New Hampshire
Department of Education

CHAPTER Ed 300 ADMINISTRATION OF MINIMUM STANDARDS IN PUBLIC SCHOOLS

Ed 306.47 Technology/Engineering Education Program.

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(a) Technology/engineering education is the discipline devoted to the study of human invention and innovation and their influence on our natural and human-made environment.

(b) The local school board shall require that a technology/engineering education program in each middle school provides:

(1) Opportunities for students to develop an understanding of the technological world in which they live and will someday work;

(2) Opportunities for students to develop positive attitudes and knowledge about present and future technologies in 3 or more of the following content areas:

a. Medical technologies;

b. Agricultural;

c. Biotechnologies;

d. Energy and power technologies;

e. Information and communications technologies;

f. Transportation technologies;

g. Manufacturing technologies;

h. Construction technologies; and

i. New and emerging technologies;

(3) Opportunities for students to develop a knowledge and understanding of how social forces like demographics and prevailing economic systems can influence the free-enterprise system and the global marketplace;

(4) Opportunities to promote the development of problem-solving skills as well as basic skills in planning, design, fabrication, and evaluating technical processes technology/engineering principles and design, encouraging those habits of mind necessary to be a lifelong learner; and

(5) Systematic instruction and activities designed to enable students to:

a. Acquire an understanding of technical processes, the practical application of mathematics and scientific principles, and the interrelationships between technology/engineering education and other academic disciplines in the school curriculum;

b. Be aware of the right to, and the knowledge of what constitutes, safe work environments as well as the safe and appropriate use of tools, small machines, and processes;

c. Understand industry and technology, their systematic structures, and their place in our culture;

d. Understand the technological systems model requiring inputs, processes, outputs and feedback, where the processes include the resources of people, information, tools, energy, capital, time, materials;

e. Learn leadership and group-process skills;

f. Recognize and build upon individual talents and interests; and

g. Become familiar with opportunities and requirements for careers in new and emerging technologies like medicine, agriculture, biotechnology, energy and power, information and communications, transportation, manufacturing, and construction.

(c) The local school board shall require that a technology/engineering education program in each high school provides:

(1) Opportunities for students to develop insight, understanding, and application of technological concepts, processes, and systems;

(2) Opportunities for students to develop safe and efficient habits in the application of tools, materials, machines, processes, and technical concepts;

(3) Planned activities designed to increase students' knowledge and skills related to technologies like medicine, agriculture, biotechnology, energy and power, information and communications, transportation, manufacturing, and construction;

(4) Courses totaling at least 4 credits in technology/engineering education with a minimum of one credit offered in 3 of the 4 areas of:

a. Energy and power technologies, including electricity, electronics, power mechanics, transportation, alternative energy, and energy conservation;

b. Process technologies, including manufacturing, construction, wood, metal, medical, agricultural, and biotechnology;

c. Communication and information technologies, including engineering graphics/CAD fundamentals, architectural design including modeling and the virtual environment, photography, printing, desktop publishing, graphic arts and design; and

d. Engineering principles and design; and

(5) Systematic instruction and activities designed to enable students to:

a. Understand the factors of production, including capital, labor, and management, in relation to industrial organization, systems and structure;

b. Utilize the engineering design process to propose, build, test and assess technological problems in a systematic and economically sound manner;

c. Develop skills in specific machine and tool operations;

d. Plan, design, produce and/or use measuring instruments, jigs, fixtures, and templates to control, test and assess parts of a technological process;

e. Use a variety of problem-solving tools to develop and apply critical thinking skills to technological problems;

f. Exhibit an understanding for the importance of using resources in a way that is economical, efficient and respectful of our shared environment;

g. Develop those habits of mind necessary to a lifelong learner such as the ability to question, investigate, design, experiment, and evaluate; and

h. Develop leadership abilities required in a technological society such as communication, cooperation, and collaboration with individuals and groups.

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