TITLE 6 PRIMARY AND SECONDARY EDUCATION
CHAPTER 64 SCHOOL PERSONNEL - COMPETENCIES FOR LICENSURE
PART 16 COMPETENCIES FOR ENTRY-LEVEL TECHNOLOGY STUDIES/EDUCATION TEACHERS

6.64.16.1 ISSUING AGENCY: Public Education Department (PED)
[6.64.16.1 NMAC - N, 04-29-05; A, 10-31-07]

6.64.16.2 SCOPE: All institutions of higher education in New Mexico that establish or maintain a curriculum for persons seeking an endorsement in technology studies/education to a state educator license.
[6.64.16.2 NMAC - N, 04-29-05]

6.64.16.3 STATUTORY AUTHORITY: Sections 22-2-1 and 22-2-2 (J), NMSA 1978.
[6.64.16.3 NMAC - N, 04-29-05]

6.64.16.4 DURATION: Permanent
[6.64.16.4 NMAC - N, 04-29-05]

6.64.16.5 EFFECTIVE DATE: April 29, 2005, unless a later date is cited in the history note at the end of a section.
[6.64.16.5 NMAC - N, 04-29-05]

6.64.16.6 OBJECTIVE: This rule establishes entry-level competencies that are based on what beginning technology studies/education teachers must know and be able to do to provide effective technology education programs in New Mexico schools. These competencies should be incorporated into all college or university curricula for persons seeking a technology studies/education endorsement to their state educator license.
[6.64.16.6 NMAC - N, 04-29-05; A, 10-31-07]

6.64.16.7 DEFINITIONS:

A. "Design" means an iterative decision-making process that produces plans by which resources are converted into products or systems that meet human needs or solve problems.

B. "Design process "a systematic problem-solving strategy, with criteria and constraints, used to develop many possible solutions to solve a problem or satisfy human needs and wants or to narrow down the possible solutions.

C. "System" means a group of interacting, interrelated or interdependent elements or parts that function together as a whole to accomplish a goal.

D. "Technology" means:

(1) human innovation in action that involves the generation of knowledge and processes to develop systems that solve problems and extend human capabilities; or

(2) the innovation, change or modification of the natural environment to satisfy perceived human needs and wants.

E. "Technological literacy" means the ability to use, manage, understand and assess technology.
[6.64.16.7 NMAC - N, 04-29-05]

6.64.16.8 REQUIREMENTS:

A. Beginning teachers seeking an endorsement in technology education to an initial level 1 New Mexico teaching license must satisfy all of the requirements of the license as provided in the (PED) rule for that license, which include, among other requirements, 24-36 semester hours in technology education.

B. Teachers seeking to add an endorsement in technology education to an existing New Mexico teaching license of any level shall meet one of the following requirements:

(1) pass the content knowledge test(s) of the New Mexico teacher assessments, the predecessor New Mexico teacher licensure examination or accepted comparable licensure test(s) from another state, if available, in technology education; or

(2) successfully complete an undergraduate academic major (24-36 semester hours), coursework equivalent to an undergraduate major or a graduate degree in technology education; or

(3) obtain certification in technology education for the appropriate grade level of New Mexico licensure from the national board for professional teaching standards.
[6.64.16.8 NMAC - N, 04-29-05; A, 10-31-07]

6.64.16.9 COMPETENCIES FOR ENTRY-LEVEL TECHNOLOGY STUDIES/EDUCATION TEACHERS:

A. The domain of technology include the preparation to teach technology studies/education which will result in individuals who can teach others the competencies in basic technology, the relationship between technology and society, technological design and the skills necessary for a technological world the teacher must:

(1) understand the nature of technology, including the characteristics and scope of technology, the core concepts of technology, the relationships among technologies and the connections between technology and other fields;

(2) recognize the relationship between technology and society, including the cultural, social, economic and political effects of technology, the effects of technology on the environment, the role of society in the development and use of technology and the influence of technology on history;

(3) develop an understanding of design, including the attributes of design, the processes of engineering design, the role of troubleshooting, research and development, invention and innovation and experimentation in problem solving;

(4) develop abilities for a technological world, including application of the design process, use and maintenance of technological products and systems and assessment of the impact of products and systems; and

(5) develop a working knowledge of the designed world, including medical technologies agricultural and related biotechnologies, energy and power technologies, information and communication technologies transportation technologies, manufacturing technologies and construction technologies.

