><i>**This course may include concepts of personal finance such as checkbook mechanics, saving for larger purchases, credit, earning power, taxation and paycheck withholdings, college costs, making and living within a budget, mortgages, retirement savings, and investments.</i></p>	<p>¼*, ½, or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 09025-Home Economics ◆ 5-12 or 9-12 OR 09035-CTE Family & Consumer Sciences ◆ 5-12 or 9-12 OR 09040-Family & Consumer Science ◆ 5-12 or 9-12</p>
09023	<p>Family and Consumer Sciences II</p> <p>◆ Prerequisite Family and Consumer Sciences I</p>	10-12	<p>To provide students with experiences in all areas of Family and Consumer Sciences at a more advanced level than in Family and Consumer Sciences I. The course may include: self-development; multiple roles of individuals in contemporary society; finances and economic interdependence**; housing to meet lifestyle and family goals; lifestyle and parenting decisions; family meal choices at home and away; influences of nutrition on health and disease; personal and family clothing needs; societal and environmental impacts of personal decisions; career information, exploration and planning; work readiness skills; leadership development.</p> <p><i>**This course may include concepts of personal finance such as checkbook mechanics, saving for larger purchases, credit, earning power, taxation and paycheck withholdings, college costs, making and living within a budget, mortgages, retirement savings, and investments.</i></p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	

HIGH SCHOOL FAMILY AND CONSUMER SCIENCE COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Family and Consumer Science **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
09024	Family and Consumer Sciences III ◆ Prerequisite Family and Consumer Sciences II	11-12	To provide specialized experiences that will enable advanced students to plan and prepare for present and future personal and family needs. Course content should expand on the content areas from Family and Consumer Sciences II and should be determined by the needs and interests of the students enrolled. Note: Unless student needs call for an additional comprehensive course at this level, it is recommended that in-depth semester courses described below be offered instead.	½ or 1 Max credit = 1	
09025	Independent Living	9-12*	To prepare students for responsibilities involved in becoming self-sufficient young adults preparing for life away from the parental home during or immediately following high school. Course content may include: living independently; supporting oneself; making financial decisions**; making choices about housing, nutrition and food, clothing, transportation, health and wellness; using time to achieve personal goals; finding balance in life; current issues that affect personal decisions; societal and environmental impacts of personal decisions; sources of support and assistance in the community; leadership development. <i>*It is recommended that enrollment of students below grade 10 be limited to students with special needs who must develop basic living skills, and that the instructional topics be adjusted accordingly.</i> <i>**This course may include concepts of personal finance such as checkbook mechanics, saving for larger purchases, credit, earning power, taxation and paycheck withholdings, college costs, making and living within a budget, mortgages, retirement savings, and investments.</i>	¼, ½, or 1 Max credit = 1	License Code: 09025-Home Economics ◆ 5-12 or 9-12 OR 09035-CTE Family & Consumer Sciences ◆ 5-12 or 9-12 OR 09040-Family & Consumer Science ◆ 5-12 or 9-12

HIGH SCHOOL FAMILY AND CONSUMER SCIENCE COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Family and Consumer Science require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
09026	Child Development	9-12	To increase students' knowledge of how children grow and develop, and to foster acquisition of skills that promote healthy development of the individual. Content may include: processes in individual development; cultural and ethnic differences and similarities in child care; how children learn; age-appropriate activities for children; family development and preparation for parenthood; prenatal development; changing relationships within the family; current issues relating to children and families; sources of support and assistance; related careers; leadership development.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	License Code: 09025-Home Economics ♦ 5-12 or 9-12 OR 09035-CTE Family & Consumer Sciences ♦ 5-12 or 9-12 OR 09040-Family & Consumer Science ♦ 5-12 or 9-12
09027	Clothing and Textiles I	9-12	This course introduces students to basic consumer skills regarding fabric, design, construction, and maintenance techniques. Instruction may include cost analysis, wardrobe planning, basic sewing and fiber terminology, equipment for hand and/or machine sewing, reading and using a pattern, and care and maintenance of fabrics and garments.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
09028	Consumer and Resource Management	9-12	To help students learn how to make intelligent choices in the use of resources in order to gain maximum personal and family satisfaction. Course content may include: interrelationships between the individual and the economy**; consumer behavior; consumer rights and responsibilities; evaluating consumer information; financial services; resource management techniques; consumer credit; developing financial plans to meet personal and family goals; financial security; societal and environmental impacts of decisions; current issues relating to consumerism and resource management; sources of consumer support and assistance; related careers; leadership development. <i>**This course may include concepts of personal finance such as checkbook mechanics, saving for larger purchases, credit, earning power, taxation and paycheck withholdings, college costs, making and living within a budget, mortgages, retirement savings, and investments.</i>	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	
09029	Clothing and Textiles II	9-12	This course provides students with knowledge and skills to identify and incorporate design details in garments or environmental textiles, assess and upgrade commercially produced patterns or products, and perform basic repairs and/or alterations. Lab experiences may include design and/or construction of one or more projects related to the concepts taught.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL FAMILY AND CONSUMER SCIENCE COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Family and Consumer Science **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
09030	Fashion and Textile Trends	9-12	This project-oriented course introduces students to historical, current and futuristic aspects of the fashion industry including use of color and design principles, identifying fashions and fads, merchandising, apparel and environmental product production, entrepreneurship, and careers in the fashion industry. In this course, science, mathematics, management, communication skills, and team work are reinforced.	½ or 1 Max credit = 1	License Code: 09025-Home Economics ◆ 5-12 or 9-12 OR 09035-CTE Family & Consumer Sciences ◆ 5-12 or 9-12 OR 09040-Family & Consumer Science ◆ 5-12 or 9-12
09037	Current Topics in Textiles and Apparel	9-12	Students will explore areas of interest related to apparel, textiles and home furnishings. Students may expand their interest and/or expertise in a clothing or textiles area, to explore a topic in greater detail, or to develop more advanced skills.	½ or 1 Max credit = 1	
09041	Teaching Professional (CTE)	9-12	Teaching Professional (CTE) courses introduce students to the principles underlying teaching and learning, the responsibilities and duties of teachers, and the techniques of imparting knowledge and information. These courses typically expose students to and train them in classroom management, student behavior, leadership and human relations skills, assessment of student progress, teaching strategies, and various career opportunities in the field of education.	½ or 1 Max credit = 2	
09042	Educational Methodology	9-12	Educational Methodology (CTE) courses prepare students to teach and guide others. These courses typically provide opportunities for students to develop their own teaching objectives, to design lesson plans, and to experience teaching in a controlled environment. Students examine and practice teaching strategies, learning styles, time management and planning strategies, presentations and questioning skills, classroom management, and evaluation techniques.	½ or 1 Max credit = 2	

HIGH SCHOOL FAMILY AND CONSUMER SCIENCE COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Family and Consumer Science **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
09129	Individual and Family Health	9-12	<p>To help students develop a holistic approach to “good health” and learn ways to maintain optimum levels of wellness. Course content may include: characteristics of a healthy person; maintenance of health (including nutrition, physical fitness, personal hygiene, accident prevention, protection against disease, effects of alcohol, tobacco, and other drugs, coping skills, “preventive maintenance”, home safety and sanitation, athletics); preparing for emergency situations; home care of the sick; pregnancy, community health services and programs; selecting and using health care products and services; current issues related to personal, family, and world health; related careers; leadership development.</p> <p>Note: This course can be taught for CTE credit only. For Physical Education credit, Health can be found under Physical Education and Health. For Science credit, Health can be found under Science. This course may also satisfy the health requirement for graduation.</p>	<p>$\frac{1}{4}$, $\frac{1}{2}$, or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 09025-Home Economics ◆ 5-12 or 9-12 OR 09035-CTE Family & Consumer Sciences ◆ 5-12 or 9-12 OR 09040-Family & Consumer Science ◆ 5-12 or 9-12</p>
09130	Parenting	9-12*	<p>To explore the parenting roles that most adults will assume at some time during their lives. Content may include: assessing readiness for parenthood; role clarification-mothers, fathers, and others; the finances of parenting; providing an environment for optimum child growth and development; family communication; stress and crisis in the family; special parenting situations — finding and assessing child care, the handicapped child, foster parenting, blended families, single-parent families, parenting as grandparents; current issues impacting on parents, children, and society; sources of support and assistance for parents and families; related careers; leadership development.</p> <p><i>*It is recommended that enrollment of students below grade 10 be limited to those with immediate need, such as pregnant or parenting teens.</i></p>	<p>$\frac{1}{4}$, $\frac{1}{2}$, or 1</p> <p><i>Max credit = 1</i></p>	
09131	Nutrition and Food Preparation I	9-12	<p>This introductory course will prepare students to make critical decisions about food that will contribute to their health and well-being of themselves, their families and their communities. The course may include basic food selection and storage, accurate and appropriate measuring, basic cooking terms and techniques, and working safely in the kitchen. Students will learn how to read food labels and how to apply them to their eating habits and their dietary needs. Lab experiences will focus on preparing and tasting a variety of foods.</p>	<p>$\frac{1}{2}$ or 1</p> <p><i>Max credit = 1</i></p>	

HIGH SCHOOL FAMILY AND CONSUMER SCIENCE COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Family and Consumer Science **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
09135	Nutrition and Food Preparation II	9-12	This course will examine the nutritional needs of the individual, emphasizing the relationship of diet to health. Enhanced cooking terms and techniques, kitchen and meal management, time and resource management and food preparation techniques will be explored. This course may include food trends and lifestyle options such as organic foods, vegetarian diets, and convenience foods, eating out, lactose and gluten intolerance and nutrition supplements. Lab experiences will align with and enhance the course content using a variety of foods and preparation methods.	½ or 1 <i>Max credit = 1</i>	License Code: 09025-Home Economics ◆ 5-12 or 9-12 OR 09035-CTE Family & Consumer Sciences ◆ 5-12 or 9-12 OR 09040-Family & Consumer Science ◆ 5-12 or 9-12
09136	Cultures and Cuisine	9-12	This course will explore cultures in various parts of the world in relation to ethnic foods, food supply, preparation methods and traditions. Current, historical and futurist issues related to food patterns and the global society will be an integral component of the course which may include such topics as famine, contamination, religious rites and practices, celebrations and cultural cuisine. Labs will combine the familiar with the exotic to create foods of the world	½ or 1 <i>Max credit = 1</i>	
09137	Nutrition and Fitness	9-12	This course is designed for all students concerned about nutrition and fitness and will explore such topics as sports nutrition in relation to performance, decision making and personal goal setting and stress management in relation to personal needs. Meal planning, fast foods, restaurant dining, family practices, genetically altered foods, weight loss and gain and current nutrition guidelines may be components of this course. Students will learn to read and interpret labels in relation to their dietary needs. Personal wellness and a healthy lifestyle will be the basis for lab experiences.	½ or 1 <i>Max credit = 1</i>	
09138	Food Science and Technology	9-12	This course will examine food and the food industry along the producer to table continuum. Topics that may be addressed include production, processing, preparation, preservation, and packaging principles. This course may integrate the application of basic food science principles, government regulations, emerging trends, sustainability, biotechnology, packaging and marketing, transportation and distribution, and career opportunities as related to the world of food science and technology. Lab experiences can demonstrate how food technology affects the consumer.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL FAMILY AND CONSUMER SCIENCE COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Family and Consumer Science **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
09132	Family Living (CTE)	9-12	<p>To assist students in preparing for adult roles that support and strengthen family life. The course may include: lifestyle and role options for adult life; forms and functions of the family; processes in making and evaluating decisions; readiness for adult roles and responsibilities, including marriage and parenthood; customs and laws relating to marriage and family life; emergency preparedness; coping with crises affecting family life; the family throughout the life cycle; interactions between family and community; sources of support and assistance for individuals and families; current issues related to home and family life; related careers; leadership development.</p> <p>Note: This course can be taught for CTE credit only. For Physical Education credit, Family Living can be found under Physical Education and Health.</p>	<p>¼, ½, or 1</p> <p>Max credit = 1</p>	<p>License Code: 09025-Home Economics ◆ 5-12 or 9-12</p> <p>OR</p> <p>09035-CTE Family & Consumer Sciences ◆ 5-12 or 9-12</p> <p>OR</p> <p>09040-Family & Consumer Science ◆ 5-12 or 9-12</p>
09133	Housing and Living Environments	9-12	<p>To explore the impacts housing has on families and the variety of ways in which individuals and families meet their needs for shelter. Content may include: the meaning of home; determining personal housing needs; selecting housing to meet needs; legal and financial aspects of housing; housing for individuals with special needs; the home as work site; personal expression through home decoration; household equipment selection, care, and use; maintaining safe environment; home repairs and improvements; energy and resource consumption and conservation; technology for home and family life; societal and environmental impacts of decisions; sources of support and assistance for individuals and families; current issues related to family housing; related careers; leadership development.</p>	<p>¼, ½, or 1</p> <p>Max credit = 1</p>	
09140	Individual Family and Consumer Sciences Studies	9-12	<p>To provide students in Family and Consumer Sciences additional opportunity to expand their knowledge and explore the fields of home and family life, related careers, leadership, citizenship, and personal development on an individual basis. Instructor and student will cooperatively develop specific goals and learning activities to achieve these goals.</p>	<p>¼, ½, or 1</p> <p>Max credit = 1</p>	

HIGH SCHOOL FAMILY AND CONSUMER SCIENCE COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Family and Consumer Science **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
09211	Early Childhood Care and Education Services	10-12	To prepare the student for employment in child care centers under the supervision of a director or for self-employment in home-based child care. Content may include: opportunities in child care occupations; career maturity skills; child care facilities; stages of child growth and development; planning for children's needs; protecting the child's health and safety; children with special needs; working with parents; working with other child care related agencies; current issues in child care; community work experience and/or laboratory simulation; balancing work and family; leadership development.	1 or 2 <i>Max credit = 2</i>	License Code: 09025-Home Economics ◆ 5-12 or 9-12 OR 09035-CTE Family & Consumer Sciences ◆ 5-12 or 9-12 OR 09040-Family & Consumer Science ◆ 5-12 or 9-12
09212	Clothing and Textile Services	11-12	To prepare the student for employment in occupations concerned with the design, manufacture, or care of clothing and other textiles. Content may include: opportunities in clothing and textile occupations; career maturity skills; equipment and facilities; developing skill in construction and use of equipment; visual design; color; textile characteristics and implications for use; safety; working with customers; financial management; current issues in clothing and textiles; community work experience and/or laboratory simulation; balancing work and family; leadership development.	1 or 2 <i>Max credit = 2</i>	
09213	Food Service/ Culinary Arts	10-12	To prepare students for occupations concerned with the preparation and service of food. Content may include: opportunities in the food service industry; career maturity skills; legislation affecting the industry and its workers; safety and sanitation; organization of food preparation and service areas; developing skill in quantity food preparation; menu planning and recipe selection; food purchasing; financial management; current issues in food service; community work experience and/or laboratory simulation; balancing work and family; leadership development.	1 or 2 <i>Max credit = 2</i>	
09214	ProStart I	10-12	ProStart I provides an opportunity for the students with an interest in food to learn about culinary skills and entering the culinary/food service industry by introducing students into the world of professional cooking. Training in safety and sanitation (ServSafe), kitchen basics, food service equipment, nutrition, cost control, accounting, marketing, and customer service relations are taught. Lab experiences will be provided throughout in order to reinforce these skills. The ProStart Program is a two-year, industry-based program that is approved by the National Restaurant Association.	1 or 2 <i>Max credit = 2</i>	

HIGH SCHOOL FAMILY AND CONSUMER SCIENCE COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Family and Consumer Science **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
09215	ProStart II	10-12	ProStart II provides a further opportunity for the students with an interest in food to learn about culinary skills and entering the culinary/food service industry by introducing students into the world of professional cooking. Training continues in safety and sanitation (ServSafe), kitchen basics, food service equipment, nutrition, cost control, accounting, marketing, and customer service relations are taught. Lab experiences will be provided throughout in order to reinforce these skills. The ProStart Program is a two-year, industry-based program that is approved by the National Restaurant Association.	1 or 2 <i>Max credit = 2</i>	License Code: 09040-Family & Consumer Science ◆ 5-12 or 9-12
09250	Occupational Exploration	10-12	To allow students with special needs to develop basic employability skills and explore several occupational clusters in preparation for moving into a more specific training program. Course content may include: opportunities in Family and Consumer Sciences occupations; career maturity skills; employability assessment; career exploration and job shadowing; leadership development.	½ or 1 <i>Max credit = 1</i>	
09299	Cooperative Work Experience	11-12 (see note)	Provides students with a regularly scheduled, supervised employment opportunity related to Family and Consumer Sciences Occupations in order to develop and improve work skills. The employment must be preceded by, or concurrent with, classroom instruction related to the work experience, consistent with the student's occupational goals, and related to the Family and Consumer Sciences program area. There shall be a training agreement among all partners to the work experience (school, employer, student, and parents/guardians) outlining the expectations of each party. The instructor shall also develop a specific training plan with the employer for each student placed. The training plan shall include provisions for assessment of student progress and for on-site visits by the instructor during the student's placement. Note: Students must be a minimum of 16 years old and may be paid a wage by the employer.	Maximum of ½ credit per semester, not to exceed 4 credits while in high school <i>Max credit = 4</i>	License Code: 09025-Home Economics ◆ 5-12 or 9-12 OR 09035-CTE Family & Consumer Sciences ◆ 5-12 or 9-12 OR 09040-Family & Consumer Science ◆ 5-12 or 9-12

* *High school curricular requirements are spelled out in NDCC 15.1-21-02 and High school unit - instructional time is NDCC 15.1-21-03. Maximum credit refers to the maximum units of credit a student may earn for a course over four years of high school. (Example: Band - a student 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).*

Credentials are obtained from the Department of Public Instruction (DPI) and are issued to individuals holding a current teaching license.

HIGH SCHOOL HEALTH SCIENCES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Health Sciences **require 150 contact hours** per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
07021	Sign Language I	9-12	This sequential program begins with the basic knowledge of American Sign Language finger spelling, sign vocabulary, basic grammar and basic conversational skills. Fundamental aspects of the deaf culture and the deaf community are incorporated.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 07020-Sign Language ◆ 9-12
07022	Sign Language II	9-12	Sign Language II will increase understanding of American Sign Language and its cultural features. Sign language vocabulary is increased. Continuation of Sign Language I with greater emphasis on expressive and receptive signing skills. (Pre-requisite, Sign Language I)	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
07023	Sign Language III	10-12	Continued study of the American Sign Language and its syntax, grammar and cultural features. Opportunities to develop competency and fluency in use of American Sign Language. (Pre-requisite Sign Language II)	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
07024	Sign Language IV	10-12	Further study of the American Sign Language, its syntax, grammar and cultural features. Advanced skill development in the use of American Sign Language. (Pre-requisite Sign Language III)	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
07025	Sign Language Cooperative Education	11-12	Provides students with a regularly scheduled, supervised employment opportunity related to sign language occupations in order to develop and improve work skills. The employment must be preceded by or concurrent with, classroom instruction related to the work experience. A training agreement is to be developed between work experience partners outlining the expectations of the experience. The training plan shall include provisions for assessment of student progress and or on-site visits by the instructor during student placement.	1 <i>Max credit = 1</i>	
07031	Nurse Assistant Foundation	9-12	The Nurse Assistant Foundation course offers classroom instruction and the necessary skills practice to those preparing for employment as a certified nursing assistant in a skilled nursing facility, acute care or home health care. This course does not require supervised clinical practice hours, but will provide necessary curriculum and supervised skills training to challenge the state CNA board exam provided by the North Dakota Board of Nursing to become a certified CNA	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
07032	Nurse Assistant	10-12	The Nursing Assistant Training program offers classroom instruction and clinical practice to those preparing for employment as a certified nursing assistant in a skilled nursing facility, acute care or home health care. This program includes supervised practical training and clinical practice as required by the North Dakota Board of Nursing. A certificate is issued upon completion of the class. Students also can take the state CNA board exam to acquire state certification.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL HEALTH SCIENCES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Health Sciences **require 150 contact hours** per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
07033	Health Science I	9-12	The Health Science course is an introduction course to subject matter that pertains to medically related careers. This introduction course is to help students interested in the medical field in determining if a medical career is appropriate for their interests and capabilities. This course will cover subject matter such as History of Medicine, Health Care Systems, Careers in Healthcare and Career Exploration, Personal Qualities and Employability Skills, CPR/First Aid training, Infection Control, Introduction to Anatomy and Physiology and Disease Processes, Safety in Healthcare, Legal and Ethical in Healthcare, Fundamentals of Nutrition, and Growth and Development of the Human Body.	1 or 2 <i>Max credit = 2</i>	License Code: 07033-Health Careers ◆ 9-12
07034	Prevention/Care of Athletic Injuries	9-12	Provides the student with a background in athletic training and basic health care. The course emphasizes injury prevention, first responder management daily for athletic injuries and skills to fulfill the activities of daily living. Students will be able in one semester to complete the requirements to become a student athletic trainer.	½ or 1 <i>Max credit = 1</i>	
07035	Health Science II ◆ Prerequisite: Health Science I	10-12	The Health Science II course is available to students who have taken Health Science I and wish to further investigate their interest in the medical field. This course will allow students to study subject matter covered in Health Science I further and in-depth. Students will expand their skills and knowledge in specific areas of interest as well as have the opportunity for job shadowing experiences in areas of their interest. Emphasis on academics, professional development, leadership, and organizational skills are discussed and practiced throughout this course.	1 or 2 <i>Max credit = 2</i>	
07036	Medical Terminology	9-12	This class is designed to introduce students to the health information technology field. Students will learn prefixes, suffixes and root words for medical terms. This will include meanings, spellings and pronunciations. Emphasis is on building a working medical vocabulary based on body systems. Anatomy and physiology of major organs, pathological conditions, laboratory studies, clinical procedures and abbreviations are studied for each body system. The student will also learn medical terminology as it relates to pathology, diagnostic, surgical, clinical and laboratory procedures, and common abbreviations and acronyms by body systems.	½ or 1 <i>Max credit = 1</i>	License Code: 07033-Health Careers ◆ 10-12

HIGH SCHOOL HEALTH SCIENCES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Health Sciences **require 150 contact hours** per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
07040	Medical Records	9-12	To prepare students for employment as medical records clerks. The program covers a wide range of necessary skills including answering the phone, greeting patients, recording, and filing patient medical records, filling out insurance forms, handling correspondence, and scheduling appointments. The student will also gain an understanding of medical terminology and hospital or clinic procedures including making arrangements for hospital admissions and laboratory services, handling billing and bookkeeping.	1 or 2 <i>Max credit = 2</i>	License Code: 07040-Medical Records ◆ 9-12
07044	Emergency Medical Services Foundation	9-12	The Emergency Medical Services Foundations course places a special emphasis on the knowledge and skills needed in medical emergencies. Topics typically include clearing airway obstructions, controlling bleeding, bandaging, methods for lifting and transporting injured persons, simple spinal immobilization, infection control, stabilizing fractures, and responding to cardiac arrest. The courses may also cover the legal and ethical responsibilities involved in dealing with medical emergencies. These courses may better prepare students to obtain certification such as: Emergency Medical Response (EMR), CPR, First Aid, Incident Command System (ICS), and Wilderness First Responder.	½ or 1 <i>Max credit = 1</i>	License Code: 07045-Emergency Medical Services ◆ 9-12
07045	Emergency Medical Services	9-12	Students enrolling in this course will complete training in CPR for Health Care Providers and the National Curriculum Emergency Medical Technician – Basic Course. The course prepares the student to respond to a wide range of emergencies such as heart attacks, auto accidents, and diabetic problems. Students participate in extensive “hands-on” practical sessions using modern prehospital care equipment under the instruction of paramedics from the local paramedic service. Students also receive exposure to a wide array of health careers using professional guest speakers. Upon completion of the course, students are eligible for ND State licensure testing and they will have extensive knowledge and experience to aid them in choosing a health care career.	1 or 2 <i>Max credit = 2</i>	

HIGH SCHOOL HEALTH SCIENCES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Health Sciences **require 150 contact hours** per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
07046	Advanced EMS Prerequisite: Emergency Medical Services	10-12	The Advanced Emergency Medical Technician (AEMT) program prepares students to provide basic and limited advanced emergency medical care and transportation for patients who access the emergency medical system. This individual possesses the basic knowledge and skills necessary to provide patient care and transportation. Advanced Emergency Medical Technicians function as part of the comprehensive EMS response, under medical oversight. AEMT perform interventions with the basic and advanced equipment typically found on an ambulance. The AEMT is a link from the scene to the emergency health care system. Advanced skills taught in the course include IV placement and maintenance, and introduction to cardiac monitoring.	1 or 2 Max credit = 2	License Code: 07045-Emergency Medical Services ◆ 9-12
07050	Medical Diagnostic Technology 1a: Introduction	9-12	Students will explore different diagnostic technology used and essential body systems and fluids that need to be understood to make an accurate diagnosis of a disease, condition, or illness.		
07999	Health Education Supervised Occupational Experience	11-12	Provides students with a regularly scheduled, supervised employment opportunity related to Health Career Occupations in order to develop and improve work skills. The employment must be preceded by, or concurrent with, classroom instruction related to the work experience, consistent with the student's occupational goals, and related to the health program area. There shall be a training agreement among all partners to the work experience (school, employer, student, and parents/guardians) outlining the expectations of each party. The instructor shall also develop a specific training plan with the employer for each student placed. The training plan shall include provisions for assessment of student progress and for on-site visits by the instructor during the student's placement. NOTE: Students must be at least 16 years old and may be paid a wage by the employer.	Maximum of ½ credit per semester, not to exceed 4 credits while in high school. Max credit = 4	License Code: 07033-Health Careers ◆ 9-12

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**HIGH SCHOOL OF BUSINESS PROGRAM COURSE CODES
GRADES 9-12**

These courses are ONLY for those instructors who have completed the High School of Business National Certification.

*High school (grades 9-12) courses in High School of Business **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
04311	HSB - Leadership for Business	9	<i>Leadership</i> , a project-based leadership course, develops student understanding and skills in such areas as communication skills, emotional intelligence, operations, and professional development. Students acquire an understanding and appreciation of the need for leadership skills. To encourage immediate implementation of leadership skills, <i>Leadership</i> utilizes an on-going service-learning project for course delivery and reinforcement. The course content is sequenced for students to identify, plan, implement, and evaluate a service-learning project based on the needs of their community/school. Throughout the course, students are presented problem-solving situations for which they must apply academic and critical-thinking skills. Formal reflection is an on-going component of the course.	½ <i>Max credit = ½</i>	License Code: 03020-Business Ed/General Business ♦ K-12, 1-12, 5-12, or 9-12 OR 03025-CTE Business Education ♦ K-12, 1-12, 5-12, or 9-12 OR 04006-CTE Marketing Education ♦ 5-12 or 9-12 AND 04311-High School of Business-Leadership for Business ♦ 5-12
04312	HSB - Wealth Management	9-12	<i>Wealth Management</i> is an accelerated financial literacy course in which High School of Business™ students actively learn to manage and build personal wealth. Students develop an understanding of the relationship between economics and wealth management, set personal and financial goals, establish a personal budget, manage personal finances, explore methods of generating income, determine insurance needs, and acquire investing skills and knowledge. To demonstrate their mastery of such financial literacy skills and knowledge, students engage in an intensive project to educate those around them (e.g., fellow high school students, adult members of the community, etc.) about wealth management, its importance, and its impact upon a person's overall success in life. Suggested Pre-requisite: Leadership for Business.	½ <i>Max credit = ½</i>	License Code: 03020-Business Ed/General Business ♦ K-12, 1-12, 5-12, or 9-12 OR 03025-CTE Business Education ♦ K-12, 1-12, 5-12, or 9-12 OR 04006-CTE Marketing Education ♦ 5-12 or 9-12 AND 04312-High School of Business-Wealth Management ♦ 5-12

**HIGH SCHOOL OF BUSINESS PROGRAM COURSE CODES
GRADES 9-12**

These courses are ONLY for those instructors who have completed the High School of Business National Certification.

High school (grades 9-12) courses in High School of Business require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
04313	HSB - Principles of Business	9-12	<i>Principles of Business</i> , a project-based business course, develops student understanding and skills in such areas as business law, economics, financial analysis, human resources management, information management, marketing, operations, and strategic management. Through the use of three projects, students acquire an understanding and appreciation of the business world. They develop a business analysis report, conduct an environmental scan of the local business community, and investigate business activities. Current technology will be used to acquire information and to complete the projects. Throughout the course, students are presented problem-solving situations for which they must apply academic and critical-thinking skills. Formal reflection is an on-going component of the course. Suggested Pre-requisite: Leadership for Business and Wealth Management.	½ <i>Max credit = ½</i>	License Code: 03020-Business Ed/General Business ♦ K-12, 1-12, 5-12, or 9-12 OR 03025-CTE Business Education ♦ K-12, 1-12, 5-12, or 9-12 OR 04006-CTE Marketing Education ♦ 5-12 or 9-12 AND 04313-High School of Business-Principles of Business ♦ 5-12
04314	HSB - Business Economics	9-12	In <i>Business Economics</i> , a project-based business course, students expand their understanding that businesses are influenced by external factors that are often beyond their control. Consumer spending, government policies, economic conditions, legal issues, and global competition are addressed through practical, current applications to everyday societal and business life. Students develop their knowledge and skills in such areas as economics, entrepreneurship, and professional development.	½ <i>Max credit = ½</i>	License Code: 03020-Business Ed/General Business ♦ K-12, 1-12, 5-12, or 9-12 OR 03025-CTE Business Education ♦ K-12, 1-12, 5-12, or 9-12 OR 04006-CTE Marketing Education ♦ 5-12 or 9-12 AND 04314-High School of Business-Business Economics ♦ 5-12

HIGH SCHOOL OF BUSINESS PROGRAM COURSE CODES
GRADES 9-12

These courses are ONLY for those instructors who have completed the High School of Business National Certification.

