PROPOSED REGULATION OF THE

STATE BOARD OF EDUCATION

LCB File No. R087-12

August 31, 2012

EXPLANATION – Matter in ***italics*** is new; matter in brackets **[**~~omitted material~~**]** is material to be omitted.

AUTHORITY: §§1-8, NRS 385.080, 385.110 and 388.360.

A REGULATION relating to education; prescribing the program areas and the courses of study which the board of trustees of a school district may offer for a program of career and technical education; revising the courses of study which may be offered as elective courses of study in a public high school; repealing certain elective courses of study; and providing other matters properly relating thereto.

Section 1. NAC 386.415 is hereby amended to read as follows:

386.415 1. For the purposes of subsection 1 of NRS 386.590, the Department will consider a charter school to be a "vocational school" if the charter school provides:

(a) Instruction in at least grades 9 through 12, inclusive; and

(b) A progression of courses within one or more of the **[**~~occupational~~**]** ***program*** areas **[**~~identified~~**]** ***set forth*** in **[**~~NAC 389.516~~**]** ***subsection 1 of section 2 of this regulation*** that prepares a pupil for entry level employment in **[**~~an occupational~~**]** ***the applicable program*** area.

2. A charter school that is a vocational school shall comply with subsection 3 of NAC 389.800, and the courses ***of study*** in career and technical education offered by such a school must comply with subsection 1 of that section.

Sec. 2. Chapter 389 of NAC is hereby amended by adding thereto a new section to read as follows:

1. The board of trustees of a school district may offer any of the following program areas for a program of career and technical education in a public high school:

(a) Agriculture and natural resources, which may include the following courses of study:

(1) Agriculture business systems.

(2) Agriculture leadership, communication and policy.

(3) Agriculture mechanical engineering technology equipment fabrication systems.

(4) Agriculture mechanical engineering technology power systems.

(5) Agriculture mechanical engineering technology structural systems.

(6) Animal science.

(7) Environmental management.

(8) Equine science.

(9) Floriculture design and management.

(10) Landscape design and management.

(11) Natural resources and wildlife management.

(12) Ornamental horticulture or greenhouse management.

(13) Veterinary science.

(b) Business and marketing education, which may include the following courses of study:

(1) Accounting and finance.

(2) Administrative services.

(3) Business management.

(4) Entrepreneurship.

(5) Hospitality and tourism.

(6) Marketing.

(7) Sports and entertainment marketing.

(c) Family and consumer sciences, which may include the following courses of study:

(1) Baking and pastry.

(2) Child development.

(3) Costume design.

(4) Culinary arts.

(5) Early childhood education.

(6) Family and consumer sciences.

(7) Fashion merchandising.

(8) Fashion, textiles and design.

(9) Foods and nutrition.

(10) Housing and interior design.

(11) Human development.

(12) Personal and family management.

(d) Health science and public safety, which may include the following courses of study:

(1) Biomedical science.

(2) Biotechnology.

(3) Criminal justice.

(4) Dental assisting.

(5) Emergency medical services.

(6) Emergency telecommunications.

(7) Forensics.

(8) Fire science.

(9) Health occupations.

(10) Health sciences.

(11) Health information management.

(12) Law enforcement.

(13) Medical assisting.

(14) Nursing operations.

(15) Pharmacology.

(16) Respiratory therapy.

(17) Sports medicine or exercise science.

(e) Information and media technologies, which may include the following courses of study:

(1) Animation.

(2) Computer science.

(3) Database design.

(4) Digital game development.

(5) Digital video and broadcast production.

(6) Geographic information systems.

(7) Graphic design.

(8) Graphic communications and production.

(9) Information technology for networking.

(10) Information technology for service and support.

(11) Photography.

(12) Radio production.

(13) Web design and development.

(f) Skilled and technical sciences, which may include the following courses of study:

(1) Aerospace engineering.

(2) Aircraft equipment technology.

(3) Architectural drafting and design.

(4) Automotive technology.

(5) Aviation technology.

(6) Building maintenance.

(7) Collision repair technology.

(8) Construction management.

(9) Construction technology.

(10) Cosmetology.

(11) Diesel equipment technology.

(12) Electronics.

(13) Engineering.

(14) Furniture and cabinetmaking.

(15) Heating, ventilation, air-conditioning and refrigeration.

(16) Home technology integration.

(17) Machine tool technology.

(18) Mechanical drafting and design.

(19) Mechanical technology.

(20) Metalworking.

(21) Power equipment technology.

(22) Renewable energy technology.

(23) Theater design technology.

(24) Welding technology.

2. If the board of trustees of a school district offers a program area set forth in subsection 1, the courses of study which the board of trustees offers within that program area must comply with the standards of content and performance established by the State Board of Education for that course of study. A copy of the standards of content and performance for those courses of study are available on the website maintained by the Department of Education at the Internet address http://www.doe.nv.gov/CTE_Standards.htm.

Sec. 3. NAC 389.516 is hereby amended to read as follows:

389.516 A local school board may offer the following courses of study as elective courses in a public high school:

1. ~~[History, other than American history.]~~ ***Social studies, other than the course of study required by NAC 389.511.***

2. ~~[Government, other than American government.~~

~~3. Agriculture and natural resource sciences, which may include the courses of study described in NAC 389.520 to 389.537, inclusive.~~

~~4.]~~ The arts.

~~[5.]~~ ***3.*** Business ~~[, which may include the courses of study described in NAC 389.543 to 389.555, inclusive.~~

~~6.]~~ ***math.***

4. Employability skills.

5. Communications, which may include the courses of study described in NAC 389.556 and 389.558.

~~[7.]~~ ***6.*** Career and technical education, in cooperation with private employers, as described in NAC 389.562, 389.564 and 389.566.

~~[8.]~~ ***7.*** Drivers' education.

~~[9.]~~ ***8.*** Foreign language.

~~[10. Occupations, which may include the courses of study described in NAC 389.572 to 389.584, inclusive.~~

~~11. Occupations in trade and industry, which may include the courses of study described in NAC 389.586 to 389.618, inclusive.~~

~~12. Family and consumer sciences.~~

~~13. Industrial arts.~~

~~14. Marketing.~~

~~15.]~~ ***9.*** Skills needed to obtain employment as described in NAC 389.644 to 389.650, inclusive.

~~[16. Social studies, which must include the course of study described in NAC 389.511.~~

~~17.]~~ ***10.*** Introduction to ~~[occupations which may include the courses of study described in NAC 389.6528 to 389.6547 , inclusive.~~

~~18.]~~ ***keyboarding.***

11. Great Basin Native American languages.

Sec. 4. NAC 389.672 is hereby amended to read as follows:

389.672 1. A board of trustees may allow a pupil to earn, towards the units necessary for graduation from high school, two units of the credit required in English, one unit required in mathematics, one unit required in science and one-half unit required in health if he or she is enrolled in ~~[one of the following occupational courses]~~ ***a course of study in career and technical***

education approved pursuant to this section within one of the program areas set forth in subsection 1 of section 2 of this regulation and that course of study includes, as part of its curriculum, the curriculum of the required course ***.*** ~~[:~~

~~(a) Agriculture and natural resource sciences described in NAC 389.520 to 389.537, inclusive.~~

~~(b) Business.~~

~~(c) Career and technical education in cooperation with a private employer.~~

~~(d) Occupations described in NAC 389.572 to 389.584, inclusive.~~

~~(e) Occupations in trade and industry described in NAC 389.586 to 389.618, inclusive.~~

~~(f) Family and consumer sciences.~~

~~(g) Industrial arts.~~

~~(h) Marketing.~~

~~(i) Skills needed to obtain employment.]~~

2. The superintendent of the school district shall appoint a committee composed of one person certified to teach in the ~~[occupational]~~ course of study ***in career and technical education*** and one person certified to teach in the academic area in which the credit may be earned. The committee must verify to the board of trustees that the curriculum for the ~~[occupational]~~ course of study ***in career and technical education*** includes the curriculum of the required course of study ~~[.]~~ ***for which a pupil may earn credit.***

3. After verification has been received by the board of trustees, the written curriculum and title of the course of study ***in career and technical education*** and a statement of the academic credit to be granted must be submitted to the State Board of Education for approval. Academic

credit may be granted for the ~~[occupational]~~ course of study ***in career and technical education*** or combination of courses only after the State Board of Education has given its approval.

4. The Superintendent of Public Instruction may give approval for the granting of academic credit to a board of trustees requesting to use a curriculum for a course of study ***in career and technical education*** that has been approved by the State Board of Education for another school district if:

(a) The procedures set forth in subsection 2 were followed by the requesting district; and

(b) The board of trustees provides assurances that it will not deviate from the curriculum that has been approved by the State Board.

5. A pupil who earns academic credit pursuant to this section must be notified that the approval for academic credit is designed to meet the requirements for graduation from high school and may not necessarily be accepted for academic credit by a specific postsecondary institution. A copy of the notification given to the pupil must accompany the other materials to be submitted to the State Board of Education for final approval.

6. A minimum number of credits must be earned in the respective academic areas, as follows:

(a) At least ~~[one credit]~~ ***two credits*** must be earned in the academic mathematics department;

(b) At least one credit must be earned in the academic science department; and

(c) At least two credits must be earned in the academic English department.

Sec. 5. NAC 389.673 is hereby amended to read as follows:

389.673 1. The superintendent of each school district which is authorized by the State Board of Education to grant academic credit for ~~[an occupational]~~ ***a*** course of study ***in career and technical education*** pursuant to NAC 389.672 shall, at least once every 3 years, appoint a

committee to review that ~~[occupational]~~ course of study. The committee must consist of one person who is certified to teach in the ~~[occupational]~~ course of study ***in career and technical education*** and one person who is certified to teach in the academic area in which the credit may be earned.

2. After the committee has reviewed the ~~[occupational]~~ course of study ~~[,]~~ ***in career and technical education,*** it shall submit a written report of its review to the board of trustees of the school district. The report must include a statement signed by the members of the committee that the curriculum for the ~~[occupational]~~ course of study ***in career and technical education*** includes the curriculum of the required course of study.

3. The board of trustees shall submit to the State Board of Education, for its approval, the written curriculum and title of the ~~[occupational]~~ course of study ***in career and technical education*** and a statement of the academic credit it proposes to grant.

4. Academic credit may be granted for the ~~[occupational]~~ course of study ***in career and technical education*** or combination of courses only after the State Board of Education has given its approval.

Sec. 6. NAC 389.800 is hereby amended to read as follows:

389.800 1. Courses of study in ***career and technical education offered by the board of trustees of a school district in a program area for a program of*** career and technical education ~~[described in this chapter]~~ ***set forth in subsection 1 of section 2 of this regulation*** must:

(a) Be based upon state standards and a written curriculum that has been developed in collaboration with representatives of the occupation being studied to measure the competency of the pupil and which includes:

(1) The current duties, tasks, skills and levels of performance necessary to perform the duties and tasks involved in being employed in the occupation being taught.

(2) Instruction which reinforces academic skills of reading, writing, speaking, mathematics, science and using a computer.

(3) Instruction designed to develop leadership, initiative, integrity, confidence, poise, reliability, cooperation, the ability to accept divergent points of view, self-discipline, the ability to adapt to change, make decisions, solve problems and set priorities, the ability to learn and participate in discussions, and a willingness to seek and accept responsibility.

(b) Be designed to:

(1) Allow the ~~[student]~~ ***pupil*** to advance in the course of study at his or her own pace and allow the teacher to evaluate the progress of the pupil based on the requirements for obtaining employment or being promoted in the occupation being taught.

(2) Include pupils with disabilities.

(c) Provide the ~~[student]~~ ***pupil*** with reasonable access to the equipment used in the occupation the ~~[student]~~ ***pupil*** is studying.

(d) Include instruction in employability skills for career readiness prescribed for the course of study in NAC 389.555 and measure the proficiency of the pupil in the standards prescribed for that course of study.

2. The teacher of a course of study in career and technical education shall:

(a) Possess a valid endorsement to his or her license for each occupation in which he or she teaches a course of study.

(b) Use resources, materials and techniques which do not discriminate among pupils.

(c) Evaluate the pupil's achievement of the required goals in the course of study.

3. Each pupil enrolled in a course of study of an occupation:

(a) Must be given the opportunity to participate in youth organizations that are:

(1) Affiliated with state and national organizations;

(2) Associated with the occupation the pupil is studying; and

(3) An integral part of the instructional program.

(b) Must be given a certificate upon completion of a course of study in ~~[an occupation]~~ ***career and technical education*** which states the level of performance the pupil has attained in specific skills identified by representatives of business or industry.

(c) Upon completion of the course, should be qualified to enter a higher level of training without the necessity of repeating previously learned skills.

4. Written policies for the maintenance, replacement and disposal of equipment must be made available to the representatives of business or industry for review and comment.

5. The superintendent of each school district shall maintain a current and comprehensive inventory of all capital equipment, if any, maintained for each course offered in career and technical education. The superintendent shall establish a list of equipment that is comparable to that used in the occupations in which a course of study is offered. The superintendent shall not allow the use in career and technical education of equipment or facilities which do not meet the generally applicable safety requirements, including those adopted to ensure occupational safety and health for that occupation.

6. The teacher of a course of study in career and technical education shall cooperate with the guidance counselor of each school to assist pupils to enroll in an appropriate course of study. The guidance counselor shall assist the pupil to achieve:

(a) An awareness of the opportunities for the development of the skills required in the various occupations.

(b) An exploration of the pupil's abilities with his or her occupational interest.

(c) Opportunities for the development of the pupil's skills.

(d) Realities of the workforce and expectations of employers.

(e) Opportunities for continued career and technical education and training.

7. The Department of Education shall cause surveys to be taken of each pupil who has completed a course of study in career and technical education to determine the effectiveness of the program.

8. Each school district shall adopt a written statement of philosophy for its program of career and technical education which includes stated goals that such instruction will:

(a) Contribute to each pupil's competency to enter the job market.

(b) Enable the pupils to succeed in further training.

(c) Enable the pupils to obtain employment.

(d) Enable the pupils to advance in job responsibilities.

Sec. 7. NAC 389.815 is hereby amended to read as follows:

389.815 1. To qualify for an endorsement on a high school diploma indicating that a pupil has successfully completed a ***course of study in a program area for a*** program of career and technical education ~~[,]~~ ***set forth in subsection 1 of section 2 of this regulation,*** the pupil must:

(a) Satisfactorily complete a sequence, or combination of sequences, of courses leading to a terminal course prescribed by the school district or charter school in which the pupil is enrolled for the ~~[career and technical area]~~ ***course of study*** selected.

(b) Satisfy the state academic requirements governing receipt of a standard high school diploma and the statutes and regulations governing the receipt of a standard high school diploma, including, without limitation, passage of the high school proficiency examination.

2. The sequence and terminal courses required pursuant to paragraph (a) of subsection 1 must be approved by the Department of Education. A sequence must be a minimum of two credits.

3. The endorsement must be printed on the front of the high school diploma in a format prescribed by the local school district.

Sec. 8. NAC 389.520, 389.521, 389.523, 389.524, 389.525, 389.526, 389.527, 389.529, 389.530, 389.532, 389.534, 389.536, 389.537, 389.543, 389.5435, 389.545, 389.5455, 389.547, 389.5475, 389.549, 389.5495, 389.5515, 389.553, 389.5535, 389.572, 389.573, 389.575, 389.576, 389.577, 389.579, 389.580, 389.581, 389.582, 389.584, 389.586, 389.588, 389.589, 389.590, 389.592, 389.594, 389.596, 389.597, 389.598, 389.600, 389.601, 389.6013, 389.6015, 389.6017, 389.604, 389.606, 389.608, 389.610, 389.611, 389.612, 389.614, 389.616, 389.618, 389.620, 389.622, 389.624, 389.652, 389.6525, 389.6526, 389.6527, 389.6528, 389.6529, 389.653, 389.6531, 389.6532, 389.6534, 389.6535, 389.6536, 389.6537, 389.6538, 389.6539, 389.6541, 389.6542, 389.6543, 389.6544, 389.6545, 389.6546, 389.6547 and sections 2 and 3 of LCB File No. R144-11 are hereby repealed.

TEXT OF REPEALED SECTIONS

389.520 Agriculture. (NRS 385.080, 385.110) A course of study in agriculture and natural resource sciences must be designed so that pupils meet the following performance standards by the completion of the second year of instruction:

1. For the area of agriculture and society, describe the relationship between agriculture in the State of Nevada and society at the local, state, national and international level and discuss the economic impact of leading commodities, as demonstrated by the pupil's ability to:

(a) Identify and categorize agricultural products and services in the State of Nevada;

(b) Discuss the role of agriculture in the development of society; and

(c) Explain the economic value of agricultural commodities produced at the local, state, national and international level.

2. For the area of animal science, explain the importance of animals, the domestication of animals and the role of animals in modern society, as demonstrated by the pupil's ability to:

(a) Explain the care and uses of domesticated livestock in society;

(b) Demonstrate an understanding of the process of evaluation and selection of livestock based upon current industry standards;

(c) Explain the correct method to select and safely use facilities for the housing of animals and related equipment;

(d) Explain the structure and function of the reproductive systems of animals and the relationship of those systems to reproductive management and fetal development;

(e) Explain the factors that influence animal nutrition and feeding, including, without limitation, an identification of the common ingredients of feed and an explanation of the uses of different types of feed for particular animal species;

(f) Identify the general symptoms of health problems that affect animals and the causes of disease in domesticated animals; and

(g) Demonstrate an awareness of the perception of the general public concerning issues related to the welfare of animals.

3. For the area of plant and soil science, explain the requirements for the growth and development of plants and the relationship with soil, water and fertilizer, and identify and explain the functions and interaction of plant systems and characteristics of soil, as demonstrated by the pupil's ability to:

(a) Explain the principles of the classification of plants by taxonomy and use;

(b) Explain the principles of the physiology and growth of plants;

(c) Recognize the differences in the reproductive systems of plants;

(d) Explain the relationship between soils and the production of plants;

(e) Explain the importance of the systems, management and care of plants; and

(f) Explain the economic and aesthetic role of horticulture in the community and in industry at the local, state and national level.

4. For the area of supervised agricultural experience, explain the relationship between a supervised agricultural experience and the preparation that is necessary for a pupil to pursue a career in agriculture, as demonstrated by the pupil's ability to actively engage in and manage a

supervised agricultural experience in a manner that enables the pupil to develop skills necessary for a career in agriculture.

5. For the area of leadership and Future Farmers of America, recognize the traits of effective leaders and participate in leadership training through active membership in the Future Farmers of America, as demonstrated by the pupil's ability to understand the basic principles of an organizational framework, communication, group dynamics, team building and the management of meetings.

6. For the area of the business, sales and marketing of agriculture, explain the importance of agricultural firms and technologies with regard to the production, processing, servicing, purchasing and marketing of agricultural products, as demonstrated by the pupil's ability to:

(a) Explain the basic principles of the marketing of agricultural products;

(b) Explain the basic principles of sales and service of agricultural products; and

(c) Explain the basic principles of concepts of business management.

