

**PROPOSED REGULATION OF THE
STATE BOARD OF EDUCATION**

LCB File No. R185-03

November 18, 2003

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

AUTHORITY: §§1-4, NRS 385.080.

Section 1. Chapter 389 of NAC is hereby amended by adding thereto a new section to read as follows:

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.*

Sec. 2. 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 ~~§~~, *and section 1 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.

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. 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. 3. 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 is enrolled in one of the following occupational courses of study and that course of study includes as part of its curriculum the curriculum of the required course:

- (a) Agriculture and natural resource sciences ~~is~~ *described in NAC 389.520 to 389.538, inclusive, and section 1 of this regulation.*
- (b) Business.
- (c) Occupational 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 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 includes the curriculum of the required course of study.

3. After verification has been received by the board of trustees, the written curriculum and title of the course of study 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 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 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 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 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. 4. NAC 389.528 is hereby repealed.

TEXT OF REPEALED SECTION

389.528 Veterinary technology. A course of study in veterinary technology must include instruction designed to teach the pupil to do the following:

- 1. Recognize clinical signs of common diseases in animals.
- 2. Demonstrate a knowledge of the procedures for the management of an office in a veterinary clinic.
- 3. Provide assistance in the examination and treatment of animals.
- 4. Develop a knowledge of state and federal statutes and regulations concerning drugs.
- 5. Recognize the principles and methods for the control of disease.