*High school (grades 9-12) courses in High School of Business **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
04315	HSB - Principles of Marketing	10-12	<i>Principles of Marketing</i> is a project-based business course that develops student understanding and skills in the functional areas of channel management, marketing-information management, market planning, pricing, product/service management, promotion, and selling. Students acquire an understanding and appreciation of each of the marketing activities.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 03020-Business Ed/General Business ♦ K-12, 1-12, 5-12, or 9-12 OR 03025-CTE Business Education ♦ K-12, 1-12, 5-12, or 9-12 OR 04006-CTE Marketing Education ♦ 5-12 or 9-12 AND 04315-High School of Business-Principles of Marketing ♦ 5-12
04316	HSB - Principles of Finance	10-12	<i>Principles of Finance</i> furthers student understanding of two specific business activities—accounting and finance—that were introduced in an earlier <i>High School of Business</i> course, <i>Principles of Business</i> . Through team activities and a semester-long corporate investment project, students make connections between accounting and finance. Students acquire an understanding of financial statements, calculate financial ratios, and make corporate financial management decisions based on their analysis of that financial data. In addition, students apply the concepts of operating and overhead costs, internal accounting controls, and budgets to their class business. Lastly, cost/benefit analysis is introduced as an element of financial planning and decision-making.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 03020-Business Ed/General Business ♦ K-12, 1-12, 5-12, or 9-12 OR 03025-CTE Business Education ♦ K-12, 1-12, 5-12, or 9-12 OR 04006-CTE Marketing Education ♦ 5-12 or 9-12 AND 04316-High School of Business-Principles of Finance ♦ 5-12

**HIGH SCHOOL OF BUSINESS PROGRAM COURSE CODES
GRADES 9-12**

These courses are ONLY for those instructors who have completed the High School of Business National Certification.

High school (grades 9-12) courses in High School of Business require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Grade Levels	Description	High School Credit Options*	License/credential Required**
04317	HSB - Principles of Management	11-12	<i>Principles of Management</i> furthers student understanding of management that was introduced in an earlier <i>High School of Business™</i> course, <i>Principles of Business</i> . Through individual and team activities and a semester-long project, students make connections between management and business success. Students acquire an understanding of legal and ethical issues associated with management; initiate, plan, implement and control, and close a project; motivate team members; delegate work; develop a chain of command; coordinate work efforts; and interpret statistical findings.	½ <i>Max credit = ½</i>	License Code: 03020-Business Ed/General Business ♦ K-12, 1-12, 5-12, or 9-12 OR 03025-CTE Business Education ♦ K-12, 1-12, 5-12, or 9-12 OR 04006-CTE Marketing Education ♦ 5-12 or 9-12 AND 04317-High School of Business-Principles of Management ♦ 5-12
04318	HSB - Business Strategies	12	<i>Business Strategies</i> , which is the capstone course for the <i>High School of Business™</i> program, develops student understanding and skills in such areas as business law, entrepreneurship, financial analysis, human resources management, and strategic management. By planning, organizing, staffing, directing, leading, and controlling business activities, students acquire a realistic understanding of what is required to open and successfully run a business. They conduct situational, market, and competitive analyses; select a target market; develop a business plan; recruit, interview, select, and hire staff; supervise staff; control use of resources; and evaluate the results of the business effort. Throughout the course, students make decisions and use problem-solving skills. Formal reflection is an on-going component of the course.	½ <i>Max credit = ½</i>	License Code: 03020-Business Ed/General Business ♦ K-12, 1-12, 5-12, or 9-12 OR 03025-CTE Business Education ♦ K-12, 1-12, 5-12, or 9-12 OR 04006-CTE Marketing Education ♦ 5-12 or 9-12 AND 04318-High School of Business-Business Strategies ♦ 5-12

* *High school curricular requirements are spelled out in NDCC 15.1-21-02 and High school unit - instructional time is NDCC 15.1-21-03. Maximum credit refers to the maximum units of credit a student may earn for a course over four years of high school. (Example: Band - a student 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).*

Credentials are obtained from the Department of Public Instruction (DPI) and are issued to individuals holding a current teaching license.

HIGH SCHOOL INFORMATION TECHNOLOGY COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Information Technology **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
27101	Introduction to Information Technology	9-12	<p>An exploratory level course that provides an exposure to careers and issues in information technology. Students will develop SCAN skills including teamwork, communication, entrepreneurship, and personal management. Students will also gain hands-on experience in three major IT areas including:</p> <ul style="list-style-type: none"> • Hardware and Software: Safety and tools, numbering systems and basic electricity, operating systems, troubleshooting, etc. • Networking: LAN fundamentals, peer-to-peer networking, IP addressing, troubleshooting, etc. • Programming/Interactive-media: Visual Basic and HTML basics 	<p>$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i></p>	<p>License Code: 27101-CTE Information Technology ◆ 5-12</p>
27102	Computer Software Applications	9-12	<p>Semester modules in computer applications may include a broad-based overview of office suites or skills leading to high-level competencies in spreadsheets, databases, presentations, desktop publishing, etc. Students will gain skills at the proficient or expert level in office suite software. Successful attainment of competencies within each office suite prepares students for industry certification, such as MOUS (Microsoft Office User Specialist).</p>	<p>$\frac{1}{2}$, 1, or 2 <i>Max credit = 2</i></p>	<p>License Code: 27102-CTE Computer Software ◆ 5-12</p>
27111	Internet of Things (IoT) Fundamentals	9-12	<p>Internet of Things (IoT) Fundamentals provides students with a comprehensive understanding of the Internet of Things (IoT). It develops foundational skills using hands-on lab activities that stimulate the students in applying creative problem-solving and rapid prototyping in the interdisciplinary domain of electronics, networking, security, data analytics, and business. Outcoming students will be able to ideate, design, prototype and present an IoT solution for an identified business or society need.</p>	<p>$\frac{1}{2}$ or 1 <i>Max credit = 1</i></p>	<p>License Code: 27111-CTE Internet of Things (IoT) Fundamentals ◆ 5-12</p>
27120	Introduction to Programming Languages	9-12	<p>This course will provide students with a solid foundation for understanding the fundamental concepts of programming languages. It will include coverage of concepts and constructs from languages like C#, JAVA™, JavaScript™, Perl, PHP, Python, Ruby, XHTML, XSLT, and JSP.</p>	<p>$\frac{1}{2}$ or 1 <i>Max credit = 1</i></p>	<p>License Code: 27120-CTE Introduction to Programming Languages ◆ 5-12</p>

HIGH SCHOOL INFORMATION TECHNOLOGY COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Information Technology **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
27121	<p>Integrated Mathematics for Computer Science/Information Technology (Career and Technical Education Information Technology)</p> <p>◆ Prerequisite: Algebra I and Computer Science Programming</p>	9-12	<p>This course is a computer science with a major focus on math. Course topics are divided into six areas: sets, functions, and relations; basic logic; proof techniques; counting basics; graphs and trees; and discrete probability. Mathematical topics are interwoven with computer science applications to enhance the student's understanding of the introduced mathematics, while students develop the ability to see computational problems from a mathematical perspective. Topics also include 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. Algorithms in both mathematics and computer science contexts will be explored in depth.</p> <p>Note: This course can be taught for Career and Technical Education – Information Technology credit only. For Computer Science credit, Integrated Mathematics for Computer Science/Information Technology can be found under Computer Science. For Mathematics credit, Integrated Mathematics for Computer Science/Information can be found under Mathematics.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 27121-Integrated Mathematics for Computer Science/Information Technology ◆ 9-12</p>
27122	<p>Programming Essentials-Visual Basics</p>	9-12	<p>Basic programming concepts are presented which are transferable to other programming languages. Foundational concepts and fundamentals of computer programming including logic, design, coding, structure, and controls are addressed. Careers in programming are explored and students are provided with opportunities to increase their communication, teamwork, and critical thinking skills. Business projects are used to show how programming skills are used in the business world.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 27122-CTE Programming Essentials-Visual Basics ◆ 9-12</p>
27123	<p>Programming Essentials-Python</p>	9-12	<p>The aim of the course is to familiarize the student with general computer programming concepts like conditional execution, loops, Python programming language syntax, semantics, and the runtime environment, as well as with general coding techniques and object-oriented programming.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 27123-CTE Programming Essentials-Python ◆ 9-12</p>

HIGH SCHOOL INFORMATION TECHNOLOGY COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Information Technology **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
27124	Programming Essentials – C++	9-12	<p>This course teaches the basics of programming in the C++ programming language, as well as the fundamental concepts and techniques used in object-oriented programming. The course begins with the universal basics, without relying on object concepts, then gradually extends to advanced concepts that are encountered using the objective approach.</p> <p>This course focuses on the following:</p> <ul style="list-style-type: none"> • Describe the universal concepts of computer programming. • Use the syntax, semantics, and basic data types of the C++ language. • Resolve typical implementation problems using standard C++ language libraries. 	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 27124-CTE Programming Essentials-C++ ◆ 9-12</p>
27125	Fundamentals of JAVA Programming	9-12	<p>The Fundamentals of JAVA Programming Language course provides a conceptual understanding of Object-Oriented programming. The course also teaches students how to use JAVA's Conditional Control Structures, Loop Structures and Strings, Classes and Object-Oriented Development, Inheritance and Polymorphism, Arrays, GUIs and Event-Driven Programming.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 27125-Fundamentals of JAVA Programming ◆ 9-12</p>
27127	Advanced JAVA Programming	9-12	<p>The Advanced JAVA Programming course will present concepts similarly covered by Advanced Placement Computer Science and is comparable to an introductory sequence of courses for computer science majors offered in college and university computer science departments. Students completing the course will be able to design and implement computer-based solutions to problems in several application areas; learn, organize, and process well-known algorithms and data structures; be able to develop and select appropriate algorithms and data structures to demonstrate problem solving; design strategies and methodologies; analyze potential solutions; and understand the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language, representing proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. Students will be able to code fluently in a well-structured fashion using the programming language JAVA and be able to read and understand a large program and a description of the design and development process leading to such a program.</p> <p>Note: This course can be taught for Career and Technical Education – Information Technology credit only. For Mathematics credit, Advanced JAVA Programming can be found under Mathematics.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 27127-Advanced JAVA Programming ◆ 9-12</p>

HIGH SCHOOL INFORMATION TECHNOLOGY COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Information Technology **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
27128	Mobile Applications Development	9-12	This course will introduce students to mobile application development and management using a variety of commercial and open source software. Topics to be included in the course are: (1) Installation and modification of application; (2) Code modification; (3) Design and implementation; (4) Database systems management; (5) Security; and (6) Customer Service.	½ or 1 <i>Max credit = 1</i>	License Code: 27128-Mobile Applications Development ◆ 9-12
27130	Computer Gaming and Design	9-12	Computer Gaming and Design courses prepare students to design computer games by studying design, animation, artistic concepts, digital imaging, coding, scripting, multimedia production, and game play strategies. Advanced course topics include, but are not limited to, level design, environment and 3D modeling, scene and set design, motion capture, and texture mapping.	½ or 1 <i>Max credit = 1</i>	License Code: 27130-CTE Computer Gaming and Design ◆ 5-12
27170	Introduction to Web Design	9-12	The Web Design course is an introductory standards-based course on Web Design. The course includes learning experiences in basic HTML, modern web features including Cascading Style Sheets (CSS) and interactivity, web standards and accessibility, creation of web media, and planning, development, publishing, and evaluation of web sites. The course is based upon the ISTE's National Educational Technology Standards for Students (NET-S), 21 st Century Skills, and the ACM Model Curriculum for K-12 Computer Science.	½ or 1 <i>Max credit = 1</i>	License Code: 27170-Introduction to Web Design ◆ 9-12
27219	Computer Hardware and Operating Systems (A+)	9-12	An introductory level course that focuses on essential hardware and operating system competencies for an entry-level PC service technician. Students will demonstrate basic knowledge of installing, configuring, upgrading, troubleshooting, and repairing microcomputer systems and operating systems. Work-based strategies appropriate for this course. Computer Hardware related careers are explored and students are provided with opportunities to increase their communication, teamwork, and critical thinking skills. Students completing the full year program will be prepared for computer industry certification, such as CompTia's A+ certification exam or IC3 certification. (Possible curriculum: ExplorNet, HP/Cisco Sponsored IT Essentials Part 1, Aries, Computer Prep, Element K, etc.)	½, 1, or 2 <i>Max credit = 2</i>	License Code: 27219-Computer Hardware and Operating Systems (A+) ◆ 9-12

HIGH SCHOOL INFORMATION TECHNOLOGY COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Information Technology **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
27220	IT Essentials 2	9-12	<p>This course introduces and extends the knowledge of operating systems, the benefits of networking, and types of networks. The physical components of a network are reviewed, including the NIC, types of media, and networking devices that provide Internet connections. The concepts covered in this course include TCP/IP networking, IP addressing, name resolution, and protocols. The importance of a hardware inventory list is stressed, as is verifying compatibility with the network. The steps to install a network operating system, including Windows 2000 and Linux, are covered in detail.</p> <p>The course introduces the responsibilities of a network administrator, including managing users and groups, and creating directories, passwords, and permissions. It covers backup methods and strategies, partition and process management, monitoring server resources, and analyzing network performance. The course discusses troubleshooting the operating system, including how to identify the type of problem, creating an emergency boot disk, and the process of disaster recovery. It addresses security issues and how to assess security needs and develop an acceptable-use policy to prevent inside and outside threats. This course will help prepare students for CompTIA's Server+ certification exam.</p>	<p>½ or 1 <i>Max credit = 1</i></p>	<p>License Code: 27220-IT Essentials ◆ 9-12</p>
27265	Introduction to Networking	9-12	<p>An introduction to networking course which introduces students to the principles and practices of designing, building and maintaining computer networks. Topics would include: networking administration and support, media and topologies, protocols and standards, network implementation, and network support. The course would prepare students for CompTIA's Network + certification.</p>	<p>½ or 1 <i>Max credit = 1</i></p>	<p>License Code: 27265-Introduction to Networking ◆ 9-12</p>
27266	CCNA Introduction to Networks	9-12	<p>CCNA Introduction to Networks is the first of the four courses leading to the CCNA industry certification. This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the course. Students will be able to build simple LANs, perform basic configuration for routers and switches, and implement IP addressing schemes.</p>	<p>½ or 1 <i>Max credit = 1</i></p>	<p>License Code: 27266-CTE CCNA Introduction to Networks ◆ 9-12</p>

HIGH SCHOOL INFORMATION TECHNOLOGY COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Information Technology **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
27267	CCNA Routing & Switching Essentials ♦ Prerequisite: CCNA Introduction to Networks	9-12	CCNA Routing and Switching Essentials is the second of four courses that leads to the CCNA industry certification. This course describes the architecture, components, and operations of routers and switches in a small network. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPng, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. Students completing this course can choose to complete the CCENT industry certification.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 27267-CTE CCNA Routing & Switching Essentials ♦ 9-12
27268	CCNA Scaling Networks ♦ Prerequisite: CCNA Routing & Switching Essentials	9-12	CCNA Scaling Networks is the third of four courses that leads to the CCNA industry certification. This course describes the architecture, components, and operations of routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement a WLAN in a small-to-medium network.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 27268-CTE Scaling Networks ♦ 9-12
27269	CCNA Connecting Networks ♦ Prerequisite: CCNA Routing & Switching Essentials	9-12	CCNA Connecting Networks is the last of four courses that leads to the CCNA industry certification. This course discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students will also develop the knowledge and skills needed to implement virtual private network (VPN) operations in a complex network.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 27269-CTE CCNA Connecting Networks ♦ 9-12
27280	Introduction to Cybersecurity	9-12	Introduction to Cybersecurity covers trends in cybersecurity and career opportunities. Course modules will define cybersecurity, explain why it's important, and introduce products and processes used to secure data. Students will also explore why cybersecurity is critical in business and medical industries, how hackers use unsuspecting individuals to propagate malware, and why cybersecurity is a growing profession.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 27280-CTE Introduction to Cybersecurity ♦ 9-12

HIGH SCHOOL INFORMATION TECHNOLOGY COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Information Technology **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
27299	Special Topics	9-12	An examination of special topics in cutting edge computer information technologies. Some topics may include geographic information systems, telecommunications, internet, data communications, etc. Prior to instruction, an Alternative Curriculum Form must be submitted for approval to the IT division of the Department of Career and Technical Education.	¼, ½, 1, or 2 <i>Max credit = 2</i>	License Code: 27299-CTE Special Topics ◆ 9-12
27300	Essentials of Desktop Operating Systems	9-12	Students will be introduced to the implementation and desktop support of Microsoft Windows Operating Systems. Essentials of Desktop Operating Systems course will prepare students to install one or multiple operating systems, configure and manage hardware, manage disks, troubleshoot, configure desktop environments, enable network connectivity, configure mobile computing, support remote users, monitor resources and performance, and maintain security.	½ or 1 <i>Max credit = 1</i>	License Code: 27300-CTE Windows XP Professional ◆ 9-12
27305	Essentials of Desktop Operating Systems – Linux	9-12	This course teaches students the fundamentals of the Linux operating system and command line, and basic open source concepts. This course focuses on the following: <ul style="list-style-type: none"> • Understand how Linux is used and the basics of the command line. • Apply skills using Linux virtual machine with step-by-step and hands-on activities. • Build foundational knowledge for progressively mastering Linux commands.	½ or 1 <i>Max credit = 1</i>	License Code: 27305-CTE Essentials of Desktop Operating Systems - Linux ◆ 9-12
27310	Essentials of Network Operating Systems	9-12	Essentials of Network Operating Systems courses provide a study of multi-user, multi-tasking network operating systems. In these courses students learn the characteristics of Microsoft Windows and Linux based operating systems and explore a variety of topics including installation procedures, security issues, back-up procedures, and remote access, TCP/IP concepts, DNS, digital certificates, and the OP security extensions.	½ or 1 <i>Max credit = 1</i>	License Code: 27310-CTE Windows 2003 Server ◆ 9-12
27400	Geographic Information Systems (GIS)	9-12	Students will have the opportunity to gather technical skills in the areas of geographic information systems, remote sensing, and global positioning systems. Students will learn the basic ESRI ArcView interface in the context of local and global problems. They will gain experience in the use of global positional system (GPS) units to gather authentic data and will be able to overlay their collected data on aerial photographs and/or satellite images.	½ or 1 <i>Max credit = 1</i>	License Code: 27400-CTE Geographic Information Systems (GIS) ◆ 9-12

HIGH SCHOOL INFORMATION TECHNOLOGY COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Information Technology **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
27500	Data Modeling and SQL	9-12	<p>Students are challenged to identify patterns and connections between information that is not obviously related; to identify key underlying business issues in complex scenarios. This course will prepare students for the "Introduction to Oracle 9i – SQL" Oracle Certified Professional exam. This course focus on the following objectives:</p> <ul style="list-style-type: none"> • Transform business requirements into an operational database utilizing a top-down, systematic approach. • Create Entity-Relationship Diagrams that accurately model the organization's information needs and support the functions of the business. • Map the information requirements reflected in the Entity-Relationship Model into a relational database design. • Create physical relational database tables to implement the database design. • Manage a data analysis project that delivers a persuasive database design and model for a potential client. • Solve complex business problems using data storage and retrieval techniques. • Articulate issues involving data security and keeping "history" of data in business systems, as well as the role of the Database Administrator in these practices. • Use interviewing skills and techniques learned as they approach post-secondary education or future employment. 	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 27500-CTE Data Modeling and SQL ◆ 9-12</p>
27510	AP Computer Science Principles (CTE)	10-12	<p>Focuses on computational thinking that is vital for success in all disciplines. Students use computational tools to analyze and study data. They also work with large data sets to identify, analyze, and draw conclusions from trends. Also focuses on student creativity and collaboration to develop skills in oral and written communication and problem solving. Students will use software and technology to explore questions that interest them.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 27510-AP Computer Science Principles (CTE) ◆ 9-12</p>
27520	AP Computer Science A (CTE)	10-12	<p>AP Computer Science A is equivalent to a first-semester, college level course in computer science. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The AP Computer Science A course curriculum is compatible with many CS1 courses in colleges and universities.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 27520-AP Computer Science A (CTE) ◆ 9-12</p>

HIGH SCHOOL INFORMATION TECHNOLOGY COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Information Technology **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
27995	IT Internship	9-12	This course serves as an integrative experience that is designed to give students the opportunity to expand their knowledge in the IT career pathway. It is a project-based course that incorporates 21st Century Skills including thinking critically and solving challenging problems. This course is an extension of an IT pathway class that a student has already completed or is concurrently in. The student will learn, refine, and apply skills necessary to be successful in IT related careers. Projects that incorporate the broader community and/or some aspect of "giving back" to others outside of school learning experiences are highly encouraged.	$\frac{1}{2}$ Max credit = 4	License Code: 27999- ◆ 9-12
27999	Cooperative Work Experience	11-12	Provides students with a regularly scheduled, supervised employment opportunity related to Information Technology Occupations in order to develop and improve work skills. The employment must be preceded by, or concurrent with, classroom instruction related to the work experience, consistent with the student's occupational goals, and related to the Information Technology program area. There shall be a training agreement among all partners to the work experience (school, employer, student, and parents/guardians) outlining the expectations of each party. The instructor shall also develop a specific training plan with the employer for each student placed. The training plan shall include provisions for assessment of student progress and for on-site visits by the instructor during the student's placement. NOTE: Students must be at least 16 years old and may be paid a wage by the employer.	Maximum of $\frac{1}{2}$ credit per semester, not to exceed 4 credits while in high school Max credit = 4	License Code: 27999-CTE Cooperative Work Experience ◆ 9-12

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HIGH SCHOOL MARKETING EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Marketing Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
04080	Principles of Marketing	9-12	To provide student with the objectives and benefits of a marketing education program and to prepare them for marketing careers. The role, functions, and institution of marketing in the economy and society, marketing career opportunities and requirements, career planning, and necessary personal characteristics for competencies for success.	½ or 1 <i>Max credit = 1</i>	License Code: 04006-CTE Marketing Education ♦ 5-12 or 9-12
04110	Principles of Entrepreneurship	9-12	To provide students with an introduction to entrepreneurship business opportunities and requirements as well as related career information and self-assessment opportunities. Covers entrepreneurship importance and concepts, characteristics of different types of business organizations and opportunities, entrepreneurial career examples, individual career assessment and planning, entrepreneurial projects and simulations.	½ or 1 <i>Max credit = 1</i>	
04111	Entrepreneurship	9-12	To provide opportunity for students to explore self-employment benefits versus risks and to develop specific competence in starting a small business. It covers the characteristics of an entrepreneur, economics and the nature of small business, feasibility study Business Plan Development, type of ownership, location, financing, recordkeeping, management, promotion, legal issues, business protection, assistance.	½ or 1 <i>Max credit = 1</i>	
04210	Marketing I	10-12	Marketing I is a course that develops student understanding and skills in such areas as business law, communication skills, customer relations, economics, emotional intelligence, financial analysis, human resource management, information management, marketing, operations, professional development, and strategic management. Students acquire knowledge of fundamental business activities and factors affecting business, develop verbal and written communication skills, use information literacy skills, utilize job-seeking strategies, and participate in career planning.	1 <i>Max credit = 1</i>	
04215	Marketing II ♦ Prerequisite: Marketing I or instructor approval.	11-12	This course develops student understanding and skills in such areas as channel management, marketing-information management, market planning, pricing, product/service management, promotion, and selling. Through the use of projects, students acquire an understanding and appreciation for marketing activities. Current technology will be used to acquire information and to complete projects. Throughout the course, students are presented problem-solving situations for which they must apply academic and critical-thinking skills. Formal reflection is an on-going component of the course.	1 <i>Max credit = 1</i>	

HIGH SCHOOL MARKETING EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Marketing Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
04223	Management ♦ Prerequisite: Marketing I or instructor approval.	11-12	This course furthers student understanding and skills in the various marketing functions leading to decisions in business management. Students coordinate channel management with other marketing activities, discuss the nature of marketing plans, generate product ideas, coordinate activities in the promotional mix, and demonstrate specialized sales processes and techniques. The importance of human resource management, personnel and policies in business are discussed. Current technology will be used acquire information to complete projects. Students are presented problem-solving situations for which they apply academic and critical-thinking skills.	1 <i>Max credit = 1</i>	License Code: 04006-CTE Marketing Education ♦ 5-12 or 9-12
04235	Social Media Marketing	9-12	Social Media Marketing presents the use of online social networking as a business strategy designed to increase customer loyalty and inquiry conversion. Students will study major social media channels and marketing campaign techniques, and evaluate contemporary and emerging tools in the digital marketplace including social bookmarking and techniques to drive social media traffic. Analyses of social media effectiveness will also be explored.	½ or 1 <i>Max credit = 1</i>	
04239	Principles of Sports and Entertainment Marketing	9-12	To prepare students for marketing occupations in the area of sports and entertainment. This course is to prepare students who have an interest in sports or entertainment marketing and wish to continue exploring marketing and business related careers. The course will include an introduction to marketing and business concepts, foundations, including the business and marketing core concepts.	½ <i>Max credit = ½</i>	
04240	Sports and Entertainment Marketing	10-12	To prepare students for marketing occupations in the area of sports and entertainment. Take a look at the exciting and dynamic field of sports and entertainment marketing. One of the largest industries in the world, sport marketing provides a unique way of looking at the business world. This course will focus on the two main aspects of sports and entertainment marketing: 1) The marketing of sports and entertainment, and 2) The marketing of non-sports products and services through sports. You will discover why companies pay to be associated with a team or entertainer; how to develop ticket plans to fill the seats in the arena; why targeting your marketing efforts is so important; and more.	½ or 1 <i>Max credit = 1</i>	
04245	Hospitality and Tourism Marketing	9-12	To provide the student with an understanding of one of the largest industries in the world. Specific applications include marketing, promoting, and selling product of airlines, international travel, ground transportation, cruising, hotel and lodging, restaurants, and tours. Students will learn the importance of hospitality and tourism impact on the economy.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL MARKETING EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Marketing Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
04081	Principles of Finance	9-12	To prepare students to develop and understand the skills such the value of money, financial management, investments, and economic decision-making. Students will understand and appreciate the need for personal financial management and investing. The course will help students understand their role and responsibility in the financial future.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 04006-CTE Marketing Education ♦ 5-12 or 9-12
04082	Business Finance	10-12	The student will expand their understanding of finance in this course. Students develop their knowledge and skills in such areas as business law, communications, compliance, customer relations, economics, financial analysis, financial-information management, human resources and marketing. Emphasis is placed on the analysis and purchase of securities and investments, as well as the need for effective customer relationship management and information management in finance.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
04290	School Based Enterprise	10-12	To prepare students for employment. Provides a model store complete with modern business equipment. Retail operation and marketing activities integrated with classroom learning, including involvement in real work situations, various store responsibilities and other relevant activities; participation in total store operations by student rotation through the store departments of management, merchandising, sales promotion, and controlling.	$\frac{1}{2}$, 1, or 2 <i>Max credit = 2</i>	
04310	International Marketing	11-12	The content of the International Marketing course focuses upon marketing concepts applicable to international marketing business policies, practices and strategies. Local/state and major international regional trade profiles are addressed regarding International Marketing functions, institutions, cultures, social environments, natural trade resources, political/financial factors, laws/regulations, and significant economic variables. Students develop international marketing plans for selected products and services. International marketing career opportunities and requirements are emphasized.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	

HIGH SCHOOL MARKETING EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Marketing Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
04999	Cooperative Work Experience	11-12	<p>Provides students with a regularly scheduled, supervised employment opportunity related to Marketing and Related Occupations in order to develop and improve work skills. The employment must be preceded by, or concurrent with, classroom instruction related to the work experience, consistent with the student's occupational goals, and related to the Marketing Education program area. There shall be a training agreement among all partners to the work experience (school, employer, student, and parents/guardians) outlining the expectations of each party. The instructor shall also develop a specific training plan with the employer for each student placed. The training plan shall include provisions for assessment of student progress and for on-site visits by the instructor during the student's placement.</p> <p>Note: Students must be at least 16 years old and may be paid a wage by the employer.</p>	<p>Maximum of ½ credit per semester, not to exceed 4 credits while in high school</p> <p style="text-align: center;"><i>Max credit = 4</i></p>	<p>License Code: 04006-CTE Marketing Education ♦ 5-12 or 9-12</p>

* *High school curricular requirements are spelled out in NDCC 15.1-21-02 and High school unit - instructional time is NDCC 15.1-21-03. Maximum credit refers to the maximum units of credit a student may earn for a course over four years of high school. (Example: Band - a student 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).*

Credentials are obtained from the Department of Public Instruction (DPI) and are issued to individuals holding a current teaching license.

