

LCB File No. R236-03

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

Explanation: Matter in *italics* is new; matter in brackets [] is material to be omitted.

AUTHORITY: NRS 385.080

Section 1. NAC 389 is hereby amended as follows:

Section 2. *Residential Building Construction. 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 construction mathematics, blueprint reading and tool/equipment usage, the student shall understand the skills in mathematics required for carpentry, residential plumbing, residential wiring, and for masonry and concrete placement, and for interpretation of blueprints, as demonstrated by the student's ability to:

(a) Apply mathematics for practical use in carpentry;

(b) Apply mathematics for practical use in residential plumbing;

(c) Apply mathematics for practical use in residential wiring;

(d) Apply mathematics for practical use in masonry and concrete;

(e) Interpret and apply information from blue prints, schedules and specifications used in the residential construction trades.

2. For the area of safety, understand safe practices and proper tool/equipment usage, as demonstrated by the student's ability to:

(a) Demonstrate adherence to general shop and job-site safety rules including but not limited to those related to safety apparel; hazardous materials; tools, equipment and other apparatus, including fall-protection devices; and fire hazards.

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

3. For the area of site preparation, understand proper use of layout and measurement tools in residential construction and excavation processes, as demonstrated by the student's ability to:

(a) Properly use layout and measurement tools;

(b) Identify methods of excavation, compaction, and backfill processes common to residential construction.

4. For the area of foundations, understand layout techniques as demonstrated by the student's ability to:

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

(b) Demonstrate forming techniques in accordance with industry standards;

(c) Demonstrate techniques for placing concrete;

(d) Lay masonry units in accordance to plans and specifications.

5. For the area of carpentry, understand carpentry techniques as demonstrated by the student's ability to:

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

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

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

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

(e) Demonstrate techniques for the installation of exterior finish materials;

(f) Demonstrate techniques for the installation of doors and windows;

(g) Install thermal insulation and vapor barriers;

(h) Install roofing system, to include but not limited to underlayments, drip edging, flashing and shingles.

6. For the area of plumbing, understand the plumbing system for a single-family residence in accordance with accepted industry standards as demonstrated by the student's ability to:

(a) Layout the locations of plumbing fixtures and components, and complete a rough and top out installation of water piping in a single-family residence;

(b) Layout the locations of plumbing fixtures and components, and complete a rough and top out installation of DWV piping in a single-family residence;

(c) Install fixtures required for the completion of the water supply and DWV systems of the single-family residence.

7. For the area of electrical systems, understand the electrical system of a single-family residence in accordance with accepted industry standards as demonstrated by the student's ability to:

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

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

8. For the area of employability skills, achieve workplace readiness, career development, and lifelong learning as demonstrated by the student's ability to:

(a) Demonstrate problem-solving skills;

(b) Demonstrate critical-thinking skills;

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

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

(e) Demonstrate leadership and teamwork skills;

(f) Demonstrate sound workplace ethics;

(g) Demonstrate the ability to effectively manage resources in high-performance workplaces;

(h) Demonstrate career planning and development skills;

(i) Demonstrate job retention and lifelong-learning skills.