7. For the area of mechanical engineering and technology relating to agriculture, explain the concepts of mechanical systems and structures and explain the emerging technologies and their relationship to the agricultural industry, as demonstrated by the pupil's ability to:

(a) Explain the operating principles of common tools that are used in agriculture; and

(b) Explain the different types of power systems and the major components and principles of operation of those systems.

8. For the area of natural resources, explain the relationship between modern agriculture and the environment, with an emphasis on land, water and other natural resources in the State of Nevada and explain how the availability of natural resources affects agriculture, as demonstrated by the pupil's ability to:

(a) Explain the importance of agriculturists as stewards of our natural resources;

(b) Describe the environmental impacts of agriculture on the water, soil and air;

(c) Explain the importance and value of mining in the State of Nevada; and

(d) Explain the importance of the management of wildlife and its relationship to agriculture.

9. For the area of skills necessary to obtain employment, demonstrate:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain the appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) An ability to effectively manage resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retaining a job and continuation of learning throughout a career.

389.521 Agricultural business systems. (NRS 385.080, 385.110) A course of study in agricultural business systems must be designed so that pupils meet the following performance standards by completion of the final course of instruction:

1. Describe basic economic principles as they relate to agricultural business and agriculture, as demonstrated by the pupil’s ability to:

(a) Describe the basic economic factors that affect management decisions relating to a farm and agricultural business;

(b) Distinguish among supplementary, complementary, competitive and independent enterprises; and

(c) Use economic decision-making tools to increase the profitability of an agricultural enterprise.

2. Explain how business ownership structures, organizations and human resources affect management decisions relating to agricultural business, as demonstrated by the pupil's ability to:

(a) Explain how the different types of business ownership structures affect agricultural enterprises;

(b) Explain how different public and private organizations affect agricultural enterprises;

(c) Explain the role of a human resources manager for agricultural business; and

(d) Explain the role and importance of human resources in a successful agricultural business.

3. Describe generally accepted accounting principles and establish an accounting system appropriate for agricultural business, as demonstrated by the pupil's ability to explain and use generally accepted accounting principles to record business transactions.

4. Read and interpret financial reports to make informed decisions relating to budgeting, obtaining credit, managing taxes and making other financial decisions, as demonstrated by the pupil's ability to:

(a) Identify and interpret financial reports and recommend sound financial proposals;

(b) Describe the purposes, benefits and limitations of budgeting and developing a budget for agricultural business;

(c) Describe and explain the role of credit in an agricultural business; and

(d) Describe the types of taxes, the reasons for tax planning and the general factors necessary for understanding tax management.

5. Explain the importance of establishing and maintaining an efficient system of recordkeeping to comply with applicable laws and regulations and to assist in decision making, as demonstrated by the pupil's ability to:

(a) Identify reports required by applicable laws and regulations and establish systems of collection and retrieval of information to facilitate completion of those reports; and

(b) Complete and explain the importance of production reports used in planning and analyzing performance in agricultural business.

6. Identify the major principles of law and risk management as they relate to agricultural enterprises, as demonstrated by the pupil's ability to explain those major principles of law and methods of risk management.

7. Describe the principles of marketing and selling agricultural products and use simulations and career development events, as demonstrated by the pupil's ability to:

(a) Describe and simulate strategies for marketing agricultural products and services;

(b) Describe and simulate strategies for buying and selling agricultural products and services; and

(c) Explain the interrelationships of governmental, economic and cultural factors that affect local, national and international trade.

8. Use technology and information technology for improvement of agricultural business, as demonstrated by the pupil's ability to:

(a) Explain and use computer technology to support strategies for improvement of agricultural business; and

(b) Explain and use technology to support strategies for improvement of agricultural business.

9. Explain the relationship between a supervised agricultural experience and preparation for a career in agricultural business, as demonstrated by the pupil's ability to actively engage in and manage a supervised agricultural experience in a manner that enables the pupil to develop skills for the workplace.

10. Recognize the importance of leadership skills, including interpersonal relations, group management and communication, as demonstrated by the pupil's ability to recognize traits of effective leaders and participate in leadership training by actively participating in Future Farmers of America.

11. For the area of skills necessary to obtain employment, achieve competence in workplace readiness, career development and lifelong learning by demonstrating:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) An ability to manage effectively resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retention of a job and continuation of learning throughout a career.

389.523 Agricultural mechanical engineering technology. (NRS 385.080, 385.110) A course of study in agricultural mechanical engineering technology must be designed so that pupils meet the following performance standards by the completion of the final course of instruction:

1. For the area of safety:

(a) Demonstrate and practice general shop safety and those practices specific to the learning activity; and

(b) Understand personal and group safety while working in an agricultural mechanics environment.

2. For the area of welding:

(a) Understand the principles and application of welding and, where applicable, cutting, and be able to explain the role of heat and the process of fusion.

(b) Practice safety, demonstrate equipment setup and maintenance, appropriate welding procedures and, where applicable, cutting procedures, and practice proper tool selection while using:

(1) Oxy-fuel welding;

(2) Shielded metal arc welding;

(3) Gas metal and arc welding;

(4) Gas tungsten arc welding; and

(5) Air arc and plasma cutting procedures.

(c) For the area of electricity, understand the principles of generation, distribution and application of electricity in agricultural and industrial settings, as demonstrated by the pupil's ability to:

(1) Understand and use safe practices and procedures during learning activities appropriate to agricultural electrification;

(2) Recognize principles and theories of electricity;

(3) Describe appropriate use and application of electrical conductors and over-current protection;

(4) Recognize standard components of electrical systems;

(5) Understand, design and construct electrical circuits; and

(6) Demonstrate proficiency in the use of electrical meters and test equipment.

(d) For the area of agricultural industry water management, understand the principles and applications of water and wastewater management as they relate to the agricultural and industrial settings, as demonstrated by the pupil's ability to:

(1) Understand and use safe practices and procedures in the management of water in the agricultural and industrial settings;

(2) Understand the theory and design of various water transfer systems; and

(3) Understand the application of various components relating to water transfer systems.

(e) For the area of concrete, understand the principles and applications of concrete in agricultural and industrial construction, as demonstrated by the pupil's ability to:

(1) Understand and use safe practices and procedures with concrete;

(2) Know the components and ratios of various mixtures of concrete; and

(3) Demonstrate knowledge of proper concrete applications and construction.

(f) For the area of fencing, understand the agricultural and industrial applications of fencing, as demonstrated by the pupil's ability to:

(1) Understand and use safe practices and procedures in the construction of agricultural and industrial fencing;

(2) Describe the application of various types of fencing systems; and

(3) Understand the design and installation of various types of fencing systems.

(g) For the area of agricultural and industrial drafting, attain proficiency in agricultural and industrial drafting, as demonstrated by the pupil's ability to:

(1) Understand the use of various types of drafting plans; and

(2) Prepare and use drafting plans appropriate to the learning activity.

(h) For the area of agricultural and industrial buildings, understand the applications of agricultural and industrial buildings, as demonstrated by the pupil's ability to:

(1) Understand and use safe practices and procedures associated with the construction of agricultural and industrial buildings;

(2) Understand different types of buildings used in the agricultural industry;

(3) Select and design the appropriate building for a specific agricultural application;

(4) Demonstrate the skills necessary for the appropriate maintenance and repair of agricultural buildings; and

(5) Construct a selected agricultural building.

(i) For the area of small engine power and equipment, understand the principles and applications of small engine power and equipment in an agricultural setting, as demonstrated by the pupil's ability to:

(1) Understand and use safe practices and procedures associated with the operation, maintenance and repair of small engines and equipment;

(2) Show a working knowledge of essential engine operating systems;

(3) Recognize appropriate power attachments and their applications; and

(4) Demonstrate the skills necessary for the appropriate maintenance and repair of small gasoline engines and their power attachments.

(j) For the area of hand and power tools, identify and demonstrate the proper use of hand and power tools in agricultural settings, as demonstrated by the pupil's ability to:

(1) Identify general hand and power tools;

(2) Show a working knowledge of and demonstrate the safe use of hand and power tools;

(3) Select and use the appropriate tool for a task; and

(4) Demonstrate the skills necessary for the appropriate maintenance and repair of hand and power tools.

(k) For the area of gasoline and diesel power, understand the basic principles, operations and maintenance of gasoline and diesel engines used in agricultural settings, as demonstrated by the pupil's ability to:

(1) Understand and use safe practices and procedures with gasoline and diesel engines used in agricultural settings;

(2) Demonstrate knowledge of the theoretical operation of a multiple cylinder engine; and

(3) Demonstrate the skills necessary for the appropriate maintenance and repair of multiple cylinder engines.

(l) For the area of hydraulics, understand the basic principles, operations and maintenance of hydraulic systems used in agricultural settings, as demonstrated by the pupil's ability to:

(1) Understand and use safe practices and procedures appropriate for hydraulic systems used in agricultural settings;

(2) Demonstrate a knowledge of the basic principles of hydraulics;

(3) Identify the components of hydraulic systems;

(4) Demonstrate the skills necessary for the appropriate maintenance and repair of hydraulic system; and

(5) Design and build hydraulic systems to be used in an agricultural application.

(m) For the area of agricultural industrial machinery, understand and demonstrate basic skills in the operation, maintenance and repair of agricultural industrial machinery, as demonstrated by the pupil's ability to:

(1) Understand and use safe practices and procedures associated with the operation, maintenance and repair of agricultural industrial machinery;

(2) Understand the theoretical operation of agricultural machinery;

(3) Demonstrate the skills necessary for the appropriate maintenance and repair of agricultural machinery; and

(4) Demonstrate the skills necessary for the safe operation of agricultural machinery, including tractors.

(n) For the area of electrical power, understand and demonstrate the operation, maintenance and use of electrical power in agricultural applications, as demonstrated by the pupil's ability to:

(1) Understand and use safe practices and procedures associated with the operation, maintenance and repair of electrical power;

(2) Describe the basic principles and operation of electric motors and controls;

(3) Design and build an electric system using motors and controls; and

(4) Demonstrate the skills necessary for the appropriate maintenance and repair of electrical motor and control systems.

(o) For the area of supervised agricultural experience, explain the relationship between a supervised agricultural experience and the preparation that is necessary for a pupil to pursue a career in agriculture, as demonstrated by the pupil's ability to actively engage in and manage a

supervised agricultural experience in a manner that enables the pupil to develop skills necessary for a career in agricultural mechanical engineering technology.

(p) For the area of leadership and Future Farmers of America, recognize the traits of effective leaders and participate in leadership training through active membership in the Future Farmers of America, as demonstrated by the pupil's ability to understand the basic principles of an organizational framework, communication, group dynamics, team building and the management of meetings.

(q) For the area of skills necessary to obtain employment, demonstrate:

(1) Skills necessary for solving problems;

(2) Skills of critical thinking;

(3) The ability to speak, write and listen effectively;

(4) The ability to select, apply and maintain appropriate technology necessary for a career;

(5) Skills of leadership and teamwork;

(6) An awareness of the ethical behavior appropriate for the workplace;

(7) An ability to manage effectively resources in the workplace;

(8) Skills necessary for the planning and development of a career; and

(9) Skills necessary for retention of a job and continuation of learning throughout a career.

389.524 Landscape management. (NRS 385.080, 385.110) A course of study in landscape management must include instruction designed to teach the pupil to do the following:

1. Identify the tools used in designing a landscape.
2. Explain the relationship between the design and development of a landscape.
3. Explain the techniques involved in the design of a landscape.
4. Write a program for professional care of a lawn.

5. Describe the requirements to maintain the various grasses.

389.525 Plant and environmental horticulture science. (NRS 385.080, 385.110) A course of study in plant and environmental horticulture science must be designed so that pupils meet the following performance standards by the completion of the final course of instruction:

1. For the area of plant science, understand plant anatomy, physiology and reproduction as it relates to environmental horticulture, as demonstrated by the pupil's ability to:

(a) Describe the major external plant structures and their functions;

(b) Describe the major internal plant structures and their functions;

(c) Recognize differences in the methods of plant reproduction; and

(d) Describe the processes involved in plant growth.

2. For the area of plant classification, recognize the importance of plant classification and identification, as demonstrated by the pupil's ability to:

(a) Recognize the importance of the history and purpose of plant classification and nomenclature;

(b) Recognize plant characteristics used for the identification of plants; and

(c) Classify and identify local horticultural plant materials.

3. For the area of soil and water science, recognize the importance of the interaction of soil, water and fertilizer in plant production, as demonstrated by the pupil's ability to:

(a) Explain the relationship between soils and plant production;

(b) Understand nutrition practices for plants as they relate to plant growth and health; and

(c) Understand effective management practices used in irrigation, drainage, watersheds and water conservation.

4. For the area of pest control, explore basic principles of integrated pest management and identify pest and disease damage, including methods of disease and pest control, as demonstrated by the pupil's ability to:

(a) Describe and explain safe practices of pesticide management;

(b) Identify insects and insect damage and learn methods of pest management as it relates to agriculture and horticulture crops;

(c) Identify weeds and describe methods of weed control as it relates to agricultural and horticultural crops; and

(d) Identify horticultural diseases and disease damage and describe methods of control.

5. For the area of arboriculture, understand basic principles of arboriculture as it relates to the management of ornamental and production trees and shrubs, as demonstrated by the pupil's ability to:

(a) Explain proper techniques of planting and transplanting for ornamental and production trees and shrubs;

(b) Describe management practices used with ornamental and production trees and shrubs; and

(c) Explain and identify tools and equipment involved in the management of ornamental and production trees and shrubs.

6. For the area of greenhouse, understand the design, construction, management and operation of a greenhouse in the production of a greenhouse crop, as demonstrated by the pupil's ability to:

(a) Explain the principles of greenhouse and growing structure design, construction and operation; and

(b) Explain the principles of the management and production of greenhouse crops.

7. For the area of nursery, understand the care and maintenance of nursery stock and understand the importance of wholesale and retail nursery operations, as demonstrated by the pupil's ability to:

(a) Explain the principles involved in the production of nursery stock; and

(b) Describe management practices involved in a retail nursery operation.

8. For the area of turf grass, understand the selection, installation and maintenance of turf, as demonstrated by the pupil's ability to:

(a) Describe the considerations involved in the selection of turf grass;

(b) Describe the various methods of the installation of turf grass; and

(c) Identify and explain the cultural practices involved in the maintenance and care of turf grass.

9. For the area of landscaping, understand the basic principles of landscape planning, design, construction, irrigation and maintenance, as demonstrated by the pupil's ability to:

(a) Describe the principles and practices involved in landscape planning and design;

(b) Describe proper techniques used in landscape construction;

(c) Examine the practices involved in the design, construction and maintenance of irrigation systems; and

(d) Explain proper practices of landscape maintenance.

10. For the area of floral design, understand the basic principles and skills involved in the design and construction of floral arrangements, as demonstrated by the pupil's ability to:

(a) Demonstrate the basic design principles used in the floral industry;

(b) Identify and use flowers and foliage common to the floral industry; and

(c) Identify and use floral tools and materials.

11. For the area of business management, understand the importance of business principles and practices in the horticulture industry, as demonstrated by the pupil's ability to:

(a) Explain basic business principles; and

(b) Explain the importance of keeping business and production records.

12. For the area of supervised agricultural experience, explain the relationship between a supervised agricultural experience and the preparation that is necessary for a pupil to pursue a career in horticulture, as demonstrated by the pupil's ability to actively engage in and manage a supervised agricultural experience in a manner that enables the pupil to develop skills necessary for a career in horticulture.

13. For the area of leadership and Future Farmers of America, recognize the traits of effective leaders and participate in leadership training through active membership in the Future Farmers of America, as demonstrated by the pupil's ability to understand the basic principles of an organizational framework, communication, group dynamics, team building and the management of meetings.

14. For the area of skills necessary to obtain employment, demonstrate:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) An ability to manage effectively resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retention of a job and continuation of learning throughout a career.

389.526 Technology of horses. (NRS 385.080, 385.110) A course of study in the technology of horses must include instruction designed to teach the pupil to do the following:

1. Develop a knowledge of genetics, the systems for breeding, the principles of production and the care of a herd of horses used for breeding.

2. Apply the knowledge of controlling parasites and diseases affecting horses.

3. Demonstrate the proper procedure in feeding horses and providing a proper diet.

4. Perform proper procedures in handling a horse, caring for its feet and for transporting it.

5. Develop skills necessary to train, equip, show and sell horses.

6. Demonstrate a knowledge of the practices for the management of a farm and ranch, including leases, taxes and legal documents.

389.527 Animal science and veterinary medicine. (NRS 385.010, 385.110) A course of study in animal science and veterinary medicine must be designed so that pupils meet the following performance standards by completion of the final course of instruction:

1. For the area of introduction to animal science, understand the history and importance of domestic animals, as demonstrated by the pupil’s ability to:

(a) Define animal science and its components;

(b) Describe how, why and when the domestication of animals occurred;

(c) Classify animals using accepted nomenclatures; and

(d) Explore global trends and the impact of domestic animals.

2. For the area of anatomy and physiology, understand the structure and function of the major organ systems of animals, as demonstrated by the pupil’s ability to:

(a) Identify the external anatomy of domestic animals; and

(b) Identify and describe the anatomy and functions of the:

(1) Musculoskeletal, nervous and integumentary systems;

(2) Digestive and urinary systems;

(3) Reproductive and endocrine systems; and

(4) Cardiovascular, hemolymphatic and respiratory systems.

3. For the area of the evaluation and selection of animals, demonstrate an understanding of the process of evaluation and selection of animals based upon current industry standards, as demonstrated by the pupil's ability to:

(a) Recognize and describe the different breeds within the species of domestic animals;

(b) Identify the various types and conformations of domestic animals;

(c) Analyze and interpret the performance data used in the selection of domestic animals; and

(d) Recognize the importance of physical condition in the evaluation of an animal.

4. For the area of animal genetics, understand the basic theory of inheritance and the genetic basis for animal selection, as demonstrated by the pupil's ability to:

(a) Explain the role of genetics in animal production and performance;

(b) Explain the process of cellular division and how that process relates to the transfer of genetic information;

(c) Explain the concepts of linkage, crossover and mutation as they relate to the transmission of characteristics; and

(d) Discuss genetic engineering and its effects on animal production and performance.

5. For the area of management of animal reproduction, understand the structure and function of the endocrine and reproductive systems and how they relate to the management of

reproductive practices and to fetal development, as demonstrated by the pupil's ability to describe the:

(a) Factors that affect fertility and the process of fertilization;

(b) Stages of fetal development and gestation;

(c) Process of parturition and lactation; and

(d) Common breeding systems used in animal reproduction.

6. For the area of feeding and nutrition, understand the nutritional requirements and feeding practices of animals, as demonstrated by the pupil's ability to:

(a) Differentiate the types of gastrointestinal tracts and dietary requirements;

(b) Identify the nutrients and nutritional requirements for animal production and performance;

(c) Identify and classify the common types of feed used for animal production and performance, including methods of preparation and processing; and

(d) Explain the role of food additives in animal nutrition.