HIGH SCHOOL TECHNOLOGY & ENGINEERING EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Technology Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
10091	Individual Technical Problems	11-12	To provide a course for schools who cannot offer other specified course titles. Experiences in communication technology, production technology, and energy utilization are to be identified and developed on a contractual basis by the student and approved by the instructor.	½ or 1 <i>Max credit = 1</i>	License Code: 10005-Industrial Arts ♦ 5-12 or 9-12 OR 10007-Technology Education ♦ 5-12 or 9-12 OR 10010-Industrial Technology ♦ 5-12 or 9-12
10093	Applying Technology	9-12	This is an activity-based course addressing all 20 of the Standards for Technological Literacy using primarily a modular classroom environment.	½ or 1 <i>Max credit = 2</i>	
10094	Foundations of Technology	9-12	Foundations of Technology increases student's capability by using their unique skills to innovate, improvise, and invent. Students develop an understanding of engineering design, transforming ideas into products or systems. They select and use manufacturing, construction and energy and power technologies in order to understand quality goods, impact of structures and the importance of energy resources. Students also gain insights into the use of communication technologies, telemedicine and other medical technologies. The course concludes with the synthesizing of major ideas through an understanding of the impacts the use of technology has on society and the environment. A state recommended course guide is available.	½ or 1 <i>Max credit = 1</i>	
10096	Technology and Society	9-12	Technology and Society teaches students critical thinking skills as they relate to the creation and use of technology. Students are prepared to analyze issues, consider their validity, formulate positions, and defend these positions. This course helps students disentangle the elements of an issue, allowing them to make informed decisions. It prepares all students, whether they intend to be engineers, cosmetologists, or parents, to make informed decisions about their individual, community, and organizational uses of technology. A state recommended course guide is available.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL TECHNOLOGY & ENGINEERING EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Technology Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
10111	Construction Technology	9-12	To study the technology involved in the construction of residential and industrial structures. Study will include designing, planning, and constructing structures using various materials and methods.	½ or 1 <i>Max credit = 1</i>	License Code: 10005-Industrial Arts ♦ 5-12 or 9-12 OR 10007-Technology Education ♦ 5-12 or 9-12 OR 10010-Industrial Technology ♦ 5-12 or 9-12
10121	Manufacturing Technology	9-12	To provide students with a broad overview of the technology involved in creation and production of consumer products. Study will involve techniques and processes used to produce goods including manufacturing systems, materials, planning, financing, and distribution	½ or 1 <i>Max credit = 1</i>	
10251	Communication Technology	9-12	This is an activity-based course that provides the application of tools, materials and energy in developing, processing, using and assessing communication systems. Students will produce graphic and electronic media as they explore techniques used to apply technology communicating information and ideas.	½ or 1 <i>Max credit = 1</i>	
10259	Design/Drafting	9-12	An evolving study of modern drafting within the framework of communication technology. The course provides an experience in design and drafting as it applies in an industrial environment.	½ or 1 <i>Max credit = 1</i>	
10260	3D Modeling and Design	9-12	Students will explore systems of design, construction and testing. Using CAD software, students will gain technical skills in product design, prototyping, and the design process.	½ or 1 <i>Max credit = 1</i>	
10331	Energy and Transportation Technology	9-12	This is an activity-based course that introduces students to generation, conversion, control, transmission and storage of energy. Machines and tools are used to increase strength and mechanical advantage in the movement of people and materials. Energy and transportation is equally applied to production, communication and transportation activities introduce major scientific and mathematical concepts that support energy and transportation.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL TECHNOLOGY & ENGINEERING EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Technology Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
10338	Advanced Design Applications	9-12	This is a standards-based, engineering-related course providing an engineering or technical base for students. It consists of four separate learning units, each nine weeks in length: Manufacturing Technologies, Energy and Power Technologies, Construction Technologies and Transportation Technologies. Each unit has a primary challenge or design problem that is supported in separate learning cycles. The course allows students to focus on solutions to problems, with minimal constraints. A state recommended course guide is available.	½ or 1 <i>Max credit = 1</i>	License Code: 10005-Industrial Arts ♦ 5-12 or 9-12 OR 10007-Technology Education ♦ 5-12 or 9-12 OR 10010-Industrial Technology ♦ 5-12 or 9-12
10339	Advanced Technological Applications	9-12	This is a standards-based, engineering-related course providing an engineering or technical base for students. It consists of four separate learning units, each nine weeks in length: Information and Communication Technologies, Medical Technologies, Agriculture and Related Biotechnologies and Entertainment and Recreation Technologies. Each unit has a primary challenge or design problem that is supported in separate learning cycles. The course allows students to focus on solutions to problems, with minimal constraints. A state recommended course guide is available.	½ or 1 <i>Max credit = 1</i>	
10410	Technological Design	9-12	In Technological Design, engineering scope, content, and professional practices are presented through practical applications. Students in engineering teams apply technology, science, and mathematics concepts and skills to solve engineering design problems and innovate designs. Students research, develop, test, and analyze engineering designs using criteria such as design effectiveness, public safety, human factors, and ethics. This course is an essential experience for students who are interested in technology, innovation, design, and engineering. A state recommended course guide is available.	½ or 1 <i>Max credit = 1</i>	
10411	Robotics Engineering	9-12	Robotics Engineering provides a comprehensive study of engineering concepts including physics, programming, mechanical systems, electrical and electronics systems. These core concepts are delivered with a robotics emphasis through relevant activities and projects.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL TECHNOLOGY & ENGINEERING EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Technology Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
10415	Engineering Design	11-12	The Engineering Design course is the capstone course focusing on how engineers apply their creativity, resourcefulness, mathematical, scientific and technical knowledge and skills in the creation or refinement of technological products/systems. Students will be challenged to participate as members of engineering teams within a typical business organization. Independent and group work will be reflective of authentic engineering projects found in the designed world. Students will prepare for the technological world in order to assume their roles as informed voters, productive workers, and wise consumers. A state recommended course guide is available.	½ or 1 <i>Max credit = 1</i>	License Code: 10005-Industrial Arts ♦ 5-12 or 9-12 OR 10007-Technology Education ♦ 5-12 or 9-12 OR 10010-Industrial Technology ♦ 5-12 or 9-12
10510	Invention and Innovation	9-12	Invention and Innovation prepares students with opportunities to apply the design process in the invention or innovation of a new product, process, or system. Students learn about the core concepts of technology and about the various approaches to solving problems, including engineering design and experimentation. Students apply their creativity in the invention and innovation of new products, processes, or systems. Students participate in engineering-design activities where they learn about brainstorming, visualizing, modeling, construction, testing, experimenting, and refining designs. Students also develop skills in researching for information, communicating design information, and reporting results. A state recommended course guide is available.	½ or 1 <i>Max credit = 1</i>	
10511	PLTW Introduction to Engineering Design	9-12	This course emphasizes the development of a design. Students use 3-D computer software to produce, analyze and evaluate models of project solutions. They study the design concepts of form and function, and then use state-of-the-art technology to translate conceptual designs into reproducible products. This is a PLTW course and only instructors with this training may use this number and description.	½ or 1 <i>Max credit = 1</i>	License Code: 10511-Project LEAD the WAY Endorsement (Intro to Eng Design) ♦ 5-12
10512	PLTW Digital Electronics	9-12	This course provides students with the applied logic that encompasses application of electrical circuits and devises. Students will use state-of-the-art technology, including computer software and equipment used by industry. Hands-on activities that utilize the team approach to learning how to solve real-world problems while reinforcing the study of math and science. This is a PLTW course and only instructors with this training may use this number and description.	½ or 1 <i>Max credit = 1</i>	License Code: 10512-Project LEAD the WAY Endorsement (Digital Electronics) ♦ 5-12

HIGH SCHOOL TECHNOLOGY & ENGINEERING EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Technology Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
10513	PLTW Principals of Engineering	9-12	This course provides students with an opportunity to investigate engineering and high-tech careers and to develop skills and understanding of course concepts. Students employ engineering and scientific concepts in the solution of engineering design problems, develop problem-solving skills, and apply their knowledge of research and design to create solutions to various challenges. This is a PLTW course and only instructors with this training may use this number and description.	½ or 1 <i>Max credit = 1</i>	License Code: 10513-Project LEAD the WAY Endorsement (Principles of Engineering) ♦ 5-12
10514	PLTW Civil Engineering & Architecture	9-12	This course provides students with opportunities to work in teams, exploring hands-on activities and projects to learn the characteristics of civil engineering and architecture. In addition, students use 3D design software to help them design solutions to solve major course projects. Students learn about documenting their project, solving problems, and communicating their solutions to their peers and members of the professional community of civil engineering and architecture. This is a PLTW course and only instructors with this training may use this number and description.	½ or 1 <i>Max credit = 1</i>	License Code: 10514-Project LEAD the WAY Endorsement (Civil Engineering & Architecture) ♦ 5-12
10515	Technological Systems	9-12	Technological Systems is designed to introduce students to systems and processes to develop an understanding of the impact of technology on humans, the environment, and the global community. It is intended to teach students to learn how systems work together to solve problems and capture opportunities. By investigating systems through their function, design, and development, students will understand what systems are, why they are developed and how 'systems thinking' can be used to describe them. Students engage in activities and experiences where they evaluate the impacts of technology through the lenses of culture, society, economics and the environment. A state recommended course guide is available.	½ or 1 <i>Max credit = 1</i>	License Code: 10005-Industrial Arts ♦ 5-12 or 9-12 OR 10007-Technology Education ♦ 5-12 or 9-12 OR 10010-Industrial Technology ♦ 5-12 or 9-12
10517	PLTW Computer Integrated Manufacturing	9-12	The major focus of this course is to answer questions such as: How are things made? What processes go into creating products? As students find the answers to these questions, they learn about the history of manufacturing, a sampling of manufacturing processes, robotics, and automation. The course is built around several key concepts: computer modeling, Computer Numeric Control (CNC) equipment, Computer Aided Manufacturing (CAM) software, robotics and flexible manufacturing systems. This is a PLTW course and only instructors with this training may use this number and description.	½ or 1 <i>Max credit = 1</i>	License Code: 10517-Project LEAD the WAY Endorsement (Computer Integrated Manufacturing) ♦ 5-12

HIGH SCHOOL TECHNOLOGY & ENGINEERING EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Technology Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
10518	PLTW Environmental Sustainability	9-12	Students investigate and design solutions in response to real-world challenges related to clean and abundant drinking water, food supply, and renewable energy. <i>NOTE: This course can be taught for Technology & Engineering Education credit only.</i>	½ or 1 <i>Max credit = 1</i>	License Code: 10518-Project LEAD the WAY Endorsement (Environmental Sustainability) ◆ 5-12
10519	PLTW Engineering Design & Development	11-12	This is a capstone course that provides students with the ability to identify an issue and then research, design, and test a solution; ultimately presenting their solution to a panel of engineers. Students apply the professional skills they are developing to document their design process. <i>NOTE: This course can be taught for Technology & Engineering Education credit only.</i>	½ or 1 <i>Max credit = 1</i>	License Code: 10519-Project LEAD the WAY Endorsement (Engineering Design & Development) ◆ 5-12
10520	PLTW Engineering Essentials	9-12	This introductory course will give students the foundational concepts of engineering practice insight into engineering careers and opportunities to solve real-world problems. <i>NOTE: This course can be taught for Technology & Engineering Education credit only.</i>	½ or 1 <i>Max credit = 1</i>	License Code: 10520-Project LEAD the WAY Endorsement (Engineering Essentials) ◆ 5-12
10610	STEM Seminar (Tech Ed)	9-12	STEM Seminar provides students with a project based and integrated and 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 students in hands on interdisciplinary application of the Engineering Design Process. Students engage in authentic projects and create products, presentations, and network with local STEM industry experts. In this course students 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 in order to be globally competitive in the 21 st Century. This course curriculum infuses academic content from Math, Science, Language Arts, and Social Studies. It utilizes state standards, technical skills and develops 21 st Century Skills such as communication, networking, collaboration, decision making, creativity and critical thinking. <i>Note: This course can be taught for Technology & Engineering credit only. For Mathematics credit, use STEM Seminar (Math) under Mathematics. For Science credit, use STEM Seminar (Science) under Science. Only one (1) credit of this course can be used towards the coordinated plan of study for the Academic and Career and Technical Education Scholarship.</i>	½ or 1 <i>Max credit = 2</i>	License Code: 10005-Industrial Arts ◆ 5-12 or 9-12 OR 10007-Technology Education ◆ 5-12 or 9-12 OR 10010-Industrial Technology ◆ 5-12 or 9-12

HIGH SCHOOL TECHNOLOGY & ENGINEERING EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Technology Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
10710	Biomedical Technology	9-12	Biomedical Technology is designed to introduce students to the recent advancements in biotechnology and biomedical engineering. Diverse topics range from cancer treatment utilizing nanomaterials to biomedical devices used in prosthetics and implants. The course will cover the future trends and societal, ethical and environmental implications of these technologies.	½ or 1 credit <i>Max credit = 1</i>	License Code: 10009-Technology and Engineering Education Endorsement ♦ 5-12
10730	PLTW Principles of Biomedical Science	9-12	Students will explore concepts of biology and medicine to determine factors that led to the death of a fictional person. Students will examine autopsy reports, investigate medical history and explore medical treatments that might have prolonged the person's life. Students are introduced to human physiology, basic biology, medicine and research processes while designing their own experiments to solve problems. NOTE: This course can be taught for Technology & Engineering Education credit only	½ or 1 credit <i>Max credit = 1</i>	License Code: 10730-Project Lead the Way Endorsement (Principles of Biomedical Science) ♦ 5-12
10732	PLTW Human Body Systems	9-12	Students examine the interactions of human body systems as they explore identity, power, movement, protection and homeostasis. Students build organs and tissues on MANIKEN® skeletal models; use data acquisition software to monitor body functions; and take on the roles of biomedical professionals to solve real-world medical cases. NOTE: This course can be taught for Technology & Engineering Education credit only	½ or 1 credit <i>Max credit = 1</i>	License Code: 10732-Project Lead the Way Endorsement (Human Body Systems) ♦ 5-12
10734	PLTW Medical Interventions	9-12	Students follow the life of a fictitious family as they investigate how to prevent, diagnose and treat disease. Students explore how to detect and fight infection; screen and evaluate the code of human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through cases, students learn about a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices and diagnostics. NOTE: This course can be taught for Technology & Engineering Education credit only	½ or 1 credit <i>Max credit = 1</i>	License Code: 10734-Project Lead the Way Endorsement (Medical Interventions) ♦ 5-12
10810	PLTW Computer Science Essentials	9-12	Students will explore a diverse set of computational thinking concepts, fundamentals and tools. Students use visual, block-based programming and seamless transition to text-based programming to create apps and websites. They apply computational thinking practices and collaborate to create products and address topics and problems important to them. NOTE: This course can be taught for Technology & Engineering Education credit only.	½ or 1 credit <i>Max credit = 1</i>	License Code: 10810-Project LEAD the WAY Endorsement (Computer Science Essentials) ♦ 5-12

HIGH SCHOOL TECHNOLOGY & ENGINEERING EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Technology Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
10815	PLTW Computer Science Principles	10-12	<p>Students will explore computation thinking, generate excitement about career paths that utilize computing and introduce professional tools that foster creativity and collaboration. Students will develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity and simulations. This course offering is aligned to the AP Curriculum Framework standard and the AP CSP assessment.</p> <p>NOTE: This course can be taught for Technology & Engineering Education credit only.</p>	<p>½ or 1 credit</p> <p><i>Max credit = 1</i></p>	<p>License Code: 10815-Project LEAD the WAY Endorsement (Computer Science Principles) ◆ 5-12</p>
10820	PLTW Cybersecurity	9-12	<p>Students will be introduced to the tools and concepts of cybersecurity and be encouraged to create solutions to allow people to share computing resources while protecting privacy. Students solve problems by understanding and closing vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior and develops skills as consumers, friends, citizens and employees who move and process information safely.</p> <p>NOTE: This course can be taught for Technology & Engineering Education credit only.</p>	<p>½ or 1 credit</p> <p><i>Max credit = 1</i></p>	<p>License Code: 10820-Project LEAD the WAY Endorsement (Cybersecurity) ◆ 5-12</p>
10999	Cooperative Work Experience	11-12	<p>Provides students with a regularly scheduled, supervised employment opportunity related to Technology and Engineering Education occupations in order to develop and improve work skills. The employment must be preceded by, or concurrent with, classroom instruction related to the work experience, consistent with the student's occupational goals, and related to the Technology and Engineering Education program area. There shall be a training agreement among all partners to the work experience (school, employer, student, and parents/guardians) outlining the expectations of each party. The instructor shall also develop a specific training plan with the employer for each student placed. The training plan shall include provisions for assessment of student progress and for on-site visits by the instructor during the student's placement.</p> <p>NOTE: Students must be at least 16 years old and may be paid a wage by the employer.</p>	<p>Maximum of ½ credit per semester, not to exceed 4 credits while in high school</p> <p><i>Max credit = 4</i></p>	<p>License Code: 10005-Industrial Arts ◆ 5-12 or 9-12 OR 10007-Technology Education ◆ 5-12 or 9-12 OR 10010-Industrial Technology ◆ 5-12 or 9-12</p>

* High school curricular requirements are spelled out in NDCC 15.1-21-02 and High school unit - instructional time is NDCC 15.1-21-03. Maximum credit refers to the maximum units of credit a student may earn for a course over four years of high school. (Example: Band - a student may be enrolled in band all four years of high school -- earning a possible total of four units of credit.)

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HIGH SCHOOL TRADE AND INDUSTRIAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Trade and Industrial Education require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
17029	Foundations of Automotive	9-12	To prepare students to understand the features of a vehicle. Learn safety around the shop and vehicle. Explore careers in the auto industry. Learn proper care and use of hand tools and shop equipment for basic vehicle maintenance. Understand care of a vehicle, cleaning, and maintenance. Learn to be an informed consumer of a vehicle purchase and care.	½ or 1 <i>Max credit = 1</i>	License Code: 17032-Automotive Technology ♦ 9-12
17030	Auto Collision Technology I	9-12	This is the beginning 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. This is a prerequisite to Auto Collision Technology II.	1 or 2 <i>Max credit = 2</i>	License Code: 17031-Auto Collision Technology ♦ 9-12
17031	Auto Collision Technology II ♦ Prerequisite: Auto Collision Technology I	10-12	To prepare students for employment in the auto body occupation. All phases of repairing damaged bodies and fenders including metal straightening by hammering, smoothing areas by filing, grinding or sanding, concealment of imperfections, painting and replacement of body components, including trim. Students completing this sequential course will be eligible for ASE certification as noted in the NATEF guidelines.	2 <i>Max credit = 2</i>	
17032	Automotive Technology I	9-12	To begin preparation for employment as an ASE certified auto technician. This sequential course will include topics in vehicle engine, power transmission, steering, brakes, and electrical systems.	1 or 2 <i>Max credit = 2</i>	License Code: 17032-Automotive Technology ♦ 9-12
17036	Automotive Technology Summer Academy	9-12	Automotive Technology is a Summer Academy that allows students the opportunity to take fundamentals learned through online instruction, ITV instruction, or regular classroom instruction from an accepted Automotive Technology program to gain training through project-based learning. Students will be given more detailed instruction and hands-on training in Automotive Service Excellence (ASE) recognized processes preparing them for industry certification testing. Automotive Technology Summer Academy must be offered as part of the Automotive Technology program. Prior approval must be received from the Department of Career and Technical Education before offering the Automotive Technology Summer Academy as an option.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL TRADE AND INDUSTRIAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Trade and Industrial Education require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
17035	Parts Merchandising & Management	9-12	Students will gain knowledge and skills that will enable them to recognize various parts, fill out sales receipts, and collect payments or file the charges on the customer's account. The student will become familiar with the needs of the customer and learn how to stock and merchandise the latest parts to meet their needs. Parts Merchandisers are found in occupational settings such as automotive dealerships, retail parts stores, wholesale distributors and others. Students will become aware of occupational and advanced training opportunities in Parts Merchandising.	2 Max credit = 2	License Code: 17035-Parts Merchandising & Management ◆ 9-12
17037	Automotive Technology II ◆ Prerequisite: Automotive Technology I	10-12	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.	2 Max credit = 2	
17038	Automotive General Service Technology I	9-12	The General Service Technology program begins with an orientation to the eight areas of NATEF standardized programming – Engine Repair, Automatic Transmissions, Manual Drive, Suspension and Steering, Brakes, Electrical/Electronic Systems, Heating and Air Conditioning and Engine Performance. This is a sequential course and is a prerequisite to Automotive General Service Technology II.	1 or 2 Max credit = 2	License Code: 17032-Automotive Technology ◆ 9-12
17039	Automotive General Service Technology II ◆ Prerequisite: Automotive General Service Technology I	10-12	The second year General Service Technology program consists of a two-hour course continuing orientation to Engine Repair, Automatic Transmissions, Manual Drive, Suspension and Steering, Brakes, Electrical/Electronic Systems, Heating and Air Conditioning and Engine Performance. Students must complete the Electrical/Electronic Systems standard to pass complete the course. Automotive General Service Technology is a preparatory program to enter college Automotive Technology and does prepare students to be eligible for ASE certification.	2 Max credit = 2	
17040	Diesel Technology I	9-12	This course allows students to experience a variety of diesel and heavy equipment practices. Students will explore the field of diesel and heavy-duty equipment repair, and will learn the basics of safety, equipment identification, and the use of hand and power tools in lab setting. Students will learn about careers within the diesel and heavy equipment repair industry. Lessons will be enhanced by industry partners. Students will be introduced to diesel engine operation and components, hydraulics, brakes\suspension, and electrical. Technology-related mathematics, reading, writing, vocabulary, blueprint reading, and science are integrated throughout the curriculum. NATEF standards and guidelines are followed. This course is a prerequisite to Diesel Technology II.	1 or 2 Max credit = 2	License Code: 17040-Diesel Technology ◆ 9-12

HIGH SCHOOL TRADE AND INDUSTRIAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Trade and Industrial Education require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
17041	Diesel Technology II ◆ Prerequisite: Diesel Technology I	10-12	This course will serve as a continuation from Diesel I. Students will be exposed to diesel careers and college options in construction, agriculture, aviation, and trucking vehicles. Students will be required to demonstrate sound safety practices, shop organization and equipment management. Students will learn advanced diesel concepts in fuel systems, steering and suspension, tire and wheel diagnostics, service and repair of electrical and electronic controls and systems, engines, drive trains, hydraulics and air brake systems. Training and practice of Preventive Maintenance Inspection (PMI) is accomplished. Lessons will be enhanced by industry collaboration, job shadows and internship experiences. Technology, mathematics, reading, writing, vocabulary, blueprint reading, and science are integrated throughout the curriculum. NATEF standards and guidelines are followed.	2 <i>Max credit = 2</i>	License Code: 17040-Diesel Technology ◆ 9-12
17045	Introduction to Commercial Driving License (CDL)	12	The focus of this class is to give the students an understanding and skills to obtain a CDL certification. Students will start with the basics and move up to the finer points of the trade. Topics include required CDL Manual subjects such as General Knowledge, Air Brakes, and Combination Vehicle, as well as Tanker and Doubles/Triples endorsements. Also covered are hours of service, weight and balance, vehicle out-of-service regulations, and National Safety Council professional truck driver DDC. Students will use a school-owned tractor-trailer to log behind-the-wheel hours for real-world experience and to practice for the test. At the end of the year students will have been taught the skills to obtain a CDL permit and pass the CDL drivers test. Students need to be 18 to obtain the CDL permit and to earn the CDL license.	1 <i>Max credit = 1</i>	License Code: 17045-Introduction to Commercial Driving License (CDL) ◆ 10-12
17050	Culinary Arts I	9-12	Culinary Arts I introduces students to the occupation concerned with preparation and service of food. Contents may include: opportunities in the food service industry, career maturity skills, safety and sanitation, organization of food preparation, menu planning and recipe selection and food purchasing. This course is a prerequisite to Culinary Arts II.	1 or 2 <i>Max credit = 2</i>	License Code: 17050-Culinary Arts ◆ 9-12
17051	Culinary Arts II ◆ Prerequisite: Culinary Arts I	10-12	Culinary Arts II continues training for the occupation of food service and additionally includes topics on financial management, current issues in food service, legislation affecting the industry and its workers and career maturity skills. The Culinary Arts program prepares students for college programs in food service.	2 <i>Max credit = 2</i>	

HIGH SCHOOL TRADE AND INDUSTRIAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Trade and Industrial Education require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
17072	Commercial Art I	9-12	Commercial Art I introduce students to the skills required to become a commercial artist. Application of art to the design of commercial products for decorative, aesthetic effects and current styling will be introduced. Software applications will be introduced so students are able to develop products electronically. The Commercial Art course is a prerequisite to Commercial Art II. Note: This course can be taught for CTE credit only. For Fine and Performing Arts credit, Commercial Art can be found under Fine and Performing Arts.	1 or 2 <i>Max credit = 2</i>	License Code: 17073-Commercial Art ◆ 9-12
17073	Commercial Art II ◆ Prerequisite: Commercial Art I	10-12	Commercial Art II continues skill development in design and aesthetic effects of products. Advanced software applications and training is incorporated. The course also includes orientation to production methods and product knowledge. The Commercial Art program prepares students to enter college commercial art programs. Note: This course can be taught for CTE credit only. For Fine and Performing Arts credit, Commercial Art can be found under Fine and Performing Arts.	2 <i>Max credit = 2</i>	
17080	Photography	9-12	Students will gain knowledge and skill that will enable them to recognize and understand Commercial Photography in the following areas: 35 mm Camera Operation, Film Processing, Printing/Enlarging, and Lighting. Students will become aware of occupational and advanced training opportunities in Photography. Note: This course can be taught for CTE credit only. For Fine and Performing Arts credit, Photography can be found under Fine and Performing Arts.	1 or 2 <i>Max credit = 2</i>	License Code: 17080-Photography ◆ 9-12
17100	Building Trades I	9-12	Building Trades I provide an orientation to the building trades that meets industry standards. The course is standards-based beginning with Core Curriculum which includes Basic Safety, construction math, Introduction to Hand and Power Tools, Introduction to Construction Drawings, Basic Rigging, Communication and Employability Skills. Fundamentals of building are introduced including floor, wall and roof systems and structure enclosure. Building Trades, I is a prerequisite to Building Trades II.	1 or 2 <i>Max credit = 2</i>	License Code: 17100-Building Trades ◆ 9-12
17105	Foundations of Building Trades	9-12	Foundations of Building Trades will expose students to the opportunities available in the architecture and construction industry, including occupations such as carpenter, electrician, plumber, heating/air conditioning technician, safety supervisor, architect, engineer, and other occupations. Students learn about the processes involved in construction projects and may engage in a variety of small projects. These courses emphasize responsibilities, qualifications, work environment, rewards, and career paths within construction-related fields.	½ or 1 <i>Max credit = 1</i>	License Code: 17105-Building Trades ◆ 9-12

HIGH SCHOOL TRADE AND INDUSTRIAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Trade and Industrial Education require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
17117	Building Trades II ◆ Prerequisite: Building Trades I	10-12	Building Trades II continues with the fundamentals of building with advanced training in floor, wall and roof systems. Advanced enclosure techniques will be included. Enhanced safety protocol will be included with emphasis on safety practices. Building Trades II will continue fundamentals learned in Building Trades I but will also include Introduction to Residential Plumbing, Electrical, HVAC, Masonry, Exterior and Interior Finishing. Students who successfully complete course modules and meet all safety standards will be eligible to receive nationally recognized industry credentials.	2 Max credit = 2	License Code: 17100-Building Trades ◆ 9-12
17101	Building Trades Summer Academy	9-12	Building Trades Summer Academy provides a hands-on opportunity for students to integrate previously learned skills from Building Trades I or Building Trades II, into Summer Academy. The Summer Academy will combine the classroom skills with hands-on learning of building trades fundamentals. The Summer Academy must be part of Building Trades I and Building Trades II and is only for students in established Centers. This class is offered as part of a Building Trades Program. The Center must receive prior approval from the Department of Career and Technical Education before offering the Building Trades Summer Academy as a class option.	$\frac{1}{2}$ Max credit = $\frac{1}{2}$	
17110	Facilities Maintenance I	9-12	Facilities Maintenance I orientate students to careers in maintaining buildings such as office buildings or schools. 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. Introduction to door repair or replacement, window repair or replacement, maintaining various floor surfaces and understanding cleaning methods for a variety of surfaces. Facilities Maintenance I is a prerequisite to Facilities Maintenance II.	1 or 2 Max credit = 2	License Code: 17110-Facilities Maintenance ◆ 9-12
17112	Heating, Ventilating, & Air Conditioning	9-12	This is an introductory course that addresses air quality standards of the interior environment. Instruction will be provided in the areas of heating and cooling. Students will learn the basic concepts in circulating and cleaning the air as well as adding or removing humidity. An introduction covers safety, tools, equipment and the fundamentals of electricity. Students will work with electrical components, wiring, compressors, evaporators, condensers and metering devices. Troubleshooting methods will be taught in heating and cooling systems.	1 or 2 Max credit = 2	License Code: 17112-Heating, Ventilating, & Air Conditioning ◆ 9-12

