

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

LCB File No. R055-06

April 20, 2006

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

AUTHORITY: §1, NRS 385.080 and 385.110.

A REGULATION relating to education; prescribing performance standards for a course of study in furniture and cabinetmaking; and providing other matters properly relating thereto.

Section 1. NAC 389.614 is hereby amended to read as follows:

389.614 A course of study in *furniture and* cabinetmaking must ~~[include instruction~~

~~designed to teach the pupil to do the following:~~

~~—1.— Read blueprints.~~

~~—2.— Estimate the need for materials.~~

~~—3.— Use portable electric tools and stationary equipment such as a shaper, planer, radial saw, jointer, sander and machines for dowling.~~

~~—4.— Design, layout, build, finish and install cabinets.~~

~~—5.— Apply a finish to a cabinet.]~~ *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 tools 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.*