7. For the area of animal health, understand the prevention and etiology of animal diseases with an emphasis on the applicable region, as demonstrated by the pupil's ability to recognize:

(a) Common infectious diseases in domestic animals;

(b) Nutritional diseases in domestic animals;

(c) Common genetic and congenital diseases in domestic animals;

(d) Environmental diseases associated with domestic animals;

(e) Common developmental diseases associated with domestic animals; and

(f) Common traumatic injuries in domestic animals.

8. For the area of animal facilities, equipment and handling, recognize accepted industry standards for the use and selection of animal facilities, housing, tools and equipment used for restraining animals, as demonstrated by the pupil's ability to:

(a) Classify and discuss the different types of systems used for housing and penning domestic animals;

(b) Identify and describe appropriate methods of restraining and handling domestic animals;

(c) Recognize the behaviors common to domestic animals that are exhibited during confinement and handling;

(d) Describe appropriate and safe methods for transporting animals; and

(e) Recognize the type of equipment used in the management of animals.

9. For the area of animal welfare, develop an understanding of issues relating to animals and the uses of animals in today's society, as demonstrated by the pupil's ability to discuss:

(a) Philosophies concerning animal welfare;

(b) Historical events, changing attitudes and legislation regarding the use of animals; and

(c) Controversial practices and cultural differences in the use of animals.

10. For the area of animals and society, develop an awareness of the relationship and interaction of animals in society, as demonstrated by the pupil's ability to:

(a) Describe how domestic animals are used as sources of food and fiber;

(b) Discuss food safety as it relates to animal products and by-products;

(c) Discuss applicable statutes and regulations governing the use of animals; and

(d) Recognize the existence and importance of the bond between humans and animals.

11. For the area of animals and the environment, understand the role animals have with the ecosystem and their impact on the ecosystem, as demonstrated by the pupil's ability to:

(a) Describe sustainable agricultural practices associated with animal production;

(b) Discuss the various aspects of the practices of range management and the relationship of those practices to the land; and

(c) Discuss the various aspects of the management of domestic animals and the relationship of those practices to wildlife management.

12. For the area of nontraditional and specialty animals, develop an understanding of the significance of those animals and their husbandry practices.

13. For the area of supervised agricultural experience, explain the relationship between a supervised agricultural experience and preparation for a career in agriculture, as demonstrated by the pupil's ability to actively engage in and manage a supervised agricultural experience in a manner that enables the pupil to develop skills for the workplace.

14. For the area of leadership and Future Farmers of America, recognize the importance of leadership skills, including interpersonal relations, group management and communication, as demonstrated by the pupil's ability to recognize traits of effective leaders and participate in leadership training by actively participating in Future Farmers of America.

15. For the area of skills necessary to obtain employment, achieve competence in workplace readiness, career development and lifelong learning by demonstrating:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) An ability to manage effectively resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retention of a job and continuation of learning throughout a career.

389.529 Health sciences. (NRS 385.080, 385.110) A course of study in health science must be designed so that pupils meet the following performance standards by the completion of the final course of instruction:

1. For the area of academic foundation, understand principles of health science as they relate to a career in health science, as demonstrated by the ability of the pupil to:

(a) Demonstrate knowledge of human anatomy and physiology and the corresponding medical terminology;

(b) Relate principles of anatomy and physiology to the diagnosis and treatment of diseases and medical conditions;

(c) Demonstrate and apply knowledge of mathematics as it relates to health care; and

(d) Evaluate individual situations in a health care setting using the appropriate assessment tools.

2. For the area of communication, understand the different methods that are available to gather and communicate information in a health care setting, as demonstrated by the ability of the pupil to use:

(a) The appropriate verbal and nonverbal communication skills in the workplace;

(b) The appropriate medical terminology while communicating information; and

(c) Current written and electronic formats for communication.

3. For the area of systems, understand systems of health care and the role of those systems, as demonstrated by the ability of the pupil to:

(a) Evaluate the delivery of systems of health care; and

(b) Demonstrate competency in and an understanding of systems of health care which are safe for the environment.

4. For the area of skills necessary to obtain employment, achieve competence in workplace readiness, career development and lifelong learning, by demonstrating:

(a) The skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select and apply computer skills;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) An ability to manage resources effectively in the workplace;

(h) The skills necessary for the planning and development of a career; and

(i) The skills necessary for retention of a job and continuation of learning throughout a career.

5. For the area of legal responsibility, understand the legal responsibilities, limitations and implications of actions taken by the pupil or other persons in the delivery of health care, as demonstrated by the ability of the pupil to:

(a) Perform duties in accordance with laws, regulations and policies; and

(b) Accurately apply standards and procedures for legal documentation and recordkeeping.

6. For the area of ethics, understand ethical practices which are consistent with professional and organizational directives with respect to cultural, social and ethnic differences, as demonstrated by the ability of the pupil to:

(a) Differentiate between ethical and legal issues that impact health care;

(b) Demonstrate professional and ethical standards that impact health care; and

(c) Demonstrate respectful and empathetic interactions with diverse populations.

7. For the area of safety practices, understand safe work practices, safety policies and procedures and existing and potential hazards, as demonstrated by the ability of the pupil to:

(a) Explain principles of infection control and techniques for the prevention of infection;

(b) Apply procedures for personal safety in accordance with the Occupational Safety and Health Act and the regulations of the Centers for Disease Control and Prevention;

(c) Apply appropriate safety techniques to maintain a safe working environment;

(d) Comply with safety signs, symbols, labels and material safety data sheets; and

(e) Practice basic emergency procedures and protocols.

8. For the area of teamwork, understand the roles and responsibilities of persons who are part of a health care team, as demonstrated by the ability of the pupil to:

(a) Describe characteristics of an effective health care team; and

(b) Understand the methods for building team relationships in a positive manner.

9. For the area of personal health, understand the fundamentals of wellness and the prevention of diseases, as demonstrated by the ability of the pupil to describe and apply behaviors for the prevention of diseases and the promotion of health and wellness.

10. For the area of technical skills, demonstrate the skills and knowledge of the technical skills required for a career in health care.

11. For the area of information technology, understand the components that are necessary for the management of health care information, as demonstrated by the ability of the pupil to:

(a) Interpret health care records and files; and

(b) Use technology to access and distribute data and other information.

389.530 Forestry. (NRS 385.080, 385.110) A course of study in forestry must include instruction designed to teach the pupil to do the following:

1. Develop a knowledge of the identification and physiology of trees and the classification of a crown of a tree.

2. Describe the relationship of the forest to the geology, soils, ecology and types of density of the forest.

3. Explain methods to protect forests against fire, insects, diseases, injury by animals, weather and chemicals.

4. Apply a knowledge of techniques to fight fire.

5. Demonstrate the fundamentals of reforestation and applied silviculture.

6. Apply a knowledge of the business of forestry, including knowledge of taxation, other laws relating to forestry and real estate.

389.532 Management of wildlife and natural resources. (NRS 385.080, 385.110) A course of study in management of wildlife and natural resources must include instruction designed so that pupils meet the following performance standards by the completion of the final course of instruction:

1. Identify the characteristics of soil, as demonstrated by the pupil's ability to:

(a) Explore the chemical and biological interactions of soil; and

(b) Develop an appreciation for the conservation of soil.

2. Examine the sources and distribution of water resources, as demonstrated by the pupil's ability to:

(a) Comprehend and explain the hydrological cycle;

(b) Explain the factors contributing to the quality of water; and

(c) Investigate the basis of monitoring water.

3. Understand air quality as it relates to natural resource systems, as demonstrated by the pupil's ability to:

(a) Investigate the composition of the atmosphere; and

(b) Explore major issues affecting the quality of air and associated monitoring techniques.

4. Examine the interaction between energy resources and the ecosystems, as demonstrated by the pupil's ability to:

(a) Recognize the types and importance of energy resources; and

(b) Explore the relationship between the development and use of energy and the ecosystem.

5. Examine minerals in Nevada and the socioeconomic impact of those minerals, as demonstrated by the pupil's ability to:

(a) Develop an appreciation for the mineral resources in Nevada;

(b) Examine the relationship between the development of minerals and the management of natural resources; and

(c) Examine the development of minerals as it relates to cultural resources and socioeconomics in Nevada.

6. Examine vegetation resources in Nevada, as demonstrated by the pupil's ability to:

(a) Examine plant biology;

(b) Identify the characteristics of plant communities and the associated dynamics of those communities;

(c) Explore the agricultural vegetation in Nevada; and

(d) Investigate the basis of standards and monitoring for vegetation.

7. Explore the science of management of the range, as demonstrated by the pupil's ability to:

(a) Identify the components of managing a range;

(b) Examine the nutrition for animals managed on a range;

(c) Determine the factors affecting the carrying capacity of rangelands and compare and contrast among the various grazing systems;

(d) Investigate the factors contributing to the ecology of a range;

(e) Investigate practices for manipulating the vegetation of a range; and

(f) Investigate the principles involved in monitoring the inventory of a range.

8. Understand forest ecology, as demonstrated by the pupil's ability to develop a historical and regional perspective of the resources of a forest and opportunities for future management of a forest.

9. Investigate fish and wildlife ecology, as demonstrated by the pupil's ability to:

(a) Differentiate among the various categories of wildlife and explore the importance and distribution of fish and wildlife resources in Nevada;

(b) Examine wildlife and aquatic ecology;

(c) Investigate the relationship between uplands and riparian habitats;

(d) Examine the federal Endangered Species Act of 1973, 16 U.S.C. §§ 1531 et seq., and its implementation; and

(e) Investigate the basis of wildlife and aquatic monitoring.

10. Understand the dynamics of fire ecology, as demonstrated by the pupil's ability to:

(a) Explore the effects of fire on the ecosystem; and

(b) Explore the cycle of a fire and examine fire as a tool for the management of the rangeland ecosystem.

11. Understand outdoor recreation and its importance to natural resources, as demonstrated by the pupil's ability to explore the opportunities associated with outdoor recreation.

12. Explore outdoor safety and survival skills, as demonstrated by the pupil's ability to examine the proper response to outdoor emergency situations.

13. Understand the importance and application of global positioning systems and geographic information systems in the management of natural resources, as demonstrated by the pupil's ability to investigate those systems and their applications.

14. Recognize the importance of leadership skills, including interpersonal relations, group management and communication, as demonstrated by the pupil's ability to recognize traits of effective leaders and participate in leadership training by actively participating in Future Farmers of America.

15. Explain the relationship between a supervised agricultural experience and preparation for a career in management of wildlife and natural resources, as demonstrated by the pupil's ability to engage actively in and manage a supervised agricultural experience in a manner that enables the pupil to develop skills for the workplace.

16. For the area of skills necessary to obtain employment, achieve competence in workplace readiness, career development and lifelong learning by demonstrating:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) The ability to manage effectively resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retention of a job and continuation of learning throughout a career.

389.534 Processing of meat. (NRS 385.080, 385.110) A course of study in processing of meat must include instruction designed to teach the pupil to do the following:

1. Identify cuts of beef, lamb and pork.

2. Prepare and preserve meat.

3. Explain how to buy, sell, ship, handle and receive meat and fish.

4. Explain the sanitation required in the processing, handling and storing of meats.

5. Identify the nutritive value, uses, cooking qualities and palatability of different types of meat.

389.536 Management of a feedlot. (NRS 385.080, 385.110) A course of study in the management of a feedlot must include instruction designed to teach the pupil to do the following:

1. Identify classes of feed and additives to feed.

2. Demonstrate an ability to analyze and prepare feed.

3. Describe the layout of a feedlot including the construction of pens, gates and chutes.

4. Use commercial feeding facilities and equipment.

5. Demonstrate a knowledge of quarantine, the treatment of sick animals, and the eradication of disease.

389.537 Leadership, communication and policy relating to agriculture and natural resource sciences. (NRS 385.080, 385.110) A course of study in leadership, communication

and policy relating to agriculture and natural resource sciences must be designed so that pupils meet the following performance standards by completion of the final course of instruction:

1. Recognize the importance and history of communications, leadership and policy relating to agriculture, including effects on consumer and producer markets, as demonstrated by the pupil's ability to:

(a) Determine the need for competent communications, leadership and policy relating to agriculture;

(b) Identify major changes in communications, leadership and policy relating to agriculture;

(c) Identify historical events in communications, leadership and policy relating to agriculture; and

(d) Explore the future of communications, leadership and policy relating to agriculture.

2. Characterize factors associated with leadership categories and styles, as demonstrated by the pupil's ability to:

(a) Analyze various definitions of leadership;

(b) Investigate and discuss personal leadership development;

(c) Explain the relationship between leadership categories, human behavior and employment;

(d) Describe various leadership styles;

(e) Identify the qualities of successful leaders; and

(f) Identify the need for teamwork in group settings.

3. Recognize and apply various methods of research used in communications relating to agriculture, as demonstrated by the pupil's ability to:

(a) Identify basic research techniques; and

(b) Identify and apply effective interviewing techniques.

4. Develop effective verbal communication skills for use in occupational, social and civic settings, as demonstrated by the pupil's ability to:

(a) Explain the types and importance of verbal communication; and

(b) Demonstrate the principles of verbal communication.

5. Develop effective written communications skills for use in occupational, social and civic settings, as demonstrated by the pupil's ability to:

(a) Identify the types of written communication relating to agriculture;

(b) Demonstrate the basic skills of journalistic writing;

(c) Demonstrate the basic skills of group correspondence;

(d) Demonstrate the basic skills of writing for employment;

(e) Demonstrate the basic skills of technical writing; and

(f) Demonstrate the basic skills of page layout and design.

6. Identify various channels of mass media communication and apply its uses in the agricultural industry, as demonstrated by the pupil's ability to:

(a) Explore the importance and impact of mass media on the agricultural industry;

(b) Use the Internet in communication relating to agriculture; and

(c) Develop print, broadcast and electronic media projects.

7. Identify traits associated with a positive self-concept and relationships with others in occupational, social and civic settings, as demonstrated by the pupil's ability to:

(a) Discuss the importance and components of self-concept;

(b) Demonstrate the importance of self-concept in social, occupational and civic settings; and

(c) Compare diversity in relationships.

8. Examine the developmental process of political and governmental policy issues relating to the agricultural industry, as demonstrated by the pupil's ability to:

(a) Demonstrate the principles of the effective management of meetings;

(b) Investigate local and political agricultural policy issues;

(c) Identify the steps of the political process;

(d) Identify the various organizations involved in agricultural policy; and

(e) Examine the legal and ethical aspects of agricultural policy.

9. Recognize the importance of leadership skills, including interpersonal relations, group management and communication, as demonstrated by the pupil's ability to recognize traits of effective leaders and participate in leadership training by actively participating in Future Farmers of America.

10. Explain the relationship between a supervised agricultural experience and preparation for a career in natural resources and wildlife management, as demonstrated by the pupil's ability to engage actively in and manage a supervised agricultural experience in a manner that enables the pupil to develop skills for the workplace.

11. For the area of skills necessary to obtain employment, achieve competence in workplace readiness, career development and lifelong learning by demonstrating:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) The ability to manage effectively resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retention of a job and continuation of learning throughout a career.

389.543 Accounting. (NRS 385.080, 385.110) A course of study in accounting must include instruction designed to teach the pupil to do the following:

1. Demonstrate an understanding of accounting concepts and principles.

2. Demonstrate an understanding of the accounting cycle and explain the purpose of each step in that cycle.

3. Demonstrate an understanding of the value of assets.

4. Demonstrate an understanding of liabilities.

5. Demonstrate an understanding of equity.

6. Prepare, interpret and analyze a financial statement.

7. Use planning and control principles, including differential analysis and concepts of present value, to evaluate the performance of an organization.

389.5435 Business law. (NRS 385.080, 385.110) A course of study in business law must include instruction designed to teach the pupil to do the following:

1. Demonstrate knowledge of the different sources of law as they relate to ethical and legal decisions.

2. Differentiate between criminal and civil law.

3. Identify the structure of the court system at the state and federal levels.

4. Demonstrate an understanding of contractual relationships.

5. Demonstrate an understanding of consumer law.

6. Demonstrate an understanding of the roles of agency and employment law as they relate to the national and international marketplaces.

7. Demonstrate an understanding of laws that affect national and international business organizations.

8. Demonstrate an understanding of laws that apply to personal and real property.

9. Demonstrate an understanding of commercial paper, insurance, secured transactions and bankruptcy.

10. Demonstrate an understanding of family law as it relates to domestic relations, wills and trusts.

11. Demonstrate an understanding of laws that apply to the environment and energy regulation.

389.545 Business communications. (NRS 385.080, 385.110) A course of study in business communications must include instruction designed to teach the pupil to do the following:

1. Demonstrate an understanding of oral communication.

2. Communicate effectively in writing.

3. Read for information, understanding and appreciation.

4. Be able to apply effective employment communication skills.

5. Apply social communications skills in personal and professional situations.

6. Demonstrate how to use technology to enhance effectiveness of communication.

7. Demonstrate how to incorporate appropriate customer service strategies, leadership, supervision and personal ethics to communicate effectively within various business environments.

389.5455 Business economics. (NRS 385.080, 385.110) A course of study in business economics must include instruction designed to teach the pupil to do the following:

1. Demonstrate an understanding of the allocation of resources.

2. Demonstrate an understanding of economic systems.

3. Demonstrate an understanding of economic institutions and incentives.

4. Demonstrate an understanding of markets and prices in the economy of the United States.

5. Demonstrate an understanding of market structures and the effect they have on the price and quality of the goods and services produced.

6. Demonstrate an understanding of the importance of productivity.

7. Demonstrate an understanding of the role of government in economic systems.

8. Demonstrate an understanding of concepts of international economics, including the roles of trade, protectionism and monetary markets in the global economy.

9. Demonstrate an understanding of supply and demand, analyze how the economy of the United States functions as a whole and describe macroeconomic measures of economic activity.

389.547 Entrepreneurship. (NRS 385.080, 385.110) A course of study in entrepreneurship must include instruction designed to teach the pupil to do the following:

1. Demonstrate knowledge of the characteristics of entrepreneurship.

2. Demonstrate knowledge of the components of a business plan, including marketing.

3. Demonstrate knowledge of entrepreneurial finance.

4. Demonstrate knowledge of entrepreneurial management.

5. Demonstrate knowledge of the legal requirements of business ownership.

389.5475 Finance. (NRS 385.080, 385.110) A course of study in finance must include instruction designed to teach the pupil to do the following:

1. Demonstrate an understanding of rational decision making as it applies to the roles of citizens, workers, businesses and consumers.

2. Demonstrate an understanding of financial budgeting and planning.

3. Gain an understanding of saving and investment options for individuals and businesses.

4. Demonstrate an understanding of financial institutions and banking procedures.

5. Demonstrate an understanding of factors that affect the choice of credit, the cost of credit and the legal aspects of using credit.

6. Demonstrate an understanding of principles of protection against risk and financial loss.

389.549 International business. (NRS 385.080, 385.110) A course of study in international business must include instruction designed to teach the pupil to do the following:

1. Explain the role and impact of international business and analyze how it affects business at the local, state and national levels, including considerations of geography, travel and career opportunities.

2. Demonstrate knowledge of the social, cultural, ethical, political, legal and economic factors that shape and affect the international business environment.