HIGH SCHOOL TRADE AND INDUSTRIAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Trade and Industrial Education require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
17113	Automated Manufacturing	9-12	Students will gain knowledge of the concepts and career opportunities in the manufacturing industry. Craft course offerings will include courses such as metal welding, machining, blueprint reading, fabrication, robotics, assembly, industry terminology, safety, tools, milling, electrical principals, and measurement. Course of study will also incorporate leadership skills, professional development and organizational skills.	1 or 2 Max credit = 2	License Code: 17113-Automated Manufacturing ◆ 9-12
17115	Sheet Metal Technology	9-12	This course provides instruction in the sheet metal industry as it relates to the cooling and heating of interior environments. The following aspects of the sheet metal industry will be introduced: basic safety, math; hand tools, power tools; blueprints and specifications; fasteners, hangers and supports; steel and other metals; and an introduction to insulation. Sheet metal processes will include sheet metal duct fabrication; gutters and downspouts, and roof flashing.	1 or 2 Max credit = 2	License Code: 17115-Sheet Metal Technology ◆ 9-12
17118	Facilities Maintenance II ◆ Prerequisite: Facilities Maintenance I	10-12	Facilities Maintenance II incorporates advanced skill training. The Core Curriculum is completed and enhanced safety protocol including participation as a safety officer is included. Additional topics will be introduced including electrical device service, plumbing fixture maintenance and landscape maintenance. Students who successfully complete course modules and meet all safety standards will be eligible to receive national recognition and can articulate the national recognition into college construction craft programs.	1 or 2 Max credit = 2	License Code: 17110-Facilities Maintenance ◆ 9-12
17120	Residential Plumbing	9-12	This course provides the student with the basic knowledge of the plumbing code, trade skills, job site expectations and blueprint reading. The curriculum includes state codes, various aspects of materials, equipment and fixtures, service and installation procedures. Activities will include; layout of water and sanitation systems; working with a variety of materials such as cast iron, plastic, copper and steel; setting fixtures and proper hookups; and plumbing service.	2 Max credit = 2	License Code: 17120-Residential Plumbing ◆ 9-12

HIGH SCHOOL TRADE AND INDUSTRIAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Trade and Industrial Education require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
17125	Electrical Technology	9-12	This program will provide students with the background necessary to enter the field of electrical wiring in residential construction. The course of study includes; electrical fundamentals, electrical code study, math, residential wiring, electrical drafting and blueprint reading, and alternating current theory. Hands-on practical wiring of equipment circuits will be provided in a laboratory setting.	2 <i>Max credit = 2</i>	License Code: 17125-Electrical Technology ◆ 9-12
17130	Drafting Technology I	9-12	Drafting Technology I introduces careers in drafting. The course covers theory, laboratory and shop work related to gathering and translating data or specifications. Orientation to the use of drafting tools and beginning Computer Aided Drafting software is included in the first year. The types of drafting introduced include architectural, mechanical, structural, pneumatic, marine, electrical-electronic, topographical as well as other drawings and sketches. Drafting Technology I is a prerequisite course to Drafting Technology II.	1 or 2 <i>Max credit = 2</i>	License Code: 17130-Drafting Technology ◆ 9-12
17131	Drafting Technology II ◆ Prerequisite: Drafting Technology I	10-12	Drafting Technology II provides advanced software applications training requiring greater detail and accuracy. Use of reproduction materials, equipment and processes, preparation of reports and data sheets for specification writing, development of plan and process charges and development of models will be included. Completion of the Drafting Program prepares students for college drafting.	2 <i>Max credit = 2</i>	
17140	Audio/Visual Production	9-12	Audio/Visual Production courses provide students with the knowledge and skills necessary for television, video, film, online, and/or radio production. Writing scripts, camera operation, use of graphics and other visuals, lighting, audio techniques, editing, production principles, and career opportunities are typical topics covered within production courses. Students are usually required to produce their own program or segment. Additional topics such as broadcast industry regulations, radio/TV operation, power of the medium, photography, transmission technology, and so on may be included.	½, 1 or 2 <i>Max credit = 2</i>	License Code: 17140-Television Production ◆ 9-12
17150	Electronics Technology I	9-12	Electronics Technology I will provide students with a working knowledge of Direct Current (DC) and Alternation Current (AC) theory and application. Integrated math and physic concepts will be provided to support the understanding of DC and AC circuitry. Electronics Technology I is a prerequisite course to Electronics Technology II.	1 or 2 <i>Max credit = 2</i>	License Code: 17150-Electronics Technology ◆ 9-12

HIGH SCHOOL TRADE AND INDUSTRIAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Trade and Industrial Education require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
17151	Electronics Technology II	9-12	Electronics Technology II continues skill development using solid state technology such as diodes, transistors, integrated circuits, optoelectronic devices, digital electronics, power supplies and amplifiers. Additional topics that will be included are communication, instrumentation, lasers, security systems and electronic systems technology. Articulation with college electronics programs is available. Electronics Technology II is a prerequisite to Electronics Technology III.	1 or 2	License Code: 17150-Electronics Technology ◆ 9-12
17152	Electronics Technology III	9-12	Designing and installing computer networks, home theater, security systems and Programmable Logic Computers. Students will also have opportunities for Career tours and hands-on projects to enhance the students understanding of the electronics career field. Full articulation agreements with post-secondary education with successful completion of the course.	1 or 2 <i>Max credit = 2</i>	
17190	Graphic Communications I	9-12	Graphic Communications I includes instruction in graphic theory, hot and cold typesetting, lithography, photoengraving and other graphic arts related to the printing industry. Emphasis on applied academics, professional development, leadership and organizational skills are integrated. Graphic Communications I is a prerequisite course to Graphic Communications II.	1 or 2 <i>Max credit = 2</i>	License Code: 17190-Graphic Communications ◆ 9-12
17191	Graphic Communications II ◆ Prerequisite: Graphic Communications I	10-12	Graphic Communications II provides advanced instruction in typographical layouts and designs, hand and machine typesetting, camera and plate work. Emphasis on applied academics, professional development, leadership and organizational skills are integrated. Graphic Communications	2 <i>Max credit = 2</i>	
17230	Machine Tooling Technology	9-12	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.	1 or 2 <i>Max credit = 2</i>	License Code: 17230-Machine Tooling Technology ◆ 9-12

HIGH SCHOOL TRADE AND INDUSTRIAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Trade and Industrial Education require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
17236	Welding Technology I	9-12	This course introduces students to a career in welding. The course begins covering various types of metal welding, brazing, flame cutting, properties of metals, blueprint reading, electrical principles, welding symbols and mechanical drawing. Emphasis on applied academics, professional development, leadership, and organizational skills are integrated throughout the curriculum. Welding Technology I is a prerequisite course to Welding Technology II.	1 or 2 <i>Max credit = 2</i>	License Code: 17236-Welding Technology ♦ 9-12
17237	Welding Technology II ♦ Prerequisite: Welding Technology I	10-12	Welding Technology II provides advanced training in the various welding applications in preparation for college welding programs or entering employment. The course will adhere to American Welding Society standards in welding processes. Continued emphasis will be placed on applied academics, professional development, leadership, and organizational skills.	2 <i>Max credit = 2</i>	
17238	Virtual Center Welding Technology Summer Academy	9-12	Welding Technology 17238 is a Summer Academy that allows students the opportunity to take fundamentals learned through online instruction, ITV instruction, or articulation from an accepted Agriculture program to gain training in advanced welding techniques. Students will be given more detailed instruction and hands-on training in American Welding Society recognized processes preparing them for industry certification testing. Virtual Welding Technology Summer Academy must be a part of the Welding Technology or Ag Mechanics class for students in Virtual Centers only and must be offered as part of the Welding Technology program. The Virtual Center must receive prior approval from the Department of Career and Technical Education before offering the Welding Technology class as an option.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
17310	Recreational Small Engine Technology I	9-12	Recreational Small Engine Technology I includes the maintenance repair of a variety of small engines such as lawnmowers, outboard motors, chain saws and rototillers. The course includes theory and practical application lab. This course is a prerequisite to Recreational Small Engines II.	1 or 2 <i>Max credit = 2</i>	License Code: 17310-Recreational Small Engine Technology ♦ 9-12
17311	Recreational Small Engine Technology II ♦ Prerequisite: Recreational Small Engine Technology I	10-12	Recreational Small Engine Technology II provides advance instruction in maintenance repair of a variety of small engines. The course includes principles of the internal engine, reading technical manuals and customer service.	2 <i>Max credit = 2</i>	

HIGH SCHOOL TRADE AND INDUSTRIAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Trade and Industrial Education require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
17410	Exploration of Oil Industry Careers	9-12	This is a beginning course for students interested in exploring petroleum industry careers. The course introduces students to oil industry occupations and the occupations concerned with oil production from exploration to refining, including aptitude and interest. The course will cover the processes involved in exploration for oil and gas, obtaining mineral rights, and getting the oil from the ground to the pipeline.	½ or 1 <i>Max credit = 1</i>	License Code: 17400-Petroleum Technology ♦ 9-12
17413	Petroleum Industry Skills	9-12	The course will cover basic workplace safety and emphasize safety protocol required in the Petroleum Industry and in the oil field including safety practices on projects and the use of a safety officer. Students who successfully complete course modules and meet all safety standards will be NCCER and OSHA 10 Certified. Students will be introduced to the Production processes from land rights to pipeline and then the basic principles of oil field technology. The course will cover basic mechanical components and their application.	1 <i>Max credit = 1</i>	
17812	Aviation Technology I	9-12	To provide students for employment in the aviation field. The course covers fundamentals of flight, flight operations, aviation weather, performance and navigation. The course also explores careers in air traffic control, flight dispatching and airport management. Units of instruction include; safety of flight, airport layout, aeronautical charts, radar, radio procedures, airplane power plant, aerodynamics, weather patterns and hazards. Emphasis on applied academics in math and science are integrated throughout the curriculum along with decision-making principles as it applies to flight-related factors.	1 or 2 <i>Max credit = 2</i>	License Code: 17812-Aviation Technology 9-12
17813	Aviation Technology II	10-12	Students will be prepared to pass the Federal Aviation Administration, FAA, private pilot verbal exam. Course will cover advanced flight topics as well as topics covered in Aviation I to an advanced level. Students will also work in teams to build a full-scale aircraft.	1 or 2 <i>Max credit = 2</i>	
17814	Unmanned Aircraft Systems	10-12	The Unmanned Aircraft Systems course will teach students a basic understanding of recreational and commercial unmanned aircraft operations. They will identify the responsibility and authority of the remote PIC, discuss rules of UAS operation, understand the significance of airspace Classes B, C, D, E, and G as they pertain to UAS. Identify special-use airspace where UAS usage may be prohibited. Understand weather and how it affects flight of UAS. Understand general loading and performance data, airport operations. When students complete this course, they will have a general understanding and knowledge of the operation and uses of UAS as they pertain to the world of Aviation.	1 or 2 <i>Max credit = 2</i>	

HIGH SCHOOL TRADE AND INDUSTRIAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Trade and Industrial Education require 150 contact hours per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
17950	T&I Capstone ◆ Prerequisite: minimum 3 credits in same field of study	11-12	<p>This course serves as the culminating and integrative experience that is designed to give students the opportunity to expand their knowledge in their career pathway. It is a project-based course that would take a student through the design process to a finished product, incorporating 21st Century Skills, thinking critically and solving challenging problems. Course would consist of a major project, engaging in extended learning and/or an internship. The student must be able to demonstrate through their project all that they have learned in their program of study by applying it. Each capstone project should incorporate the broader community, some aspect of "giving back" to others, encouraging students to connect their project (s) to the community or to integrate outside of school learning experiences.</p> <p>Key Requirements:</p> <ol style="list-style-type: none"> 1. Student would meet with Capstone team (teacher, career advisor, administrator, parent) 2. Lay out a plan of study (Individual CTE Learning Plan) to meet the goal determine by the Capstone team. 3. Capstone team would monitor progress (assessment) and either add to or change the individual learning plan as to meet the student goals. 4. Maintain a portfolio of learning outcomes. 	<p>½ or 1</p> <p><i>Max credit = 2</i></p>	<p>License Code: 17031-Auto Collision Technology ◆ 9-12</p> <p>OR</p> <p>17032-Automotive Technology ◆ 9-12</p> <p>OR</p> <p>17035-Parts Merchandising & Management ◆ 9-12</p> <p>OR</p> <p>17040-Diesel Technology ◆ 9-12</p> <p>OR</p> <p>17045-Introduction to Commercial Driving License (CDL) ◆ 10-12</p> <p>OR</p> <p>17050-Culinary Arts ◆ 9-12</p> <p>OR</p> <p>17073-Graphic Communication ◆ 9-12</p> <p>OR</p> <p>17080-Photography ◆ 9-12</p> <p>OR</p> <p>17100-Construction Technology ◆ 9-12</p> <p>OR</p> <p>17110-Facilities Maintenance 9-12</p> <p>OR</p> <p>17112-Heating, Ventilating, & Air Conditioning 9-12</p> <p>Continued on Next Page</p>

HIGH SCHOOL TRADE AND INDUSTRIAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Trade and Industrial Education **require 150 contact hours** per Career and Technical Education (CTE) credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
17950	<p>T&I Capstone</p> <p>(Continued)</p> <p>◆ Prerequisite: minimum 3 credits in same field of study</p>				<p>License Code (Continued from Previous Page):</p> <p>OR 17113-Automated Manufacturing 9-12</p> <p>OR 17115-Sheet Metal Technology ◆ 9-12</p> <p>OR 17120-Residential Plumbing 9-12</p> <p>OR 17125-Electrical Technology 9-12</p> <p>OR 17130-Drafting Technology 9-12</p> <p>OR 17140-Television Production 9-12</p> <p>OR 17150-Electronics Technology 9-12</p> <p>OR 17190-Graphic Communications 9-12</p> <p>OR 17230-Machine Tooling Technology 9-12</p> <p>OR 17236-Welding Technology 9-12</p> <p>OR 17310-Recreational Small Engine Technology 9-12</p> <p>Continued on Next Page</p>

HIGH SCHOOL TRADE AND INDUSTRIAL EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Trade and Industrial Education **require 150 contact hours** per Career and Technical Education (CTE) credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
17950	<p style="text-align: center;">T&I Capstone</p> <p style="text-align: center;">(Continued)</p> <p>◆ Prerequisite: minimum 3 credits in same field of study</p>				<p>License Code (Continued from Previous Page):</p> <p>OR 17400-Petroleum Technology 9-12</p> <p>OR 17812-Aviation Technology 9-12</p> <p>OR 17999-Cooperative Work Experience 10-12</p>
17999	Cooperative Work Experience	11-12	<p>Provides students with a regularly scheduled, supervised employment opportunity related to Trade and Industrial Occupations in order to develop and improve work skills. The employment must be preceded by, or concurrent with, classroom instruction related to the work experience, consistent with the student's occupational goals, and related to the Trade and Industrial Education program area. There shall be a training agreement among all partners to the work experience (school, employer, student, and parents/guardians) outlining the expectations of each party. The instructor shall also develop a specific training plan with the employer for each student placed. The training plan shall include provisions for assessment of student progress and for on-site visits by the instructor during the student's placement.</p> <p>NOTE: Students must be at least 16 years old and may be paid a wage by the employer.</p>	<p>Maximum of ½ credit per semester, not to exceed 4 credits while in high school</p> <p><i>Max credit = 4</i></p>	<p>License Code: 17999-Cooperative Work Experience ◆ 10-12</p>

* *High school curricular requirements are spelled out in NDCC 15.1-21-02 and High school unit - instructional time is NDCC 15.1-21-03. Maximum credit refers to the maximum units of credit a student may earn for a course over four years of high school. (Example: Band - a student 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).*

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HIGH SCHOOL COMPUTER SCIENCE EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Computer Science Education **require 120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
23011	Computer Science Applications	9-12	The main focus of this course is microcomputer operation system functions and commands. Students learn about operating system concepts, disk and file formats, disk and file management, and control and processing programs. Students learn to use utilities to sort, merge, copy, back up, and recover data. They also perform installation and execution of business applications software.	½ or 1 <i>Max credit = 1</i>	License Code: 23000-Computer Science ◆ 5-12 or 9-12
23012	Computer Science Programming	9-12	Basic programming concepts are presented which are transferable to other programming languages. Foundational concepts and fundamentals of computer programming including logic, design, coding, structure, and controls are addressed. Careers in programming are explored and students are provided with opportunities to increase their communication, teamwork, and critical thinking skills. Business projects are used to show how programming skills are used in the business world.	½ or 1 <i>Max credit = 1</i>	
23013	Integrated Mathematics for Computer Science/Information Technology (Computer Science) ◆ Recommended Prerequisite: Algebra I and Computer Science Programming or Programming Essentials-Visual Basics	9-12	This course is a computer science with a major focus on math. Course topics are divided into six areas: sets, functions, and relations; basic logic; proof techniques; counting basics; graphs and trees; and discrete probability. Mathematical topics are interwoven with computer science applications to enhance the student's understanding of the introduced mathematics, while students develop the ability to see computational problems from a mathematical perspective. Topics also include 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. Algorithms in both mathematics and computer science contexts will be explored in depth. Note: This course can be taught for Computer Science credit only. For Career and Technical Education credit, Integrated Mathematics for Computer Science/Information Technology can be found under Information Technology. For Mathematics credit, Integrated Mathematics for Computer Science/Information Technology can be found under Mathematics.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL COMPUTER SCIENCE EDUCATION COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Computer Science Education **require 120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
23015	Advanced Computer Science Programming	10-12	Advanced Computer Science Programming provides students with the knowledge and skills necessary to construct computer programs in one or more languages. Computer coding and program structure are often introduced with the BASIC language, but other computer languages, such as Visual Basic (VB), Java, Pascal, C++, and COBOL, may be used instead. Initially, students learn to structure, create, document, and debug computer programs, and as they progress, more emphasis is placed on design, style, clarity, and efficiency. Students may apply the skills they learn to relevant applications such as modeling, data management, graphics, and text-processing.	½ or 1 Max credit = 1	License Code: 23000-Computer Science ◆ 5-12 or 9-12
23580	Advanced Placement Computer Science A©	10-12	AP Computer Science A is equivalent to a first-semester, college-level course in computer science. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The AP Computer Science A course curriculum is compatible with many CS1 courses in colleges and universities.	½ or 1 Max credit = 1	
23582	Advanced Placement Computer Science Principles©	9-12	Focuses on computational thinking that is vital for success in all disciplines. Students use computational tools to analyze and study data. They also work with large data sets to identify, analyze, and draw conclusions from trends. Also focuses on student creativity and collaboration to develop skills in oral and written communication and problem solving. Students will use software and technology to explore questions that interest them.	½ or 1 Max credit = 1	

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HIGH SCHOOL DRIVER AND TRAFFIC SAFETY EDUCATION COURSE CODES

GRADES 9-12

(For time/credit options, refer to the Department of Transportation ND Administrative Code 37-03-04-02 and the Administrative Resource Guide for Driver and Traffic Safety Education in North Dakota (<http://www.dpi.state.nd.us/approve/drivered.shtml>))

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
21012	Driver Education Classroom Only	8 (see note) 9-12	The classroom program of driver's education includes at least 30 hours of classroom instruction. <u>This course</u> provides students with the knowledge to become safe drivers on America's roadways. Topics in these courses include legal obligations and responsibility, rules of the road and traffic procedures, safe driving strategies and practices, and the physical and mental factors affecting the driver's capability (including alcohol and other drugs). (Note: This course code should only be used for MIS03 reporting purposes when a grade 8 student <u>is receiving high school credit.</u>)	¼ or ½ (may be awarded ½ credit if <u>all</u> required times are doubled) <i>Max credit = ½</i>	License Code: 21005-Driver Education ♦ 5-12 o 9-12
21013	Driver Education Behind-the Wheel Only	9-12	The behind-the-wheel instruction should include: 1) a minimum of 6 hours of supervised behind-the-wheel on-street instruction in a dual-control vehicle and at least 6 hours of driving observation; or 2) at least three hours of behind-the-wheel on-street instruction and twelve hours of simulation, or 3) at least three hours of behind-the-wheel on-street instruction in addition to at least six hours of range driving, or 4) a sequential use of simulation, multiple-car driving range, and behind-the-wheel on-street instruction of which students must receive a minimum of two hours of behind-the-wheel instruction on-street instruction.	¼ or ½ (may be awarded ½ credit if <u>all</u> required times are doubled) <i>Max credit = ½</i>	
21014	Two Phase Program-- Classroom and Behind-the-Wheel	9-12	The most frequently offered driver education course is a two-phase program encompassing integrated driver education experiences consisting of 30 hours of classroom instruction and a minimum of 6 hours of supervised behind-the-wheel on-street instruction in a dual-control vehicle and at least 6 hours of driving observation.	¼ or ½ (may be awarded ½ credit if <u>all</u> required times are doubled) <i>Max credit = ½</i>	
21015	Three Phase Program-- Classroom, Behind-the-Wheel, & Simulation	9-12	An integrated program of a minimum of 30 hours of classroom instruction combined with at least three hours of behind-the-wheel on-street instruction and twelve hours of simulation.	¼ or ½ (may be awarded ½ credit if <u>all</u> required times are doubled) <i>Max credit = ½</i>	

HIGH SCHOOL DRIVER AND TRAFFIC SAFETY EDUCATION COURSE CODES

GRADES 9-12

(For time/credit options, refer to the Department of Transportation ND Administrative Code 37-03-04-02 and the Administrative Resource Guide for Driver and Traffic Safety Education in North Dakota (<http://www.dpi.state.nd.us/approve/drivered.shtm>))

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
21016	Three Phase Program-- Classroom, Behind-the-Wheel, & Multi-Car Driving Range	9-12	An integrated program of a minimum of 30 hours of classroom instruction combined with extensive driving on a multi-car driving range. Students must receive at least three hours of behind-the-wheel on-street instruction in addition to at least six hours of range driving.	$\frac{1}{4}$ or $\frac{1}{2}$ (may be awarded $\frac{1}{2}$ credit if <u>all</u> required times are doubled) <i>Max credit = $\frac{1}{2}$</i>	License Code: 21005-Driver Education ♦ 5-12 or 9-12
21018	Four Phase Program-- Classroom, Behind-the-Wheel, Simulation, & Multi-Car Driving Range	9-12	This course provides a comprehensive program of driver education, which includes a minimum of 30 hours of classroom instruction and sequential use of simulation, multiple-car driving range, and behind-the-wheel on-street instruction. Students must receive a minimum of two hours of behind-the-wheel instruction on-street instruction.	$\frac{1}{4}$ or $\frac{1}{2}$ (may be awarded $\frac{1}{2}$ credit if <u>all</u> required times are doubled) <i>Max credit = $\frac{1}{2}$</i>	

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HIGH SCHOOL ENGLISH/LANGUAGE ARTS COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in English/Language Arts require **120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
05011	Developmental Reading/Writing	9-12	Developmental Reading/Writing offers students the opportunity to focus on their reading and writing skills. Assistance is targeted to students' particular weaknesses and is designed to bring students' reading comprehension and writing skills up to the desired level or to develop strategies to read and write more efficiently.	$\frac{1}{2}$ or 1 <i>Max credit = 4</i>	License Code: 05020-Composite English ◆ 5-12 or 9-12 OR 05007-Reading ◆ 5-12, 9-12, 1-12, or K-12
05012	English Intervention	9-12	English Intervention is designed to assist students who are struggling and/or failing in an English course. This course should be provided in conjunction with the regular English course to pre-teach, re-teach, or provide enrichment to the student in order to prevent the need to modify the school's existing English curriculum. This course should be a structured class period which will build upon the existing reading, writing, and language skills needed for students to achieve the opportunity for success in their current and/or future English courses.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 05020-Composite English ◆ 5-12 or 9-12
05015	Remedial Reading	9-12	To instruct students in a secondary setting who have failed to benefit from regular classroom instruction in any content subject where reading is a required skill.	Supplemental instruction – provided as needed	
05022	Grammar	9-12	Grammar involves the study of the English language—its roots and derivations, structure and sentence patterns, dialects, writing and spelling systems, and uses as a communication tool.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
05024	History of the English Language	11-12	Development of an understanding of the historical and social changes in the English language. How the Anglo-Saxon dialects transplanted to Britain developed in the course of time into the language called English. Attention should center on two historical areas: 1) the influence of nonlinguistic factors such as social and political change, and 2) the effect on English of the process of general language change.	$\frac{1}{4}$ or $\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
05030	Humanities (English)	10-12	Humanities (English) provides an overview of major expressions of the cultural heritage of selected western and eastern civilizations. Content typically includes (but is not limited to) the examination of selected examples of art, music, literature, architecture, technology, philosophy, and religion of the cultures studied. These courses may also cover the languages and political institutions of these cultures. Note: This course can be taught for English credit only. For Social Studies credit, use Humanities (Social Studies) under Social Studies.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: Any 5-12 or 9-12 English degree

HIGH SCHOOL ENGLISH/LANGUAGE ARTS COURSE CODES GRADES 9-12

High school (grades 9-12) courses in English/Language Arts require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
05031	American Literature	10-12	American Literature focuses upon commonly known American authors and their work. Students improve their critical-thinking skills as they determine the underlying assumptions and values within the selected works and as they understand how the literature reflects the society of the time. Oral discussion is an integral part of literature courses, and written compositions are often required.	¼, ½, or 1 Max credit = 1	License Code: 05020-Composite English ◆ 5-12 or 9-12
05033	Modern Literature	10-12	Modern Literature has the same aim as general literature courses (to improve students' language arts and critical-thinking skills), focusing on the literature written during or reflecting a particular time period (such as the French Revolution, the 1960s, or the 20th century). Students determine the underlying assumptions and values within the selected works, reflect upon the influence of societal events and social attitudes, and compare the points of view of various authors. Oral discussion is an integral part of literature courses, and written compositions are often required.	¼, ½, or 1 Max credit = 1	
05034	English Literature	10-12	English Literature may provide a survey of British literature or may focus on a selected timeframe of England's history. Students improve their critical-thinking skills as they determine the underlying assumptions and values within the selected works and as they understand how the literature reflects the society of the time. Oral discussion is an integral part of literature courses, and written compositions are often required.	¼, ½, or 1 Max credit = 1	
05035	World Literature	10-12	World Literature uses representative literature selections from ancient and/or modern times from countries around the world. Students improve their critical-thinking skills as they comprehend the diversity of literary traditions and the influences of those traditions. Oral discussion is an integral part of literature courses, and written compositions are often required.	¼, ½, or 1 Max credit = 1	
05036	Biography	10-12	Biography is the study of the lives of persons in narrative accounts that have stylistic and other formal qualities of noteworthy literature; historical development of techniques of biographical styles; and methods of revealing the subjects' character as well as the facts of their lives.	¼ or ½ Max credit = ½	
05037	Drama (Literature)	9-12	The main types and styles of dramatic literature, including tragedy, comedy, melodrama, social criticism, classical, romantic, realistic, impressionistic, and expressionistic. It may include philosophy or attitude of the dramatist and background on the historical period and the culture of the intended audience. The study of structure, plot, and techniques of character revelation through movement and dialogue rather than narrative.	¼ or ½ Max credit = ½	

HIGH SCHOOL ENGLISH/LANGUAGE ARTS COURSE CODES GRADES 9-12

High school (grades 9-12) courses in English/Language Arts require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
05038	Poetry	10-12	Poetry is a study and appreciation of the details of poetry including rhythm, imagery, connotative word values, figures of speech, similes and metaphors, and rhyme. It may include historical background and speculation on the writers' emotions and ideas. It may be studied by type—Ballads, organized by theme—Man, A Victim of Industrialization, or organized in relation to time—Today's Poetry.	$\frac{1}{4}$ or $\frac{1}{2}$ Max credit = $\frac{1}{2}$	License Code: 05020-Composite English ♦ 5-12 or 9-12
05039	Fiction	9-12	Fiction is the study of short stories and novels, point of view, plot, character, setting, and theme	$\frac{1}{4}$, $\frac{1}{2}$, or 1 Max credit = 1	
05040	Composition	9-12	Composition focuses on students' writing skills and develops their ability to compose different types of papers for a range of purposes and audiences. This course enables students to explore and practice descriptive, narrative, persuasive, or expository styles as they write paragraphs, essays, letters, applications, formal documented papers, or technical reports. Although composition may present some opportunities for creative writing, their focus usually remains on nonfiction, scholarly, or formal writing.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 Max credit = 1	
05041	Advanced Composition ♦ Recommended Prerequisite: $\frac{1}{2}$ credit in Composition	10-12	Advanced Composition reinforces the logic and critical-thinking skills that accompany good writing, these courses—which emphasize word choice, usage, and writing mechanics—provide continued and advanced instruction in writing for a variety of purposes and audiences. This course may emphasize college or business preparation; literature study may be offered as an additional component in which students analyze examples of several genres.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 Max credit = 1	
05042	Creative Writing	10-12	Creative Writing offers students the opportunity to develop and improve their technique and individual style in poetry, short story, drama, essays, and other forms of prose. The emphasis of the course is on writing; however, students may study exemplary representations and authors to obtain a fuller appreciation of the form and craft. Although most creative writing classes cover several expressive forms, others concentrate exclusively on one particular form (such as poetry or playwriting).	$\frac{1}{4}$ or $\frac{1}{2}$ Max credit = $\frac{1}{2}$	
05043	Mythology	9-12	Mythology identifies the characteristics of a myth and recognizes the close relationship between myths and legends, folk tales, and fairy tales. This course may include how it reflects upon the culture of people who created them, how they explain the natural world and provide meaning to everyday life, how they establish guidelines for living, and how they are reflected in literature, music, and art.	$\frac{1}{2}$ Max credit = $\frac{1}{2}$	

