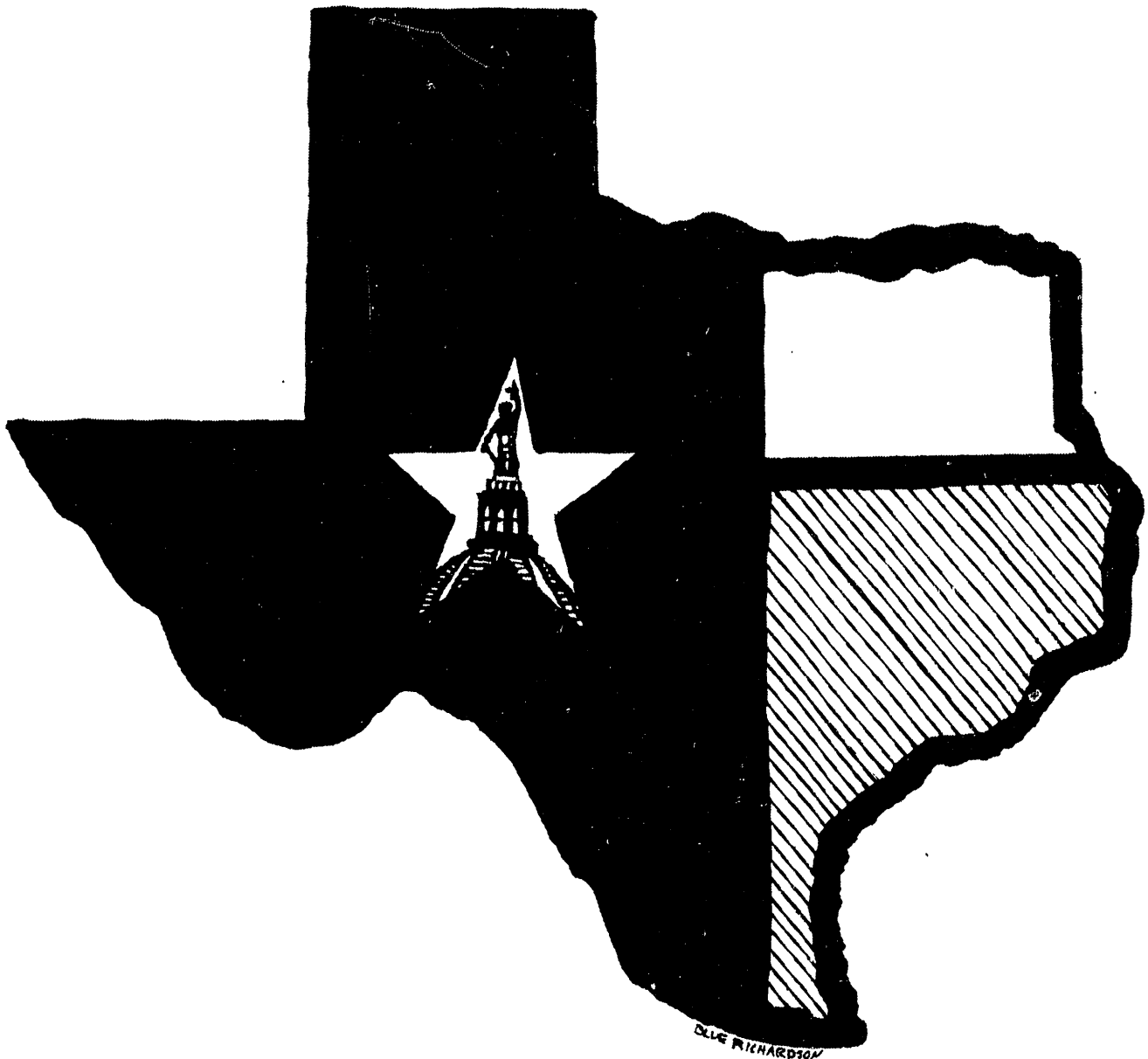


Texas Register

Volume 12, Number 73, September 29, 1987

Pages 3401-3498



Highlights

The **Board of Nurse Examiners** adopts on an emergency basis an amendment addressing the fee change which occurred as a result of Senate Bill 1160. Effective date - October 1, 1987 **page 3408**