3. Demonstrate an understanding of communication strategies necessary for effective international relations.

4. Demonstrate an understanding of the concepts of the balance of trade as they relate to the import-export process.

5. Demonstrate an understanding of challenges in operations and human resource management in international business.

6. Demonstrate an understanding of the application of marketing principles to international business.

7. Demonstrate an understanding of the concepts, role and importance of international finance and risk management.

8. Identify forms of business ownership and entrepreneurial opportunities available in international business.

389.5495 Management and business leadership. (NRS 385.080, 385.110) A course of study in management and business leadership must include instruction designed to teach the pupil to do the following:

1. Demonstrate knowledge of management theories and functions.

2. Demonstrate an understanding of business organizations.

3. Demonstrate an understanding of human resources, including organized labor.

4. Demonstrate an understanding of personal management skills necessary to function effectively and efficiently in a business environment.

5. Demonstrate an understanding of operations and information management.

6. Demonstrate an understanding of financial decision making based upon industry analysis.

7. Demonstrate an understanding of ethical business leadership skills and practices.

389.5515 Business marketing. (NRS 385.080, 385.110) A course of study in business marketing must include instruction designed to teach the pupil to do the following:

1. Demonstrate an understanding of marketing foundations.

2. Demonstrate an understanding of the characteristics, motivations and behavior of consumers.

3. Demonstrate an understanding of the influence of external factors on marketing.

4. Demonstrate an understanding of the elements of the marketing mix.

5. Demonstrate an understanding of the role of marketing research in decision making.

6. Demonstrate an understanding of the elements, design and purpose of a marketing plan.

389.553 Information systems and business technology. (NRS 385.080, 385.110) A course of study in information systems and business technology must include instruction designed to teach the pupil to do the following:

1. Demonstrate knowledge of the impact of technology on society.

2. Demonstrate knowledge of current and emerging computer architecture, including the use of input technologies appropriately to enter and manipulate text and data, configure, install and upgrade hardware, and diagnose and repair hardware problems.

3. Demonstrate knowledge of the use of various types of operating systems, environments and utilities.

4. Demonstrate knowledge of:

(a) Application software, including its identification, evaluation, selection, installation, use, upgrading, and diagnosing and problem solving; and

(b) Technology components relating to major business functions.

5. Demonstrate the ability to gather, evaluate, use and cite information from information technology sources.

6. Demonstrate an understanding of database management systems.

7. Demonstrate an understanding of programming and application development.

8. Demonstrate an understanding of communications and information infrastructures.

9. Demonstrate an understanding of network applications.

10. Demonstrate an understanding of systems analysis and design and the planning and acquisition of information technology.

11. Demonstrate an understanding of technical support and training.

12. Demonstrate an understanding of risk management policies and procedures for information technology and policies for managing issues of privacy and ethics in a technology-based society.

389.5535 Business services and innovation. (NRS 385.080, 385.110) A course of study in business services and innovation must include instruction designed to teach the pupil to do the following:

1. Demonstrate an understanding of electronic commerce and its impact on society, including issues of law and ethics.

2. Demonstrate an understanding of the service industry and its role in local, state and national economies.

3. Demonstrate an understanding of technological advances, scientific discoveries and inventions and their impact on business.

4. Demonstrate an understanding of changes in the human perspective relating to the virtual business environment, including new relationships and cultural exchanges.

389.572 Occupations in health care. (NRS 385.080, 385.110) A course of study in occupations in health care must include instruction designed to teach the pupil to do the following:

1. For the area of professionalism:

(a) Demonstrate a knowledge of and compliance with the ethical behavior appropriate for the workplace;

(b) Perform duties in accordance with the applicable laws, regulations and policies;

(c) Understand the legal responsibilities and limitations placed upon the pupil;

(d) Understand the legal implications of actions taken by the pupil;

(e) Interact effectively and sensitively with others while showing respect for cultural and social diversity;

(f) Understand and apply the principles of privacy and confidentiality in the field of health care;

(g) Understand how the role of the pupil relates to other roles within the field of health care;

(h) Identify interrelationships between the key systems within the field of health care; and

(i) Identify stressors and respond appropriately.

2. For the area of health promotion and disease prevention:

(a) Demonstrate an understanding of the wellness strategies used to help prevent injury and disease throughout the life span;

(b) Demonstrate an understanding of interventions for health improvement;

(c) Understand the interventions for secondary prevention that are used when chronic conditions exist; and

(d) Demonstrate an awareness of alternative and complementary health practices.

3. For the area of client and patient care skills:

(a) Demonstrate an understanding of existing and potential hazards to clients or patients, coworkers and the pupil and prevention of injury and illness through safe work practices and compliance with health and safety policies and procedures;

(b) Demonstrate effective communication with clients or patients;

(c) Demonstrate an understanding of the process of care through assessment, planning, implementation and evaluation; and

(d) Demonstrate knowledge of and the ability to use the technology, equipment, tools and supplies used in health care.

4. For the area of medical sciences:

(a) Define, pronounce, spell and use terminology related to health care;

(b) Demonstrate knowledge of human anatomy and physiology;

(c) Demonstrate an understanding of diseases and other health conditions;

(d) Demonstrate an understanding and appreciation of the impact that history and culture have had on health care; and

(e) Understand and apply mathematics as it specifically relates to health care.

5. For the area of employability skills:

(a) Demonstrate the skill of problem solving;

(b) Demonstrate the skill of critical thinking;

(c) Demonstrate the ability to speak, write, listen, record and report effectively;

(d) Demonstrate the ability to select, apply and maintain appropriate technology;

(e) Demonstrate the skills of leadership and teamwork;

(f) Demonstrate the ability to manage effectively resources in the workplace;

(g) Demonstrate skills necessary for the planning and development of a career; and

(h) Demonstrate skills necessary for retaining a job and continuation of learning throughout a career.

389.573 Culinary arts. (NRS 385.080, 385.110) A course of study in the commercial production and service of food must be designed so that pupils meet the following performance standards by the completion of the final courses of instruction:

1. For the area of career exploration, analyze career paths and employ industry standards within the culinary arts field to:

(a) Describe the professional food service industry, including its history, traditions and current trends;

(b) Analyze career paths and opportunities in food production and service as well as related food service industries; and

(c) Develop and model workplace behaviors that are professional and ethical.

2. For the area of sanitation, integrate knowledge, skills and practices in sanitation to:

(a) Determine microorganisms found in food and their role in causing illness;

(b) Comply with applicable laws and regulations governing food sanitation;

(c) Apply principles governing the safe handling of food during all stages of food handling to minimize the risk of foodborne illnesses; and

(d) Apply techniques of proper facility management for cleaning and sanitation.

3. For the area of safety, apply knowledge, skills and practices in workplace safety to:

(a) Demonstrate procedures of basic first aid for injuries that typically occur in the food service industry; and

(b) Use appropriate procedures and precautions to prevent accident and injuries.

4. For the area of equipment, demonstrate proper operation of equipment used in the food service industry to explore tools, and large and small standard equipment used in the food service industry.

5. For the area of nutrition, apply principles related to health and nutrition to evaluate the principles of nutrition, food plans, techniques of preparation and special dietary plans.

6. For the area of basic skills, integrate knowledge and demonstrate basic skills in the culinary arts to:

(a) Develop necessary knife skills;

(b) Apply terminology used in the professional culinary arts;

(c) Establish mise en place in the workplace;

(d) Employ proper techniques of measuring; and

(e) Use recipe standards.

7. For the area of management skills, integrate specific functions of management related to the food service industry to:

(a) Explore the principles of writing a menu; and

(b) Incorporate the relationship between purchasing, operating a storeroom and controlling costs.

8. For the area of breakfast preparation, apply knowledge, skills and practices to prepare eggs, and breakfast meats and starches.

9. For the area of bakeshop, demonstrate bakery production skills by demonstrating a variety of techniques for preparing breads, pastries and desserts.

10. For the area of garde-manger, explore and practice techniques of a garde-manger by demonstrating a variety of techniques to:

(a) Prepare salads, sandwiches, appetizers and hors d'oeuvres, and fresh and dried herbs; and

(b) Make attractive presentations.

11. For the area of front-of-the-house and model front-of-the-house operations:

(a) Explore various styles of service and career opportunities; and

(b) Demonstrate an awareness of beverage service.

12. For the area of product identification, differentiate and categorize food service products by demonstrating knowledge of the principles regarding the:

(a) Selection of fruits, starches and grains, vegetables, dairy products, meats, poultry, and fish and shellfish; and

(b) Identification and selection of staples.

13. For the area of product preparation, differentiate and categorize food service products by demonstrating knowledge of the principles regarding the preparation of fruits, starches and grains, vegetables, dairy products, meats, poultry, and fish and shellfish.

14. For the area of stocks, sauces and soups, classify and produce stocks, sauces and soups by demonstrating knowledge of the principles regarding the preparation of stocks, sauces and soups.

15. For the area of cooking methods, differentiate and carry out appropriate cooking methods by demonstrating dry heat, moist heat and combination cooking methods.

16. For the area of business operations, analyze business procedures in the hospitality field to:

(a) Explore entrepreneurship opportunities in the food service industry;

(b) Describe marketing strategies in the food service industry;

(c) Investigate facilities management in the food service industry; and

(d) Explore professional organizations in the food service industry.

17. For the area of skills necessary to obtain employment, achieve competence in workplace readiness, career development and lifelong learning by demonstrating:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) An ability to manage effectively resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retention of a job and continuation of learning throughout a career.

389.575 Foods and nutrition. (NRS 385.080, 385.110) A course of study in foods and nutrition must include instruction designed to teach the pupil to do the following:

1. Examine the factors that influence personal choices relating to food;

2. Evaluate the nutritional needs of individual persons and families as those needs relate to health and wellness;

3. Integrate knowledge, skills and practices in the proper sanitation and safety relating to food;

4. Apply the skills used in the management of kitchen resources;

5. Apply knowledge, skills and practices used in the preparation of food;

6. Apply the principles of managing a meal;

7. Make informed choices as a consumer;

8. Analyze career paths and opportunities in the food and nutrition industry; and

9. Achieve competence in workplace readiness, career development and lifelong learning.

389.576 Fashion, textiles and design. (NRS 385.080, 385.110) A course of study in fashion, textiles and design must include instruction designed to teach the pupil to do the following:

1. Examine the skills necessary to effectively manage decisions relating to clothing;

2. Integrate knowledge, skills and practices in clothing and textile construction;

3. Evaluate the use, care and production of fibers, fabrics and textiles;

4. Develop the knowledge and skills necessary for the field of fashion merchandising;

5. Analyze career paths and opportunities within the fashion, textile and design industry; and

6. Achieve competence in workplace readiness, career development and lifelong learning.

389.577 Hospitality services. (NRS 385.080, 385.110) A course of study in hospitality services must include instruction designed to teach the pupil to demonstrate an understanding of:

1. Basic economic systems, cost-profit relationships, economic indicators and trends, and international concepts as they relate to the hospitality industry;

2. The hospitality industry;

3. The department or division that oversees rooms in a full-service hotel;

4. The department or division that oversees food and beverages in a full-service hotel; and

5. The department or division that oversees staff, including, without limitation, human resources, sales and marketing, accounting, security and engineering in a full-service hotel.

389.579 Travel and tourism. (NRS 385.080, 385.110) A course of study in travel and tourism must include instruction designed to teach the pupil to do the following:

1. Demonstrate an understanding of basic economic systems, cost-profit relationships, economic indicators and trends, and international concepts as they relate to the travel and tourism industry;

2. Demonstrate an understanding of the travel and tourism industry;

3. Demonstrate an understanding of lodging and transportation as they relate to the travel and tourism industry;

4. Demonstrate an understanding of wholesale and retail services as they relate to the travel and tourism industry;

5. Demonstrate an understanding of sales and marketing as they relate to the travel and tourism industry;

6. Demonstrate an understanding of destination marketing as it relates to the travel and tourism industry; and

7. For the area of skills necessary to obtain employment, achieve competence in workplace readiness, career development and lifelong learning by demonstrating:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) An ability to manage effectively resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retention of a job and continuation of learning throughout a career.

389.580 Care of the aged and persons with special needs. (NRS 385.080, 385.110) A course of study in the care of the aged and persons with special needs must include instruction designed to teach the pupil to do the following:

1. Demonstrate the ability to work with the aged and persons with special needs.

2. Describe the special needs of the aged and persons with disabilities.

3. Describe the patterns of behavior found in each stage of aging or the process of dealing with a disability and their interrelationship.

4. Describe the resources available to persons with special needs.

5. Describe the relationship between the different types of care and facilities available to the aged or persons with disabilities.

6. Identify state or national standards and requirements for licensing, operating or working in a business which provides care of the aged or persons with special needs.

389.581 Early childhood care, education and services. (NRS 385.080, 385.110) A course of study in early childhood care, education and services must be designed so that pupils meet the following performance standards by the completion of the final course of instruction:

1. For the area of careers in early childhood care and education, analyze career paths within early childhood development, education and services, as demonstrated by the pupil's ability to:

(a) Determine the roles and functions of persons engaged in early childhood education and services;

(b) Explore opportunities for employment and entrepreneurial endeavors;

(c) Examine the requirements of education and training and the opportunities for careers in early childhood education and services; and

(d) Examine the impact of occupations in early childhood education and services on the local, state, national and global economics.

2. For the area of developmentally appropriate practices, analyze developmentally appropriate practices to plan for early childhood development, education and services, as demonstrated by the pupil's ability to:

(a) Examine theories of child development and their implications for early childhood education practices;

(b) Use a variety of methods to observe and interpret the growth and development of children;

(c) Consider cultural and environmental influences upon the development of children;

(d) Determine any special needs of children; and

(e) Practice effective strategies that promote the growth and development of all children.

3. For the area of curriculum and instruction, demonstrate integration of curriculum and instruction to meet the developmental needs and interests of children, as demonstrated by the pupil's ability to:

(a) Examine a variety of curriculum and instructional models;

(b) Implement learning activities in all curriculum areas that meet the developmental needs of all children;

(c) Implement and integrate a preliteracy curriculum for children;

(d) Implement and integrate a curriculum that considers the native language, learning style, home experience, and cultural values of each child;

(e) Arrange learning centers that provide for exploration, discovery and development by children; and

(f) Establish activities, routines and transitions for children.

4. For the area of health and safety, provide a safe and healthy learning environment for children, as demonstrated by the pupil's ability to:

(a) Manage physical space to maintain a safe and healthy learning environment;

(b) Comply with safe and healthy practices in conformance with the statutes and regulations applicable to a particular agency;

(c) Implement strategies to teach children habits related to health, safety and sanitation;

(d) Provide safe and healthy meals and snacks;

(e) Document symptoms of child abuse and neglect and use appropriate procedures to report suspected abuse or neglect to the appropriate authorities;

(f) Implement basic health practices and prevention procedures for child care workers and children regarding childhood illness and communicable diseases; and

(g) Demonstrate security and emergency procedures appropriate for child care facilities.

5. For the area of child and family relationships, understand techniques for positive collaborative relationships with children and their families, as demonstrated by the pupil's ability to:

(a) Establish developmentally appropriate guidelines for behavior;

(b) Demonstrate problem-solving skills with children;

(c) Demonstrate interpersonal skills and implement strategies that promote positive and productive relationships with children;

(d) Implement strategies for constructive and supportive interactions between children and their families; and

(e) Present information to a parent regarding any developmental issues and concerns related to his or her child in a positive and supportive manner.

6. For the area of skills necessary to obtain employment, demonstrate:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) An ability to manage effectively resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retention of a job and continuation of learning throughout a career.

389.582 Housing and interior design. (NRS 385.080, 385.110) A course of study in housing and interior design must include instruction designed to teach the pupil to do the following:

1. Evaluate needs and preferences relating to personal choices in housing;

2. Investigate options when selecting a place to reside;

3. Evaluate a home for quality of construction;

4. Describe the architectural features of a home;

5. Demonstrate skills in the use and planning of space;

6. Evaluate and select home furnishings;

7. Evaluate and select backgrounds for home interiors;

8. Complete an interior design plan;

9. Analyze career paths and opportunities within the housing and interior design industry; and

10. Achieve competence in workplace readiness, career development and lifelong learning.

389.584 Commercial housekeeping. (NRS 385.080, 385.110) A course of study in commercial housekeeping must include instruction designed to teach the pupil to do the following:

1. Demonstrate the knowledge required to be a commercial housekeeper.

2. Plan, control the cost of and standardize the techniques, equipment and supplies used in housekeeping.

3. Use equipment, materials and supplies necessary for cleaning.

4. Describe the relationship between the facility to be cleaned and the equipment, personnel and services to be provided.

5. Identify state or national standards and requirements for licensing for operating or working in the business of commercial housekeeping.

389.586 Occupations involving electricity. (NRS 385.080, 385.110) A course of study in occupations involving electricity must include instruction designed to teach the pupil to do the following:

1. Read blueprints.

2. Estimate the need for material and labor.

3. Design circuitry.

4. Identify and name common electrical materials and supplies.

5. Name and make common splices in wire.

6. Install a complete residential wiring system.

7. Install electrical systems in commercial buildings.

389.588 Carpentry. (NRS 385.080, 385.110) A course of study in carpentry must include instruction designed to teach the pupil to do the following:

1. Identify and use the basic hand and power tools associated with carpentry.

2. Operate transits and levels.

3. Identify and describe the common fasteners for construction and the building materials associated with carpentry.

4. Demonstrate the common procedures for constructing foundations of a building.

5. Construct and install framing for a floor, roof and stair and finish roofing.

6. Install exterior and interior frames for a door and window, doors, windows and the necessary trim.

7. Install exterior covering of a wall and interior finishing of a wall.

8. Install thermal insulation and sound conditioning.

9. Install and identify cabinets and finished coverings for the floor.

10. Read and understand measuring tapes and blueprints.

389.589 Residential building construction. (NRS 385.080, 385.110) A course of study in residential building construction must be designed so that pupils meet the following performance standards by the completion of an advanced program of instruction:

1. For the area of mathematics used in construction, blueprints, and the use of tools and equipment, a pupil shall demonstrate the ability to:

(a) Understand and apply mathematics for practical use in:

(1) Carpentry;

(2) Residential plumbing;

(3) Residential wiring; and

(4) Masonry and concrete placement; and

(b) Interpret and apply information from blueprints, and schedules and specifications used in the residential construction trades.

2. For the area of safe practices and proper use of equipment and tools, a pupil shall demonstrate the ability to:

(a) Adhere to general shop and job-site safety rules, including, without limitation, rules governing safety apparel, hazardous materials, fire safety, tools, equipment and other apparatus, including protection devices for falls; and

(b) Maintain and safely use hand tools and power tools.

3. For the area of site preparation, a pupil shall demonstrate the ability to:

(a) Understand the proper use of layout and measurement tools used in residential construction and excavation processes;

(b) Properly use layout and measurement tools; and

(c) Identify methods of excavation, compaction and backfill processes commonly used for residential construction.

4. For the area of foundations, a pupil shall demonstrate the ability to:

(a) Understand layout techniques;

(b) Interpret construction drawings to layout locations and elevations of concrete and masonry structural elements and reinforcements;

(c) Apply forming techniques in accordance with accepted industry standards;

(d) Apply techniques for placing concrete; and

(e) Lay masonry units according to plans and specifications.