HIGH SCHOOL ENGLISH/LANGUAGE ARTS COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in English/Language Arts require **120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
05071	English 9	9-12	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.	1 <i>Max credit = 1</i>	License Code: 05020-Composite English 5-12 or 9-12
05072	English 10 ♦ Recommended Prerequisite: English 9	10-12	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.	1 <i>Max credit = 1</i>	
05073	English 11 ♦ Recommended Prerequisite: English 9 and 10	11-12	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.	1 <i>Max credit = 1</i>	
05074	English 12 ♦ Recommended Prerequisite: English 9, 10, and 11	11-12	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.	1 <i>Max credit = 1</i>	
05076	Business English	11-12	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.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	
05077	Advanced English ♦ Recommended Prerequisite: 3 credits in English	12	Advanced English teaches critical reading and analysis of literature; advanced techniques of formal written composition; personal writing in a variety of literary forms; and self-designed oral presentations and techniques of group discussion.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL ENGLISH/LANGUAGE ARTS COURSE CODES GRADES 9-12

High school (grades 9-12) courses in English/Language Arts require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
05078	College Learning Lab-English 12	12	College Learning Lab-English focuses on preparing the student for collegiate studies, specifically to Freshman English. The student will be engaged in educational experiences regarding effective listening, speaking, writing, and reading. NOTE: This course code is designed to be used exclusively with the Pearson MyFoundationsLab platform through the CREAM or CLEM programs.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 05020-Composite English ◆ 5-12 or 9-12
05081	Journalism	9-12	Journalism examines specific topics in journalism and broadcasting other than those already described.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 4</i>	
05082	Advanced Journalism ◆ Recommended Prerequisite: $\frac{1}{2}$ credit in Journalism	10-12	An advanced study of journalism procedures including a review of writing, editing, and proofreading; specific writing skills needed for each of the various media and discussion or simulation of the responsibilities of various professional journalists, and techniques and practice in feature and editorial writing.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 4</i>	License Code: 05025-Journalism ◆ 5-12 or 9-12
05091	Speech I	9-12	Speech I is an introduction to various types of oral communication situations: conversation, group discussion, and problem solving, interpersonal communication, nonverbal communication, and public address. Exploration and application of skills such as: gathering information, speech planning, speech organization, delivery techniques, listening skills, communication theory, and understanding persuasion.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 Max credit = 1	
05092	Speech II ◆ Recommended Prerequisite: $\frac{1}{2}$ credit in Speech I	10-12	Speech II is a review and refinement of basic oral communication skills in Speech I-05091. Exploration of related activities such as oral interpretation, parliamentary procedure, media, theater arts, and contest speaking. Note: If no other advanced speech courses are taught, this course should include elements of Oral Interpretation 05093, Beginning Debate 05094, and Advanced Debate 05095.	$\frac{1}{2}$ or 1 Max credit = 2	License Code: 05045-Speech ◆ 5-12 or 9-12
05093	Oral Interpretation ◆ Recommended Prerequisite: $\frac{1}{2}$ credit in Speech I	10-12	Oral Interpretation is the development, study, and practice of delivery techniques, selection of materials, group reading, analysis and interpretation of prose, poetry, and drama.	$\frac{1}{4}$ or $\frac{1}{2}$ <i>Max credit = 2</i>	

HIGH SCHOOL ENGLISH/LANGUAGE ARTS COURSE CODES GRADES 9-12

High school (grades 9-12) courses in English/Language Arts require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
05094	Beginning Debate	9-12	Beginning Debate involves studying and applying the techniques for investigating two sides of contemporary problems. It addresses the formulation of propositions; analyzing and determining issues; gathering supporting material; constructing cases; developing logical reasoning and critical thinking; techniques of rebuttal and refutation; and extemporaneous delivery skills.	¼, ½, or 1 <i>Max credit = 4</i>	License Code: 05045-Speech ◆ 5-12 or 9-12
05095	Advanced Debate ◆ Recommended Prerequisite: ½ credit in Beginning Debate	10-12	Advanced Debate is an in-depth investigation and analysis of significant contemporary problems; critical thinking; testing facts and evidence; use of logic and reasoning; and delivery techniques and varieties of forensic speaking.	¼, ½, or 1 <i>Max credit = 4</i>	
05098	Semantics	11-12	Semantics is the study of evaluative process; the ways a person interprets his/her own language; factual and influential statements; values in nature compared to the two-valued orientation of written or spoken language; verbal abstractions compared to concrete terms; stereotyping and how to avoid it; use of dating; emotive language; and distinction between any item and its label.	¼ or ½ <i>Max credit = ½</i>	
05099	Mass Media	9-12	Mass Media develops an awareness of the cultural and social impact of mass media and artistic features unique to each medium. It addresses mass media's influence on the communication process; electronic media (radio and television), printed media (newspapers and magazines), and the film as forms of entertainment and education.	¼, ½ or 1 <i>Max credit = 1</i>	License Code: 05020-Composite English ◆ 5-12 or 9-12
05111	Applied Communications	9-12	Applied Communications provides students the opportunity to develop and refine communication skills through competency-based individual and group learning in job-related communication skills: reading, writing, listening, speaking, problem-solving, visual, and nonverbal communication. These communication skills will be applied to occupations in the areas of agriculture, business/marketing, health occupations, home economics, and technical/trade/industry.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL ENGLISH/LANGUAGE ARTS COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in English/Language Arts require **120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
05580	Advanced Placement English Language & Composition©	10-12	The AP English Language and Composition course aligns to an introductory college-level rhetoric and writing curriculum, which requires students to develop evidence-based analytic and argumentative essays that proceed through several stages or drafts. Students evaluate, synthesize, and cite research to support their arguments. Throughout the course, students develop a personal style by making appropriate grammatical choices. Additionally, students read and analyze the rhetorical elements and their effects in non-fiction texts, including graphic images as forms of text, from many disciplines and historical periods.	½ or 1 <i>Max credit = 1</i>	License Code: 05020-Composite English ♦ 5-12 or 9-12
05581	Advanced Placement English Literature and Composition©	10-12	The AP English Literature and Composition course aligns to an introductory college-level literary analysis course. The course engages students in the 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, symbolism, and tone. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works.	½ or 1 <i>Max credit = 1</i>	

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FINE AND PERFORMING ARTS COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Fine and Performing Arts require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
ART					
02011	Art History	9-12	Art History introduces students to significant works of art, artists, and artistic movements that have shaped the art world and have influenced or reflected periods of history. This course often emphasizes the evolution of art forms, techniques, symbols, and themes.	¼, ½, or 1 <i>Max credit = 1</i>	License Code: 02005-Art ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12
02020	Art	9-12	Art focuses on drawing and painting. In keeping with this attention on two-dimensional work, students typically work with several media (such as pen-and-ink, pencil, chalk, watercolor, tempera, oils, acrylics, and so on), but some courses may focus on only one medium.	½ or 1 <i>Max credit = 1</i>	
02021	Fundamental of Art	9-12	Fundamental of Art provides students with the knowledge and opportunity to explore an art form and to create individual works of art. This course may also provide a discussion and exploration of career opportunities in the art world. Initial courses cover the language, materials, and processes of a particular art form and the design elements and principles supporting a work of art. As students advance and become more adept, the instruction regarding the creative process becomes more refined, and students are encouraged to develop their own artistic styles. Although this course focuses on creation, it may also include the study of major artists, art movements, and styles.	½ or 1 <i>Max credit = 1</i>	
02022	Color & Design	9-12	Color harmony combinations, design elements from line, geometric form construction, and theories of balance, both symmetrical and asymmetrical. Styles of design patterns for various cultures—American Indian, Oriental, other ethnic groups—should be included.	¼, ½, or 1 <i>Max credit = 1</i>	
02024	Crafts	9-12	Crafts focus is on crafts. This course may survey a wide range of crafts, or they may focus on only one type of craft; possibilities include calligraphy, quilting, silk-screening, cake-decorating, tole-painting, mask-making, knitting, crocheting, paper-making, and so on.	¼, ½, or 1 <i>Max credit = 1</i>	
02025	Drawing	9-12	Drawing focuses on drawing. In keeping with this attention on two-dimensional work, students typically work with several media (such as pen-and-ink, pencil, chalk, and so on), but some courses may focus on only one medium.	¼, ½, or 1 <i>Max credit = 1</i>	
02026	Painting	9-12	Painting focuses on painting. In keeping with this attention on two-dimensional work, students typically work with several media (such as watercolor, tempera, oils, acrylics, and so on), but some courses may focus on only one medium.	¼, ½, or 1 <i>Max credit = 1</i>	

**FINE AND PERFORMING ARTS COURSE CODES
GRADES 9-12**

High school (grades 9-12) courses in Fine and Performing Arts require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
ART (Continued)					
02028	Printmaking	9-12	Printmaking introduces students to a variety of printmaking techniques using processes such as relief printing (monoprint, collograph block); intaglio (etching and engraving); and perigraphy (silkscreen films, stencils, block-out). This course emphasizes design elements and principles and introduces art criticism as applied to fine art prints. Lessons may also include the historical development of printmaking in Western and non-Western cultures.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	License Code: 02005-Art ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12
02029	Sculpture	9-12	Sculpture focuses on creating three-dimensional works. Students typically work with several media (such as clay, ceramics, wood, metals, textiles, and so on), but some courses may focus on only one medium.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	
02050	Commercial Art	9-12	Commercial Art teaches students to use artistic techniques to effectively communicate ideas and information to business and customer audiences via illustration and other forms of digital or printed media. Topics covered may include concept design, layout, paste-up and techniques such as engraving, etching, silkscreen, lithography, offset, drawing and cartooning, painting, collage and computer graphics. <i>Note: This course can be taught for Fine and Performing Arts credit only. For CTE credit, Graphic Communication can be found under Trade and Industrial Education.</i>	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	
02060	Photography	9-12	Photography exposes students to the materials, processes, and artistic techniques of taking artistic photographs. Students learn about the operation of a camera, composition, lighting techniques, depth of field, filters, camera angles, and film development. The course may cover black-and-white photography, color photography, or both. As students advance, the instruction regarding the creative process becomes more refined, and students are encouraged to develop their own artistic style. This course may also cover major photographers, art movements, and styles. <i>Note: This course can be taught for Fine and Performing Arts credit only. For CTE credit, Photography can be found under Trade and Industrial Education.</i>	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	

FINE AND PERFORMING ARTS COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Fine and Performing Arts require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
ART (Continued)					
02580	Advanced Placement Art History©	10-12	Functions and effects of art are the focus of the AP Art History course. Students consider influential forces like patronage, politics, class, belief, gender, and ethnicity in their analyses of art forms. They examine styles, techniques, themes, and chronology, comparing and contrasting art forms from varied perspectives. Students explore a specific set of 250 works of art in 10 content areas, beginning with art from global prehistory and ending with global works from the present.	½ or 1 <i>Max credit = 1</i>	License Code: 02005-Art ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12
02581	Advanced Placement Studio Art: Drawing©	10-12	The AP Program offers three studio art courses and portfolios: Two-Dimensional Design, Three-Dimensional Design, and Drawing. The AP Studio Art portfolios are designed for students who are seriously interested in the practical experience of art. Students submit portfolios for evaluation at the end of the school year. The AP Studio Art Program consists of three portfolios – 2-D Design, 3-D Design and Drawing – corresponding to the most common college foundation courses. Students may choose to submit any or all of the Drawing, Two-Dimensional Design, or Three-Dimensional design portfolios. AP Studio Art students create a portfolio of work to demonstrate the artistic skills and ideas they have developed, refined, and applied over the course of the year to produce visual compositions.	½ or 1 <i>Max credit = 1</i>	
02582	Advanced Placement Studio Art: 2-D Design©	10-12	The AP Program offers three studio art courses and portfolios: Two-Dimensional Design, Three-Dimensional Design, and Drawing. The AP Studio Art portfolios are designed for students who are seriously interested in the practical experience of art. Students submit portfolios for evaluation at the end of the school year. The AP Studio Art Program consists of three portfolios – 2-D Design, 3-D Design and Drawing – corresponding to the most common college foundation courses. Students may choose to submit any or all of the Drawing, Two-Dimensional Design, or Three-Dimensional design portfolios. AP Studio Art students create a portfolio of work to demonstrate the artistic skills and ideas they have developed, refined, and applied over the course of the year to produce visual compositions.	½ or 1 <i>Max credit = 1</i>	

FINE AND PERFORMING ARTS COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Fine and Performing Arts require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
ART (Continued)					
02583	Advanced Placement Studio Art: 3-D Design©	10-12	The AP Program offers three studio art courses and portfolios: Two-Dimensional Design, Three-Dimensional Design, and Drawing. The AP Studio Art portfolios are designed for students who are seriously interested in the practical experience of art. Students submit portfolios for evaluation at the end of the school year. The AP Studio Art Program consists of three portfolios – 2-D Design, 3-D Design and Drawing – corresponding to the most common college foundation courses. Students may choose to submit any or all of the Drawing, Two-Dimensional Design, or Three-Dimensional design portfolios. AP Studio Art students create a portfolio of work to demonstrate the artistic skills and ideas they have developed, refined, and applied over the course of the year to produce visual compositions.	½ or 1 Max credit = 1	License Code: 02005-Art ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12
08055	Dance I (Fine Arts)	9-12	Dance I (Fine Arts) provides students with experience in one or several dance forms (i.e., modern, jazz, ballet, and tap). Initial classes are usually introductory in nature, while the more advanced classes concentrate on improving students' technique and may offer or require experience in choreography and dance evaluation. Note: This course can be taught for Fine and Performing Arts credit only. For Physical Education credit, use Dance I (Phy. Ed.) under Physical Education and Health.	¼, ½, or 1 Max credit = 4	License Code: 08020-Health, Physical Education & Recreation ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 08025-Physical Education ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12
08056	Dance II (Fine Arts)	10-12	Dance II (Fine Arts) provides the opportunity for students with prior dance experience to improve techniques, experience choreography, and emphasize performance. Note: This course can be taught for Fine and Performing Arts credit only. For Physical Education credit, use Dance II (Phy. Ed.) under Physical Education and Health.	¼, ½, or 1 Max credit = 3	OR 08027-Health & Physical Education ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12

FINE AND PERFORMING ARTS COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Fine and Performing Arts require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/Credential Required**
MUSIC					
12020	Music History and Appreciation	9-12	Music History and Appreciation surveys different musical styles and periods with the intent of increasing students' enjoyment of musical styles and/or developing their artistic or technical judgment. Music History and Appreciation may also focus on developing an understanding of a particular style or period.	¼, ½, or 1 Max credit = 1	License Code: 12005-Instrumental Music ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 12010- Music ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 12015-Vocal Music ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12
12030	Music Theory	9-12	Music Theory provides students with an understanding of the fundamentals of music and includes one or more of the following topics: composition, arrangement, analysis, aural development, and sight reading.	½ or 1 Max credit = 1	
12039	Supervised Individual Study: Musicology	9-12	Supervised Individual Study: Musicology courses, often conducted with instructors, professional musicians, or voice coaches as mentors, enable students to explore music-related topics. Individual Study may serve as an opportunity for students to expand their expertise in a particular form or style, to explore a topic in greater detail, or to develop more advanced skills.	½ or 1 Max credit = 3	
12040	Vocal Music (Chorus)	9-12	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.	½ or 1 <i>Max credit = 4</i>	License Code: 12010-Music ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 12015-Vocal Music ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12
12048	Voice Classes	9-12	Vocal classes provide instruction in and encourage the development of vocal techniques (including aural development) other than the ability to sing in groups. This course may be conducted on either an individual or small group basis.	½ or 1 <i>Max credit = 4</i>	
12049	Supervised Individual Study: Vocal Music	9-12	Supervised Individual Study: Vocal Music provides instruction in and encourages the development of vocal techniques (including aural development) other than the ability to sing in groups. This course may be conducted on either an individual or small group basis.	½ or 1 <i>Max credit = 4</i>	
12051	Instrumental Music (Band)	9-12	Instrumental Music (Band) develops students' technique for playing brass, woodwind, and percussion instruments and cover a variety of non-specified band literature styles (concert, marching, orchestral, and modern styles).	½ or 1 <i>Max credit = 4</i>	License Code: 12005-Instrumental Music ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 12010-Music ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12
12052	Instrumental Music (Orchestra)	9-12	Instrumental Music (Orchestra) is designed to develop students' abilities to play brass, woodwind, percussion, and string instruments, covering a variety of string and orchestral literature styles.	½ or 1 <i>Max credit = 4</i>	

FINE AND PERFORMING ARTS COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Fine and Performing Arts require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
MUSIC - continued					
12057	Strings	9-12	The study, rehearsing, and performance of music for string instruments.	¼, ½, or 1 <i>Max credit = 4</i>	License Code: 12005-Instrumental Music ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 12010-Music ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12
12058	Instrument Classes	9-12	Instrumental classes provide individuals with instruction in instrumental techniques. This course may be conducted on either an individual or small group basis.	¼, ½, or 1 <i>Max credit = 4</i>	
12059	Supervised Individual Study: Instrumental Music	9-12	Supervised Individual Study: Instrumental Music provides individuals with instruction in instrumental techniques. This course may be conducted on either an individual or small group basis.	½ or 1 <i>Max credit = 4</i>	
12580	Advanced Placement Music Theory©	10-12	The AP Music Theory course corresponds to one or two semesters of an introductory-level college music theory course, covering topics such as musicianship, theory, musical materials, and procedures. Musicianship skills, including dictation and other listening skills, sight singing, and harmony, are considered an important part of the course. Students develop the ability to recognize, understand, and describe basic materials and processes of tonal music that are heard or presented in a score. Development of aural skills is a primary objective. Performance is also a part of the curriculum through the practice of sight singing. Students understand basic concepts and terminology by listening to and performing a wide variety of music. Notational skills, speed, and fluency are also emphasized.	½ or 1 <i>Max credit = 1</i>	License Code: 12005-Instrumental Music ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 12010- Music ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 12015-Vocal Music ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12
THEATRE ARTS					
05061	Theatre Arts	9-12	Theatre Arts is the awareness and application of the various skills and aspects of theatre productions including movement, characterization, makeup, costuming, theatre history, set design, lighting, and the directing and analysis of scenes and plays. <i>Note: This course can be taught for Fine and Performing Arts credit only.</i>	¼, ½, or 1 <i>Max credit = 4</i>	License Code: 05015-Drama ◆ K-8, 1-8, 5-12 or 9-12
05063	Advanced Theatre Arts ◆ Recommended Prerequisite: ½ credit in Theatre Art	9-12	Advanced Theatre Arts is a more detailed study of theatre productions including movement, characterization, makeup, costuming, theatre history, set design, lighting, and the directing and analysis of scenes and plays. It may include the production of a full-length play. <i>Note: This course can be taught for Fine and Performing Arts credit only.</i>	¼, ½, or 1 <i>Max credit = 3</i>	

FINE AND PERFORMING ARTS COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Fine and Performing Arts require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
THEATRE ARTS (Continued)					
05064	Drama - Literature (Fine Arts)	9-12	<p>The main types and styles of dramatic literature, including tragedy, comedy, melodrama, social criticism, classical, romantic, realistic, impressionistic, and expressionistic. It may include philosophy or attitude of the dramatist and background on the historical period and the culture of the intended audience. The study of structure, plot, and techniques of character revelation through movement and dialogue rather than narrative.</p> <p>Note: This course can be taught for Fine and Performing Arts credit only. For English credit, use Drama (Literature) under English/Language Arts.</p>	<p>$\frac{1}{4}$ or $\frac{1}{2}$</p> <p>Max credit = $\frac{1}{2}$</p>	<p>License Code: 05015-Drama ◆ K-8, 1-8, 5-12 or 9-12</p>
05068	TV/Cinema Production (Fine Arts)	9-12	<p>Students will learn (a) the skills necessary to produce the schools television show, along with mini films through CS6 generated art, stop motion, animation and video production; (b) to use digital and video cameras, video editing software, and CS6 programs including Photoshop and Premiere; (c) to demonstrate a professional attitude and the ability to work independently and in groups.</p> <p>Note: This course can be taught for Fine and Performing Arts credit only. For English credit, use Drama (Literature) under English/Language Arts.</p>	<p>$\frac{1}{4}$, $\frac{1}{2}$, or 1</p> <p>Max credit = 3</p>	<p>License Code: 02005-Art ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12</p>

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

Credentials are obtained from the Department of Public Instruction (DPI) and are issued to individuals holding a current teaching license.

HIGH SCHOOL FOREIGN LANGUAGES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Foreign Languages **require 120 contact hours** per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
AMERICAN SIGN LANGUAGE					
06315	American Sign Language I	8 (see note) 9-12	Designed to introduce students to American Sign Language and culture, American Sign Language I course prepare students to communicate authentically in American Sign Language by interpreting (reading/viewing), exchanging (signing and reading), and presenting (signing) information on a variety of topics. They introduce the relationship among the practices, perspectives, and cultures of deaf people and communities. Note: This course code <u>should only be used for MIS03 reporting purposes when a grade 8 student is receiving high school credit.</u>	½ or 1 <i>Max credit = 1</i>	License Code: 06040-American Sign Language ◆ K-12
06316	American Sign Language II	9-12	American Sign Language II courses build upon skills developed in American Sign Language I, preparing students to communicate authentically in American Sign Language by interpreting (reading/viewing), exchanging (signing and reading), and presenting (signing) information on concrete topics. American Sign Language II courses introduce the relationship among the practices, perspectives, and cultures of deaf people and communities.	½ or 1 <i>Max credit = 1</i>	
06317	American Sign Language III	9-12	American Sign Language III courses prepare students to communicate authentically in American Sign Language by interpreting (reading/viewing), exchanging (signing and reading), and presenting (signing) information, concepts, and ideas on a variety of topics, including connections to other subject areas. These courses expand students' knowledge of relationships among the practices, perspectives, and cultures of deaf people and communities.	½ or 1 <i>Max credit = 1</i>	
06318	American Sign Language IV	9-12	American Sign Language IV courses prepare students to communicate authentically in American Sign Language by interpreting (reading/viewing), exchanging (signing and reading), and presenting (signing) information, concepts, and ideas on a variety of topics, including connections to other subject areas. American Sign Language IV courses promote students' understanding of the relationships among the practices, perspectives, and cultures of deaf people and communities.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL FOREIGN LANGUAGES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Foreign Languages require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
CHINESE					
06261	Chinese I	8 (see note) 9-12	Designed to introduce students to Chinese language and culture, Chinese I emphasizes basic syntax, simple vocabulary, written characters, and spoken tones 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. Chinese culture is introduced through the art, literature, customs, and history of Chinese-speaking people. (Note: This course code should only be used for MIS03 reporting purposes when a grade 8 student is receiving high school credit.)	½ or 1 Max credit = 1	License Code: 06260-Chinese ◆ K-12
06262	Chinese II	9-12	Chinese II builds upon skills developed in Chinese I, extending students' ability to understand and express themselves in Chinese and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and phrasing, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of Chinese-speaking people to deepen their understanding of the culture(s).	½ or 1 Max credit = 1	
06263	Chinese III	9-12	Chinese III focuses on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.	½ or 1 Max credit = 1	
06264	Chinese IV	9-12	Chinese IV focuses on advancing students' skills and abilities to read, write, speak, and understand the Chinese language so that they can maintain simple conversations with sufficient vocabulary and an acceptable accent, have sufficient comprehension to understand speech spoken at a normal pace, read uncomplicated but authentic prose, and write narratives that indicate a good understanding of language rules and a strong vocabulary.	½ or 1 Max credit = 1	

HIGH SCHOOL FOREIGN LANGUAGES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Foreign Languages require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
CHINESE (Continued)					
06587	Advanced Placement Chinese Language and Culture	10-12	Emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. Engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions).	½ or 1 <i>Max credit = 1</i>	License Code: 06260-Chinese ♦ K-12
FRENCH					
06281	French I	8 (see note) 9-12	Designed to introduce students to French language and culture, French 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. French culture is introduced through the art, literature, customs, and history of the French-speaking people. <i>(Note: This course code should only be used for MIS03 reporting purposes when a grade 8 student is receiving high school credit.)</i>	½ or 1 <i>Max credit = 1</i>	License Code: 06010-French ♦ K-8, K-12, 1-8, 1-12, 5-8, 5-12, or 9-12
06282	French II	9-12	French II builds upon skills developed in French I, extending students' ability to understand and express themselves in French and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of French-speaking people to deepen their understanding of the culture(s).	½ or 1 <i>Max credit = 1</i>	
06283	French III	9-12	French III focuses on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL FOREIGN LANGUAGES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Foreign Languages require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
FRENCH (Continued)					
06284	French IV	9-12	French IV focuses on advancing students' skills and abilities to read, write, speak, and understand the French language so that they can maintain simple conversations with sufficient vocabulary and an acceptable accent, have sufficient comprehension to understand speech spoken at a normal pace, read uncomplicated but authentic prose, and write narratives that indicate a good understanding of grammar and a strong vocabulary.	½ or 1 Max credit = 1	License Code: 06010-French ♦ K-8, K-12, 1-8, 1-12, 5-8, 5-12, or 9-12
06285	French V	9-12	French V extends students' facility with the language so that they are able to understand, initiate, and sustain general conversations on topics beyond basic survival needs. Reading and writing tasks will usually include all normal verb tenses (present, past, and future).	½ or 1 Max credit = 1	
06580	Advanced Placement French Language and Culture©	10-12	Emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. Engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions).	½ or 1 Max credit = 1	
GERMAN					
06291	German I	8 (see note) 9-12	Designed to introduce students to German language and culture, German 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. German culture is introduced through the art, literature, customs, and history of the German-speaking people. <i>(Note: This course code should only be used for MIS03 reporting purposes when a grade 8 student is receiving high school credit.)</i>	½ or 1 Max credit = 1	License Code: 06015-German ♦ K-8, K-12, 1-8, 1-12, 5-8, 5-12, or 9-12

HIGH SCHOOL FOREIGN LANGUAGES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Foreign Languages require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
GERMAN (Continued)					
06292	German II	9-12	German II builds upon skills developed in German I, extending students' ability to understand and express themselves in German and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of German-speaking people to deepen their understanding of the culture(s).	½ or 1 <i>Max credit = 1</i>	License Code: 06015-German ♦ K-8, K-12, 1-8, 1-12, 5-8, 5-12, or 9-12
06293	German III	9-12	German III focuses on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.	½ or 1 <i>Max credit = 1</i>	
06294	German IV	9-12	German IV focuses on advancing students' skills and abilities to read, write, speak, and understand the German language so that they can maintain simple conversations with sufficient vocabulary and an acceptable accent, have sufficient comprehension to understand speech spoken at a normal pace, read uncomplicated but authentic prose, and write narratives that indicate a good understanding of grammar and a strong vocabulary.	½ or 1 <i>Max credit = 1</i>	
06295	German V	9-12	German V extends students' facility with the language so that they are able to understand, initiate, and sustain general conversations on topics beyond basic survival needs. Reading and writing tasks will usually include all normal verb tenses (present, past, and future).	½ or 1 <i>Max credit = 1</i>	
06586	Advanced Placement German Language and Culture©	10-12	Emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. Engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions).	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL FOREIGN LANGUAGES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Foreign Languages require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
GREEK					
06221	Greek I	8 (see note) 9-12	<p>Designed to introduce students to Greek language and culture, Greek 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. Greek culture is introduced through the art, literature, customs, and history of the Greek-speaking people.</p> <p><i>(Note: This course code should only be used for MIS03 reporting purposes when a grade 8 student is receiving high school credit.)</i></p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 06020-Greek ◆ K-12, 1-12, 5-12, or 9-12</p>
06222	Greek II	9-12	<p>Greek II builds upon skills developed in Greek I, extending students' ability to understand and express themselves in Greek and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of Greek-speaking people to deepen their understanding of the culture(s).</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	
JAPANESE					
06231	Japanese I	9-12	<p>Designed to introduce students to Japanese language and culture, Japanese I courses emphasize 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. Japanese culture is introduced through the art, literature, customs, and history of the Japanese-speaking people.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 06230-Japanese ◆ K-12</p>
06232	Japanese II	9-12	<p>Japanese II courses build upon skills developed in Japanese I, extending students' ability to understand and express themselves in Japanese and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of Japanese-speaking people to deepen their understanding of the culture(s).</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	

