

**ADOPTED REGULATION OF THE  
STATE BOARD OF EDUCATION**

**LCB File No. R010-03**

Effective October 22, 2003

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

AUTHORITY: §§1 and 3-11, NRS 385.080 and 385.110; §2, NRS 385.080, 385.110 and 389.180.

**Section 1.** Chapter 389 of NAC is hereby amended by adding thereto the provisions set forth as sections 2 to 7, inclusive, of this regulation.

**Sec. 2.** *A course of study in academic achievement, career exploration, and personal and social development must include instruction designed to teach pupils in kindergarten through the completion of the twelfth grade, as applicable:*

*1. For the area of academic achievement, skills that support academic achievement and lifelong learning, as demonstrated by the pupil's ability to:*

*(a) Demonstrate attitudes, knowledge and skills that contribute to effective learning while in school and during the lifetime of that pupil;*

*(b) Complete his secondary education prepared academically to choose from a wide range of career and post secondary academic options; and*

*(c) Explain the relationship of education to career, life and community.*

*2. For the area of career exploration, skills that support the ability of the pupil to investigate career options and develop the skills and attitudes necessary to make a successful transition from school to his career, as demonstrated by the pupil's ability to:*

*(a) Explain his career goals;*

*(b) Explain the relationship between personal characteristics, education, training and career; and*

*(c) Develop strategies to achieve career goals.*

*3. For the area of personal and social development, skills that maximize the personal and social development of the pupil, as demonstrated by the pupil's ability to:*

*(a) Acquire the attitudes, knowledge and interpersonal skills necessary to understand and respect himself and others;*

*(b) Make decisions, set goals and take action appropriate for the achievement of those goals; and*

*(c) Apply life skills that contribute to his safe and healthy physical and emotional development.*

*4. 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.*

**Sec. 3.** *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 e-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.*

**Sec. 4.** *A course of study in computer-aided drafting and design, or CADD, 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 pupil's ability to:*

- (a) Create various geometric constructions;*
- (b) Use appropriate measuring and scaling techniques;*
- (c) Use conventional drafting practices;*
- (d) Create multiview drawings using orthographic projections;*
- (e) Apply dimensions and annotations;*
- (f) Create pictorial drawings; and*
- (g) Create development drawings and models.*

*2. For the area of fundamental computer skills, understand computer-aided drafting and design processes as demonstrated by the pupil's ability to:*

*(a) Determine fundamental safety and ergonomic factors in the computer-aided drafting and design work environment;*

*(b) Maintain, operate and adjust computer hardware; and*

*(c) Demonstrate proficiency in common operating systems and software.*

*3. For the area of fundamental computer-aided drafting and design skills, understand computer-aided drafting and design processes, as demonstrated by the pupil's ability to:*

*(a) Perform drawing set up and layout;*

*(b) Create, apply and modify annotations;*

*(c) Construct and manipulate problems using the Cartesian Coordinate System;*

*(d) Create and modify geometric entities using command sequences; and*

*(e) Use media output.*

*4. For the area of advanced computer-aided drafting and design skills, understand computer-aided drafting and design processes as demonstrated by the pupil's ability to:*

- (a) Develop symbols, attributes and libraries;*
- (b) Apply appropriate geometric dimensioning and tolerancing standards;*
- (c) Output drawings;*
- (d) Develop and display three-dimensional models;*
- (e) Develop and construct presentation drawings; and*
- (f) Customize a computer-aided drafting and design working environment.*

*5. For the area of related disciplines, understand computer-aided drafting and design principles as demonstrated by the pupil's ability to apply drafting concepts related to:*

- (a) Basic manufacturing processes;*
- (b) Basic architectural design;*
- (c) Basic geographic information systems and civil engineering; and*
- (d) Basic electronics.*

*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.*

**Sec. 5.** *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.*

**Sec. 6.** *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.*

**Sec. 7.** *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 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.*

**Sec. 8.** NAC 389.195 is hereby amended to read as follows:

389.195 1. The State Board of Education prescribes the following courses of study for elementary schools:

- (a) Reading.
- (b) Language.
- (c) Social studies.
- (d) Mathematics.
- (e) Science.
- (f) Art.
- (g) Music.
- (h) Health.
- (i) Physical education.
- (j) Computers.

2. In addition to the courses prescribed by subsection 1, a course of study in:

(a) Introduction to technology is prescribed ~~[on and after September 1, 1993,]~~ for pupils in sixth, seventh or eighth grade.