5. For the area of carpentry, a pupil shall demonstrate the ability to:

(a) Understand carpentry techniques;

(b) Layout and construct floor systems according to plans and specifications;

(c) Layout, construct and raise wall assemblies according to plans and specifications;

(d) Layout, construct and install roof framing systems according to plans and specifications;

(e) Layout, cut and install interior finish materials;

(f) Apply techniques for the installation of exterior finish materials;

(g) Apply techniques for the installation of doors and windows;

(h) Install thermal insulation and vapor barriers; and

(i) Install a roofing system, including, without limitation, underlayments, drip edging, flashing and shingles.

6. For the area of plumbing, a pupil shall demonstrate the ability to:

(a) Understand the plumbing system for a single-family residence in accordance with accepted industry standards;

(b) Layout the locations of plumbing fixtures and components, and complete a rough and top out installation of:

(1) Water piping in a single-family residence; and

(2) Drain waste vent piping in a single-family residence; and

(c) Install fixtures required for the completion of the water supply and drain waste vent systems of a single-family residence.

7. For the area of electrical systems, a pupil shall demonstrate the ability to:

(a) Understand the electrical system for a single-family residence in accordance with accepted industry standards;

(b) Install service equipment, junction and device boxes, conduits, cables and conductors required for a complete residential electrical installation; and

(c) Select and install switches and receptacles and terminate conductors to devices.

8. For the area of skills necessary to obtain employment, a pupil shall achieve competence in workplace readiness, career development and lifelong learning by demonstrating:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) An ability to manage effectively resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retention of a job and continuation of learning throughout a career.

389.590 Repair of electrical and electronic equipment. (NRS 385.080, 385.110) A course of study in the repair of electrical and electronic equipment must include instruction designed to teach the pupil to do the following:

1. Design circuitry.

2. Identify and name common electrical materials and supplies.

3. Name and make common splices in wire.

4. Install electronic equipment.

5. Test electronic systems.

6. Calibrate instruments.

7. Assemble an electronic chassis.

8. Build, design, repair and assemble electronic equipment.

9. Apply the principles of electrical theory.

389.592 Heating, ventilation, air-conditioning and refrigeration. (NRS 385.080, 385.110) A course of study in heating, ventilation, air-conditioning and refrigeration must be designed so that pupils meet the following performance standards by the completion of an advanced program of instruction:

1. For the area of general safety, demonstrate safe work practices while performing operations in the heating, ventilation, air-conditioning and refrigeration laboratory or internship program, or both, as demonstrated by the pupil's ability to:

(a) Adhere to general shop and site safety rules associated with the heating, ventilation, air-conditioning and refrigeration industry, including:

(1) The Occupational Safety and Health Act;

(2) Fire drills;

(3) The proper use of fire extinguishers and fire blankets;

(4) The classification of various types of fires; and

(5) Personal behaviors and attitudes appropriate for the working environment;

(b) Comply with personal safety and work habits associated with:

(1) Personal protective wear;

(2) The effect of substance abuse on safety;

(3) Practices for safe driving;

(4) Procedures for proper lifting;

(5) Proper and safe use of ladders; and

(6) Maintenance of clean and orderly work areas;

(c) Adhere to safe work practices in the handling of pressurized fluids associated with:

(1) The application of pressure relief devices;

(2) The proper storage and handling of refrigerants, oxygen, nitrogen and acetylene bottles; and

(3) The ability to follow procedures specified in Material Safety Data Sheets, the specifications of the United States Environmental Protection Agency and other industry safety standards for the handling, use and disposal of pressurized fluids;

(d) Comply with safe work practices in handling hazardous substances; and

(e) Comply with safe work practices regarding electrical safety.

2. For the area of the history of air-conditioning and refrigeration, demonstrate knowledge of the history of air-conditioning and refrigeration and explore related career paths, as demonstrated by the pupil's ability to understand:

(a) The basics of the refrigeration cycle and its components;

(b) The development of air-conditioning as a part of the refrigeration process; and

(c) Various heating systems.

3. For the area of thermodynamics and heat transfer, understand thermodynamic properties and heat transfer and interpret the significance of thermodynamic properties and heat transfer in air-conditioning and refrigeration technology, as demonstrated by the pupil's ability to:

(a) Understand the fundamentals of refrigeration and heating science;

(b) Explore the science of fluids and pressures as they relate to air-conditioning and refrigeration;

(c) Understand the relationship of the components of the refrigeration cycle; and

(d) Use different methods of measurement systems.

4. For the area of hand tools and equipment, demonstrate the proper use of hand tools and equipment common to the air-conditioning and refrigeration industry, as demonstrated by the pupil's ability to:

(a) Identify tools and equipment related to air-conditioning and refrigeration;

(b) Properly use tools and equipment related to air-conditioning and refrigeration;

(c) Properly use electrical meters;

(d) Properly use refrigeration test instruments;

(e) Properly use fossil fuel heating system measurement devices; and

(f) Properly use instruments necessary to determine proper airflow.

5. For the area of piping and piping practices, demonstrate various brazing techniques to prepare and install piping, as demonstrated by the pupil's ability to understand proper tubing and piping requirements for air-conditioning systems.

6. For the area of electricity, demonstrate knowledge of electrical theory, measurement, circuitry and controls, as demonstrated by the pupil's ability to:

(a) Understand basic electricity;

(b) Describe how electricity is generated and distributed; and

(c) Identify and use specialty controls used in air-conditioning and refrigeration systems.

7. For the area of refrigerant system components, understand the purposes and uses of refrigeration cycle components, including, without limitation, metering devices, evaporators, compressors, condensers, accessories and access fittings, as demonstrated by the pupil's ability to:

(a) Explain the functions and uses of metering devices;

(b) Understand how various types of evaporators function;

(c) Understand how various types of compressors function;

(d) Understand how various types of condensers function;

(e) Identify air-conditioning and refrigeration system accessories and describe how they function; and

(f) Understand the function and operation of various access fittings.

8. For the area of gas controls, demonstrate knowledge of the operation and diagnosis of gas control valves, regulators and fossil fuel heating systems, as demonstrated by the pupil's ability to:

(a) Demonstrate the operation and function of various gas control valves;

(b) Understand the operation of fuel control systems; and

(c) Install and operate residential control systems.

9. For the area of fossil fuel heating systems, demonstrate competency in the operation and maintenance of unitary and split fossil fuel-fired heating systems, as demonstrated by the pupil's ability to:

(a) Service and operate a forced-air heating system;

(b) Test and balance heating systems; and

(c) Understand the function of humidity for air-conditioning comfort systems.

10. For the area of air-conditioning systems, understand the process of heat transfer and the properties of air relating to air-conditioning applications, as demonstrated by the pupil's ability to:

(a) Understand the relationship between temperature and humidity as they affect comfort;

(b) Understand the operation of cooling systems as part of the refrigeration process; and

(c) Troubleshoot an air-conditioning system to determine and correct electrical and mechanical cooling problems.

11. For the area of air handling, understand the principles and effects of airflow and duct design on the operation of an air-conditioning system, as demonstrated by the pupil's ability to:

(a) Understand the requirements of supplying air to an area to be environmentally controlled;

(b) Install and service air-filtering systems; and

(c) Understand how various types of fan blower systems operate.

12. For the area of electrical motors, understand the various types of electrical motors used in air-conditioning systems, as demonstrated by the pupil's ability to understand the:

(a) Function, operation and service of motors used in air-conditioning systems;

(b) Various types of motors and motor components used in air-conditioning systems; and

(c) Operation of three-phase motors.

13. For the area of electrical heating systems, demonstrate competency in the operation and maintenance of unitary and electrical heating systems, as demonstrated by the pupil's ability to operate and test an electrical heating system.

14. For the area of heat pump systems, demonstrate a working knowledge of reverse cycle heating systems and emergency heat applications, as demonstrated by the pupil's ability to:

(a) Understand the operation of heat pumps;

(b) Understand the various applications for the heat pump;

(c) Describe the functions of heat pump system controls; and

(d) Install basic heat pump system controls.

15. For the area of commercial refrigeration, demonstrate knowledge of refrigeration systems for food service, medical industries and transportation applications, as demonstrated by the pupil's ability to:

(a) Understand the aspects of commercial refrigeration;

(b) Understand the use of multiple evaporators on a single system;

(c) Inspect and service commercial ice makers;

(d) Describe the operation of dispensing freezers; and

(e) Inspect and service a commercial refrigeration system.

16. For the area of system load calculations, understand how to calculate the cooling and heating requirements for an environmental living space, as demonstrated by the pupil's ability to calculate heat loss and heat gains through various insulating and construction materials.

17. For the area of system installation and start-up, demonstrate knowledge of procedures for installation and start-up, as demonstrated by the pupil's ability to inspect and perform check-out procedures to start and operate safely various:

(a) Gas heating systems;

(b) Reverse cycle heating systems; and

(c) Cooling systems.

18. For the area of servicing and troubleshooting systems, demonstrate knowledge of how to perform procedures for servicing and troubleshooting, as demonstrated by the pupil's ability to troubleshoot and service problems in:

(a) Mechanical systems;

(b) Electrical systems;

(c) Gas heating systems;

(d) Reverse cycle heating systems; and

(e) Cooling systems.

19. For the area of preventative maintenance, demonstrate knowledge of the various requirements for maintenance and how to implement recommendations of the manufacturer.

20. For the area of refrigerant recovery, demonstrate a thorough knowledge of the guidelines and standards established by the United States Environmental Protection Agency that govern refrigerant recovery, as demonstrated by the pupil's ability to:

(a) Understand the regulations that affect ozone depletion;

(b) Demonstrate refrigerant handling safety techniques while complying with applicable laws and regulations;

(c) Understand the methods of refrigerant recovery, recycling and reclamation;

(d) Understand the use of equipment for refrigerant recovery, recycling and reclamation;

(e) Determine if an alternative refrigerant is applicable for retrofitting a specific system;

(f) Explain the different classes of refrigerants; and

(g) Successfully complete the Technician Certification Test offered by a Technician Certification Program that has been approved by the United States Environmental Protection Agency.

21. For the area of skills necessary to obtain employment, achieve competence in workplace readiness, career development and lifelong learning, by demonstrating:

(a) Skills necessary for problem solving;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) Effective management of resources in high-performance workplaces;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retention of a job and continuation of learning throughout a career.

389.594 Mechanics of gasoline, diesel and small engines. (NRS 385.080, 385.110) A course of study in the mechanics of gasoline, diesel and small engines must include instruction designed to teach the pupil to do the following:

1. Tune gasoline and diesel engines.

2. Perform repairs on suspension and steering systems.

3. Diagnose problems in and repair electrical systems.

4. Perform necessary repairs and maintenance on drum and disc brakes.

5. Demonstrate a knowledge of the construction of engines powered by gasoline and diesel and cooled by air, and their related components.

6. Repair malfunctions in the systems for exhaust, cooling and fuel, the assembly for the transmission and clutch for an automobile and other mechanical systems in an engine powered by gasoline or diesel.

389.596 Collision repair technology. (NRS 385.080, 385.110) A course of study in collision repair technology must be designed so that pupils meet the following performance standards by the completion of an advanced program of instruction:

1. For the area of safety, demonstrate safe work practices while performing operations in a collision repair technology lab by:

(a) Adhering to general shop and site safety rules relating to:

(1) Personal protective wear;

(2) Hand tools;

(3) Power equipment;

(4) Proper ventilation;

(5) The safe handling, storage and disposal of hazardous materials;

(6) Awareness of potential hazards to oneself and to other persons;

(7) Safety practices used in the collision repair industry; and

(8) Administration of basic first-aid treatment.

(b) Adhering to specific shop fire safety rules and procedures.

2. For the area of analysis and damage repair, demonstrate, in accordance with vehicle manufacturer specifications and procedures:

(a) Understanding of the processes involved in frame inspection and repair;

(b) The ability to inspect and repair a frame;

(c) Understanding of the processes used to inspect and replace glass; and

(d) Understanding of the processes used in metal welding and cutting.

3. For the area of nonstructural analysis and damage repair, demonstrate an understanding of the processes involved in:

(a) The preparation of nonstructural inspection and repair;

(b) Outer body panel repairs, replacements and adjustments;

(c) Metal finishing and body filling;

(d) Repairing or replacing movable glass and hardware;

(e) Metal welding and cutting; and

(f) Plastic repair and adhesives.

4. For the area of mechanical and electrical components, demonstrate an understanding of the processes involved in:

(a) Identifying, inspecting, diagnosing and removing mechanical and electrical components as required;

(b) Repairing suspension and steering systems;

(c) Repairing electrical components and systems;

(d) Testing and repairing brake systems;

(e) Inspecting and repairing air conditioning;

(f) Diagnosing and repairing cooling systems;

(g) Repairing drive train systems;

(h) Repairing or replacing fuel intake and exhaust systems; and

(i) Diagnosing and repairing active, passive and supplemental restraint systems.

5. For the area of painting and refinishing procedures, demonstrate an understanding of the processes involved in:

(a) Adhering to health, safety and environmental requirements and abiding by local, state and federal safety and environmental regulations;

(b) Adhering to health, safety and environmental requirements while maintaining safety precautions;

(c) Preparing a surface;

(d) Operating a spray gun and related equipment;

(e) Applying, mixing and matching paint;

(f) Identifying paint defects; and

(g) Completing final details.

6. For the area of estimating collision repairs, demonstrate an understanding of the processes involved in:

(a) Preparing damage reports;

(b) Using industry definitions;

(c) Identifying the different types of automotive finishes;

(d) Obtaining relevant information needed to estimate collision-related repairs; and

(e) Writing a damage report.

7. For the area of skills necessary to obtain employment, demonstrate:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) The ability to effectively manage resources in high performance workplaces;

(h) Knowledge of the skills necessary for career planning and development; and

(i) Skills necessary for retention of a job and continuation of learning throughout a career.

8. For the area of English, demonstrate an understanding and use of language arts-related academic skills commonly used in the collision repair industry.

9. For the area of mathematics, demonstrate an understanding and use of mathematics-related academic skills commonly used in the collision repair industry.

10. For the area of science, demonstrate an understanding and use of science-related academic skills commonly used in the collision repair industry.

389.597 Automotive technology: Advanced program. (NRS 385.080, 385.110) A course of study in automotive technology must be designed so that pupils meet the following performance standards by the completion of an advanced program of instruction:

1. For the area of safety, demonstrate safe work practices while performing operations in an automotive technology laboratory, as demonstrated by the pupil's ability to:

(a) Demonstrate adherence to the general rules of shop safety, including, without limitation, the:

(1) Proper use of safety apparel;

(2) Proper use and care of hand and power tools;

(3) Proper use and care of heavy equipment; and

(4) Safe handling, storage and disposal of chemicals and hazardous materials in accordance with local, state and federal statutes and regulations.

(b) Demonstrate adherence to the rules and procedures regarding fire safety.

2. For the area of general laboratory procedures, understand the general rules and procedures of the automotive technology laboratory, as demonstrated by the pupil's ability to:

(a) Properly use the tools and equipment commonly found in the automotive technology laboratory;

(b) Retrieve and apply the service information of a vehicle;

(c) Prepare a vehicle for automotive service;

(d) Perform basic automotive service; and

(e) Return a vehicle to a customer upon the completion of the automotive service.

3. For the area of engine repair, understand the requirements for automotive service, as demonstrated by the pupil's ability to perform general service and maintenance on an engine.

4. For the area of automatic transmissions and transaxles, understand the requirements for automotive service, as demonstrated by the pupil's ability to perform general service on a transmission and transaxle by:

(a) Performing visual inspections;

(b) Replacing fluids and filters;

(c) Retrieving and interpreting diagnostic codes;

(d) Identifying the components; and

(e) Identifying fluid types, fluid levels and concerns about the condition of the fluid.

5. For the area of manual drive train and axles, understand the requirements for automotive service, as demonstrated by the pupil's ability to perform general service on the:

(a) Clutch;

(b) Transmission and transaxle;

(c) Drive-shaft and half-shaft, universal and constant velocity joint; and

(d) Drive axle.

6. For the area of suspension and steering, understand the requirements of automotive service, as demonstrated by the pupil's ability to perform general service on:

(a) A steering system;

(b) A suspension system; and

(c) The wheels and tires.

7. For the area of brakes, understand the requirements of automotive service, as demonstrated by the pupil's ability to perform general service of:

(a) Hydraulic systems;

(b) Drum brakes;

(c) Disc brakes;

(d) Power assists units;

(e) Anti-lock brake systems; and

(f) Parking brakes.

8. For the area of electrical and electronic systems, understand the requirements of automotive service, as demonstrated by the pupil's ability to perform:

(a) General service of the electrical system;

(b) General service and testing of a battery;

(c) General service of a starting system; and

(d) General service of a charging system.

9. For the area of heating and air conditioning, understand the requirements for automotive service, as demonstrated by the pupil's ability to demonstrate knowledge of heating and air conditioning systems by:

(a) Conducting visual inspections;

(b) Identifying the location and types of refrigerants; and

(c) Conducting diagnostic tests using manifold gauges.

10. For the area of engine performance, understand the requirements of automotive service, as demonstrated by the pupil's ability to perform:

(a) General diagnosis and repair of an engine;

(b) Diagnosis and repair of an ignition system; and

(c) Diagnosis and repair of fuel systems.

11. For the area of alternative fuels and vehicles that use alternative fuels, demonstrate general knowledge of:

(a) Alternative fuels; and

(b) Vehicles that use alternative fuels.

12. For the area of skills necessary to succeed in the workplace, understand the requirements for workplace readiness, as demonstrated by the pupil's ability to:

(a) Solve problems;

(b) Evaluate information critically;

(c) Speak, write and listen effectively;

(d) Select, apply and maintain the appropriate technology necessary for a career;

(e) Demonstrate the skills of leadership and teamwork;

(f) Demonstrate ethical behavior appropriate for the workplace;

(g) Effectively manage resources in the workplace;

(h) Demonstrate the skills necessary for the planning and development of a career; and

(i) Demonstrate knowledge of the skills necessary for retaining a job and continuation of learning throughout a career.

389.598 Mechanics of an aircraft. (NRS 385.080, 385.110) A course of study in the mechanics of an aircraft must include instruction designed to teach the pupil to do the following:

1. Maintain and repair reciprocating and turbine engines of an aircraft.

2. Identify, repair and maintain lubricating systems of an aircraft.

3. Maintain and repair induction systems, cooling systems and systems for fuel and exhaust.

4. Maintain and repair the ignition, electrical system and instruments of an aircraft.

5. Maintain and repair systems for the protection against fire in an engine.

6. Maintain and repair propellers.

7. Acquire the skills necessary to acquire a license as an aircraft mechanic from the Federal Aviation Administration.

389.600 Electronic communications. (NRS 385.080, 385.110) A course of study in electronic communications must include instruction designed to teach the pupil to do the following:

1. Install electronic equipment.
2. Test electronic systems.
3. Operate audio equipment.
4. Calibrate instruments.
5. Assemble an electronic chassis.
6. Inspect and repair instruments.
7. Repair digital equipment.
8. Test and repair audio and video equipment.