The **Texas Department of Agriculture** adopts an amendment to set and collect fees for seed certification in compliance with the directive of the

70th Legislature. Effective date - October 13, 1987 **page 3479**

The **Texas Education Agency** proposes a new rule concerning guidelines and minimum standards for operation of Texas proprietary schools. Proposed date of adoption - January 9, 1988 **page 3410**

Office of
the Secretary
of State

Texas Register

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- Proposed Rules—rules proposed for adoption
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Emergency

Rules An agency may adopt a new or amended rule, or repeal an existing rule on an emergency basis, if it determines that such action is necessary for the public health, safety, or welfare of this state. The rule may become effective immediately upon filing with the *Texas Register*, or on a stated date less than 20 days after filing, for no more than 120 days. The emergency action is renewable once for no more than 60 days.

Symbology in amended emergency rules. New language added to an existing rule is indicated by the use of **bold text**. [Brackets] indicate deletion of existing material within a rule.

TITLE 19. EDUCATION

Part II. Texas Education

Agency

Chapter 85. Student Services

Subchapter B. Guidance Services

★19 TAC §85.22

The Texas Education Agency adopts on an emergency basis an amendment to §85.22, concerning school-community guidance centers. The amendment implements the General Appropriations Act, Article III, Section 1, Rider Number 13 (70th Legislature, 1987) which changed the criteria for establishing school-community guidance centers by deleting the requirement that such centers be established in urban areas. Such centers may now be established by school districts or cooperatives with at least 6,000 average daily attendance.

The amendment is adopted on an emergency basis to ensure that all districts eligible to establish school-community guidance centers may do so.

The amendment is adopted on an emergency basis under the Texas Education Code, §21.601, which authorizes the establishment of school-community guidance centers.

§85.22. *School-Community Guidance Centers.*

(a) (No change.)

(b) In accordance with the Texas Education Code, Chapter 21, Subchapter P, a school-community guidance center for [urban] areas reflecting high concentrations of adjudicated persons may be established by school districts [located within the counties having the highest juvenile population in the state]. School districts or a cooperative of school districts shall have an average daily attendance of at least 6,000 students.

(c)-(i) (No change.)

Issued in Austin, Texas, on September 15, 1987.

TRD-8708146

W. N. Kirby
Commissioner of
Education

Effective date: September 22, 1987

Expiration date: January 20, 1988

For further information, please call
(512) 463-9212.



TITLE 22. EXAMINING

BOARDS

Part XI. Board of Nurse

Examiners

Chapter 223. Fees

★22 TAC §223.1

The Board of Nurse Examiners adopts on an emergency basis an amendment to §223.1, concerning fees. The amendment conforms with Senate Bill 1160, 70th Legislature, 1987.

The amendment is adopted on an emergency basis to address the fee change which occurred as a result of Senate Bill 1160, 70th Legislature, 1987.

The amendment is adopted on an emergency basis under Texas Civil Statutes, Article 4514, §1, which provide the Board of Nurse Examiners with the authority to make and enforce all rules and regulations necessary for the performance of its duties and conducting of proceedings before it, to establish standards of professional conduct for all persons licensed under the provisions of this law in keeping with its purpose and objectives, to regulate the practice of professional nursing, and to determine whether or not an act constitutes the practice of professional nursing, not inconsistent with the Act, provided that such rules and regulations shall not be inconsistent with the provisions of the law. The amendment is also adopted on an emergency basis under Texas Civil Statutes, Article 4527, which provide the Board of Nurse Examiners with the authority to establish reasonable and necessary fees for the administration of its functions.

§223.1. *Fees.* The Board of Nurse Examiners shall establish reasonable and necessary fees for the administration of its functions in amounts not to exceed:

(1)-(5) (No change.)

