

PROPOSED REGULATION OF THE STATE BOARD OF EDUCATION

LCB File No. R166-12

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

AUTHORITY: NRS 385.080 & (if necessary, provide other statutory authority)

Section 1. NAC389 is hereby amended as follows:

NAC 389.601 Information technology - *networking*. (NRS 385.080, 385.110) A course of study in information technology - *networking* 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 ~~network systems, including topology, internetworking design, implementation, network instrumentation and network administration, understand basic network systems;~~ *identify and utilize safety procedures and proper tools, understand safety procedures and proper tools*, as demonstrated by the pupil's ability to:

(a) ~~Demonstrate the fundamental tasks required to administer a network;~~ *Identify and utilize safety procedures; and*

(b) ~~Demonstrate the use of network security policies and procedures;~~ *Identify and utilize proper tools.*

~~(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~~ *network system hardware*, understand *network system hardware* ~~basic hardware and software support;~~ as demonstrated by the pupil's ability to:

(a) ~~Understand hardware and software support;~~ *Identify network hardware;*

(b) ~~Understand quality customer service skills;~~ *Examine bridges and switches;*

(c) ~~Demonstrate proficiency with documentation skills; and~~ *Explore Routers; and*

(d) ~~Understand basic electronics, troubleshooting skills and the proper use of electronic test equipment and repair tools.~~ *Investigate wireless networks.*

3. For the area of *system network protocols*, ~~multimedia;~~ understand ~~multimedia content creation and authoring, including, without limitation;~~ *system network protocols, as demonstrated by the pupil's ability to*:

(a) ~~Fundamental drawing techniques;~~ *Identify protocols;*

(b) ~~The use of audio and video in content creation and authoring;~~ *Utilize protocols; and*

(c) ~~Computer animation;~~ *Identify securities policies and procedures.*

~~(d) Typography;~~

~~(e) Computer digital imaging;~~

~~(f) Web design and development;~~

~~(g) The use of electronic 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 *constructing network systems* ~~computer programming;~~ understand *constructing network systems* ~~essential programming skills;~~ as demonstrated by the pupil's ability to understand the:

- (a) ~~[Use of essential programming skills;]~~ *Identify network system needs;*
- (b) ~~[Design and analysis of software;]~~ *Design and evaluate network systems;*
- (c) ~~[Encoding of software; and]~~ *Construct network systems; and*
- (d) ~~[Testing and integration of software.]~~ *Perform network administration and monitoring.*

5. For the area of *maintaining network systems* ~~[computer applications,]~~ understand *maintaining network systems* ~~[contemporary application programs and office software application products,]~~ as demonstrated by the pupil's ability to understand the:

(a) ~~[Use of spreadsheet software;]~~ *Demonstrate network troubleshooting and diagnostic; and*

(b) ~~[Use of databases;]~~ *Demonstrate network maintenance.*

~~[(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.]~~

(Added to NAC by Bd. of Education by R010-03, eff. 10-30-2003)

New NAC: *Web design and development. A course of study in web design and development 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 the foundations of web design and development, understand the foundation of web design and development, as demonstrated by the pupil's ability to understand the:*

(a) *Understand the history of web design and development;*

(b) *Understand layout and design theory; and*

- (c) Demonstrate knowledge of industry terminology.*
- 2. For the area of ethical use of information, understand ethical use of information, as demonstrated by the pupil's ability to understand the:*
 - (a) Understand copyright laws in relationship to web development;*
 - (b) Understand security issues in relation to web development; and*
 - (c) Apply personal and professional ethics.*
- 3. For the area of constructing a website, understand website construction, as demonstrated by the pupil's ability to understand the:*
 - (a) Develop a file management system;*
 - (b) Demonstrate proper layout techniques;*
 - (c) Create web content;*
 - (d) Create media for the web;*
 - (e) Demonstrate knowledge of challenges associated with accessibility and usability;*
 - (f) Understand the impact of marketing, analytics and branding; and*
 - (g) Update and maintain web content.*
- 4. For the area of publishing website, understand the process of publishing a website, as demonstrated by the pupil's ability to understand the:*
 - (a) Understand fundamentals of a web server; and*
 - (b) Demonstrate publishing to the web.*
- 5. For the area of web programming, understand web programming, as demonstrated by the pupil's ability to understand the:*
 - (a) Develop a website using Hypertext Markup Language (HTML);*
 - (b) Understand concepts and use of Cascading Style Sheets (CSS);*
 - (c) Understand foundations of web scripting;*
 - (d) Understand databases; and*
 - (e) Utilize content management systems in web development.*
- 6. For the area of advanced and emerging technologies in web development, understand advanced and emerging technologies in web development , as demonstrated by the pupil's ability to understand the:*
 - (a) Understand E-commerce concepts;*
 - (b) Understand the role of social media; and*
 - (c) Utilize cloud computing resources.*