389.601 Information technology. (NRS 385.080, 385.110) A course of study in information technology must be designed so that pupils meet the following performance standards:

1. For the area of network systems, including topology, internetworking design, implementation, network instrumentation and network administration, understand basic network systems, as demonstrated by the pupil's ability to:

(a) Demonstrate the fundamental tasks required to administer a network;

(b) Demonstrate the use of network security policies and procedures;

(c) Demonstrate proper file and disc management skills; and

(d) Construct, differentiate and diagnose network systems.

2. For the area of information technology service and support, understand basic hardware and software support, as demonstrated by the pupil's ability to:

(a) Understand hardware and software support;

(b) Understand quality customer service skills;

(c) Demonstrate proficiency with documentation skills; and

(d) Understand basic electronics, troubleshooting skills and the proper use of electronic test equipment and repair tools.

3. For the area of multimedia, understand multimedia content creation and authoring, including, without limitation:

(a) Fundamental drawing techniques;

(b) The use of audio and video in content creation and authoring;

(c) Computer animation;

(d) Typography;

(e) Computer digital imaging;

(f) Web design and development;

(g) The use of electronic commerce; and

(h) The ability to explain basic intellectual property and copyright laws as they relate to content creation and authoring.

4. For the area of computer programming, understand essential programming skills, as demonstrated by the pupil's ability to understand the:

(a) Use of essential programming skills;

(b) Design and analysis of software;

(c) Encoding of software; and

(d) Testing and integration of software.

5. For the area of computer applications, understand contemporary application programs and office software application products, as demonstrated by the pupil's ability to understand the:

(a) Use of spreadsheet software;

(b) Use of databases;

(c) Use of word processing software;

(d) Use of desktop publishing software;

(e) Use of presentation software; and

(f) Installation, set up and upgrade of software.

6. For the area of information technology management, demonstrate:

(a) An understanding of organizational issues in the management of information technology;

(b) An understanding of effective interpersonal communication skills in the workplace;

(c) Proficiency in oral and written communication skills; and

(d) An understanding of information technology policies and procedures established by companies and the necessity for compliance with and enforcement of those policies and procedures.

7. For the area of telecommunications, demonstrate:

(a) An understanding of telephony and the operation and specifications of public switch telephone networks, or PTSN;

(b) An understanding of broadband and baseband local area network, or LAN, metropolitan area network, or MAN, and wide area network, or WAN, systems; and

(c) An understanding of wireless technologies.

8. For the area of skills necessary to obtain employment, demonstrate:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) An ability to manage effectively resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retention of a job and continuation of learning throughout a career.

389.6013 Graphic design. (NRS 385.080, 385.110) A course of study in graphic design must be designed so that pupils meet the following performance standards by the completion of an advanced program of instruction:

1. For the area of graphic design industry, demonstrate knowledge of the graphic design industry, as demonstrated by the ability of the pupil to:

(a) Demonstrate knowledge of the history of the field of graphic design; and

(b) Communicate ideas using appropriate terminology related to the graphic design industry.

2. For the area of design, apply elements and principles of design to communicate in a visual manner, as demonstrated by the ability of the pupil to:

(a) Identify and apply the elements of design;

(b) Identify and apply the principles of design;

(c) Identify and apply the principles of typography; and

(d) Apply the principles and elements of design to layout.

3. For the area of production, demonstrate knowledge of the key aspects of production using software that is standard in the graphic design industry, as demonstrated by the ability of the pupil to:

(a) Demonstrate knowledge of concept development;

(b) Demonstrate knowledge of image creation and manipulation;

(c) Demonstrate the appropriate applications of media output;

(d) Demonstrate knowledge of workflow in the graphic design industry to increase success and productivity;

(e) Identify and apply the design process; and

(f) Demonstrate knowledge of the use of brand names and corporate identity.

4. For the area of ethics and legal issues, demonstrate knowledge of the ethical and legal issues related to graphic design, as demonstrated by the ability of the pupil to:

(a) Demonstrate knowledge of copyright and intellectual property laws related to the graphic design industry; and

(b) Demonstrate ethical behavior related to the graphic design industry.

5. For the area of portfolio of work:

(a) Create and maintain a portfolio of the pupil’s work; and

(b) Demonstrate the process for evaluating a portfolio.

389.6015 Mechanical drafting and design. (NRS 385.080, 385.110) A course of study in mechanical drafting and design must be designed so that pupils meet the following performance standards by the completion of an advanced program of instruction:

1. For the area of fundamental drafting skills, understand fundamental drafting skills, as demonstrated by the ability of the pupil to:

(a) Create geometric constructions;

(b) Demonstrate measuring and scaling techniques;

(c) Demonstrate conventional drafting practices;

(d) Create multiview drawings using orthographic projections;

(e) Apply dimensions and annotations;

(f) Create pictorial drawings; and

(g) Demonstrate sketching techniques.

2. For the area of fundamental computer-aided drafting and design skills, understand computer-aided drafting and design processes, as demonstrated by the ability of the pupil to:

(a) Use basic computer and informational technology skills;

(b) Set up a drawing environment;

(c) Use the Cartesian Coordinate System to create geometric shapes and objects;

(d) Create and modify objects using computer-aided drafting and design commands;

(e) Create and modify annotations; and

(f) Use basic output methods.

3. For the area of advanced computer-aided drafting and design skills, understand advanced computer-aided drafting and design processes, as demonstrated by the ability of the pupil to:

(a) Use templates, symbols and libraries;

(b) Develop and display three-dimensional models; and

(c) Use advanced output methods.

4. For the area of mechanical drafting and design, understand mechanical drafting and design processes, as demonstrated by the ability of the pupil to:

(a) Apply mechanical drafting concepts related to basic manufacturing processes;

(b) Apply geometric dimensioning and tolerancing standards; and

(c) Apply mechanical drafting concepts to basic pattern development.

389.6017 Architectural drafting and design. (NRS 385.080, 385.110) A course of study in architectural drafting and design must be designed so that pupils meet the following performance standards by the completion of an advanced program of instruction:

1. For the area of fundamental drafting skills, understand fundamental drafting skills, as demonstrated by the ability of the pupil to:

(a) Create geometric constructions;

(b) Demonstrate measuring and scaling techniques;

(c) Demonstrate conventional drafting practices;

(d) Create multiview drawings using orthographic projections;

(e) Apply dimensions and annotations;

(f) Create pictorial drawings; and

(g) Demonstrate sketching techniques.

2. For the area of fundamental computer-aided drafting and design skills, understand computer-aided drafting and design processes, as demonstrated by the ability of the pupil to:

(a) Use basic computer and informational technology skills;

(b) Set up a drawing environment;

(c) Use the Cartesian Coordinate System to create geometric shapes and objects;

(d) Create and modify objects using computer-aided drafting and design commands;

(e) Create and modify annotations; and

(f) Use basic output methods.

3. For the area of advanced computer-aided drafting and design skills, understand advanced computer-aided drafting and design processes, as demonstrated by the ability of the pupil to:

(a) Use templates, symbols and libraries;

(b) Develop and display three-dimensional models; and

(c) Use advanced output methods.

4. For the area of architectural drafting and design skills, understand architectural drafting and design processes, as demonstrated by the ability of the pupil to:

(a) Identify architectural draftings related to architectural design;

(b) Prepare architectural draftings related to design criteria;

(c) Create architectural drafting views and details related to design criteria; and

(d) Define and apply civil site drafting concepts related to civil engineering.

389.604 Graphic arts and printing. (NRS 385.080, 385.110) A course of study in graphic arts and printing must include instruction designed to teach the pupil to do the following:

1. Identify different styles of letters.

2. Operate equipment for a bindery.

3. Set up and operate an efficient darkroom.

4. Prepare a basic layout.

5. Operate a system of platemaking.

6. Operate a single and two offset presses with one or two colors.

7. Produce halftones in a variety of sizes.

389.606 Photography. (NRS 385.080, 385.110) A course of study in photography must be designed so that pupils meet the following performance standards by the completion of an advanced program of instruction:

1. For the area of history of photography, describe and analyze the role and development of photography in past and present cultures by demonstrating an understanding of the role and development of photography in those cultures;

2. For the area of laws and ethics, demonstrate knowledge of the laws and ethics relating to photography by demonstrating an understanding of the principles of photography law;

3. For the area of safety, demonstrate the safe use of photographic materials and equipment by demonstrating general rules of lab safety, including, without limitation, rules relating to camera equipment, lighting equipment, other electrical equipment, photography materials and fire safety;

4. For the area of cameras and camera accessories, identify and use different types of cameras and camera accessories by demonstrating:

(a) Competence in the proper use of various types of cameras to take photographs, including a 35 millimeter or digital single-lens reflex camera; and

(b) An understanding of various lenses and corrective applications for those lenses;

5. For the area of exposure, demonstrate competence in the use of exposure settings to achieve the desired photographic effects by demonstrating knowledge of the selection and proper exposure settings for a variety of situations as prescribed by the International Organization for Standardization;

6. For the area of elements and principles of art and composition, demonstrate a basic understanding of the application of the elements and principles of art and composition to digital photography by:

(a) Incorporating the elements and principles of art into photographs; and

(b) Using the elements and principles of composition to organize images to communicate ideas;

7. For the area of lighting, demonstrate an understanding of different sources of light and proper uses of those sources by demonstrating an understanding of the:

(a) Techniques of artificial lighting as applied in a variety of situations and the effects of artificial lighting for digital photography; and

(b) Techniques of natural lighting as applied to a variety of situations and the effects of natural lighting for digital photography;

8. For the area of film photography, if a course of study includes instruction in silver-based film photography, demonstrate knowledge in selecting film, developing film and printing negatives;

9. For the area of digital images, demonstrate an understanding of capturing, manipulating, storing and printing digital images by demonstrating:

(a) Knowledge of the components of a digital camera and digital image storage devices;

(b) Proficiency in using a scanner;

(c) Competence in using graphics software to modify or enhance a digital image;

(d) The ability to save and retrieve digital images;

(e) Knowledge of printers and techniques for printing digital images; and

(f) Knowledge of the proper maintenance and calibration of printers;

10. For the area of presentations, demonstrate competence in presentation techniques and the development of a portfolio by:

(a) Displaying printed digital images; and

(b) Creating a physical or electronic portfolio of digital photographs;

11. For the area of career development, identify and research career options in photography by demonstrating knowledge in selecting career opportunities relating to photography; and

12. For the area of skills necessary to obtain employment, achieve competence in workplace readiness, career development and lifelong learning by demonstrating:

(a) Knowledge and skills necessary to perform in the workplace;

(b) The ability to safely work with a variety of technologies;

(c) Knowledge in preparing for job interviews and preparing to obtain a job;

(d) The ability to properly identify, organize, plan and allocate resources;

(e) Knowledge of interpersonal skills related to the workplace; and

(f) An understanding of entrepreneurship.

389.608 Machine shop. (NRS 385.080, 385.110) A course of study in machine shop must include instruction designed to teach the pupil to do the following:

1. Read blueprints.

2. Perform benchwork.

3. Operate a lathe, grinder, milling machine, drill press, band saw and any other equipment necessary in the operation of a machine shop.

4. Read and interpret a micrometer.

5. Heat-treat metal.

389.610 Sheet metal. (NRS 385.080, 385.110) A course of study in sheet metal must include instruction designed to teach the pupil to do the following:

1. Read blueprints.

2. Demonstrate methods utilized to lay out parallel lines, radial lines, development and triangulation.

3. Fabricate, erect or install ducts and fittings.

4. Join metal with mechanical fasteners.

5. Join metal by welding and soldering.

6. Operate equipment which forms and shears sheet metal.

7. Construct and assemble common locks and seams.

389.611 Metalworking. (NRS 385.080, 385.110) A course of study in metalworking must be designed so that pupils meet the following performance standards by the completion of an advanced program of instruction:

1. For the area of safety, demonstrate safe work practices while performing operations in the metalworking laboratory, as demonstrated by the pupil's ability to:

(a) Comply with personal and environmental safety practices associated with:

(1) Clothing;

(2) Protection of the eyes and ears;

(3) Hand tools and power equipment;

(4) Proper ventilation; and

(5) The handling, storage and disposal of materials in accordance with local, state and federal safety and environmental regulations.

(b) Adhere to the general rules of laboratory safety as they apply to:

(1) Flammables;

(2) Ventilation;

(3) Electrical hazards;

(4) Maintenance of orderly work areas;

(5) Personal protective wear;

(6) Safe use of tools and equipment;

(7) Work habits and behaviors; and

(8) Lifting and emergency response.

(c) Adhere to the specific procedures of fire safety in the laboratory and the rules applying to:

(1) The proper use of extinguishers;

(2) Evacuation;

(3) Knowledge of potential fire hazards;

(4) Ventilation;

(5) Personal protective wear; and

(6) Storage of flammables.

2. For the area of measurement and layout techniques, understand the proper use of layout and measurement tools and techniques, as demonstrated by the pupil's ability to:

(a) Use measuring tools to complete required laboratory assignments;

(b) Use and apply layout tools to complete required laboratory projects;

(c) Interpret basic prints and develop working drawings; and

(d) Apply basic mathematical skills common to the metalworking industry.

3. For the area of metallurgy, understand the classification and physical properties of different types of metals common to the welding industry, as demonstrated by the pupil's ability to:

(a) Identify the types and shapes of metals;

(b) Describe and apply the principles of metallurgy as they apply to hardening and annealing; and

(c) Describe the effects of heating and cooling of metals to be fabricated.

4. For the area of tools and machines, understand how to safely operate commonly used machines and tools, as demonstrated by the pupil's ability to identify and safely operate:

(a) Stationary power machines commonly used in the welding industry;

(b) Portable power machines commonly used in the welding industry; and

(c) Hand tools commonly used in the welding industry.

5. For the area of welding techniques, understand proper welding and cutting techniques, as demonstrated by the pupil's ability to:

(a) Properly use personal protective equipment and procedures;

(b) Set up and operate oxy-fuel welding and cutting equipment;

(c) Set up and operate shielded metal arc welding equipment;

(d) Set up and operate gas metal arc welding equipment;

(e) Set up and operate gas tungsten arc welding equipment; and

(f) Set up and operate plasma arc welding equipment.

6. For the area of sheet metal, understand the proper layout, forming and fastening techniques, as demonstrated by the pupil's ability to:

(a) Demonstrate pattern development and layout techniques;

(b) Identify and demonstrate the use of sheet metal forming machines and hand tools; and

(c) Identify and demonstrate the use of various sheet metal fastening techniques.

7. For the area of machine tools, understand the identification and safe operation of machine tools, as demonstrated by the pupil's ability to set up and safely operate:

(a) Metal cutting lathes;

(b) Milling machines; and

(c) The drill press.

8. For the area of skills necessary to obtain employment, achieve competence in workplace readiness, career development and lifelong learning by demonstrating:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) An ability to manage effectively resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retention of a job and continuation of learning throughout a career.

389.612 Welding. (NRS 385.080, 385.110) A course of study in welding must be designed so that pupils meet the following performance standards by the completion of an advanced program of instruction:

1. For the area of safety, demonstrate safe work practices while performing operations in the welding laboratory, as demonstrated by the pupil's ability to:

(a) Comply with personal and environmental safety practices associated with:

(1) Clothing;

(2) Protection of the eyes and ears;

(3) Hand tools and power equipment;

(4) Proper ventilation; and

(5) The handling, storage and disposal of materials in accordance with local, state and federal safety and environmental regulations.

(b) Adhere to the general rules of laboratory safety as they apply to:

(1) Flammables;

(2) Ventilation;

(3) Electrical hazards;

(4) Maintenance of orderly work areas;

(5) Personal protective wear;

(6) Safe use of tools and equipment;

(7) Work habits and behaviors; and

(8) Lifting and emergency response.

(c) Adhere to the specific procedures of fire safety in the laboratory and the rules applying to:

(1) The proper use of extinguishers;

(2) Evacuation;

(3) Knowledge of potential fire hazards;

(4) Ventilation;

(5) Personal protective wear; and

(6) Storage of flammables.

2. For the area of measurement and layout techniques, understand the proper use of layout and measurement tools and techniques, as demonstrated by the pupil's ability to:

(a) Use measuring tools to complete required laboratory assignments;

(b) Use and apply layout tools to complete required laboratory projects;

(c) Interpret basic prints and develop working drawings; and

(d) Apply basic mathematical skills common to the welding industry.

3. For the area of metallurgy, understand the classification and physical properties of different types of metals common to the welding industry, as demonstrated by the pupil's ability to:

(a) Identify the types and shapes of metals; and

(b) Describe the effects of heating, cooling and annealing processes of metals to be fabricated.

4. For the area of tools and machines, understand how to safely operate commonly used machines and tools, as demonstrated by the pupil's ability to identify and safely operate:

(a) Stationary power machines commonly used in the welding industry;

(b) Portable power machines commonly used in the welding industry; and

(c) Hand tools commonly used in the welding industry.

5. For the area of oxy-fuel welding and cutting, understand proper welding and cutting techniques, as demonstrated by the pupil's ability to:

(a) Properly use personal protective equipment and procedures;

(b) Identify, select, set up and use oxy-fuel welding equipment;

(c) Identify, select, set up and use oxy-fuel cutting equipment; and

(d) Identify, select, set up and use oxy-fuel brazing equipment.

6. For the area of shielded metal arc welding, understand proper shielded metal arc welding techniques, as demonstrated by the pupil's ability to:

(a) Use safety procedures and describe the electrical theory of shielded metal arc welding;

(b) Select and set up the appropriate equipment and consumables used in shielded metal arc welding; and

(c) Perform shielded metal arc welding using appropriate safety techniques.

7. For the area of gas metal arc welding, understand proper gas metal arc welding techniques, as demonstrated by the pupil's ability to:

(a) Use safety procedures and describe the electrical theory of gas metal arc welding;

(b) Select and set up the appropriate equipment and consumables used in gas metal arc welding; and

(c) Perform gas metal arc welding using appropriate safety techniques.

8. For the area of flux cored arc welding, understand proper flux cored arc welding techniques, as demonstrated by the pupil's ability to:

(a) Use safety procedures and describe the electrical theory of flux cored arc welding;

(b) Select and set up the appropriate equipment and consumables used in flux cored arc welding; and

(c) Perform flux cored arc welding using appropriate safety techniques.

9. For the area of gas tungsten arc welding, understand proper gas tungsten arc welding techniques, as demonstrated by the pupil's ability to:

(a) Use safety procedures and describe the electrical theory of gas tungsten arc welding;

(b) Select and set up appropriate equipment and consumables used in gas tungsten arc welding; and

(c) Perform gas tungsten arc welding using appropriate safety techniques.

10. For the area of plasma arc cutting, understand proper plasma arc cutting techniques, as demonstrated by the pupil's ability to:

(a) Use safety procedures and describe the electrical theory of plasma arc cutting;

(b) Select and set up the appropriate equipment and consumables used in plasma arc cutting; and

(c) Perform plasma arc cutting using appropriate safety techniques.