(6) reregistration (each biennium)—\$22 [§16];

(7)-(13) (No change.)

Issued in Austin, Texas, on September 21, 1987.

TRD-8708132

Louise Sanders, R.N.,
Ph.D.

Effective date: October 1, 1987

Expiration date: January 29, 1988

For further information, please call
(512) 835-4880.



TITLE 25. HEALTH SERVICES

Part I. Texas Department of Health

Chapter 181. Vital Statistics Miscellaneous Provisions [Vital Statistics]

★25 TAC §181.10

The Texas Department of Health adopts on an emergency basis new §181.10, concerning confidentiality of birth records covering adoption placement. The new section will safeguard the confidentiality of birth records covering adoption placements which are on file with the department's Bureau of Vital Statistics and local registrars. The section is being adopted on an emergency basis to comply with the provisions of House Bill 1994, 70th Legislature, 1987, which became effective on September 1, 1987. The bill which amends the Texas Vital Statistics Law, Article 4477, Rule 51a, requires the department to adopt rules to insure that birth records and indexes covering adoption placements, which are subject to the department or local registrars control and are accessible to the public, do not contain information or cross references through which the confidentiality of adoption placements can be broken. Because the department is required to adopt rules to implement House Bill 1994, effective September 1, 1987, the department adopts the new section on an emergency basis.

The new section is adopted on an emergency basis under Texas Civil Statutes, Article 4477, Rule 51a, as amended by House Bill 1994, 70th Legislature, 1987, which provide the Texas Board of Health with the authority to adopt rules to insure the confidentiality of birth records covering adoption placements; and Texas Civil Statutes, Article 6252-13a, §5, which provide the Texas Board of Health with the authority to adopt rules on an emergency basis.

government or small businesses as a result of enforcing or administering the section.

Mr. Moak and Beverly Bardsley, director for policy development, has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be regulatory relief for small businesses which operate proprietary schools. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to Beverly Bardsley, Director for Policy Development, 1701 North Congress Avenue, Austin, Texas 78701, (512) 463-9682. All requests for a public hearing submitted in accordance with the Administrative Procedure and Texas Register Act must be received by the commissioner of education not more than 15 calendar days after notice of a proposed new section has been published in the *Texas Register*.

The new section is proposed under House Bill 5, 70th Legislature, 1987, Chapter 375, page 3730, which became effective August 31, 1987, and provides the Texas Education Agency with the authority to make rules for the benefit of small businesses. §69.126. *Applications from Small Businesses.*

(a) Time periods. Applications from small businesses for certificates of approval, representatives, directors, and instructional staff shall be processed in accordance with the following time periods.

(1) The first period is a time from the receipt of an application to the date of issuance of a written notice approving the application or outlining the reasons why the application is unacceptable. The time periods from each application are:

(A) initial certificate of approval—30 days;

(B) renewed certificate of approval—30 days;

(C) change in owner certificate of approval—30 days;

(D) initial representatives—10 days;

(E) renewed representatives—10 days; and

(F) directors and instructional staff—20 days.

(2) The second period is a time from receipt of the last item necessary to complete the application to the date of issuance of written notice approving or denying approval of the application. The time periods for each application are:

(A) initial certificate of approval—21 days;

(B) renewed certificate of approval—21 days;

(C) change in owner certificate of approval—21 days;

(D) initial representative (approval contingent upon issuance of school's approval)—21 days;

(E) initial representative (approval not contingent upon issuance of school's approval)—10 days;

(F) renewed representative (approval contingent upon issuance of school's approval)—21 days;

(G) directors and instructional staff (approval contingent upon issuance of school's approval)—21 days; and

(H) directors and instructional staff (approval not contingent on issuance of school's approval)—20 days.

(b) Reimbursement of fees.

(1) In the event the application is not processed in the time periods as stated in subsection (a) of this section, the applicant has the right to request of the administrator full reimbursement of all filing fees paid in that particular application process. If the administrator does not agree that the established periods have been violated or finds that good cause existed for exceeding the established periods, the request will be denied.