B. Career cluster competencies involves preparation to teach technology studies/education which will result in individuals who can teach others the competencies in technology careers. Teachers must;

(1) achieve specific academic knowledge and skills required to pursue the full range of careers and post-secondary education opportunities within technology studies/education;

(2) use oral and written communication skills in creating, expressing and interpreting information and ideas including technical terminology and information within technology studies/education;

(3) employ technical communications effectively to maintain good records and reporting procedures;

(4) solve problems using critical thinking skills (e.g., analyze, synthesize and evaluate) independently and in teams;

(5) use information technology tools to access, manage, integrate and create information;

(6) identify health goals and safety procedures for technology studies/education occupations;

(7) use leadership skills in collaborating with others to accomplish organizational goals and objectives;

(8) know and understand the importance of professional ethics and legal responsibilities;

(9) know and understand the importance of employability skills; and

(10) use the technical knowledge and skills required to pursue the full range of careers in technology studies/education.

C. Local program success competencies

(1) Instruction for preparation to teach technology studies/education which will result in individuals who can fulfill the instructional role in the technology education program to:

(a) demonstrate teacher behaviors documented by research to be related to student achievement including clarity, variability, enthusiasm, task-oriented/business like behavior and student opportunity to learn criterion material;

(b) demonstrate master teacher competencies including with-it-ness, student centeredness and an in-charge image;

(c) conduct and use research on how students learn technology, addressing both commonality and diversity of students;

(d) design and evaluate curricula and programs that enable all students to attain technological literacy; and

(e) demonstrate proficiency in the development and implementation of contextual-based, laboratory intensive technology studies/education programs.

(2) Career readiness involves preparation to teach technology studies/education which will result in individuals who can fulfill a school-to-career role in the technology education program. Teachers must:

(a) demonstrate knowledge of school-to-work programs;
(b) plan, implement and supervise appropriate school-to-work programs; and
(c) demonstrate sound judgment when supervising school-to-work programs.

(3) Technology studies advisory (TSA) preparation to teach technology studies/education which will result in individuals who can fulfill the TSA advisory role in the technology education program. Teachers must:

(a) plan, implement and supervise the activities of an active TSA chapter;
(b) undertake advisory responsibilities necessary for operating an active TSA chapter; and
(c) demonstrate sound judgment in the role of a TSA advisor.

(4) Partnerships involve preparation to teach technology studies/education which will result in individuals who can fulfill a partnership-building role in the technology education program. Teachers must:

(a) utilize stakeholder groups within and outside the school and community to improve the program (e.g., students, administrators, parents/guardians, colleagues, community members, advisory committee members, state technology education leaders and others);
(b) utilize resources from within and outside of the school and community to improve the program; and
(c) recognize stakeholders for their contributions and support.

(5) Program marketing involves preparation to teach technology studies/education which will result in individuals who can fulfill a marketing role in the technology education program. Teachers must:

(a) demonstrate an ability to market their program to the school and community and build support for the program; and
(b) demonstrate an understanding of how to recruit potential students into the program.

(6) Professional growth involves preparation to teach technology studies/education which will result in individuals who can fulfill a professional role in the technology education program. Teachers must:

(a) join and participate in appropriate state and national technology education, as well as career and technical education, professional organizations;
(b) incorporate new ideas and technologies learned through in-service into their teaching and programs; and
(c) model systems implementation and analysis, design and communication in such a manner as to demonstrate the interwoven fiber of technology in all aspects of education and daily life.

(7) Program planning involves preparation to teach technology studies/education which will result in individuals who can fulfill a program-planning role in the technology education program. Teachers must:

(a) utilize stakeholder groups like an advisory committee in program planning; and
(b) inform school administrators about stakeholder group recommendations.

D. Program management competencies involves preparation to teach technology studies/education which will result in individuals who can manage the technology education program. Teachers must:

(1) maintain facilities, equipment and materials;
(2) demonstrate knowledge of departmental budgeting;
(3) complete required program records and reports; and
(4) balance all aspects of a strong program.

[6.64.16.9 NMAC - N, 04-29-05]

6.64.16.10 IMPLEMENTATION: Institutions of higher education that prepare teachers shall deliver the competencies in a PED approved endorsement program within a range of twenty-four (24) to thirty-six (36) semester hours of credit. For secondary and pre K-12 licensed teachers, a minimum of twelve (12) semester hours must be upper division credit.
[6.64.16.10 NMAC - N, 04-29-05; A, 10-31-07]

HISTORY OF 6.64.16 NMAC: [RESERVED]