11. For the area of fabrication, understand the tools, equipment and fabrication techniques, as demonstrated by the pupil's ability to:

(a) Identify and use fabrication techniques and equipment while planning, designing, laying out and constructing projects;

(b) Identify and perform nondestructive weld-testing techniques; and

(c) Identify and perform destructive weld-testing techniques.

12. For the area of skills necessary to obtain employment, achieve competence in workplace readiness, career development and lifelong learning by demonstrating:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) An ability to manage effectively resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retention of a job and continuation of learning throughout a career.

389.614 Furniture and cabinetmaking. (NRS 385.080, 385.110) A course of study in furniture and cabinetmaking must be designed so that pupils meet the following performance standards by the completion of an advanced program of instruction:

1. For the area of safety, demonstrate safe work practices and use of equipment and tools while performing operations in the work environment by:

(a) Adhering to general shop and site safety rules for:

(1) Personal protective wear;

(2) The safe handling, storage and disposal of hazardous materials;

(3) Awareness of the potential hazards to oneself and to other persons;

(4) Adherence to construction-related safety practices; and

(5) Administration of basic first-aid treatment.

(b) Adhering to safe work practices in the maintenance and use of hand and power tools, including:

(1) The safe use and care of hand tools;

(2) The safe operation of stationary power tools;

(3) Basic maintenance of hand and power tools;

(4) The proper operation of pneumatic tools; and

(5) The proper inspection of power tools to ensure that the guards, shields, insulation and other protective devices are properly placed and functioning.

2. For the area of mathematics, apply mathematics for practical use in furniture and cabinetmaking by:

(a) Estimating the needs and costs for materials by using board-, square- and linear-foot measurements; and

(b) Demonstrating how to properly square corners and accurately measure to 1/32 inch and to the nearest millimeter.

3. For the area of project planning, demonstrate competence in the planning, design and blueprint reading necessary for furniture and cabinetmaking by:

(a) Understanding the elements and principles of design;

(b) Identifying the various kitchen, furniture and cabinet styles used in the furniture and cabinetmaking industry;

(c) Demonstrating competence in various drafting techniques and blueprint reading used in the furniture and cabinetmaking industry;

(d) Interpreting and applying information to develop or evaluate a bill of materials;

(e) Estimating the quantity and cost of materials; and

(f) Developing a plan of procedures necessary to complete a project.

4. For the area of tool selection and usage, demonstrating the proper use of:

(a) Measuring and layout tools;

(b) Cutting tools;

(c) Striking tools;

(d) Hand-boring tools;

(e) Hand-shaping tools; and

(f) Clamping tools.

5. For the area of power tool selection and usage, demonstrating the proper and safe use of:

(a) Portable power tools; and

(b) Stationary power tools.

6. For the area of joinery, demonstrate competence in the use of joinery techniques, fasteners and adhesives by:

(a) Demonstrating a working knowledge of the various metallic fasteners used in the furniture and cabinetmaking industry;

(b) Identifying and using various dowels and biscuits used in the furniture and cabinetmaking industry;

(c) Identifying and using various adhesives used in the furniture and cabinetmaking industry; and

(d) Identifying and constructing various wood joints used in the furniture and cabinetmaking industry.

7. For the area of wood products and materials, demonstrate knowledge in the identification, characteristics and uses of commonly used wood products and materials by:

(a) Identifying various hardwoods and softwoods;

(b) Identifying various sheet goods and describing their characteristics and uses;

(c) Identifying various solid surface and laminate materials and describing their characteristics and uses; and

(d) Identifying various veneers and describing their characteristics and uses.

8. For the area of construction processes, demonstrate an understanding of various construction processes used in the furniture and cabinetmaking industry by:

(a) Demonstrating furniture construction techniques, including case, frame and panel, and leg and rail construction;

(b) Demonstrating cabinet construction techniques, including face frame case, frameless case, cabinet drawer and cabinet door construction;

(c) Demonstrating manufacturing and mass production techniques;

(d) Selecting and installing various hardware used in the furniture and cabinetmaking industry; and

(e) Demonstrating various plastic laminating techniques.

9. For the area of finishing, prepare a project and apply finishes in accordance with the standards of the furniture and cabinetmaking industry by:

(a) Properly using various abrasives to prepare a project for a finish;

(b) Selecting and applying various stains;

(c) Identifying and applying various sealers and finish coats; and

(d) Identifying and applying various fillers.

10. For the area of installation, transport and install furniture and cabinets in accordance with the standards of the furniture and cabinetmaking industry by demonstrating:

(a) Proper techniques for packaging and transporting furniture and cabinets;

(b) The proper layout and installation of cabinets;

(c) The proper layout, fabrication and installation of countertops; and

(d) The proper layout and installation of molding and trim.

11. For the area of skills necessary to obtain employment, demonstrating:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) The ability to effectively manage resources in high-performance workplaces;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retaining a job and the continuation of learning throughout a career.

389.616 Digital video and broadcast production. (NRS 385.080, 385.110) A course of study in digital video and broadcast production must be designed so that pupils meet the following performance standards by the completion of an advanced program of instruction:

1. For the area of history, demonstrate knowledge of the history of communications, industry terminology, ethics and the law by:

(a) Demonstrating knowledge of the history of film and broadcast communications;

(b) Using industry terminology; and

(c) Demonstrating an understanding of industry ethics and the law;

2. For the area of safety, demonstrate knowledge of safety and personal responsibility in video production in the workplace by demonstrating:

(a) Professionalism and personal responsibility; and

(b) Safe work habits, including, without limitation:

(1) Following established procedures;

(2) Selecting and using appropriate tools and equipment;

(3) Properly maintaining tools and equipment; and

(4) Adhering to fire safety standards;

3. For the area of communication, demonstrate appropriate skills of communication by:

(a) Distinguishing different purposes and methods of writing for broadcast;

(b) Demonstrating appropriate speaking skills and demeanor for on-camera performances; and

(c) Using story structures as appropriate for different applications in a script;

4. For the area of preproduction, demonstrate practices of preproduction which reflect the standards of the industry by:

(a) Demonstrating an understanding of the target audience, the goals of the client and the goals of the project;

(b) Conducting formal and informal research to collect appropriate topical information for a project;

(c) Demonstrating effective skills for managing time when producing a video;

(d) Interpreting and writing a script for different projects;

(e) Demonstrating appropriate techniques for interviews; and

(f) Demonstrating appropriate practices in the newsroom;

5. For the area of production, demonstrate practices of production which reflect the standards of the industry by demonstrating:

(a) The ability to operate a camera;

(b) Effective techniques for on-camera interviews;

(c) Effective on-camera performances that are appropriate for a project;

(d) The ability to select and operate sound equipment that is appropriate for a project;

(e) The correct use of technology and proper procedures to produce a studio broadcast production;

(f) The correct use of technology and proper procedures to create a professional field production; and

(g) The ability to make appropriate and ethical decisions during the production process;

6. For the area of postproduction, demonstrate practices of postproduction which reflect the standards of the industry by:

(a) Organizing and evaluating all materials that are necessary for the postproduction process;

(b) Demonstrating computer skills that are necessary for completing a video project; and

(c) Demonstrating the ability to make appropriate and ethical decisions during the postproduction process; and

7. For the area of skills necessary to obtain employment, achieve workplace readiness, career development and lifelong learning by demonstrating:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) The ability to effectively manage resources in high-performance workplaces;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for the retention of a job and the continuation of learning throughout a career.

389.618 Cosmetology. (NRS 385.080, 385.110) A course of study in cosmetology must include instruction designed to teach the pupil to do the following:

1. Explain various types of occupations in the field of cosmetology.

2. Identify and describe the composition of hair.

3. Recognize and match the texture of hair and match it to the characteristics of that texture.

4. Identify and describe the disorders of the scalp.

5. Identify and describe the most common shapes for manicuring nails.

6. Identify and describe the diseases of the nail.

7. Identify and operate the equipment and tools used in manicuring and pedicuring.

8. Identify and describe the bones of the face and head.

9. Distinguish between sensory and motor nerves.

10. Distinguish between a cartilage and a ligament.

11. List the permits and licenses necessary to do business as a cosmetologist.

12. Develop a plan for a salon.

389.620 Family and consumer sciences. (NRS 385.080, 385.110) If a district offers a course of study in family and consumer sciences, the course must be designed so that pupils meet the following performance standards:

1. For the area of human and family development:

(a) Examine the principles and roles of the development of the family and humans;

(b) Explore the stages of development throughout the life span;

(c) Explore the roles and responsibilities of parenting that maximize human growth and development;

(d) Evaluate an effective family unit and how it impacts individual growth and development;

(e) Analyze factors that affect a decision of a person to become a parent;

(f) Choose appropriate activities for young children based upon developmental stages; and

(g) Demonstrate an awareness of the opportunities and requirements for employment in early childhood education.

2. For the area of food science and nutrition:

(a) Integrate knowledge, skills and practices in food science and nutrition;

(b) Demonstrate safety and sanitation practices relating to food;

(c) Use principles of nutrition and technology in the planning and preparation of food;

(d) Apply principles of management related to food and nutrition;

(e) Demonstrate skills and procedures in the preparation and service of food;

(f) Demonstrate principles of food science that affect the quality of food; and

(g) Demonstrate an awareness of the opportunities and requirements for employment in nutrition or the food industry.

3. For the area of textiles and apparel:

(a) Integrate knowledge, skills and practices in textiles and apparel;

(b) Demonstrate skills necessary to produce, alter and repair textile products and apparel;

(c) Evaluate the use and care of fiber, fabrics and textile materials;

(d) Examine the elements and principles of design in creating, constructing and altering textile products to enhance the visual appearance of those products;

(e) Examine skills used by consumers to effectively manage money expended on apparels;

(f) Evaluate the factors that influence the apparel industry; and

(g) Demonstrate an awareness of the opportunities and requirements for employment in the textile and apparel industry.

4. For the area of family and consumer resource management:

(a) Develop skills of management related to personal, family and community resources;

(b) Demonstrate management of personal and family resources, including, without limitation, food, clothing, housing, health care, recreation and transportation;

(c) Demonstrate skills required for maintenance of interpersonal relationships, including, without limitation, effective communication and resolution of conflicts;

(d) Analyze the rights and responsibilities of consumers in the economic system;

(e) Demonstrate management of financial resources to meet the needs and goals of individuals and families throughout the life span;

(f) Evaluate the impact of technology on personal and family resources; and

(g) Develop responsible behavior and skills for making decisions, setting goals and demonstrating leadership.

5. For the area of skills necessary to obtain employment, demonstrate:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain the appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) An ability to effectively manage resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retaining a job and continuation of learning throughout a career.

389.622 Industrial arts. (NRS 385.080, 385.110) A course of study in industrial arts must include instruction designed to teach the pupil to do the following:

1. Demonstrate an understanding of the opportunities for a career in the field of industrial arts.

2. Demonstrate the appropriate use of the tools and materials used in industry.

3. Demonstrate the proper application of established standards of safety for industrial programs.

4. Identify a preferred career.

389.624 Marketing. (NRS 385.080, 385.110) A course of study in marketing must be designed so that pupils meet the following performance standards:

1. For the area of economics, demonstrate an understanding of the:

(a) Basic concepts of economics;

(b) Fundamental systems of economics;

(c) Basic concepts of cost-profit relationships;

(d) Economic indicators and trends; and

(e) International trade concepts.

2. For the area of business management and entrepreneurship:

(a) Demonstrate knowledge of marketing and the functions of marketing;

(b) Demonstrate an understanding of basic business fundamentals, management functions and entrepreneurship;

(c) Demonstrate competency in basic computer skills related to business; and

(d) Demonstrate an understanding of how risk management impacts business.

3. For the area of distribution, demonstrate an understanding of the:

(a) Nature and scope of distribution as a function of marketing;

(b) Basic concepts of fulfilling orders;

(c) Basic concepts of warehousing and handling of stock; and

(d) Basic concepts of managing distribution, including, without limitation, control of inventory, and the relationship of distribution to other activities of marketing.

4. For the area of financing, demonstrate an understanding of:

(a) The nature and scope of financing; and

(b) Extending and obtaining business credit.

5. For the area of management of marketing information, demonstrate an understanding of:

(a) The nature and scope of techniques to manage the marketing of information;

(b) Methods to gather information to determine appropriate markets;

(c) Methods to process and present information gathered by applying techniques to manage the marketing of information; and

(d) Plans and strategies for marketing a product or service.

6. For the area of pricing, demonstrate an understanding of the:

(a) Nature and scope of the pricing function;

(b) Process for establishing and communicating the value or cost of goods and services; and

(c) Strategies and outcomes for determining prices.

7. For the area of managing products or services, demonstrate an understanding of:

(a) The nature and scope of the management of products and services;

(b) The importance of ensuring quality of products and services;

(c) The concept of product mix;

(d) The concept of product and business positioning; and

(e) Other considerations related to the retail of products.

8. For the area of promotion, demonstrate an understanding of the:

(a) Nature and scope of promotion in marketing;

(b) Concept and purpose of advertising;

(c) Concept and purpose of publicity and public relations;

(d) Concept and purpose of sales promotion;

(e) Use of products, services, images and ideas to achieve a desired outcome; and

(f) Use of advertising agencies.

9. For the area of selling a product or service, demonstrate an understanding of the:

(a) Nature and scope of the functions associated with strategies of personal and business sales;

(b) Processes and techniques of selling;

(c) Relationship between knowledge of the product or service and selling;

(d) Support activities related to selling; and

(e) Management of selling.

10. For the area of skills necessary to obtain employment, demonstrate:

(a) Skills necessary for solving problems;

(b) Skills of critical thinking;

(c) The ability to speak, write and listen effectively;

(d) The ability to select, apply and maintain the appropriate technology necessary for a career;

(e) Skills of leadership and teamwork;

(f) An awareness of the ethical behavior appropriate for the workplace;

(g) An ability to effectively manage resources in the workplace;

(h) Skills necessary for the planning and development of a career; and

(i) Skills necessary for retaining a job and continuation of learning throughout a career.

389.652 Social studies. (NRS 385.080, 385.110) A course of study in social studies must include instruction designed to teach the pupil to do the following:

1. Recognize that people in a pluralistic society communicate and express themselves in different ways.

2. Recognize that social institutions, the various methods of communication and technology influence persons and groups in society.

3. Describe how historical developments and current economic conditions relate to national and international developments.

4. Interpret how people function alone and as members of groups.

389.6525 Introduction to occupations. (NRS 385.080, 385.110) A local school board shall include within courses of study in a public high school introducing students to occupations, the courses of study:

1. Working citizen.

2. Management of personal resources.

389.6526 Working citizen. (NRS 385.080, 385.110) A course of study in working citizen must include instruction designed to teach the pupil to:

1. Describe business systems and business transactions.

2. Describe the relationship of the individual person to business.

3. Describe the relationship of business to the individual person.

4. Describe the influence of economic factors on the job market and on individual standards of living.

5. Relate tentative career plans to education, training and future employment.

6. Describe personal characteristics and qualities that are desirable for successful employment.

7. Describe laws and regulations which relate to the employee.

8. Describe the influence of personal health, attitude and interpersonal relationships on productivity and job satisfaction.

9. Describe the role labor unions and professional organizations play in the relationship between employer and employee.

10. Identify the sources which provide information relating to employment opportunities.

11. Demonstrate the use of information which identifies opportunities for employment.

12. Describe the skills and training necessary for successful employment among related jobs.

13. Match the competency of the pupil with skills required for specific employment.

14. Analyze the factors that influence individual job selection.

15. Demonstrate the skills necessary to obtain employment.

389.6527 Management of personal resources. (NRS 385.080, 385.110) A course of study in the management of personal resources must include instruction designed to teach the pupil to:

1. Identify human and economic resources.

2. Explain the value of human and economic resources in daily living.

3. Describe how human and economic resources influence and change life styles.

4. Identify the personal resources needed to attain a life goal.

5. Describe the steps in attaining a life goal.

6. Describe how efficient and inefficient management of time affects the completion of a task.

7. Develop a schedule of weekly activities.

8. Identify areas of personal potential.

9. Explain how personal potential can affect the success of organizing a business.

10. Develop a plan for effective use of available human resources.

11. Identify ways to reach a financial goal.

12. Prepare a personal budget.

13. Develop a saving plan.

14. Write checks, prepare a deposit slip and update a check register.

15. Reconcile a bank statement.

16. Demonstrate the proper preparation of a federal income tax return.

17. Describe the establishment and maintenance of a credit rating.

18. Demonstrate the benefits of purchasing an item with cash instead of paying for the item in installments.

19. Explain guidelines and procedures in making a major purchase.

20. List various services which a person might buy.

21. Describe guidelines for purchasing services.

22. Describe misleading sales practices.

23. Describe ways to remedy misleading sales practices.

389.6528 Introduction to human relations and decision making. (NRS 385.080, 385.110) A course of study in an introduction to human relations and decision making must include instruction designed to teach the pupil to:

1. Explain basic human needs and their effects on an individual person.

2. Develop personal goals through techniques of self-improvement, self-motivation and self-discipline.

3. Rate the strengths and weaknesses of the pupil's personality.

4. Describe ways in which a person can improve his or her personality.

5. Describe the effect personal dress has on obtaining a job.

6. Determine the ethics involved in various work situations.

7. Describe the process of making decisions.

8. Apply techniques for solving problems to developing solutions for given problems in personal, job and group situations.

9. Demonstrate ways to give and receive points of view involving a disagreement.

10. Identify the causes of conflict in social and work settings.

11. Demonstrate techniques of resolving conflict in social and work settings.

12. Analyze the manner in which employees interact in a work-related dispute.

13. Recognize actions which can improve employee relationships.

14. Identify the knowledge and skills required for obtaining a job in the area of human relations.

389.6529 Introduction to human and family development. (NRS 385.080, 385.110) A course of study in an introduction to human and family development must be designed so that pupils meet the performance standards set forth in subsections 1 and 5 of NAC 389.620.

389.653 Introduction to food science and nutrition. (NRS 385.080, 385.110) A course of study in an introduction to food science and nutrition must be designed so that pupils meet the performance standards set forth in subsections 2 and 5 of NAC 389.620.