(2) Good cause for exceeding the period established is considered to exist if:

(A) the number of applications for certificates of approval, representatives, directors, or instructional staff as appropriate to be processed exceeds by 15% or more the number processed in the same calendar quarter the preceding year;

(B) another public or private entity utilized in the application process caused the delay; or

(C) other conditions existed giving good cause for exceeding the established periods.

(c) Appeal. If the request for full reimbursement authorized by subsection (b) of this section is denied, the applicant may then request a hearing by appealing to the commissioner of education for a resolution of the dispute. The appeal will be processed in the same manner as other appeals involving proprietary schools pursuant to the Texas Education Code, Chapter 32, Subchapter E, and Chapter 157 of this title (relating to Hearings and Appeals).

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 15, 1987.

TRD-8708111

W. N. Kirby
Commissioner of
Education

Earliest possible date of adoption:

January 9, 1988

For further information, please call
(512) 463-9212.



Chapter 75. Curriculum Subchapter C. Essential Elements—Grade Seven-Eight

★ 19 TAC §75.49, §75.50

The Texas Education Agency proposes an amendment to §75.49, the repeal of §§75.50 and 75.81-75.91, and new §§75.50 and 75.81-75.88, concerning curriculum for vocational education.

In January 1987, the State Board of Education adopted the Master Plan for Vocational Education in Texas. The plan emphasized the need for strong academic foundations for all students, provision of awareness of a broad range of career opportunities, and occupationally relevant education appropriate for the Texas economy of the 21st century. The repeal of existing §§75.50 and 75.81-75.91 allow for the simultaneous proposal of new sections which implement the master plan.

The new sections contain a revised vocational education curriculum to implement the master plan. Courses for grades seven and eight include life management skills, introductory industrial technology, and career investigation. Courses in grades nine-12 are in the following areas: agricultural science and technology, vocational home economics, health occupations, industrial technology, marketing education, office education, and trades and industrial education. Essential elements for courses in each area are established. New §75.81 sets out essential elements to be included in all programs, grades nine-12, including concepts and skills related to leadership, successful employment or post-secondary training, entrepreneurship, and safety and safe working conditions.

Lynn M. Moak, deputy commissioner for research and information, has determined that for the first five-year period the proposed sections will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the sections. Some local school districts will experience additional costs in implementing new program elements, especially through purchase of new equipment. Exact costs cannot be estimated.

Mr. Moak and Beverly Bardsley, director for policy development, have determined that for each year of the first five years the sections are in effect the public benefit anticipated as a result of enforcing the sections will be improvement in vocational education programs in Texas public schools. There is no anticipated economic cost to individuals who are required to comply with the proposed sections.

Comments on the proposal may be submitted to Dr. Beverly Bardsley, Director for Policy Development, 1701 North Congress Avenue, Austin, Texas, 78701, (512) 463-9682. All requests for a public hearing on

proposed sections submitted in accordance with the Administrative Procedure and Texas Register Act must be received by the commissioner of education not more than 15 calendar days after notice of a proposed change in sections has been published in the *Texas Register*.

The amendment and new section are proposed under the Texas Education Code, §21.101, which directs the State Board of Education to designate essential elements for subjects in the well-balanced curriculum, including vocational education.

§75.49. *Business Education.*

[(a) Typewriting (keyboarding), middle school (½-1 unit). Typewriting (keyboarding), middle school, shall include the essential elements in this section [subsection]. Typewriting offered for one semester must include the elements in paragraphs (1)-(3) of this subsection. Typewriting offered for two semesters must include all of the elements in this section [subsection].

[(1)-(6) (No change.)

[(b) Career exploration (½ unit). Career exploration shall include the following essential elements:

[(1) Self-awareness in relation to work. The student shall be provided opportunities to:

[(A) recognize individual values as determining factors in choosing a career; and

[(B) assess individual interests, aptitudes, and limitations and relate them to career goals.