(b) ~~[Career and occupational guidance]~~ *Academic achievement, career exploration, and personal and social development* is prescribed ~~[on and after September 1, 1992,]~~ for pupils in seventh or eighth grade.

3. A local school board may offer:

(a) A course in a foreign language as an elective course for pupils in kindergarten through the eighth grade.

(b) A course in home and career skills as an elective course for pupils in seventh and eighth grades.

**Sec. 9.** NAC 389.450 is hereby amended to read as follows:

389.450 In addition to the courses of study required in chapter 389 of NRS, the State Board of Education prescribes the following courses of study for graduation from a public high school:

1. Arts and humanities or occupational education;
2. Health education;
3. English;
4. Mathematics, which may include the following courses of study:
  - (a) Basic mathematics;
  - (b) Mathematics for everyday living;
  - (c) Prealgebra;
  - (d) Algebra I;
  - (e) Geometry;
  - (f) Algebra II;
  - (g) Trigonometry;
  - (h) Analytic geometry;
  - (i) Precalculus;
  - (j) Calculus; and
  - (k) Probability and statistics;
5. Physical education or personal fitness;
6. Science, which may include the following courses of study:
  - (a) Life science;

- (b) Earth science;
  - (c) Physical science;
  - (d) Environmental science; and
  - (e) General science;
7. Use of computers, which may include the following courses of study:

- (a) Accounting and computing;
- (b) Processing business information;
- (c) Word processing;
- (d) Introduction to computers;
- (e) Application of computers; and
- (f) Science of computers; and

8.  ~~Career and occupational guidance and counseling.~~ *Academic achievement, career exploration and personal and social development.*

**Sec. 10.** 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.
- 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 ~~389.538, inclusive.~~ *389.536, inclusive, and sections 5 and 6 of this regulation.*

- 4. The arts.

5. Business, which may include the courses of study described in NAC 389.542 to 389.554, inclusive.
6. Communications, which may include the courses of study described in NAC 389.556 and 389.558.
7. Occupational education, in cooperation with private employers, as described in NAC 389.562, 389.564 and 389.566.
8. Drivers' education.
9. Foreign language.
10. Occupations, which may include the courses of study described in NAC 389.572 to 389.584, inclusive **[H]**, *and section 7 of this regulation.*
11. Occupations in trade and industry, which may include the courses of study described in NAC 389.586 to 389.618, inclusive **[H]**, *and sections 3 and 4 of this regulation.*
12. Family and consumer sciences.
13. Industrial arts.
14. Marketing.
15. Skills needed to obtain employment as described in NAC 389.644 to 389.650, inclusive.
16. Social studies.
17. Introduction to occupations which may include the courses of study described in NAC 389.6528 to 389.6547, inclusive.
18. Great Basin Native American languages.

**Sec. 11.** NAC 389.392, 389.512, 389.522, 389.538, 389.578 and 389.654 are hereby repealed.

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## TEXT OF REPEALED SECTIONS

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**389.392 Career and occupational guidance.** A course of study in career and occupational guidance must include instruction designed to teach the pupil by the completion of the eighth grade to:

1. Demonstrate a positive attitude toward himself as a unique and worthy person.
2. Define the factors which influence the development of a positive self-esteem.
3. Demonstrate skills in recognizing acceptable similarities and differences among people.
4. Demonstrate skills for interacting with others.
5. Demonstrate skills in self-discipline, reducing stress and coping with changes in life.
6. Demonstrate good health maintenance.
7. Describe the considerations involved in making choices regarding leisure and life style.
8. Demonstrate the application of skills in the academic and occupational disciplines—  
communication, mathematics, economics, science and technology.
9. Demonstrate a knowledge of skills that facilitate learning.
10. Demonstrate the adaptation of skills in a dynamic society.
11. Demonstrate decision making when applied to career, educational and occupational  
planning.
12. Demonstrate a knowledge of the relationship between a changing world and lifelong  
learning.

13. Describe how choices in leisure time fulfill personal needs.
14. Describe how each job contributes to society.
15. Describe how occupations and careers relate to personal needs and society's functions.
16. Demonstrate skills for locating, evaluating and interpreting information about careers and occupations.
17. Demonstrate skills for making career and occupational decisions.
18. Demonstrate employability skills.
19. Describe the services available for placing a person in an area of employment that relate to the person's own interests and skills.