389.6531 Introduction to economics of work. (NRS 385.080, 385.110) A course of study in an introduction to the economics of work must include instruction designed to teach the pupil to:

1. Explain the importance of the worker in our economic system.

2. Identify differences between the three major types of current economic systems.

3. Explain the relationship supply and demand have to the cost a consumer pays for goods and services.

4. Describe the concept of scarcity as the underlying condition of an economic system.

5. Describe the possible effects competition has on different types of businesses.

6. Describe the business cycle and its effect on the economy.

7. Analyze the differences in employment opportunities between an entrepreneurial enterprise and an established company.

389.6532 Introduction to basic communication skills. (NRS 385.080, 385.110) A course of study in an introduction to basic communication skills must include instruction designed to teach the pupil to:

1. Prepare original compositions.

2. Describe three types of business documents.

3. Demonstrate the organization of ideas.

4. Give a speech on an occupation.

5. Use visual aids in a written or oral presentation on occupational material.

6. Identify six effective speaking skills.

7. Summarize a conversation.

8. Recognize the purpose of a set of oral instructions by listing the key parts.

9. Describe the four aspects of body language.

10. Describe the effect physical and environmental elements have on nonverbal communication.

11. Demonstrate functional reading by interpreting written instructions.

12. Demonstrate the ability to retain information through reading and study skills.

389.6534 Introduction to information technology. (NRS 385.080, 385.110) A course of study in an introduction to information technology must include instruction designed to teach the pupil to:

1. Describe the development of a contemporary information system from inception to present use.

2. Describe various types and uses of information systems.

3. Describe information systems that satisfy the needs of the home.

4. Describe information systems that satisfy the needs of education.

5. Describe information systems that satisfy the needs of business and industry.

6. Describe information systems that satisfy the needs of government.

7. Describe the effect information systems have on human culture and life style.

8. Describe how a computer operates.

9. Describe the function of hardware and software within a compatible computer system.

10. Identify the applications used for the various computer languages.

11. Complete a flowchart that outlines a simple task.

12. Identify the knowledge and skills needed to obtain a job in the area of information technology.

389.6535 Introduction to visual communications. (NRS 385.080, 385.110) A course of study in an introduction to visual communications must include instruction designed to teach the pupil to:

1. Describe the characteristics of different types of visual media.

2. Describe the relationship of color, line and design in visual media.

3. Interpret the significance of a sign or symbol.

4. Describe the effect different forms of visual communication have upon society.

5. Identify the different types of messages presented on videotaped presentations.

6. Research career opportunities in the area of electronic communications.

7. Identify the products produced in the field of graphic arts.

8. Describe the process used to develop printed material.

9. Describe the accuracy of the photographic media in society and the influence this media has on society.

10. Identify the different means by which photography is used to communicate a message.

11. Recognize the emotional effect a set of photographs can cause.

12. Identify the knowledge and skills needed to obtain a job in the area of photography.

13. Identify the types and characteristics of a printed advertisement.

14. Summarize the different purposes various types of printed advertising can have.

15. Design a printed advertisement.

16. Identify the knowledge and skills needed to obtain a job in the area of visual merchandising.

389.6536 Introduction to keeping business records. (NRS 385.080, 385.110) A course of study in an introduction to keeping business records must include instruction designed to teach the pupil to:

1. Demonstrate the classification of terms used to designate assets, liabilities, owner's equity, revenues and expense accounts.

2. Describe the accounting equation—assets equals liabilities plus owner's equity.

3. Prepare a balance sheet in account form.

4. Determine net profit or loss using the income statement report form.

5. Identify five items of information found on a cash register tape, a snap-out form and a receipt prepared on a forms register.

6. Prepare a sales slip for a sales transaction.

7. Complete a slip for a bank deposit.

8. Record information in a petty cash book.

9. Compute the cost, markup and retail selling price of merchandise.

10. Explain the importance of taking inventory.

11. Demonstrate the use of the three-column accounts-receivable ledger, including beginning balances, sale of merchandise and payments on account.

12. Prepare a schedule of accounts receivable or payable.

13. Compute earnings per hours worked from an employee's time card.

14. Compute employees' earnings, including considerations of federal and state payroll tax deductions.

15. Identify the knowledge and skills needed to obtain a job in the area of recordkeeping.

389.6537 Introduction to natural resources. (NRS 385.080, 385.110) A course of study in an introduction to natural resources must include instruction designed to teach the pupil to:

1. Describe the various forms and sources of pollution.

2. Identify the various problems which are caused by pollution.

3. Recognize natural and synthetic resources and materials.

4. Determine the origin and use of a variety of synthetic materials.

5. Distinguish renewable from nonrenewable natural resources.

6. Describe the consequences human activity can have on forest and wetland environments.

7. Identify the knowledge and skills needed to obtain a job managing natural resources in the soil, wildlife, fish, forestry and recreation areas.

389.6538 Introduction to basic mechanical principles and skills. (NRS 385.080, 385.110) A course of study in an introduction to basic mechanical principles and skills must include instruction designed to teach the pupil to:

1. Demonstrate the measurement of a machine part using an instrument for precise measurement in metric or customary scales.

2. Demonstrate linear measurements with a ruler or tape measure using the metric or customary systems of measurement.

3. Operate electric meters.

4. Interpret readings from a variety of monitoring devices used on industrial equipment and machinery.

5. Identify regulatory agencies at the state, federal and local levels.

6. Identify safety regulations which affect the home, the school and the workplace.

7. Demonstrate safety practices in the use of tools and equipment.

8. Identify hand tools by name and purpose.

9. Demonstrate the use of tools for fastening, wood working and metal working.

10. Identify power hand tools by name and purpose.

11. Demonstrate the use of power hand tools for fastening, wood working and metal working.

12. Complete a project using industry-approved procedures.

389.6539 Introduction to basic mechanical maintenance. (NRS 385.080, 385.110) A course of study in an introduction to basic mechanical maintenance must include instruction designed to teach the pupil to:

1. Describe the economic benefits that result from routinely scheduled service to maintain equipment.

2. Develop a chart for the routine service and maintenance of a piece of equipment based upon the manufacturer's recommendations.

3. Demonstrate procedures for the service and repair of a defective piece of equipment, using the operator's manual.

4. Describe the owner's responsibility and liability in a warranty agreement.

5. Identify the performance and use of tools in a maintenance or service operation which are set by the industry.

6. Demonstrate the use of tools required to perform maintenance or service operations.

7. List criteria used to determine the quality of tools.

8. Demonstrate the application of industry standards and procedures used to service basic hand tools, power tools and equipment.

9. Recognize when tools, machines or equipment require adjustment, repair or replacement.

10. Conduct safety inspections of tools, machines and equipment.

11. Perform a safety inspection of a workplace, including inspection of lighting, electrical wiring and housekeeping practices and inspection for fire, chemical and electrical hazards, using regulations adopted by the occupational safety and health administration.

12. Perform maintenance or service repair on a piece of household equipment following approved industry standards.

13. Prepare a machine for operation by checking various drives, power sources, fluid levels and lubrication points using an owner's manual or service manual.

14. Demonstrate the procedures set by the industry for servicing a direct current electrical system.

15. Operate a machine including the start-up and monitoring of equipment functions such as revolutions per minute, temperature and oil pressure.

16. Demonstrate the procedures set by the industry for locating and servicing filters.

17. Identify the knowledge and skills required for a job in the area of mechanical maintenance.

389.6541 Introduction to animal science. (NRS 385.080, 385.110) A course of study in an introduction to animal science must include instruction designed to teach the pupil to:

1. Describe the use of animals by people within the area in which the pupil lives.

2. Identify by-products of animal agriculture.

3. Identify the benefits humans have received through animal research.

4. Describe the function of each system of physiological structures found in animals.

5. Research the availability and cost of a variety of animals.

6. Prepare a report that outlines the strategies used in selecting an animal.

7. Determine the cost of feeding an animal over a set period.

8. Develop a plan that outlines housing requirements and environmental concerns related to raising a selected animal.

9. Describe the steps involved in setting up a preventive health program for the life of an animal, including the animal's nutritional requirements.

10. Describe procedures to follow in harvesting and disposing of animals and their products.

11. Compile a set of records on a farm animal or pet.

12. Describe the safety precautions to follow when working with unhealthy or potentially dangerous animals.

13. Describe techniques to use when transporting animals.

14. Describe treatment and procedures for dealing with a sick or injured animal.

15. Describe the types of markets and marketing techniques available to the producer of animals or animal products.

16. Describe the economic aspects of marketing animals or animal products.

17. Identify trends in consumer purchasing and their effect on the marketing of animal products.

18. Identify the knowledge and skills needed to obtain a job in the area of animal science.

389.6542 Introduction to reading blueprints and technical sketching. (NRS 385.080, 385.110) A course of study in an introduction to reading blueprints and technical sketching must include instruction designed to teach the pupil to:

1. Identify occupations that are dependent upon reading blueprints.

2. Describe the steps involved in producing a blueprint.

3. Identify the parts of a standard blueprint.

4. Identify the steps involved in reading a blueprint.

5. Demonstrate the application of addition, subtraction, multiplication and division skills using common fractions, mixed numbers and whole numbers.

6. Create a decimal equivalency table.

7. Demonstrate the application of a variety of measuring tools.

8. Describe the uses of sketches.

9. Describe the sketching process, including sketching equipment and final sketches.

10. Demonstrate the application of sketching techniques.

11. Identify occupations that require the use of sketching.

12. Identify the different types of lines used on a blueprint.

13. Describe the purpose of each type of line used on a blueprint.

14. Demonstrate the application of blueprints using the different types of basic lines.

15. Identify the key characteristics that differentiate the common types of industrial drawings.

16. Sketch an object in the isometric, orthographic, cabinet and cavalier oblique styles of representation.

17. Explain the importance of interpreting dimensions as it relates to careers in technical fields.

18. Sketch dimensioning conventions.

19. Recognize ferrous from nonferrous metals and cold-rolled steel from hot-rolled steel.

20. List the common thicknesses of sheet metal.

21. Identify flat bar, strip stock and other bar stocks.

22. Sketch and label the parts of the silhouettes of angles, channels and beams.

23. Describe size specifications of mechanical tubing and pipe.

24. Describe the purposes for commonly used hardware.

25. Identify, locate and read common material symbols used in standard tables.

26. Identify the knowledge and skills needed to obtain a job in the area of technical sketching.

389.6543 Introduction to textile and apparel. (NRS 385.080, 385.110) A course of study in an introduction to textile and apparel must be designed so that pupils meet the performance standards set forth in subsections 3 and 5 of NAC 389.620.

389.6544 Introduction to electricity. (NRS 385.080, 385.110) A course of study in an introduction to electricity must include instruction designed to teach the pupil to:

1. Demonstrate the production and use of a home electrical system.
2. Demonstrate behavior that contributes to the maintenance and cleanliness of a facility.
3. Assemble, fabricate and construct a simple electrical circuit.
4. Describe the theory and operation of a basic electrical circuit.
5. Demonstrate the applications in the home of low voltage circuits and systems.
6. Identify and discuss the operating theories of three sources of electrical energy.
7. Identify the major components of an electrical system.
8. Replace common switches or receptacles of an electrical system.
9. List the various applications of electric current.
10. Diagram the functions of each component in an electrical system.
11. Identify the knowledge and skills needed to obtain a job installing, repairing and maintaining the electrical systems in homes.

389.6545 Introduction to electronics. (NRS 385.080, 385.110) A course of study in an introduction to electronics must include instruction designed to teach the pupil to:

1. Identify electronic systems and subsystem functions.
2. Describe passive and active electronic devices.
3. Demonstrate laboratory and circuit fabrication techniques.
4. Demonstrate safety practices and procedures in an electronics laboratory.

5. Describe digital and linear circuit technology.

6. Analyze the construction, durability and worth of an electronics product.

7. Identify the knowledge and skills needed to obtain a job in the area of electronics.

389.6546 Introduction to technical drawing. (NRS 385.080, 385.110) A course of study in an introduction to technical drawing must include instruction designed to teach the pupil to:

1. Describe several aspects of the historical development of technical drawing.

2. Define terms commonly used in technical drawing.

3. Describe the aims of technical drawing.

4. Describe aesthetic judgments concerning works of art.

5. Describe the tools, equipment and materials used in drafting.

6. Draw basic lines with the tools, equipment and materials used in technical drawing.

7. Demonstrate techniques for lettering.

8. Identify types of sketches.

9. Demonstrate the skills of technical drawing in creating items of art and perspective drawings.

10. Use skills for sketching to solve problems.

11. Identify the best perspective to depict an object.

12. Select and draw a view to describe an object.

13. Produce dimensioning arrows, lines, letters and numerals.

14. Describe the rationale for and implementation of three-view drawings.

15. Describe the purpose for the various types of lines in multiview drawings.

16. Construct a multiview drawing.

17. Identify the knowledge and skills required for a job in the area of technical drawing.

389.6547 Introduction to energy. (NRS 385.080, 385.110) A course of study in an introduction to energy must include instruction designed to teach the pupil to:

1. Define and analyze the forms of energy.

2. Analyze the various systems for energy conversions and describe the relative efficiency of those systems.

3. List the major sources of energy.

4. List the past and present contributions of the various sources of energy.

5. List the projected supply of the various sources of energy.

6. Describe the potential effect reliance upon the various sources of energy will have on future living conditions.

7. List the relevant events that led up to the energy crisis of the 1970's and describe the effect the crisis had on society and the implications for the future.

8. Describe how energy is used in society.

9. Describe the basic principles of solar energy.

10. Identify the method used to measure solar energy.

11. Describe, construct and evaluate passive, active and hybrid systems for heating and cooling with solar energy.

12. Describe how a photo voltaic cell converts sunlight to electrical energy.

13. Create a device which illustrates the conversion of sunlight to electrical energy.

14. Describe the source of wind energy.

15. Describe how wind energy can be applied for useful purposes.

16. Identify sources of water power.

17. Describe the process which converts wind energy to productive uses.

18. Describe how plant and animal life make use of solar energy.

19. Describe the sources of energy which exist in the oceans.

20. Describe the ways in which energy resources can be used to benefit humans.

21. Identify the technical processes and methods used to locate, recover, process and distribute petroleum and natural gas products.

22. Identify the technical processes and methods used to locate, recover, process and distribute coal.

23. Trace the development of nuclear fission as a source of energy.

24. Identify the knowledge and skills needed to obtain a job in the area of managing or developing sources of energy.

Section 2 of LCB File No. R144-11

Sec. 2. ***A course of study in agricultural mechanical engineering technology power systems must be designed so that pupils meet the following performance standards by the completion of the final course of instruction:***

1. For the area of general shop safety, demonstrate general shop safety procedures, as demonstrated by the ability of the pupil to understand personal and group safety while working in an agricultural mechanics environment.

2. For the area of welding, demonstrate the safe practices and proper techniques of welding while performing:

(a) Oxy-fuel cutting; and

(b) Shielded metal arc welding.

3. For the area of electricity:

(a) Understand the principles and theories of electricity in agriculture; and

(b) Apply the principles and theories of electrical circuits.

4. For the area of water and wastewater, understand the management of water and wastewater in agricultural and industrial settings, as demonstrated by the ability of the pupil to:

(a) Demonstrate safe practices and procedures in the management of water in agricultural and industrial settings; and

(b) Understand the theory and design of various water transfer systems and pumps.

5. For the area of agricultural construction, understand the principles and applications of agricultural construction, as demonstrated by the ability of the pupil to understand and demonstrate the proper practices, applications and procedures for drafting and constructing agricultural projects.

6. For the area of single and multiple cylinder engines, understand the principles and applications of single and multiple cylinder engines, as demonstrated by the ability of the pupil to:

(a) Demonstrate safe practices and procedures associated with the operation, maintenance and repair of small gasoline engines and equipment;

(b) Demonstrate a working knowledge of essential engine operating systems;

(c) Recognize appropriate power attachments and their applications; and

(d) Demonstrate the proper procedures for the maintenance and repair of single and multiple cylinder engines and their attachments.

7. For the area of agricultural machinery, demonstrate safe practices and procedures associated with the operation, maintenance and repair of agricultural machinery and equipment.

8. For the area of hand and power tools, identify and demonstrate the proper use of hand and power tools in agricultural settings, as demonstrated by the ability of the pupil to:

(a) Identify general hand and power tools; and

(b) Demonstrate the proper procedures for the maintenance and repair of hand tools.

9. For the area of electrical power, motors and controls, demonstrate the proper procedures associated with the operation, maintenance and use of electrical power, motors and controls in agricultural applications.

10. For the area of hydraulics, understand and demonstrate knowledge of the basic principles of hydraulic systems in the agricultural industry, including, without limitation, the operation and maintenance of those hydraulics systems.

11. For the area of supervised agricultural experience, describe the relationship between a supervised agricultural experience and the preparation that is necessary for a pupil to pursue a career in agriculture, as demonstrated by the ability of a pupil to actively develop and participate in a supervised agricultural experience in a manner that enables the pupil to develop the skills necessary for a career in agricultural mechanical engineering technology power systems.

12. For the area of leadership and Future Farmers of America, participate in leadership training through active membership in the Future Farmers of America, as demonstrated by the ability of the pupil to:

(a) Recognize the traits of effective leaders and participate in leadership training through involvement in the Future Farmers of America;

(b) Understand the opportunities available to a pupil through membership in the Future Farmers of America; and

(c) Understand the importance of participating in the community in which the pupil lives and the school in which the pupil is enrolled.

Section 3 of LCB File No. R144-11

Sec. 3. ***A course of study in agricultural mechanical engineering technology structural systems must be designed so that pupils meet the following performance standards by the completion of the final course of instruction:***

1. For the area of general shop safety, demonstrate general shop safety procedures, as demonstrated by the ability of the pupil to understand personal and group safety while working in an agricultural mechanics environment.

2. For the area of welding, demonstrate the safe practices and proper techniques of welding while performing:

(a) Oxy-fuel cutting; and

(b) Shielded metal arc welding.

3. For the area of electricity:

(a) Understand the principles and theories of electricity in agriculture; and

(b) Apply the principles and theories of electrical circuits.

4. For the area of water and wastewater, understand the management of water and wastewater in agricultural and industrial settings, as demonstrated by the ability of the pupil to demonstrate safe practices and procedures in the management of water in agricultural and industrial settings.

5. For the area of agricultural construction, understand the principles and applications of agricultural construction, as demonstrated by the ability of the pupil to:

(a) Demonstrate the proper practices, applications and procedures for the use of concrete and fencing in agricultural construction;

(b) Demonstrate the proper practices, applications and procedures for drafting in agricultural construction and for the construction of agricultural buildings;

(c) Understand the applications of copper and plastic pipes; and

(d) Understand the techniques used for surveying in agricultural construction.

6. For the area of single and multiple cylinder engines, understand the principles and applications of single and multiple cylinder engines, as demonstrated by the ability of the pupil to:

(a) Demonstrate safe practices and procedures associated with the operation, maintenance and repair of small gasoline engines and equipment;

(b) Demonstrate a working knowledge of essential engine operating systems; and

(c) Recognize appropriate power attachments and their applications.

7. For the area of agricultural machinery, demonstrate safe practices and procedures associated with the operation, maintenance and repair of agricultural machinery and equipment.

8. For the area of hand and power tools, identify and demonstrate the proper use of hand and power tools in agricultural settings, as demonstrated by the ability of the pupil to:

(a) Identify general hand and power tools; and

(b) Demonstrate the proper procedures for the maintenance and repair of hand tools.

9. For the area of supervised agricultural experience, describe the relationship between a supervised agricultural experience and the preparation that is necessary for a pupil to pursue a career in agriculture, as demonstrated by the ability of the pupil to actively develop and participate in a supervised agricultural experience in a manner that enables the pupil to develop the skills necessary for a career in agricultural mechanical engineering technology structural systems.

10. For the area of leadership and Future Farmers of America, participate in leadership training through active membership in the Future Farmers of America, as demonstrated by the ability of the pupil to:

(a) Recognize the traits of effective leaders and participate in leadership training through involvement in the Future Farmers of America;

(b) Understand the opportunities available to a pupil through membership in the Future Farmers of America; and

(c) Understand the importance of participating in the community in which the pupil lives and the school in which the pupil is enrolled.