HIGH SCHOOL FOREIGN LANGUAGES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Foreign Languages require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
JAPANESE (Continued)					
06588	Advanced Placement Japanese Language and Culture	10-12	Emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. Engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions).	½ or 1 <i>Max credit = 1</i>	License Code: 06230-Japanese ◆ K-12
LATIN					
06151	Latin I	8 (see note) 9-12	Latin I exposes students to the Latin language and culture, emphasizing basic grammar and syntax, simple vocabulary, and the influence of Latin on current English words. Students will be able to read and write in Latin on a basic level. <i>(Note: This course code should only be used for MIS03 reporting purposes when a grade 8 student is receiving high school credit.)</i>	½ or 1 <i>Max credit = 1</i>	License Code: 06025-Latin ◆ K-8, K-12, 1-8, 1-12, 5-8, 5-12, or 9-12
06152	Latin II	9-12	Latin II enables students to expand upon what they have learned in Latin I, increasing their skills and depth of knowledge through the practice of structures, forms, and vocabulary. Reading materials reflect Roman life and culture.	½ or 1 <i>Max credit = 1</i>	
06153	Latin III	9-12	Latin III builds students' knowledge of the Latin language and culture, typically focusing on having students express increasingly complex concepts in writing and comprehend and react to original Latin texts.	½ or 1 <i>Max credit = 1</i>	
06154	Latin IV	9-12	Latin IV builds students' knowledge of the Latin language and culture, typically focusing on having students express increasingly complex concepts in writing and comprehend and react to original Latin texts.	½ or 1 <i>Max credit = 1</i>	
06582	Advanced Placement Latin®	10-12	The AP Latin course focuses on the in-depth study of selections from two of the greatest works in Latin literature: Vergil's Aeneid and Caesar's Gallic War. The course requires students to prepare and translate the readings and place these texts in a meaningful context, which helps develop critical, historical, and literary sensitivities. Throughout the course, students consider themes in the context of ancient literature and bring these works to life through classroom discussions, debates, and presentations. Additional English readings from both of these works help place the Latin readings in a significant context.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL FOREIGN LANGUAGES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Foreign Languages require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
NATIVE AMERICAN					
06811	Languages for Native Speakers I	9-12	Courses in language for Native Speakers support, reinforce, and expand students' knowledge of their own tongue. These courses may incorporate the culture, literature, and history of the people.	½ or 1 <i>Max credit = 1</i>	License Code: 15046-Native American Studies ◆ K-12, 1-12, 5-12, or 9-12
06812	Languages for Native Speakers II	9-12	A sequel to Level I which builds upon the skills learned in that course. Because students understand at least the rudiments and structure of the language and have a working vocabulary (to a greater or lesser degree), this course will incorporate more of the culture, literature, and history of the people.	½ or 1 <i>Max credit = 1</i>	
06813	Languages for Native Speakers III	9-12	A sequel to Level II which builds upon the skills learned in Level I and II. More emphasis will be based on conversation and storytelling in the native language.	½ or 1 <i>Max credit = 1</i>	
06814	Languages for Native Speakers IV	9-12	A sequel to Level III and represents the most advanced course of the sequel. Spontaneity and ease of speech should increase as students use the native language.	½ or 1 <i>Max credit = 1</i>	
OTHER					
06271	Other Language I	9-12	This code is to be used for students transferring into the State of North Dakota with preexisting foreign language credits that currently are not mapped or aligned to the existing course codes. For the transcript, please name the specific foreign language for which credit is given (i.e. Swedish I).	½ or 1 <i>Max credit = 1</i>	N/A – used for courses that are being transferred in
06272	Other Language II	9-12	This code is to be used for students transferring into the State of North Dakota with preexisting foreign language credits that currently are not mapped or aligned to the existing course codes. For the transcript, please name the specific foreign language for which credit is given (i.e. Swedish II).	½ or 1 <i>Max credit = 1</i>	
06273	Other Language III	9-12	This code is to be used for students transferring into the State of North Dakota with preexisting foreign language credits that currently are not mapped or aligned to the existing course codes. For the transcript, please name the specific foreign language for which credit is given (i.e. Swedish III).	½ or 1 <i>Max credit = 1</i>	
06274	Other Language IV	9-12	This code is to be used for students transferring into the State of North Dakota with preexisting foreign language credits that currently are not mapped or aligned to the existing course codes. For the transcript, please name the specific foreign language for which credit is given (i.e. Swedish IV).	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL FOREIGN LANGUAGES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Foreign Languages require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
RUSSIAN					
06310	Russian I	9-12	Designed to introduce students to Russian language and culture, Russian 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. Russian culture is introduced through the art, literature, customs, and history of Russian-speaking people.	½ or 1 <i>Max credit = 1</i>	License Code: 06037-Russian ◆ K-12, 1-12, 5-12, or 9-12
06311	Russian II	9-12	Russian II builds upon skills developed in Russian I, extending students' ability to understand and express themselves in Russian and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of Russian-speaking people to deepen their understanding of the culture(s).	½ or 1 <i>Max credit = 1</i>	
06312	Russian III	9-12	Russian III focuses on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.	½ or 1 <i>Max credit = 1</i>	
SPANISH					
06211	Spanish I	8 (see note) 9-12	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. <i>(Note: This course code should only be used for MIS03 reporting purposes when a grade 8 student is receiving high school credit.)</i>	½ or 1 <i>Max credit = 1</i>	License Code: 06035-Spanish ◆ K-8, K-12, 1-8, 1-12, 5-8, 5-12, or 9-12

HIGH SCHOOL FOREIGN LANGUAGES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Foreign Languages require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
SPANISH (Continued)					
06212	Spanish II	9-12	Spanish II builds upon skills developed in Spanish I, extending students' ability to understand and express themselves in Spanish and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of Spanish-speaking people to deepen their understanding of the culture(s).	½ or 1 <i>Max credit = 1</i>	License Code: 06035-Spanish ♦ K-8, K-12, 1-8, 1-12, 5-8, 5-12, or 9-12
06213	Spanish III	9-12	Spanish III focuses on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.	½ or 1 <i>Max credit = 1</i>	
06214	Spanish IV	9-12	Spanish IV focuses on advancing students' skills and abilities to read, write, speak, and understand the Spanish language so that they can maintain simple conversations with sufficient vocabulary and an acceptable accent, have sufficient comprehension to understand speech spoken at a normal pace, read uncomplicated but authentic prose, and write narratives that indicate a good understanding of grammar and a strong vocabulary.	½ or 1 <i>Max credit = 1</i>	
06215	Spanish V	9-12	Spanish V extends students' facility with the language so that they are able to understand, initiate, and sustain general conversations on topics beyond basic survival needs. Reading and writing tasks will usually include all normal verb tenses (present, past, and future).	½ or 1 <i>Max credit = 1</i>	
06584	Advanced Placement Spanish Language and Culture©	10-12	Emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. Engages students in an exploration of culture in both contemporary and historical contexts. The course develops student's awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions).	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL FOREIGN LANGUAGES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Foreign Languages require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
SPANISH (Continued)					
06585	Advanced Placement Spanish Literature and Culture©	10-12	The AP Spanish Literature and Culture course uses a thematic approach to introduce students to representative texts (short stories, novels, poetry, and essays) from Peninsular Spanish, Latin American, and United States Hispanic literature. Students develop proficiencies across the full range of communication modes (interpersonal, presentational, and interpretive), thereby honing their critical reading and analytical writing skills. Literature is examined within the context of its time and place, as students reflect on the many voices and cultures present in the required readings. The course also includes a strong focus on cultural connections and comparisons, including exploration of various media (e.g., art, film, articles, literary criticism).	½ or 1 <i>Max credit = 1</i>	License Code: 06035-Spanish ♦ K-8, K-12, 1-8, 1-12, 5-8, 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 student may earn for a course over four years of high school. (Example: Band - a student 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).*

Credentials are obtained from the Department of Public Instruction (DPI) and are issued to individuals holding a current teaching license.

GENERAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in General Education require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
00069	Homeroom/Study Hall	9-12		This is a non-credit course	License Code: Any Teaching License ♦ K-12, 1-12, 5-8, 5-12, 7-8, 9-12, or 10-12
20045	Exploratory Foreign Language & Cultures	9-12	Introduces the languages and cultural heritages of one or more cultures, civilizations, or countries. Content may include (but is not limited to) art, music, literature, food, and sport and leisure activities of the cultures, civilizations, or countries being studied. Language and dialect of the cultures, civilizations, and countries being studied may also be covered.	1 Max Credit - 1	License Code: Any Teaching License ♦ K-12, 1-12, 5-8, 5-12, 7-8, 9-12, or 10-12
20060	Career Management	9-12	Career Management helps students identify and evaluate personal goals, priorities, aptitudes, and interests with the goal of helping them make informed decisions about their careers. This course exposes students to various work-based learning experiences (i.e. career fairs, industry tours, informational interviews, job shadows, career mentoring, and work simulations) and may also assist them in developing job search and employability skills.	¼, ½, or 1 Max credit = 2	License Code: Any Teaching License ♦ K-12, 1-12, 5-8, 5-12, 7-8, 9-12, or 10-12 OR 47000-Career Advisor ♦ 5-12
20065	Successful School and Life Skills	9-12	This course is designed to address the challenges that students experience in high school so they can succeed in the classroom as well as the workplace. Course topics may include communication skills; personal assessment and awareness activities; test-taking/study skills; time management; choices and consequences; technology, business, and financial literacy. Additional topics can also include exercises designed to generate organized, logical thinking and writing to help with job preparation, readiness, application, or interview skills.	¼, ½ or 1 Max credit = 4	
20066	Leadership	9-12	Leadership is designed to strengthen students' personal and group leadership skills. Typically intended for students involved in extracurricular activities (especially as officers of organizations or student governing bodies), these courses may cover such topics as public speaking, effective communication, human relations, parliamentary law and procedures, organization and management, and group dynamics.	¼, ½ or 1 Max credit = 1	License Code: Any Teaching License ♦ K-12, 1-12, 5-8, 5-12, 7-8, 9-12, or 10-12
20067	Alternative High School Mentor/Mentee	9-12	Mentor/Mentee is designed to aid students in Alternative Education Schools in setting educational and career goals. Students in grades 9-12, through content/grade specific courses, will review educational plans, complete career interest inventories, and learn test taking strategies among other facets. Students are paired with a teacher/mentor who will be assigned to the student through their subsequent years of schooling. <i>Note: This course may be taught only in an Alternative High School.</i>	½ or 1 Max credit = 4	

GENERAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in General Education require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
20068	Student Aide	11-12	<p>Student Aide is designed to offer students the opportunity to assist instructors in preparing, organizing, or delivering course curricula or to assist other staff members in fulfilling their duties. Students may provide tutorial or instructional assistance to other students. This course could provide experience in a field related to a student's career interests.</p> <p>Note: This course is not designed to replace any of the CTE Cooperative Work Experience courses.</p>	<p>$\frac{1}{4}$, $\frac{1}{2}$ or 1 Max credit = 1</p>	
20069	ND Civics Test	9-12	<p>The ND Civics Test is a condition of ND high school graduation to ensure that ND students are knowledgeable citizens. The ND Civics test means the one hundred questions that, as of January 1, 2015, officers of the United States citizenship and immigration services use as the basis for selecting the questions posed to applicants for naturalization, in order that the applicants can demonstrate a knowledge and understanding of the fundamentals of United States history and the principles and form of United States government as required by 8 U.S.C. 1423. The test(s) may be administered any time after a student is enrolled in grade 7.</p> <p>For graduates of 2017, 60% of the questions on the Civics test must be passed. After 2017, 70% of the questions on the Civics test must be passed.</p> <p>Note: Each students' high school transcript must identify when the student was successful in passing the ND Civics Tests(s).</p>	This is a non-credit course.	<p>License Code: Any Teaching License ♦ K-12, 1-12, 5-8, 5-12, 7-8, 9-12, or 10-12</p>
20070	Academic Community Service Learning	9-12	<p>Academic Community Service Learning provides students with the opportunity to take an active part in community projects or organizations by volunteering their time, energy, and talents. This course should be integrated into the academic curriculum to connect the traditional classroom with real life lessons that come through service. Students will have opportunities to use newly acquired academic skills and knowledge in real life situations within their community to learn how to problem solve, make decisions, and communicate (written and verbal) effectively. This course should include four parts: preparation, service, reflection, and celebration.</p>	<p>$\frac{1}{4}$, $\frac{1}{2}$ or 1 Max credit = 1</p>	
20075	Seminar	9-12	<p>Seminar courses vary widely, but typically offer a small peer group the opportunity to investigate areas of interest. Course objectives may include improvement of research and investigatory skills, presentation skills, interpersonal skills, group process skills, and problem-solving and critical-thinking skills. Seminars aimed at juniors and seniors often include a college and career exploration and planning component.</p>	<p>$\frac{1}{2}$ or 1 Max credit = 1</p>	<p>License Code: Any Teaching License ♦ K-12, 1-12, 5-8, 5-12, 7-8, 9-12, or 10-12</p>

GENERAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in General Education require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
20076	Career Seminar	9-12	<p>Provides students with a regularly scheduled, supervised employment opportunity related to the teacher-of-record's (TOR) major/minor in order to develop and improve work skills. The employment must be preceded by, or concurrent with, classroom instruction related to the work experience, consistent with the student's occupational goals, and related to the TOR major/minor. There shall be a training agreement among all partners to the work experience (school, employer, student, and parents/guardians) outlining the expectations of each party. The instructor shall also develop a specific training plan with the employer for each student placed. The training plan shall include provisions for assessment of student progress and for on-site visits by the instructor during the student's placement.</p> <p>NOTE: Students must be at least 16 years old and may be paid a wage by the employer.</p> <p>NOTE: This course is not designed to replace any of the CTE Cooperative Work Experience courses.</p>	<p style="text-align: center;">½ or 1</p> <p style="text-align: center;"><i>Max credit = 2</i></p>	<p>License Code: Any Teaching License ♦ K-12, 1-12, 5-8, 5-12, 7-8, 9-12, or 10-12 OR 47000-Career Advisor ♦ 5-12</p>
20077	AP Research	11-12	<p>AP Research, the second course in the AP Capstone experience, allows students to deeply explore an academic topic, problem, issue, or idea of individual interest. Students design, plan, and implement a yearlong investigation to address a research question. Through this inquiry, they further the skills they acquired in the AP Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio. The course culminates in an academic paper of 4,000-5,000 words (accompanied by a performance, exhibit, or product where applicable) and a presentation with an oral defense.</p>	<p style="text-align: center;">1</p> <p style="text-align: center;">Max Credit - 1</p>	<p>License Code: Any Teaching License ♦ K-12, 1-12, K-8, 1-8, 5-8, 5-12, 7-8, 9-12, or 10-12</p>
20078	AP Seminar	10-12	<p>AP Seminar is an approved College Board Advanced Placement Course. This is a yearlong course that has students investigate real-world issues from multiple perspectives. Students learn to synthesize information from different sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team.</p>	<p style="text-align: center;">1</p> <p style="text-align: center;">Max Credit - 1</p>	<p>License Code: Any Teaching License ♦ K-12, 1-12, K-8, 1-8, 5-8, 5-12, 7-8, 9-12, or 10-12</p>

GENERAL EDUCATION COURSE CODES GRADES 9-12

High school (grades 9-12) courses in General Education require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
20080	Advancement Via Individual Determination (AVID)	9-12	<i>AVID courses encourage students to pursue college readiness (and eventual enrollment). Typically, the courses offer activities that enable students to learn organizational and study skills, enhance their critical thinking skills, receive academic assistance as necessary, and be motivated to aspire to college education.</i> NOTE: This is an AVID course and only instructors with this training may use this number and description.	½ or 1 Max credit = 4	License Code: Any Teaching License ♦ K-12, 1-12, 5-8, 5-12, 7-8, 9-12, or 10-12 (see note)
20084	Teaching Professional	9-12	Teaching Profession courses introduce students to the principles underlying teaching and learning, the responsibilities and duties of teachers, and the techniques of imparting knowledge and information. These courses typically expose students to and train them in classroom management, student behavior, leadership and human relations skills, assessment of student progress, teaching strategies, and various career opportunities in the field of education.	½ or 1 Max credit = 2	License Code: Any Teaching License ♦ K-12, 1-12, 5-8, 5-12, 7-8, 9-12, or 10-12
20085	Educational Methodology	9-12	Educational Methodology courses prepare students to teach and guide others. These courses typically provide opportunities for students to develop their own teaching objectives, to design lesson plans, and to experience teaching in a controlled environment. Students examine and practice teaching strategies, learning styles, time management and planning strategies, presentation and questioning skills, classroom management, and evaluation techniques.	½ or 1 Max credit = 2	License Code: Any Teaching License ♦ K-12, 1-12, 5-8, 5-12, 7-8, 9-12, or 10-12
20086	Education Workplace Experience	9-12	Education Workplace Experience courses provide students with work experience in fields related to education. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.	½ or 1 Max credit = 2	License Code: Any Teaching License ♦ K-12, 1-12, 5-8, 5-12, 7-8, 9-12, or 10-12
20090	Adventure Education	9-12	Adventure Education is designed to teach students healthy lifelong activities and provide students with teachable moments. Examples of activities can include, but are not limited to: hiking, camping, trail creating and maintenance, kayaking, biking, archery, first aid, basic survival skills, pro-social enrichments, snow shoeing, cross country skiing, rock climbing, orienteering, frisbee golf, land conservation, yoga, and slackline.	½ or 1 Max credit = 1	License Code: Any Teaching License ♦ K-12, 1-12, 5-8, 5-12, 7-8, 9-12, or 10-12

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

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**GOVERNOR'S SCHOOL COURSE CODES
GRADES 10-11**

Governor's School is a summer school offered program only.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
51010	Governor School – Experimental Science	10-11	Students will participate in a broad-based training program in laboratory science during the first week of Governor's Schools. They then will be paired with a mentor scientist and will join a research group (in biology, biochemistry, chemistry, materials science, pharmacy or physics) based on the student's interest and availability of projects. Here the student will further develop their laboratory skills and will learn quantitative data handling techniques. The students will present their research in a poster session during the final week of Governor's Schools.	1 <i>Max credit = 1</i>	
51011	Governor School - Mathematics	10-11	The focus of the students in Mathematics will be in select areas of mathematics theory, applied discrete mathematics and technology related to mathematics. Students also will learn about mathematics technology such as the functioning of graphics calculators and computer software	1 <i>Max credit = 1</i>	
51012	Governor School - Information Technology	10-11	The Information Technology students will explore a broad range of computer skills and real-world applications. Students will learn Internet technologies, including Web development and networking, as well as computer programming, with a focus on developing computer games. They will interact with area professionals and will work on projects, both individually and in groups.	1 <i>Max credit = 1</i>	
51013	Governor School - English Studies	10-11	Students experience a progressive "tour of the disciplines" within English studies: creative writing, literature studies, linguistics, rhetoric and composition, new media studies and English education. Students work independently within specific areas and, assisted by a mentor, produce their own cutting-edge projects. They also attend workshops on such topics as Shakespeare in film, writing for the Web, anime and gender, and dialects of the Northern Plains. The program's final product is an online journal designed, edited and written by the students.	1 <i>Max credit = 1</i>	
51014	Governor School - Visual Arts	10-11	Scholars will immerse themselves in different mediums such as printmaking, photography, sculpture, and visual graphics. The outcome of these concentrations will be to do public displays at gallery locations and perhaps at local venues.	1 <i>Max credit = 1</i>	

**GOVERNOR'S SCHOOL COURSE CODES
GRADES 10-11**

Governor's School is a summer school offered program only.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
51015	Governor School - Performing Arts	10-11	In partnership with Fargo company Theatre B, scholars will work in an ensemble-based, collaborative environment where they create and likely perform a highly creative theatrical production. They also will train together in rigorous and invigorating performance techniques.	1 <i>Max credit = 1</i>	
51016	Governor School - Engineering	10-11	Students experience mechanical, electrical, civil, industrial, manufacturing and construction engineering during the first week of Governor's Schools. They are then paired with a research engineer mentor and join a research group based on their interest and availability of projects. Students will conduct research to discover innovative solutions to real-world problems and present their findings in a poster session during the final week of Governor's Schools.	1 <i>Max credit = 1</i>	
51018	Governor School – Architecture/ Landscape Architecture	10-11	Students will learn the basics of the design process, including ordering skills, function, structure, context, sustainability, aesthetics, historical precedent, sketching and documenting a design solution. The students will then be engaged in the design and construction of a built object serving the needs of the Fargo-Moorhead community.	1 <i>Max credit = 1</i>	

* *High school curricular requirements are spelled out in NDCC 15.1-21-02 and High school unit - instructional time is NDCC 15.1-21-03. Maximum credit refers to the maximum units of credit a student may earn for a course over four years of high school. (Example: Band - a student may be enrolled in band all four years of high school -- earning a possible total of four units of credit.)*

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HIGH SCHOOL MATHEMATICS COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Mathematics require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
11010	Remedial Math 9-12	9-12	Sets numeration, operations and properties, mathematical sentences, geometry, measurement, graphing and functions, and probability and statistics.	Supplemental instruction – provided as needed	
11029	Mathematics Intervention	9-12	Mathematics Intervention is designed to assist students who are struggling and/or failing in a mathematics course. This course should be provided in conjunction with the regular mathematics course to pre-teach, re-teach, or provide enrichment to the student in order to prevent the need to modify the school's existing mathematics curriculum. This course should be a structured class period which will build upon the existing mathematics skills needed for students to achieve the opportunity for success in their current and/or future mathematics courses.	½ or 1 <i>Max credit = 3</i>	
11030	Prealgebra	9-12	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.	½ or 1 <i>Max credit = 1</i>	
11031	Algebra I	8 (see note) 9-12	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. NOTE: Use this course when credit is awarded for the full school year. This course code <u>should only be used for MIS03 reporting purposes when a grade 8 student is receiving high school credit.</u>	1 <i>Max credit = 1</i>	License Code: 11010–Mathematics ♦ 5-12 or 9-12
11032	Algebra II ♦ Recommended Prerequisite: Algebra I	9-12	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.	½ or 1 <i>Max credit = 1</i>	
11033	Discrete Mathematics ♦ Recommended Prerequisite: Algebra II	11-12	Discrete Mathematics includes the study of topics such as number theory, discrete probability, set theory, symbolic logic, Boolean algebra, combinatorics, recursion, basic algebraic structures and graph theory.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL MATHEMATICS COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Mathematics require **120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
11034	College Algebra ◆ Recommended Prerequisite: Algebra II	10-12	Covering topics from both Algebra and Analytic Geometry, this course prepares students for eventual work in calculus. Topics include the study of polynomial, logarithmic, exponential, and rational functions and their graphs; vectors; set theory; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity; the polar coordinate system; equations and graphs of conic sections; rotations and transformations; and parametric equations.	$\frac{1}{2}$ or 1 Max credit = 1	
11035	Algebra I Semester 1	8 (see note) 9-12	The first part in a multi-part sequence of Algebra I. This course generally covers the same topics as the first semester of Algebra I, including the study of properties of rational numbers (i.e., number theory), ratio, proportion, and estimation, exponents and radicals, the rectangular coordinate system, sets and logic, formulas, and solving first degree equations and inequalities. NOTE: This course code <u>should only be used for MIS03 reporting purposes when a grade 8 student is receiving high school credit.</u>	$\frac{1}{2}$ Max credit = $\frac{1}{2}$	
11036	Algebra I Semester 2	8 (see note) 9-12	The second part in a multi-part sequence of Algebra I. This course generally covers the same topics as the second semester of Algebra I, including the study of properties of the real number system and operations, 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 quadratics. NOTE: This course code <u>should only be used for MIS03 reporting purposes when a grade 8 student is receiving high school credit.</u>	$\frac{1}{2}$ Max credit = $\frac{1}{2}$	License Code: 11010–Mathematics ◆ 5-12 or 9-12
11037	Linear Algebra ◆ Recommended Prerequisite: Algebra II	11-12	Linear Algebra includes a study of matrices, vectors, tensors, and linear transformations and is typically intended for students who have attained pre-calculus objectives.	$\frac{1}{2}$ or 1 Max credit = 1	
11038	Linear Programming ◆ Recommended Prerequisite: Algebra II	11-12	Linear Programming includes a study of mathematical modeling and the simplex method to solve linear inequalities and is typically intended for students who have attained pre-calculus objectives.	$\frac{1}{2}$ Max credit = $\frac{1}{2}$	

HIGH SCHOOL MATHEMATICS COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Mathematics require **120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
11039	Abstract Algebra ◆ Recommended Prerequisite: Algebra II	11-12	Abstract Algebra includes a study of the properties of the number system from an abstract perspective, including such topics as number fields (i.e., rational, real, and complex numbers), integral domains, rings, groups, polynomials, and the fundamental theorem of algebra. Abstract Algebra is typically geared towards students who have attained pre-calculus objectives.	½ or 1 <i>Max credit = 1</i>	License Code: 11000-Mathematics ◆ 5-12
11041	Integrated Mathematics for Computer Science/Information Technology (Mathematics) ◆ Recommended Prerequisite: Algebra I and Computer Science Programming	9-12	This course is a computer science with a major focus on math. Course topics are divided into six areas: sets, functions, and relations; basic logic; proof techniques; counting basics; graphs and trees; and discrete probability. Mathematical topics are interwoven with computer science applications to enhance the student's understanding of the introduced mathematics, while students develop the ability to see computational problems from a mathematical perspective. Topics also include 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. Algorithms in both mathematics and computer science contexts will be explored in depth. Note: This course can be taught for Mathematics credit only. For Computer Science credit, Integrated Mathematics for Computer Science/Information Technology can be found under Computer Science. For Career and Technical Education credit, Integrated Mathematics for Computer Science/Information Technology can be found under Information Technology.	½ or 1 Max credit = 1	License Code: 11000-Mathematics ◆ 5-12 AND 23000-Computer Science ◆ 5-12

