PROPOSED REGULATION OF THE

STATE BOARD OF EDUCATION

LCB File No. R064-11

October 21, 2011

AUTHORITY: §§1-5, NRS 385.080 and 385.110.

A REGULATION relating to education; prescribing the performance standards for courses of study in graphic design, mechanical drafting and design, and architectural drafting and design; repealing the performance standards for courses of study in drafting and computer-aided drafting and design; and providing other matters properly relating thereto.

     Section 1. Chapter 389 of NAC is hereby amended by adding thereto the provisions set forth as sections 2, 3 and 4 of this regulation.

     Sec. 2. *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.

Sec. 3.   *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.

Sec. 4. *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.

Sec. 5. NAC 389.602 and 389.603 are hereby repealed.

TEXT OF REPEALED SECTIONS

389.602 Drafting. (NRS 385.080, 385.110) A course of study in drafting must include instruction designed to teach the pupil to do the following:

1. Sketch by freehand.

2. Identify, define, draw and construct geometric shapes and designs.

3. Complete a set of architectural, mechanical and electrical drawings.

4. Construct an orthographic drawing.

5. Complete a set of specifications.

6. Draw a topographical map.

389.603 Computer-aided drafting and design. (NRS 385.080, 385.110) 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.