**389.512 Career and occupational guidance.** A course of study in career and occupational guidance must include instruction designed to teach the pupil to:

1. Demonstrate a positive attitude toward himself as a unique and worthy person.
2. Define the factors which influence the development of a positive self-esteem.
3. Demonstrate skills in recognizing acceptable similarities and differences among people.
4. Demonstrate skills for interacting with others.
5. Demonstrate skills in self-discipline, reducing stress and coping with changes in life.
6. Demonstrate good health maintenance.
7. Demonstrate personal skills, attitudes and competencies necessary for becoming a contributing, responsible citizen.
8. Describe the considerations involved in making choices regarding leisure and life style.
9. Demonstrate the application of skills in the academic and occupational disciplines—communication, mathematics, economics, science and technology.
10. Demonstrate a knowledge of skills that facilitate learning.

11. Demonstrate the adaptation of skills in a dynamic society.
12. Demonstrate decision making when applied to career, educational and occupational planning.
13. Demonstrate a knowledge of the relationship between a changing world and lifelong learning.
14. Describe how choices in leisure time fulfill personal needs.
15. Describe how each job contributes to society.
16. Demonstrate an awareness of the dignity in all work.
17. Describe how occupations and careers relate to personal needs and society's functions.
18. Demonstrate skills for locating, evaluating and interpreting information about career and occupational education.
19. Demonstrate skills for making career and occupational decisions.
20. Demonstrate employability skills.
21. Use the services available for placing a person in an area of employment that relate to the person's own interests and skills.

**389.522 Ornamental horticulture.** A course of study in ornamental horticulture must include instruction designed to teach the pupil to do the following:

1. Identify structures and equipment used in providing ornamental plants and plants from a greenhouse or nursery.
2. Develop a knowledge of horticultural marketing, finances, credit, accounts, labeling, pricing, displays and advertising.
3. Identify and demonstrate the skill to control diseases, insects, organisms and weeds.
4. Perform different types of propagation of plants.

5. Apply a knowledge of accessories used in floral design and arranging and of the judging of flowers.

**389.538 Agricultural machinery and construction.** A course of study in agricultural machinery and construction must include instruction designed to teach the pupil to do the following:

1. Demonstrate the proper use of agricultural machinery and equipment and perform the necessary maintenance.
2. Develop an understanding of agricultural machinery and how it functions.
3. Apply knowledge and skill in the construction used on a modern farm including welding, oxyacetylene cutting, plumbing and electrical wiring.
4. Estimate the materials needed for constructing a given project for a farm and calculate its cost.

**389.578 Care of children.** A course of study in the care of children must include instruction designed to teach the pupil to do the following:

1. Identify different types of centers for the care of children.
2. Demonstrate a knowledge of first aid.
3. Identify the patterns of behavior found in each stage in the development of a child from birth to 5 years of age.
4. Lead educational activities for children.
5. Guide a child's behavior using reinforcement of the proper behavior.
6. Identify procedures for opening and operating a facility for the care of children.
7. Identify state or national standards and requirements for licensing for operating or working in a facility for the care of children.

**389.654 Introduction to plant science.** A course of study in an introduction to plant

science must include instruction designed to teach the pupil to:

1. Identify the characteristics which distinguish gymnosperms from angiosperms.
2. Identify the parts of a seed on a variety of specimens.
3. Identify the characteristics which distinguish a fruit from a seed.
4. Identify the parts of an embryo plant.
5. Describe the functions of the various types of root systems.
6. Describe the functions of the four types of root tissues.
7. Identify the functions of woody and nonwoody plant stems.
8. Identify the inner and outer structures of woody plants.
9. Identify the characteristics which distinguish heartwood from sapwood.
10. Identify the various parts of a leaf.
11. Describe the main functions of leaves.
12. Describe the process of photosynthesis.
13. Explain how food substances and water are carried throughout a leaf.
14. Compare the venation of dicot and monocot leaves.
15. Describe the distinguishing characteristics of evergreen and deciduous plants and

provide examples of each.

16. Explain why fall coloration takes place in certain types of plants.
17. Define the term "flower."
18. Describe the function of each part of a monocot and dicot flower.
19. Identify plants which have both stamens and pistils on the same flower.
20. Identify plants which have stamens and pistils in separate flowers on the same plant.