HIGH SCHOOL MATHEMATICS COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Mathematics require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
11042	Advanced JAVA Programming (Mathematics)	9-12	The Advanced JAVA Programming (Math) course will present concepts similarly covered by Advanced Placement Computer Science, and is comparable to an introductory sequence of courses for computer science majors offered in college and university computer science departments. Students completing the course will be able to design and implement computer-based solutions to problems in several application areas; learn, organize, and process well-known algorithms and data structures; be able to develop and select appropriate algorithms and data structures to demonstrate problem solving; design strategies and methodologies; analyze potential solutions; and understand the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language, representing proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. Students will be able to code fluently in a well-structured fashion using the programming language JAVA and be able to read and understand a large program and a description of the design and development process leading to such a program.	½ or 1 <i>Max credit = 1</i>	License Code: 11010–Mathematics ◆ 5-12 or 9-12
11051	Integrated Mathematics	9-12	This course formalizes and extends middle school mathematics, deepening students' understanding of linear relationships. The course begins with a review of relationships between quantities, building from unit conversion to a study of expressions, equations, and inequalities. Students contrast linear and exponential relationships, including a study of sequences, as well as applications such as growth and decay. Students review one-, two-, and multi-step equations, formally reasoning about each step using properties of equality. Students extend this reasoning to systems of linear equations. Students use descriptive statistics to analyze data before turning their attention to transformations and the relationship between Algebra and Geometry on the coordinate plane.	½ or 1 <i>Max credit = 1</i>	License Code: 11010–Mathematics ◆ 5-12 or 9-12
11052	Integrated Mathematics II ◆ Recommended Prerequisite: Integrated Mathematics I or Algebra I	9-12	This course begins with a brief exploration of radicals and polynomials before delving into quadratic expressions, equations, and functions, including a derivation of the quadratic formula. Students then embark on a deep study of the applications of probability and develop advanced reasoning skills with a study of similarity, congruence, and proofs of mathematical theorems. Students explore right triangles with an introduction to right triangle trigonometry before turning their attention into the geometry of circles and making informal arguments to derive formulas for the volumes of various solids.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL MATHEMATICS COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Mathematics require **120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
11053	Integrated Mathematics III ♦ Recommended Prerequisite: Integrated Mathematics II or Algebra I and Geometry -11120	9-12	This course synthesizes previous mathematical learning in four focused areas of instruction. First, students relate visual displays and summary statistics to various types of data and to probability distributions with a focus on drawing conclusions from the data. Then, students embark on an in-depth study of polynomial, rational, and radical functions, drawing on concepts of integers and number properties to understand polynomial operations and the combination of functions through operations. This section of instruction builds to the Fundamental Theorem of Algebra. Students then expand the study of right triangle trigonometry they began in Mathematics II to include non-right triangles and developing the Laws of Sines and Cosines. Finally, students model an array of real-world situations with all the types of functions they have studied, including work with logarithms to solve exponential equations. As they synthesize and generalize what they have learned about a variety of function families, students appreciate the usefulness and relevance of mathematics in the real world.	½ or 1 <i>Max credit = 1</i>	License Code: 11010–Mathematics ♦ 5-12 or 9-12
11061	Calculus ♦ Recommended Prerequisite: Precalculus or Algebra II and Trigonometry and Geometry or Trigonometry/ Analytic Geometry	11-12	Calculus includes the study of derivatives, differentiation, integration, the definite and indefinite integral, and applications of calculus. Typically, students have previously attained knowledge of pre-calculus topics (some combination of trigonometry, elementary functions, analytic geometry, and algebra).	½ or 1 <i>Max credit = 1</i>	
11111	General Mathematics I	9-12	General Math reinforces and expands students' foundational math skills, such as arithmetic operations using rational numbers; area, perimeter, and volume of geometric figures, congruence and similarity, angle relationships, the Pythagorean theorem, the rectangular coordinate system, sets and logic, ratio and proportion, estimation, formulas, solving and graphing simple equations and inequalities.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL MATHEMATICS COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Mathematics require **120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
11118	College Learning Lab – Math 12	12	College Learning Lab-Math focuses on preparing the student for collegiate studies, specifically to mathematics. The student will be engaged in educational experiences regarding mathematical methods for solving equations and word problems. The course will refresh students regarding equations, number systems, algebra, geometry, ratio, and analytical reasoning. NOTE: This course code is designed to be used exclusively with the Pearson MyFoundationsLab platform through the CREAM or CLEM programs.	½ or 1 <i>Max credit = 1</i>	License Code: 11010–Mathematics ◆ 5-12 or 9-12
11119	Applied Geometry	9-12	Students will understand the basic facts and properties about points, lines, planes, parallel and perpendicular lines, triangles, polygons (with emphasis on quadrilaterals), circles, and three dimensional figures. Problem solving will involve the use of formulas, such as distance, midpoint, slope, area, volume, the Pythagorean Theorem, and trigonometric ratios. Emphasis will be on connecting geometry to real-world situations to solve problems, especially related to algebra, everyday life, navigation, architecture and art. Concepts will be studied using tools which may include the ruler, compass, protractor, calculator, and geometric software.	½ or 1 <i>Max credit = 1</i>	
11120	Geometry	9-12	Geometry, emphasizing an abstract, formal approach to the study of geometry, typically includes topics such as properties of plane and solid figures; deductive methods of reasoning and use of logic; geometry as an axiomatic system including the study of postulates, theorems, and formal proofs; concepts of congruence, similarity, parallelism, perpendicularity, and proportion; and rules of angle measurement in triangles.	½ or 1 <i>Max credit = 1</i>	
11121	Analytic Geometry ◆ Recommended Prerequisite: Algebra II and Geometry	11-12	Analytic Geometry courses include the study of the nature and intersection of lines and planes in space, including vectors, the polar coordinate system, equations and graphs of conic sections, rotations and transformations, and parametric equations.	½ or 1 <i>Max credit = 1</i>	
11145	Consumer Mathematics	9-12	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.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL MATHEMATICS COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Mathematics require **120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
11150	Probability and Statistics ♦ Recommended Prerequisite: Algebra II	11-12	Probability and Statistics introduces the study of likely events and the analysis, interpretation, and presentation of quantitative data. Course topics generally include basic probability and statistics: discrete probability theory, odds and probabilities, probability trees, populations and samples, frequency tables, measures of central tendency, and presentation of data (including graphs). Course topics may also include normal distribution and measures of variability.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 11010–Mathematics ♦ 5-12 or 9-12
11160	Trigonometry ♦ Recommended Prerequisite: Geometry and Algebra II	10-12	Trigonometry prepares students for eventual work in calculus and typically includes the following topics: trigonometric and circular functions; their inverses and graphs; relations among the parts of a triangle; trigonometric identities and equations; solutions of right and oblique triangles; and complex numbers.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	
11161	Trigonometry/ Analytic Geometry ♦ Recommended Prerequisite: Geometry and Algebra II	11-12	Covering topics of both Trigonometry and Analytic Geometry, this course prepares students for eventual work in calculus. Topics typically include the study of right trigonometric and circular functions, inverses, and graphs; trigonometric identities and equations; solutions of right and oblique triangles; complex numbers; numerical tables; vectors; the polar coordinate system; equations and graphs of conic sections; rotations and transformations; and parametric equations.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
11162	Geometry/ Trigonometry/ Advanced Algebra ♦ Recommended Prerequisite: Geometry and Algebra I	11-12	Geometry/Trigonometry/Advanced Algebra reviews and extends algebra and geometry concepts for students who have already taken Algebra I and Geometry. This course includes a review of such topics as properties and operations of real numbers; evaluation of rational algebraic expressions; solutions and graphs of first degree equations and inequalities; translation of word problems into equations; operations with and factoring of polynomials; simple quadratics; properties of plane and solid figures; rules of congruence and similarity; coordinate geometry including lines, segments, and circles in the coordinate plane; and angle measurement in triangles including trigonometric ratios.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL MATHEMATICS COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Mathematics require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
11170	STEM Seminar (Math)	9-12	<p>STEM Seminar provides students with a project based and integrated and 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 students in hands on interdisciplinary application of the Engineering Design Process. Students engage in authentic projects and create products, presentations, and network with local STEM industry experts. In this course students 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 in order 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, technical skills and develops 21st Century Skills such as communication, networking, collaboration, decision making, creativity and critical thinking.</p> <p>Note: This course can be taught for Mathematics credit only. For Technology and Engineering credit, use STEM Seminar (Tech Ed) under Technology and Engineering. For Science credit, use STEM Seminar (Science) under Science.</p> <p>Note: Only one (1) credit of this course can be used towards the coordinated plan of study for the Academic and Career and Technical Education Scholarship.</p>	<p>½ or 1</p> <p><i>Max credit = 2</i></p>	<p>License Code: 11010–Mathematics ◆ 5-12 or 9-12</p>
11181	<p>Precalculus</p> <p>◆ Recommended Prerequisite: Algebra II and Geometry</p> <p>or Geometry/ Trigonometry/ Advanced Algebra</p>	11-12	<p>Precalculus 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.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	

HIGH SCHOOL MATHEMATICS COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Mathematics require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
11190	Applied Mathematics ♦ Recommended Prerequisite: General Mathematics	9-12	Applied Mathematics is designed to help students develop and refine job related math skills. Units focus on arithmetic operations, problem solving techniques, estimation of answers, measurement skills, algebra, geometry, data handling, statistics, and computers. Emphasis is on the ability to apply functional mathematics to solve problems in the world of work.	½ or 1 Max credit = 1	License Code: 11010–Mathematics ♦ 5-12 or 9-12
11191	Occupationally Applied Math	9-12	Occupationally Applied Math reinforces general math skills, extend these skills to include some prealgebra and algebra topics, and use these skills primarily in occupational applications. Course topics typically include rational numbers, measurement, basic statistics, ratio and proportion, basic geometry, formulas, and simple equations.	½ or 1 Max credit = 1	
11122	Informal Geometry	10-12	Informal Geometry emphasizes a practical approach to the study of geometry and deemphasizes an abstract, formal approach. Topics typically include properties of and work with plane and solid figures; inductive methods of reasoning and use of logic; concepts of congruence, similarity, parallelism, perpendicularity, and proportion; and rules of angle measurement in triangles.	½ or 1 Max credit = 1	
11112	Particular Topics in Foundation Math	10-12	This course examines particular topics in Foundation Math, such as arithmetic or basic conceptual skills, rather than provide a general overview.	½ or 1 Max credit = 1	
11580	Advanced Placement Statistics© Recommended Prerequisite: Algebra II	10-12	The AP Statistics course is equivalent to a one-semester, introductory, non-calculus-based college course in statistics. The course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes in the AP Statistics course: exploring data, sampling and experimentations, anticipating patterns, and statistical inference. Students use technology, investigations, problem solving, and writing as they build conceptual understanding.	½ or 1 Max credit = 1	
11581	Advanced Placement Calculus AB© Recommended Prerequisite: Algebra II	10-12	The AP Calculus AB is roughly equivalent to a first semester college calculus course devoted to topics in differential and integral calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions.	½ or 1 Max credit = 1	

HIGH SCHOOL MATHEMATICS COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Mathematics require **120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
11582	Advanced Placement Calculus BC© Recommended Prerequisite: Algebra II	10-12	The AP Calculus BC is roughly equivalent to both first and second semester college calculus courses and extends the content learned in AB to different types of equations and introduces the topic of sequences and series. The AP course covers topics in differential and integral calculus, including concepts and skills of limits, derivatives, definite integrals, the Fundamental Theorem of Calculus, and series. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions.	½ or 1 Max credit = 1	License Code: 11010–Mathematics 5-12 or 9-12
11583	Advanced Placement Computer Science A© (Mathematics) ♦ Recommended Prerequisite: Algebra I and Computer Science Programming	10-12	AP Computer Science A is equivalent to a first-semester, college-level course in computer science. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The AP Computer Science A course curriculum is compatible with many CS1 courses in colleges and universities. Note: This course can be taught for Mathematics credit only. For Computer Science credit, Advanced Placement Computer Science A© can be found under Computer Science.	½ or 1 Max credit = 1	License Code: 11000–Mathematics ♦ 5-12 AND 23000–Computer Science ♦ 5-12

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

Credentials are obtained from the Department of Public Instruction (DPI) and are issued to individuals holding a current teaching license.

HIGH SCHOOL MILITARY SCIENCE COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Military Science require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
15043	Aerospace	9-12	Aerospace courses explore the connection between meteorology, astronomy, and flight across and around the earth as well as into outer space. In addition to principles of meteorology (e.g., atmosphere, pressures, winds and jet streams) and astronomical concepts (e.g., solar system, stars, and interplanetary bodies), course topics typically include the history of aviation, principles of aeronautical decision-making, airplane systems, aerodynamics, and flight theory.	½ or 1 <i>Max credit = 2</i>	License Code: 15044-Military Science ♦ 5-12 OR 13035-Earth Science ♦ 5-12 or 9-12
15044	Junior Reserve Officers' Training Corps I (JROTC)	9-12	Introduction to Junior Reserve Officer Training Corps (ROTC) courses introduce students to the purposes and objectives of the Reserve Officer Training Corps program, which seeks to educate high school students in citizenship, promote community service, and instill responsibility. As part of that introduction, course topics typically include a brief history of the military branches in the United States and the basics of military drill, ceremony, and rank structure.	½ or 1 <i>Max credit = 4</i>	License Code: 15044-Military Science ♦ 5-12

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

Credentials are obtained from the Department of Public Instruction (DPI) and are issued to individuals holding a current teaching license.

HIGH SCHOOL PHYSICAL EDUCATION AND HEALTH COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Physical Education and Health **require 120 contact hours** per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
08010	Health (Phy Ed)	9-12	<p>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.</p> <p>Note: This course can be taught for Physical Education credit only. For CTE credit, use Individual and Family Health found under Family and Consumer Sciences. For Science credit, use Health found under Science.</p>	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	License Code: 08020-Health, Physical Education & Recreation ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 08025-Physical Education ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 08027-Health & Physical Education ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 18015-Health ♦ K-8, 1-8, 5-12 or 9-12
08015	Family Living (Phy Ed)	10-12	<p>Family Living emphasizes building and maintaining healthy interpersonal relationships among family members and other members of society. This course often emphasizes (but are not limited to) topics such as social/dating practices, human sexuality and reproduction, marriage preparation, parenthood and the function of the family unit, and the various stages of life. It may also cover topics related to individual self-development, career development, personal awareness, and preparation for the responsibilities of a family member and wage earner.</p> <p>Note: This course can be taught for Physical Education credit only. For CTE credit, use Family Living found under Family and Consumer Science.</p>	$\frac{1}{4}$, $\frac{1}{2}$, or 1 Max credit = 1	License Code: 08020-Health, Physical Education & Recreation ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 08025-Physical Education ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 08027-Health & Physical Education ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12

HIGH SCHOOL PHYSICAL EDUCATION AND HEALTH COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Physical Education and Health **require 120 contact hours** per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
08020	Substance Abuse Prevention (Phy Ed)	9-12	Substance Abuse Prevention course will focus specifically on the health risks of drugs, alcohol and tobacco. This course will provide information on the negative consequences of these products and teach students coping strategies to resist the influences (such as peers and media images) that may entice them to use these substances. Students may also explore the community resources available to them. Note: This course is taught for Physical Education credit only. For Health credit, use Substance Abuse Prevention (Health) found under Health.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 Max credit = 1	License Code: 08020-Health, Physical Education & Recreation ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 08025-Physical Education ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 08027-Health & Physical Education ◆ K-8, K-12, 1-8, 1-12, 5-12, or 9-12
08030	General Physical Education	9-12	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.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 Max credit = 4	
08031	Adaptive Physical Education	9-12	This course provides physical education activities (sports, fitness, and conditioning) adapted for students with special needs.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 Max credit = 4	
08032	Swimming and Water Safety	9-12	Swimming and Water Safety helps students develop skills useful or necessary in an aquatic environment. Activities may focus on swimming and competitive strokes, such as freestyle, breaststroke, butterfly, and so on or may involve team-oriented water sports, such as water polo and relay swimming. This course may also include (or concentrate exclusively on) diving and/or lifesaving skills.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 Max credit = 1	
08034	Dance I (Phy Ed)	9-12	Dance I (Phy Ed) provides students with experience in one or several dance forms (i.e., modern, jazz, ballet, and tap). Initial classes are usually introductory in nature, while the more advanced classes concentrate on improving students' technique and may offer or require experience in choreography and dance evaluation. Note: This course is taught for Physical Education credit only. For Fine and Performing Arts credit, use Dance I (Fine Arts) under Fine and Performing Arts.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 Max credit = 4	
08035	Dance II (Phy Ed)	10-12	Dance II (Phy Ed) provides the opportunity for students with prior dance experience to improve techniques, experience choreography, and emphasize performance. Note: This course is taught for Physical Education credit only. For Fine and Performing Arts credit, use Dance II (Fine Arts) under Fine and Performing Arts.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 Max credit = 3	

HIGH SCHOOL PHYSICAL EDUCATION AND HEALTH COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Physical Education and Health **require 120 contact hours per credit.**

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
08036	Individual and Dual Sports	9-12	Individual/Dual Sports provides students with knowledge, experience, and an opportunity to develop skills in more than one individual or dual sport (such as tennis, golf, badminton, jogging/running, racquetball, and so on).	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 2</i>	License Code: 08020-Health, Physical Education & Recreation ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 08025-Physical Education ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 08027-Health & Physical Education ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12
08038	Gymnastics	9-12	Gymnastics is designed to help students develop knowledge and skills in gymnastics, stunts, and tumbling while emphasizing safety. Floor gymnastics may be supplemented by the use of gymnastic equipment such as balance beam, uneven bars, parallel bars, rings, and so on. Gymnastic may include other components such as the history of gymnastics and conditioning.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 4</i>	
08040	Weight Training	9-12	Weight Training helps students develop knowledge and skills with free weights and universal stations while emphasizing safety and proper body positioning; they may include other components such as anatomy and conditioning.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 4</i>	
08041	Specific Sports - Physical Education	10-12	Courses in Specific Sports Activities help students develop knowledge, experience, and skills in a single sport or activity (such as basketball, volleyball, track and field, football, etc.). Note: This course may be designed for athletes during a season.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 4</i>	
08042	Physical Education Equivalent	9-12	This course awards physical education credit for other at-school activities, such as marching band or cheerleading.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 4</i>	
08043	Lifetime Fitness Education	9-12	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.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	
08044	Fitness/Conditioning Activities	9-12	Fitness/Conditioning Activities emphasizes conditioning activities that help develop muscular strength, flexibility, and cardiovascular fitness.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 2</i>	
08045	Introduction to Coaching	9-12	Introduction to Coaching focuses on the various responsibilities of a coach and the skills needed to successfully fill this important position. Throughout the course, students will explore various coaching models and leadership styles, sports nutrition and sports psychology, as well as safety in conditioning and cross-training. Students will learn effective communication, problem-solving, and decision making skills. This course will also introduce students to game strategy, tactical strategy, skills-based training, and coaching ethics.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	

HIGH SCHOOL PHYSICAL EDUCATION AND HEALTH COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Physical Education and Health **require 120 contact hours** per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
08046	Sports Officiating	9-12	In Sports Officiating, students will learn the rules, game play, and guidelines for a variety of sports, including soccer, baseball, softball, basketball, volleyball, football, and tennis. In addition, they will learn the officiating calls and hand signals for each sport, as well as the role a sports official plays in maintaining fair play.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 08020-Health, Physical Education & Recreation ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 08025-Physical Education ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12 OR 08027-Health & Physical Education ♦ K-8, K-12, 1-8, 1-12, 5-12, or 9-12
08051	Sports Physiology	9-12	Sports Physiology examines human anatomy and physiology as they pertain to human movement and physical performance in sports activities. This course may also emphasize the prevention and treatment of athletic injuries. Note: This course can be taught for Physical Education credit only. For Science credit, use Physiology found under Science.	$\frac{1}{4}$ or $\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
08052	Human Anatomy (Phy Ed)	10-12	Human Anatomy (Phy Ed) 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. Note: This course can be taught for Physical Education credit only. For Science credit, use Human Anatomy (Science) found under Science.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
18010	Health	9-12	Interpersonal relationships, mental health, chemical usage, consumer and environmental health, family life and relationships, nutrition, control of diseases, and healthy decision making skills. Note: This course can be taught for Health credit only. For CTE credit, use Individual and Family Health found under Family and Consumer Science. For Physical Education credit, use Health found under Physical Education and Health. For Science credit, use Health found under Science.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	License Code: 18015-Health ♦ K-8, 1-8, 5-12 or 9-12
18015	Family Living (Health)	10-12	Human behavior, self philosophy of life, religion, love versus infatuation, courtship, human sexuality, preparation for marriage, marriage, family life cycle, family crisis, the family in other cultures, and the future of the family. Development and problems of the adult and the family unit including topics of love, sexuality, and marriage. Note: This course can be taught for Health credit only. For CTE credit, use Family Living found under Family and Consumer Science. For Physical Education credit, use Family Living found under Physical Education and Health.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	

HIGH SCHOOL PHYSICAL EDUCATION AND HEALTH COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Physical Education and Health **require 120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
18020	Substance Abuse Prevention (Health)	9-12	<p>Substance Abuse Prevention course will focus specifically on the health risks of drugs, alcohol and tobacco. This course will provide information on the negative consequences of these products and teach students coping strategies to resist the influences (such as peers and media images) that may entice them to use these substances. Students may also explore the community resources available to them.</p> <p>Note: This course is taught for Health credit only. For Physical Education credit, use Substance Abuse Prevention (Phy Ed) found under the Physical Education and Health.</p>	<p>$\frac{1}{4}$, $\frac{1}{2}$, or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 18015-Health ◆ K-8, 1-8, 5-12 or 9-12</p>
18051	Physiology (Health)	9-12	<p>To provide students with detailed information about the human body. A study of the function of living organisms and their parts. The functions of the human body beyond those already covered in biology.</p> <p>Note: This course is taught for Health credit only. For Physical Education credit, use Sports Physiology found under Physical Education and Health. For Science credit, use Physiology found under Science.</p>	<p>$\frac{1}{4}$ or $\frac{1}{2}$</p> <p><i>Max credit = $\frac{1}{2}$</i></p>	
18052	Human Anatomy (Health)	10-12	<p>An introduction to provide an advanced study of the structure of the human body.</p> <p>Note: This course is taught for Health credit only. For Physical Education, use Human Anatomy (Phy Ed) found under Physical Education and Health. For Science credit, use Human Anatomy (Science) found under Science.</p>	<p>$\frac{1}{2}$ or 1</p> <p><i>Max credit = 1</i></p>	

* *High school curricular requirements are spelled out in NDCC 15.1-21-02. Maximum credit refers to the maximum units of credit a student may earn for a course over four years of high school. (Example: Band - a student 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). Credentials are obtained from the Department of Public Instruction (DPI) and are issued to individuals holding a current teaching license.*

HIGH SCHOOL SCIENCE COURSE CODES GRADES 9-12

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

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
13020	Biology	9-12	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.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 13010-Biology ◆ 5-12 or 9-12
13021	Human Anatomy (Science) ◆ Recommended Prerequisite: Biology	10-12	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. 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.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
13022	Physiology ◆ Recommended Prerequisite: Biology	10-12	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. Note: This course can be taught for Science credit only. For Physical Education credit, Sports Physiology can be found under Physical Education and Health.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
13023	Health	9-12	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. 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.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	

HIGH SCHOOL SCIENCE COURSE CODES GRADES 9-12

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

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
13024	Botany/Horticultural Science I	9-12	<p>This course prepares students to produce greenhouse/ nursery plants and to maintain plant growth and propagation structures. Topics to be covered 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. Students may be introduced to the biological, environmental, conservation, and ecological concepts encountered in our environment. Landscape design units will prepare students 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 students' understanding of science by associating basic scientific principles and concepts with relevant applications in agriculture. Leadership development and supervised agricultural experience programs are also an integral part of this course.</p> <p>Note: This course can be taught for Science credit only. For CTE credit, Botany/Horticultural Science I can be found under Agricultural Education.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 13010-Biology ◆ 5-12 or 9-12</p>
13025	Botany/Horticultural Science II	9-12	<p>This course prepares students to produce greenhouse/nursery plants and to maintain plant growth and propagation structures. Topics to be covered 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. Students may be introduced to the biological, environmental, conservation, and ecological concepts encountered in our environment. Landscape design units will prepare students 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 students' understanding of science by associating basic scientific principles and concepts with relevant applications in agriculture. Leadership development and supervised agricultural experience programs are also an integral part of this course.</p> <p>Note: This course can be taught for Science credit only. For CTE credit, Botany/Horticultural Science II can be found under Agricultural Education.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	

HIGH SCHOOL SCIENCE COURSE CODES GRADES 9-12

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

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
13026	Ornithology	9-12	In Ornithology, students will discover the world of birds. Topics include flight, structure, evolution, classification, behavior, habitat, and conservation. Note: This course may not be substituted for the biology course required for graduation.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 13010-Biology ◆ 5-12 or 9-12
13027	Entomology	9-12	Entomology is a basic, non-technical introduction to the study of insects and the ways they live. Course topics include insect importance, life cycles, classification, anatomy and physiology, behavior, and medical entomology. Note: This course may not be substituted for the biology course required for graduation.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
13028	Real World Biology	9-12	Real World Biology is a lab course designed around real world issues that can be explored through the integration of biology and mathematics. Students will apply tools acquired in previous math and biology classes to relevant and engaging problems. Through the use of mathematical models and sound reasoning, students will derive solutions in the areas of population growth, ecology, genetics, epidemiology, and forensics. This course will adhere to state biology standards. Note: This course may not be substituted for the biology course required for graduation.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
13029	Advanced Biology ◆ Recommended Prerequisite: Biology, Chemistry, and appropriate mathematics	10-12	Usually taken after a comprehensive initial study of biology, Advanced Biology covers biological systems in more detail. Topics that may be explored include cell organization, function, and reproduction; energy transformation; human anatomy and physiology; and the evolution and adaptation of organisms.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
13030	Physical Science	8 (see note) 9-12	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. NOTE: This course code should only be used for MIS03 reporting purposes when a grade 8 student is receiving high school credit.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 13045-Physical Science ◆ 5-12 or 9-12

HIGH SCHOOL SCIENCE COURSE CODES GRADES 9-12

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

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
13031	Chemistry	9-12	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.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 13020-Chemistry ◆ 5-12 or 9-12
13032	Advanced Chemistry ◆ Recommended Prerequisite: Chemistry	10-12	Usually taken after a comprehensive initial study of chemistry, Advanced Chemistry covers chemical properties and interactions in more detail. Advanced Chemistry topics include organic chemistry, thermodynamics, electrochemistry, macromolecules, kinetic theory, and nuclear chemistry.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
13034	Applied Biology/Chemistry	9-12	Applied Biology/Chemistry integrates biology and chemistry into a unified domain of study and presents the resulting body of knowledge in the context of work, home, society, and the environment, emphasizing field and laboratory activities. Topics include natural resources, water, air and other gases, nutrition, disease and wellness, plant growth and reproduction, life processes, microorganisms, synthetic materials, waste and waste management, and the community of life.	1 or 2 <i>Max credit = 2</i>	License Code: 13010-Biology ◆ 5-12 or 9-12 OR 13020-Chemistry ◆ 5-12 or 9-12
13036	Forensic Science ◆ Recommended Prerequisite: Biology, Physical Science, or Departmental Approval	11-12	Students will learn the methodology needed to evaluate a crime scene, the proper lab mechanics needed to evaluate evidence, and how to compare between a known and unknown. Topics may include the history of forensic science, collecting of evidence, analyzing results and hands-on application of many laboratory techniques used in solving crimes. Emphasis would be placed on the application of the scientific method to life-long skills and problem solving.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 13036-Forensic Science ◆ 10-12
13042	Physics	9-12	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 examination of sound, light, and magnetic and electric phenomena.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 13050-Physics ◆ 5-12 or 9-12
13044	Applied Physics	9-12	Applied Physics introduces students to mechanical, fluid, electrical, and thermal principles and systems on which modern equipment operates. Student activities examine the similarities of force, work, rate, resistance, energy, power, and force transformers in the mechanical, fluid, electrical, and thermal systems.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL SCIENCE COURSE CODES GRADES 9-12

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

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
13045	Principles of Technology	10-12	Principles of Technology focus on the study of the forces and laws of nature and their application to modern technology. Equilibrium, motion, momentum, energy conversion, electromagnetism, and optical phenomena are presented in the context of current, real-world applications. Demonstrations, math labs, and applied laboratory experiments are an integral part of the Principles of Technology curriculum. This course enables students to gain a solid foundation for careers in electronics, robotics, telecommunications, and other technological fields.	1 <i>Max credit = 1</i>	License Code: 13050-Physics ◆ 5-12 or 9-12
13052	Biotechnology	9-12	Students will explore the history of biotechnology, including early attempts at food preservation, the development of antibiotics, and changes to food crops around the world. They will learn about some of the challenges of biotechnology, such as the growth of antibiotic resistant bacteria and questions about the safety of commercially produced genetically modified organisms (GMOs). They will also research new biotechnologies and how they are changing the world we live in.	$\frac{1}{2}$, or 1 <i>Max credit = 1</i>	License Code: 13010-Biology ◆ 5-12 or 9-12
13061	Astronomy	9-12	Astronomy offers students the opportunity to study the solar system, stars, galaxies, and interstellar bodies. This course usually introduces and uses astronomic instruments and typically explores theories regarding the origin and evolution of the universe, space, and time.	$\frac{1}{4}$ or $\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 13035-Earth Science ◆ 5-12 or 9-12
13062	Geology	9-12	Geology provides an in-depth study of the forces that formed and continue to affect the earth's surface. Earthquakes, volcanoes, and erosion are examples of topics that are presented.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	
13063	Earth Science (Secondary)	9-12	Earth Science offers insight into the environment on earth and the earth's environment in space. While presenting the concepts and principles essential to students' understanding of the dynamics and history of the earth, this course usually explores oceanography, geology, astronomy, meteorology, and geography.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
13064	Meteorology	9-12	Meteorology examines the properties of the earth's atmosphere. Topics usually include atmospheric layering, changing pressures, winds, water vapor, air masses, fronts, temperature changes and weather forecasting.	$\frac{1}{4}$ or $\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	
13065	Environmental Science ◆ Recommended Prerequisite: Biology, Physical Science, or Departmental Approval	11-12	Environmental Science examines the mutual relationships between organisms and their environment. In studying the interrelationships among plants, animals, and humans, this course usually covers the following subjects: photosynthesis, recycling and regeneration, ecosystems, population and growth studies, pollution, and conservation of natural resources.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 13025-Environmental Science ◆ 10-12

HIGH SCHOOL SCIENCE COURSE CODES GRADES 9-12

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

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
13074	Oceanography	9-12	Oceanography focuses on the content, features, and possibilities of the earth's oceans. It explores marine organisms, conditions, and ecology and sometimes covers marine mining, farming, and exploration.	$\frac{1}{4}$ or $\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 13035-Earth Science ◆ 5-12 or 9-12
13110	Ecology	9-12	Ecology provides students with a basic understanding of living things. Topics covered may include ecology and environmental problems such as overpopulation and pollution as well as cells, types of organisms, evolutionary behavior, and inheritance.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	License Code: 13010-Biology ◆ 5-12 or 9-12
13150	STEM Seminar (Science)	9-12	STEM Seminar provides students with a project based and integrated and 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 students in hands on interdisciplinary application of the Engineering Design Process. Students engage in authentic projects and create products, presentations, and network with local STEM industry experts. In this course students 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 in order to be globally competitive in the 21 st Century. This course curriculum infuses academic content from Math, Science, Language Arts, and Social Studies. It utilizes state standards, technical skills and develops 21 st 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. Note: Only one (1) credit of this course can be used towards the coordinated plan of study for the Academic and Career and Technical Education Scholarship.	$\frac{1}{2}$ or 1 <i>Max credit = 2</i>	License Code: Any Science degree ◆ 5-12 or 9-12

HIGH SCHOOL SCIENCE COURSE CODES GRADES 9-12

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

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
13580	Advanced Placement Biology©	10-12	The course is based on four Big Ideas, which encompass core scientific principles, theories, and processes that cut across traditional boundaries and provide a broad way of thinking about living organisms and biological systems. Students establish lines of evidence and use them to develop and refine testable explanations and predictions of natural phenomena. Focusing on these disciplinary practices enables teachers to use the principles of scientific inquiry to promote a more engaging and rigorous experience for AP Biology students. Twenty-five percent of instructional time is devoted to hands-on laboratory work with an emphasis on inquiry-based investigations. Investigations require students to ask questions, make observations and predictions, design experiments, analyze data, and construct arguments in a collaborative setting, where they direct and monitor their process.	½ or 1 <i>Max credit = 1</i>	License Code: 13010-Biology ◆ 5-12 or 9-12
13581	Advanced Placement Chemistry©	10-12	The AP Chemistry course provides students with a college-level foundation to support future advanced course work in chemistry. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore topics such as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium. This course requires that 25 percent of the instructional time provides students with opportunities to engage in laboratory investigations. This includes a minimum of 16 hands-on labs, at least six of which are inquiry based.	½ or 1 <i>Max credit = 1</i>	License Code: 13020-Chemistry ◆ 5-12 or 9-12
13582	Advanced Placement Environmental Science©	10-12	The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science, through which students engage with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. The course requires that students 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. This course is interdisciplinary, embracing topics from geology, biology, environmental studies, environmental science, chemistry, and geography. Although there are no specific AP Environmental Science labs or field investigations required for the course, it is expected that students perform as many labs/field investigations as possible.	½ or 1 <i>Max credit = 1</i>	License Code: 13025-Environmental Science ◆ 10-12

HIGH SCHOOL SCIENCE COURSE CODES GRADES 9-12

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

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
13584	Advanced Placement Physics C: Electricity and Magnetism©	10-12	AP Physics C: Electricity and Magnetism is a one-semester, calculus-based, college-level physics course, especially appropriate for students planning to specialize or major in physical science or engineering. The course explores topics such as electrostatics; conductors, capacitors, and dielectrics; electric circuits; magnetic fields; and electromagnetism. Introductory differential and integral calculus is used throughout the course. AP Physics C: Electricity and Magnetism should include a hands-on laboratory component comparable to a semester-long introductory college-level physics laboratory. Students should spend a minimum of 20 percent of instructional time engaged in hands-on laboratory work. Students ask questions, make observations and predictions, design experiments, analyze data, and construct arguments in a collaborative setting, where they direct and monitor their progress. Each student should complete a lab notebook or portfolio of lab reports.	½ or 1 <i>Max credit = 1</i>	License Code: 13050-Physics ◆ 5-12 or 9-12
13585	Advanced Placement Physics C: Mechanics©	10-12	AP Physics C: Mechanics is equivalent to a one-semester, calculus-based, college-level physics course, especially appropriate for students planning to specialize or major in physical science or engineering. The course explores topics such as kinematics; Newton's laws of motion; work, energy, and power; systems of particles and linear momentum; circular motion and rotation; and oscillations and gravitation. Introductory differential and integral calculus is used throughout the course. AP Physics C: Mechanics should include a hands-on laboratory component comparable to a semester-long introductory college-level physics laboratory. Students should spend a minimum of 20 percent of instructional time engaged in hands-on laboratory work. Students ask questions, make observations and predictions, design experiments, analyze data, and construct arguments in a collaborative setting, where they direct and monitor their progress. Each student should complete a lab notebook or portfolio of lab reports.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL SCIENCE COURSE CODES GRADES 9-12

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

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
13586	Advanced Placement Physics 1: Algebra-Based	10-12	AP Physics 1 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of Physics through inquiry-based investigations as they explore topics such as Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices.	½ or 1 <i>Max credit = 1</i>	License Code: 13050-Physics ◆ 5-12 or 9-12
13587	Advanced Placement Physics 2: Algebra-Based	10-12	AP Physics 2 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of Physics through inquiry-based investigations as they explore topics such as fluid statics and dynamics; thermodynamics with kinetic theory; PV diagrams and probability; electrostatics; electrical circuits and capacitors; magnetic fields; electromagnetism; physical and geometric optics; and quantum, atomic, and nuclear physics. This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices.	½ or 1 <i>Max credit = 1</i>	

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HIGH SCHOOL SOCIAL STUDIES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Social Studies require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
06815	Tribal History	9-12	This course is a general overview of the various American Indian tribes throughout the United States. It will include the study of locations, origins, selected events, artifacts, ideas or other phenomena associated with the history of the tribes. Emphasis will be placed on the examination of the tribal nations of North Dakota.	$\frac{1}{4}$, $\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 15046-Native American Studies ◆ K-12, 1-12, 5-12, or 9-12 OR 15035-Composite Social Studies ◆ 5-12 or 9-12
06816	Tribal Government	9-12	This course provides an analytical description of tribal governments and their legal, social, and political structure. Emphasis will be placed on the examination of the tribal governments of North Dakota.	$\frac{1}{4}$, $\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
06817	Tribal Studies	9-12	This course is a general overview course that explores the social dynamics of native American tribes with emphasis on the tribal nations of North Dakota (Lakota/Dakota, Hidatsa, Mandan, Arikara, and Ojibwa). It will include a study of the ways of life they create to adapt and cope with the environmental, political, social, and economic statuses and changes. It will also include studying language components and their origins, along with contemporary issues facing native American Indian people across the United States and in North Dakota. Note: It is recommended that this course be taught by a licensed eminent scholar (license code 15046).	$\frac{1}{4}$, $\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
06818	Tribal Culture	9-12	This course explores differences and similarities of various tribes' cultural values. Topics will include kinship systems, rites and rituals, ceremonies, worldviews based on origin, and philosophical beliefs.	$\frac{1}{4}$, $\frac{1}{2}$ or 1 <i>Max credit = 1</i>	
15010	Anthropology	9-12	Anthropology introduces students to the study of human evolution with regard to the origin, distribution, physical attributes, environment, and culture of human beings. This course provides an overview of anthropology, including but not limited to both physical and cultural anthropology.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	
15011	Humanities (Social Studies)	10-12	Humanities (Social Studies) provides an overview of major expressions of the cultural heritage of selected western and eastern civilizations. Content typically includes (but is not limited to) the examination of selected examples of art, music, literature, architecture, technology, philosophy, and religion of the cultures studied. This course may also cover the languages and political institutions of these cultures. Note: This course can be taught for Social Studies credit only. For English credit, use Humanities (English) under English.	$\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: Any 5-12 or 9-12 Social Studies degree
15012	Archeology	9-12	Archeology is the systematic study of past human life and culture by the recovery and examination of remaining material evidence, such as graves, buildings, tools, and pottery. Archaeological investigations are a principal source of modern knowledge of prehistoric, ancient, and extinct cultures.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 15020-History ◆ 5-12 or 9-12

HIGH SCHOOL SOCIAL STUDIES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Social Studies require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
15020	World Areas Studies	9-12	World Area Studies examines the history, politics, economics, society, and/or culture of one or more regions of the world, such as Africa, Latin America, the former Soviet Union, Far East Asia, and the Middle East. This course may focus primarily on the history of a particular region or may take an interdisciplinary approach to the contemporary issues affecting the region. Furthermore, this course may emphasize one particular country (other than the United States), rather than emphasizing a region or continent.	$\frac{1}{4}$, $\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 15007-Government ♦ 5-12 or 9-12 OR 15010-Economics ♦ 5-12 or 9-12 OR 15015-Geography ♦ 5-12 or 9-12 OR 15020-History ♦ 5-12 or 9-12 OR 15035-Composite Social Studies ♦ 5-12 or 9-12
15021	World People Studies	9-12	World People Studies courses allow students to study various types of subgroups that have something in common such as religion, gender, or culture. Similar in style to World Area Studies but focusing on a group of people rather than on a specific region, these courses examine a subgroup's history, politics, economics, and/or culture.	$\frac{1}{4}$, $\frac{1}{2}$ or 1 <i>Max credit = 1</i>	License Code: 15007-Government ♦ 5-12 or 9-12 OR 15010-Economics ♦ 5-12 or 9-12 OR 15015-Geography ♦ 5-12 or 9-12 OR 15020-History ♦ 5-12 or 9-12 OR 15035-Composite Social Studies ♦ 5-12 or 9-12
15030	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.	$\frac{1}{4}$ or $\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 15007-Government ♦ 5-12 or 9-12
15050	Consumer Education	9-12	Choosing careers, choice of school versus careers, budgeting, background on taxes, insurance, credit buying, installment loans, and personal expenditure.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	
15060	Economics	9-12	<p>Economics is the study of economic principles and their application. This may include types of business ownership, theory of the free enterprise system, general economic principles, role of the government, cooperative marketing, economic terms and definitions, world conditions and how they affect the American Free Enterprise Systems.</p> <p>If the state mandated Personal Finance concepts are not offered to all students in another course, then these concepts must be included in the Economics curriculum.</p>	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	License Code: 15010-Economics ♦ 5-12 or 9-12
15069	Cooperative Marketing	9-12	Cooperative Marketing offers students insight into the processes affecting the flow of goods and services from the producer to the consumer. Course content ranges considerably as general marketing principles such as purchasing, distribution, and sales are covered; however, a major emphasis is often placed on kinds of markets; market identification; product planning, packaging, and pricing; and business management.	$\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 15010-Economics ♦ 5-12 or 9-12

HIGH SCHOOL SOCIAL STUDIES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Social Studies require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
15069	Cooperative Marketing	9-12	Cooperative Marketing offers students insight into the processes affecting the flow of goods and services from the producer to the consumer. Course content ranges considerably as general marketing principles such as purchasing, distribution, and sales are covered; however, a major emphasis is often placed on kinds of markets; market identification; product planning, packaging, and pricing; and business management.	½ <i>Max credit = ½</i>	License Code: 15010-Economics ◆ 5-12 or 9-12
15070	Geography	9-12	Geography provides students with an overview of world geography but may vary widely in the topics they cover. Topics typically include the physical environment; the political landscape; the relationship between people and the land; economic production and development; and the movement of people, goods, and ideas.	¼, ½, or 1 <i>Max credit = 1</i>	License Code: 15015-Geography ◆ 5-12 or 9-12
15083	Women: Past & Present	9-12	Women: Past & Present examines the history, politics, economics, and/or culture of gender in U.S. society. This course may focus primarily on gender relations or may take a more comprehensive approach to studying the contemporary issues related to gender.	¼ or ½ <i>Max credit = ½</i>	License Code: 15020-History ◆ 5-12 or 9-12
15085	U.S. History	9-12	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.	¼, ½, or 1 <i>Max credit = 1</i>	
15086	Early U.S. History	10	Early U.S. History provides students with an overview of the United States, examining time periods from the 1830's – 1930's. This course will allow for more inquiry into the content, opportunities for personalized learning, and technology integration.	1 <i>Max credit = 1</i>	License Code: 15020-History ◆ 5-12 or 9-12 OR 15035-Composite Social Studies ◆ 5-12 or 9-12
15087	Modern U.S. History	11	Early U.S. History provides students with an overview of the United States, examining time periods from the 1930's-Present. This course will allow for more inquiry into the content, opportunities for personalized learning, and technology integration.	1 <i>Max credit = 1</i>	License Code: 15020-History ◆ 5-12 or 9-12 OR 15035-Composite Social Studies 5-12 or 9-12
15089	World History	9-12	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.	¼, ½, or 1 <i>Max credit = 1</i>	License Code: 15020-History ◆ 5-12 or 9-12

HIGH SCHOOL SOCIAL STUDIES COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Social Studies **require 120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
15110	Political Science	9-12	Political Science approaches the study of politics from a theoretical perspective, including an examination of the role of government and the nature of political behavior, political power, and political action.	$\frac{1}{4}$ or $\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 15007-Government 5-12 or 9-12
15111	American Government	9-12	American Government provides an overview of the structure and functions of the U.S. government and political institutions and examines constitutional principles, the concepts of rights and responsibilities, the role of political parties and interest groups, and the importance of civic participation in the democratic process. This course may examine the structure and function of state and local governments and may cover certain economic and legal topics.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	
15110	Political Science	9-12	Political Science approaches the study of politics from a theoretical perspective, including an examination of the role of government and the nature of political behavior, political power, and political action.	$\frac{1}{4}$ or $\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 15007-Government ♦ 5-12 or 9-12
15111	American Government	9-12	American Government provides an overview of the structure and functions of the U.S. government and political institutions and examines constitutional principles, the concepts of rights and responsibilities, the role of political parties and interest groups, and the importance of civic participation in the democratic process. This course may examine the structure and function of state and local governments and may cover certain economic and legal topics.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	
15114	International Relations	9-12	International Relations provides students with an introduction to the relationships that exist among nations, including an examination of the modern state; the foreign policies of nations; the dynamics of nationalism, ideology, and culture; and the role of international organizations. The course may also emphasize contemporary events.	$\frac{1}{4}$ or $\frac{1}{2}$ <i>Max credit = $\frac{1}{2}$</i>	License Code: 15007-Government ♦ 5-12 or 9-12
15118	Law & Justice in North Dakota	9-12	Law & Justice courses examine the workings of the U.S. criminal and civil justice systems, including providing an understanding of civil and criminal law and the legal process, the structure and procedures of courts, and the role of various legal or judicial agencies. Although this course emphasizes the legal process, it may also cover the history and foundation of U.S. law (the Constitution, statutes, and precedents). Course content may also include contemporary problems in the criminal justice system.	$\frac{1}{4}$, $\frac{1}{2}$, or 1 <i>Max credit = 1</i>	

HIGH SCHOOL SOCIAL STUDIES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Social Studies require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
15120	Psychology	9-12	Psychology introduces students to the study of individual human behavior. Course content typically includes (but is not limited to) an overview of the field of psychology, topics in human growth and development, personality and behavior, and abnormal psychology.	¼, ½ or 1 <i>Max credit = 1</i>	License Code: 15030-Psychology ◆ 5-12 or 9-12
15130	Sociology	9-12	Sociology introduces students to the study of human behavior in society. This course provides an overview of sociology, generally including (but not limited to) topics such as social institutions and norms, socialization and social change, and the relationships among individuals and groups in society.	¼, ½ or 1 <i>Max credit = 1</i>	License Code: 15040-Sociology ◆ 5-12 or 9-12
15131	Particular Topics in Sociology	9-12	This course examines a particular topic(s) in sociology, such as culture and society or the individual in society, rather than provide an overview of the field of sociology.	½ or 1 <i>Max credit = 1</i>	◆
15201	Problems of Democracy	9-12	Principles of Democracy combine a study of the structure of national, state, and local U.S. government with an overview of the principles of market economics. Course content may include contemporary U.S. issues. The purpose of this course is to prepare students to perform effectively as informed citizens. Students must read the Declaration of Independence, the United States Constitution, and the Bill of Rights. If the state mandated Personal Finance concepts are not offered to all students in another course, then these concepts must be included in the Problems of Democracy curriculum.	¼, ½, or 1 <i>Max credit = 1</i>	License Code: 15007-Government ◆ 5-12 or 9-12 OR 15010-Economics ◆ 5-12 or 9-12 OR 15015-Geography ◆ 5-12 or 9-12 OR 15020-History ◆ 5-12 or 9-12 OR 15035-Composite Social Studies ◆ 5-12 or 9-12
15251	Orientation to Social Science	9-12	Social Science provides students with an introduction to the various disciplines in the social sciences, including anthropology, economics, geography, history, political science, psychology, and sociology. Typically, this course emphasizes the methodologies of the social sciences and the differences among the various disciplines.	¼ or ½ <i>Max credit = ½</i>	License Code: 15007-Government ◆ 5-12 or 9-12 OR 15035-Composite Social Studies ◆ 5-12 or 9-12

HIGH SCHOOL SOCIAL STUDIES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Social Studies require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
15301	Marriage & the Family	9-12	<p>Sociological, legal, psychological, and religious view of marriage and family relationships, responsibilities, and roles of each member, function of the family in our society.</p> <p>Note: This course can be taught for Social Studies credit only. For CTE credit, see course 09122 Family Living and 09120 Parenting under Family & Consumer Science. For Physical Education credit see course 08015 Family Living under Physical Education.</p>	<p>¼ or ½</p> <p>Max credit = ½</p>	<p>License Code: 15040-Sociology ♦ 5-12 or 9-12</p>
15401	North Dakota Studies	9-12	<p>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.</p>	<p>¼, ½, or 1</p> <p>Max credit = 1</p>	<p>License Code: 15007-Government ♦ 5-12 or 9-12 OR 15015-Geography ♦ 5-12 or 9-12 OR 15020-History ♦ 5-12 or 9-12 OR 15035-Composite Social Studies ♦ 5-12 or 9-12</p>
15402	State Studies	9-12	<p>This code is to be used for students transferring into the State of North Dakota with preexisting state studies credits that currently are not mapped or aligned to the existing course codes. For the transcript, please name the specific state for which credit is given (i.e. South Dakota Studies).</p>	<p>¼, ½, or 1</p> <p>Max credit = 1</p>	<p>N/A – used for courses that are being transferred in</p>
15580	Advanced Placement Macroeconomics©	10-12	<p>AP Macroeconomics is an introductory college-level course that focuses on the principles that apply to an economic system as a whole. The course places particular emphasis on the study of national income and price-level determination; it also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts.</p> <p>If the state mandated Personal Finance concepts are not offered to all students in another course, then these concepts must be included in the Economics curriculum.</p>	<p>½ or 1</p> <p>Max credit = 1</p>	<p>License Code: 15010-Economics ♦ 5-12 or 9-12</p>

HIGH SCHOOL SOCIAL STUDIES COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Social Studies **require 120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
15581	Advanced Placement Microeconomics©	10-12	<p>AP Microeconomics is an introductory college-level course that focuses on the principles of economics that apply to the functions of individual economic decision-makers. The course also develops students' familiarity with the operation of product and factor markets, distributions of income, market failure, and the role of government in promoting greater efficiency and equity in the economy. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts.</p> <p>If the state mandated Personal Finance concepts are not offered to all students in another course, then these concepts must be included in the Economics curriculum.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 15010-Economics 5-12 or 9-12</p>
15582	Advanced Placement Comparative Government & Politics©	10-12	<p>AP Comparative Government and Politics introduces students to the rich diversity of political life outside the United States. The course uses a comparative approach to examine the political structure; policies; and the political, economic, and social challenges among six selected countries: Great Britain, Mexico, Russia, Iran, China, and Nigeria. Additionally, students examine how different governments solve similar problems by comparing the effectiveness of approaches to many global issues.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 15007-Government ♦ 5-12 or 9-12</p>
15583	Advanced Placement United States Government & Politics©	10-12	<p>AP United States Government and Politics introduces students to key political ideas, institutions, policies, interactions, roles, and behaviors that characterize the political culture of the United States. The course examines politically significant concepts and themes, through which students learn to apply disciplinary reasoning assess causes and consequences of political events and interpret data to develop evidence-based arguments.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	
15584	Advanced Placement European History©	10-12	<p>AP European History focuses on developing students' understanding of European history from approximately 1450 to the present. Students investigate the content of European history for significant events, individuals, developments, and processes in four historical periods, and develop and use the same thinking skills and methods (analyzing primary and secondary sources, making historical comparisons, chronological reasoning, and argumentation) employed by historians. The course also provides five themes that students explore in order to make connections among historical developments in different times and places.</p>	<p>½ or 1</p> <p><i>Max credit = 1</i></p>	<p>License Code: 15020-History ♦ 5-12 or 9-12</p>

HIGH SCHOOL SOCIAL STUDIES COURSE CODES GRADES 9-12

High school (grades 9-12) courses in Social Studies require 120 contact hours per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
15585	Advanced Placement United States History©	10-12	AP U.S. History focuses on the development of historical thinking skills (chronological reasoning, comparing and contextualizing, crafting historical arguments using historical evidence, and interpreting and synthesizing historical narrative) and the development of students' abilities to think conceptually about U.S. history from approximately 1491 to the present. Seven themes of equal importance provide areas of historical inquiry for investigation throughout the course. These require students to reason historically about continuity and change over time and make comparisons among various historical developments in different times and places. The course also allows teachers flexibility across nine different periods of U.S. history to teach topics of their choice in depth.	½ or 1 <i>Max credit = 1</i>	License Code: 15020-History ◆ 5-12 or 9-12
15587	Advanced Placement Human Geography©	10-12	The AP Human Geography course is equivalent to an introductory college-level course in human geography. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socioeconomic organizations and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. The curriculum reflects the goals of the National Geography Standards (2012).	½ or 1 <i>Max credit = 1</i>	License Code: 15015- Geography ◆ 5-12 or 9-12
15587	Advanced Placement Human Geography©	10-12	The AP Human Geography course is equivalent to an introductory college-level course in human geography. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socioeconomic organizations and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. The curriculum reflects the goals of the National Geography Standards (2012).	½ or 1 <i>Max credit = 1</i>	License Code: 15015- Geography ◆ 5-12 or 9-12
15588	Advanced Placement Psychology©	10-12	The AP Psychology course introduces students to the systematic and scientific study of human behavior and mental processes. While considering the psychologists and studies that have shaped the field, students explore and apply psychological theories, key concepts, and phenomena. Throughout the course, students employ psychological research methods, including ethical considerations, as they use the scientific method, analyze bias, evaluate claims and evidence, and effectively communicate ideas.	½ or 1 <i>Max credit = 1</i>	License Code: 15030- Psychology ◆ 5-12 or 9-12

HIGH SCHOOL SOCIAL STUDIES COURSE CODES GRADES 9-12

*High school (grades 9-12) courses in Social Studies **require 120 contact hours** per credit.*

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
FOR SUMMER SCHOOL PROGRAM USE ONLY					
15600	ND Boys and Girls State Leadership Academy	11	The ND Boys and Girls State Leadership Academy is an intensive weeklong program centered on the development and implementation of local, county, and statewide civics' programs. The immersion of ND boys and girls into this program is designed to provide a hands-on approach to selecting and electing officials at all levels of a mock government, including a Governor. In addition to election, delegates write, and present mock legislation based on current issues of the day and issues they feel are important to today's society. Over fifty hours of intense instruction and a collaborative networking experience is provided to the youth of the state during their week of civic education and leadership.	¼ or ½ Max credit = 1/2	

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

Credentials are obtained from the Department of Public Instruction (DPI) and are issued to individuals holding a current teaching license.

HIGH SCHOOL THEOLOGY COURSE CODES GRADES 9-12

(These course codes are to be used by nonpublic schools only.)

High school (grades 9-12) courses in Theology **require 120 contact hours** per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
60010	Religious Foundations	9-12	Religious Foundations' primary objectives include instruction in the history, tenets, and organization of a religion; development of personal faith and conviction; and exposure to the ways in which daily life may reflect personal religious beliefs. This course typically includes various components particular to a specific religion, such as religious sacraments and symbols, food laws, the authority and structure of the church, the church calendar, and so on.	½ or 1 <i>Max credit = 1</i>	License Code: 50040-Theology ♦ 9-12 OR Any teaching license AND 50040-Theology endorsement ♦ 9-12
60011	Comparative Religion	9-12	Comparative Religion courses survey and compare the various forms and values of several world religions, offering students a basic understanding of the world's diverse religious faiths and practices. Course topics typically include the belief systems of adherents; the relationships among humans, nature, ancestors, and the spiritual world; and the historical development of each religion.	½ or 1 <i>Max credit = 1</i>	
60012	Eastern Religions	9-12	Similar to Comparative Religion, Eastern Religions provides students with an overview of various religions and belief systems but focus on those of the Eastern World. Particular religious or philosophical systems of study usually include Buddhism, Hinduism, Islam, Taoism, Shintoism, and Confucianism, among others.	½ or 1 <i>Max credit = 1</i>	
60013	Western Religions	9-12	Similar to Comparative Religion, Western Religions provides students with an overview of various religions and belief systems but focus on those of the Western World. Particular religious or philosophical systems of study usually include Judaism; Christianity (including various faiths such as those of Catholics, Episcopalians, Baptists, Quakers, Mormons, Mennonites, and others); and Native Indian belief systems, among others.	½ or 1 <i>Max credit = 1</i>	
60014	Scriptures	9-12	Scriptures emphasizes understanding and interpreting the sacred writings of a faith (such as the Bible, Torah, Koran, Book of Mormon, and so on) from the standpoint of a religious faith. Course objectives are designed so that students may comprehend the theological, doctrinal, and ethical messages contained within religious scriptures.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL THEOLOGY COURSE CODES GRADES 9-12

(These course codes are to be used by nonpublic schools only.)

High school (grades 9-12) courses in Theology **require 120 contact hours** per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
60015	Old Testament	9-12	Old Testament emphasizes understanding and interpreting the sacred writings of the Old Testament from the standpoint of a religious faith and may focus on one or several books. Course content typically focuses on themes, theological concepts, and portrayal of ethical messages, but may also include critique and commentary.	½ or 1 <i>Max credit = 1</i>	License Code: 50040-Theology ♦ 9-12 OR Any teaching license AND 50040-Theology endorsement ♦ 9-12
60016	New Testament	9-12	New Testament emphasizes understanding and interpreting the sacred writings of the New Testament from the standpoint of a religious faith and may focus on one or several religious books. Course content typically focuses on themes, theological concepts, and portrayal of ethical messages, but may also include critique and commentary.	½ or 1 <i>Max credit = 1</i>	
60017	Bible History	9-12	Bible History treats the Bible as a historical document and provides an overview of significant biblical events. The content usually includes geography; the relationship among cultures, belief systems, and the events chronicled in the Bible; and early Jewish or Christian Church history.	½ or 1 <i>Max credit = 1</i>	
60018	Christology	9-12	Christology concerns the work and life of Jesus Christ and the literature related to him. Course content is typically based on Christian scriptures, leading to an examination of the message of Jesus Christ and applying His message to daily life.	½ or 1 <i>Max credit = 1</i>	
60019	Religious Figures	9-12	Religious Figures offers students the opportunity to examine the lives and messages of one or several people who are central to a religious faith, such as a prophet, apostle, philosopher, or leader. In addition to a historical study of the person (or people), this course typically emphasize how the teachings of these individuals influence the faith and culture of a religious group.	½ or 1 <i>Max credit = 1</i>	
60020	Liturgy and Prayer	9-12	Liturgy and Prayer varies widely, usually depending upon the underlying religion, but generally seek to inform students about the meaning and message of public and private worship. Course content typically includes an examination or exploration of common rituals, spoken or sung prayers, and observed sacraments.	½ or 1 <i>Max credit = 1</i>	

HIGH SCHOOL THEOLOGY COURSE CODES GRADES 9-12

(These course codes are to be used by nonpublic schools only.)

High school (grades 9-12) courses in Theology **require 120 contact hours** per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
60021	Prayer and Spirituality	9-12	Prayer and Spirituality varies widely but seek to enable students to experience deeper communion with the divine through public and private worship. Course content may include an examination or exploration of traditional and contemporary practices.	½ or 1 Max credit = 1	License Code: 50040-Theology ♦ 9-12 OR Any teaching license AND 50040-Theology endorsement ♦ 9-12
60022	Religious Ethics and Morality	9-12	Usually including an introduction to or examination of the tenets of a particular faith, Religious Ethics and Morality seeks to enable students to apply the moral teachings of a faith to their own lives, to the larger community, and to their decision-making processes. Course content may focus on such issues as peace and justice, death and dying, human sexuality, professional ethics, and human rights.	½ or 1 Max credit = 1	
60023	Justice, Peace, and Faith	9-12	Justice, Peace, and Faith examine the scriptural foundations for justice, typically with a historical overview of a faith's social teaching. This course discusses such topics as poverty, hunger, conflict, discrimination, justice, and environmental issues, with a view toward developing students' ability to critically reflect upon and analyze their own roles and responsibilities.	½ or 1 Max credit = 1	
60024	Faith and Lifestyle	9-12	Faith and Lifestyle focuses on the development of young adults from puberty to adulthood, approached from the perspective of a faith or church. In this course, the religion's values and traditions provide an underpinning for examining such topics as identity, independence, sexuality, employment, and leisure. Typically, Faith and Lifestyle courses include discussions about adult roles—single life, marriage, religious life, and ordained ministry.	½ or 1 Max credit = 1	
60025	Ministry	9-12	Ministry introduces students to the vocation of service. Students may learn counseling skills, plan and participate in religious services, and minister to younger students or to members of the local community (assisting in hospitals and convalescent homes, crisis centers, soup kitchens, and so on).	½ or 1 Max credit = 1	
60026	Religious Education and Theology—Aide	9-12	Religious Education and Theology—Aide offers students the opportunity to assist instructors in preparing, organizing, or delivering course curricula. Students may provide tutorial or instructional assistance to other students.	½ or 1 Max credit = 2	

HIGH SCHOOL THEOLOGY COURSE CODES GRADES 9-12

(These course codes are to be used by nonpublic schools only.)

High school (grades 9-12) courses in Theology **require 120 contact hours** per credit.

Course Code	Course Name	Recommended Grade Levels	Description	High School Credit Options*	License/credential Required**
60027	Religious Education and Theology—Independent Study	9-12	Religious Education and Theology—Independent Study, often conducted with instructors, members of the clergy, or religious leaders as mentors, enables students to explore topics of interest related to religion or theology. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular religion, to explore a topic in greater detail, or to develop more advanced skills.	½ or 1 <i>Max credit = 2</i>	License Code: 50040-Theology ♦ 9-12 OR Any teaching license AND 50040-Theology endorsement ♦ 9-12
60028	Religious Education and Theology—Workplace Experience	9-12	Religious Education and Theology—Workplace Experience provides students with work experience in a field related to religion and theology. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). This course may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace	½ or 1 <i>Max credit = 1</i>	
60029	Religious Education and Theology—Other	9-12	Other Religious Education and Theology courses.	½ or 1 <i>Max credit = 1</i>	
60030	Formal and Material Logic	9-12	This course covers grammatical functions of words and their logical relationships being studies in the context of syllogisms using ordinary human language in order to use thinking skills. Students in this course will learn to decode the meaning of statements and arguments. Deductive inference, mood in syllogisms, complex syllogisms, hypothetical reasoning, truth and falsity of statements, and the validity, invalidity, and soundness of arguments is studied.	½ or 1 <i>Max credit = 2</i>	
60031	Basic Questions of Philosophy	10-12	This introductory philosophy course touches upon basic questions present in speculative philosophy through the ages beginning with the pre-Socratics up to contemporary philosophers. Topics include philosophy of nature, epistemology, philosophy of God, and philosophical anthropology.	½ <i>Max credit = 1/2</i>	
60032	Theological Anthropology	11-12	This course builds upon philosophical anthropology by investigating philosophical claims about the nature of the human person in light of claims of biblical and systematic theology.	½ <i>Max credit = 1/2</i>	

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

Credentials are obtained from the Department of Public Instruction (DPI) and are issued to individuals holding a current teaching license.