21. Identify plants that have separate male and female plants.
22. Define asexual reproduction.
23. Identify the common forms of asexual reproduction in plants.
24. Provide examples of fruits and vegetables that are reproduced by each of the asexual methods.
25. Define “sexual reproduction” in plants.
26. Describe the process of seed formation.
27. Describe environmental factors affecting plant growth.
28. Describe the soil characteristics that relate to plant growth.
29. Conduct a pH test of a soil sample and interpret the results.
30. Define plant disease.
31. Identify a variety of plant diseases.
32. Define insect pests.
33. Identify a variety of insect pests.
34. Describe the common types of pesticides to include the benefits and hazards of each.
35. Identify examples of plant products that are used for medicinal purposes or as stimulants.
36. List examples of tree species used in the production of lumber categorized as either softwood or hardwood.
37. Identify plants used for their aesthetic value.
38. Identify the knowledge and skills needed to obtain a job in the area of plant science.

**NOTICE OF ADOPTION OF PROPOSED REGULATION  
LCB File No. R010-03**

The State Board of Education adopted regulations assigned LCB File No. R010-03 which pertain to chapter 389 of the Nevada Administrative Code on September 27, 2003.

**Notice date:** 8/22/2003  
**Hearing date:** 9/27/2003

**Date of adoption by agency:** 9/27/2003  
**Filing date:** 10/30/2003

**INFORMATIONAL STATEMENT**

**1. A description of how public comment was solicited, a summary of public response, and explanation how other interested persons may obtain a copy of the summary.**

The Notice of Workshop to Solicit Comments on Proposed Regulations was sent to approximately one-hundred fifty individuals and educational organizations. The workshop was conducted by the Nevada State Board of Education on September 27, 2003. Persons from the public spoke to the proposed language.

Notice of Intent to Act Upon a Regulation for public hearing and adoption of regulation language, NAC 389, Occupational Skill Standards: Agriculture Mechanical Engineering Technology; Counseling Program Standards K-12, Careers, Academic Personal/Social Development; Early Childhood Education Services; Environmental Horticulture Science; Information Technology Skills Standards and Computer-Aided Drafting and Design (CADD) Exit Level Skills Standards (LCB File R010-03) was sent to approximately one-hundred fifty individuals and educational organizations. A one-time only public hearing was conducted September 27, 2003, to provide the opportunity for comments by affected parties and the public. There were no comments from the public. The Board adopted the permanent language on September 27, 2003 without revision.

**2. The Number of Persons Who:**

- a) Attended Each Hearing:** Workshop: 6 Hearing: 6  
**b) Testified at Each Hearing;** Workshop: 0 Hearing : 0  
**and,**  
**c) Submitted Written Statements:** Workshop: 0 Hearing: 0

Copies of written statements can be requested by calling LaDonna Byrd, Executive Assistant to the Board at the Department of Education (775) 687-9225, or by writing to the Department of Education, Suite 100, 700 East Fifth Street, Carson City, Nevada, 89701-5096.

**3. A description of how comment was solicited from affected businesses, a summary of the response and an explanation how other interested parties may obtain a copy of the summary.**

Comment was solicited through the workshop notice of August 22, 2003 and public hearing notices of August 22, 2003. No person came forward to speak at the workshop held September 27, 2003, or the public hearing held September 27, 2003.

Comment was solicited through the public hearing notice of. No individual from the public came forward to speak

A copy of the summary and/or minutes of the public hearing may be obtained by calling LaDonna Byrd, Executive Assistant to the Board at the Department of Education (775) 687-9225, or by writing to the Department of Education, Suite 100, 700 East Fifth Street, Carson City, Nevada 89701-5096.

**4. If the regulation was adopted with or without change to any part of the proposed regulation, a summary of the reasons for adopting.**

The permanent regulation language was adopted by the Nevada State Board of Education at the public hearing held September 27, 2003, without revision.

**5. The estimated economic effect of the adopted regulation on the business which it is to regulate and on the public. These must be stated separately, and each case must include:**

There is no economic effect on the business which is regulated. There is no estimated economic effect on the public, either adversely or beneficially, nor immediate or long term.

**6. The estimated cost to the agency for enforcement of the adopted regulation.**

There is no additional cost to the agency for enforcement of this regulation.

**7. A description of any regulations of other state or government agencies which the proposed regulation overlaps or duplicates and a statement explaining why the duplication or overlapping is necessary. If the regulation overlaps or duplicates a federal regulation, the name of the regulating federal agency.**

No other state or government agency regulations will be overlapped or duplicated by the above noted regulations. There is no duplication or overlap of federal regulations.

**8. If the regulation includes provisions which are more stringent than a federal regulation which regulates the same activity, a summary of such provisions.**

There are none.

**9. If the regulation provides a new fee or increases an existing fee, the total annual amount the agency expects to collect and the manner in which the money will be used.**

This regulation does not provide or involve a new fee.