[(2) Career options. The student shall be provided opportunities to:

[(A) develop a system for collecting career information;

[(B) explore careers within United States Education Department job clusters, including new and emerging occupations;

[(C) relate interests and aptitudes to specific career clusters;

[(D) identify manipulative skills essential in many occupations;

[(E) conduct a job analysis by interviewing and observing; and

[(F) identify common elements in an occupation that may transfer to other fields.

[(3) Assessment of career opportunities. The student shall be provided opportunities to:

[(A) locate and use information for evaluating employment opportunities; and

[(B) determine if career objectives can result in desired long-term financial goals.

[(4) Career planning. The student shall be provided opportunities to:

[(A) understand the necessity for gaining employability skills;

[(B) formulate sequential long-range, tentative career plans;

[(C) determine the amount of education or training needed to achieve career goals;

[(D) obtain pertinent information about schools and training programs;

[(E) select a tentative high school educational plan best suited to needs and desires;

[(F) use constructive decision-making skills; and

[(G) identify sources of financial assistance for any type of education or experience.

[(5) Job seeking. The student shall be provided opportunities to:

[(A) locate information about job opportunities for which one is qualified;

[(B) identify employment sources;

[(C) make job applications; and

[(D) interview for a job.

[(6) Growing on the job. The student shall be provided opportunities to:

[(A) discuss the importance of maintaining and advancing on the job; and

[(B) develop interpersonal skills needed in working roles.

[(7) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic methods of accessing data-base career information as related to course content.]

§75.50. *Vocational Education.*

(a) Essential elements common to all programs. The essential elements common to all programs are those described in §75.81 of this title (relating to Essential Elements Common to All Vocational Programs).

(b) Life management skills (½ unit) shall include the following essential elements:

(1) concepts and skills for successful living with peers, parents, family members, authority figures, and others. The student shall be provided opportunities to:

(A) determine personal strengths and abilities;

(B) describe methods for developing a positive self-image;

(C) describe factors influencing personality development and positive interpersonal relationships;

(D) identify methods of achieving satisfying interpersonal relationships with peers, parents, family members, authority figures, and others;

(E) point out techniques for resolving conflict;

(F) demonstrate techniques for assertiveness in managing peer pressure;

(G) describe decisions to be made as one assumes self-responsibility and implications for the future;

(H) relate individual needs to personality development; and

(I) apply principles of effective communication;

(2) concepts and skills related to problem solving and acceptance of responsibility. The student shall be provided oppor-

tunities to:

(A) explain procedure for making decisions;

(B) summarize the effects of personal priorities, perceptions, and attitudes on decisions; and

(C) describe the relationship between decision making and assuming responsibility for behavior;

(3) concepts and skills for achieving optimum personal health and appearance. The student shall be provided opportunities to:

(A) describe sources, impact, and techniques for managing stress;

(B) apply principles of good grooming;

(C) apply principles of good nutrition;

(D) relate good health practices to personal well-being and achievement; and

(E) summarize principles for selection and care of clothing;

(4) concepts and skills related to successful management of human and non-human resources. The student shall be provided opportunities to:

(A) describe human and non-human resources;

(B) identify internal and external influences on resource management; and

(C) apply principles of successful management and conservation of resources;

(5) concepts and skills related to parenting. The student shall be provided opportunities to:

(A) describe the responsibilities of parenting;

(B) describe the impact of parenthood on the individuals involved;

(C) explain factors influencing parent/child relationships; and

(D) summarize factors influencing the physical, social/emotional, and intellectual development of children.

(c) Introductory industrial technology common essential elements (grades seven-eight—½-2 units). The elements in this subsection are common to Introductory Industrial Technology I and Introductory Industrial Technology II, grades seven-eight, and shall be included in each course. They are described here to preclude repetition. Every school offering these courses shall include the following common essential elements:

(1) concepts and skills in the application of safety procedures. The student shall be provided opportunities to:

(A) demonstrate safe operation and use of selected tools and equipment to avoid injury; and

(B) maintain safe conditions in the laboratory;

(2) concepts and skills related to planning, designing, and problem solving. The student shall be provided opportunities to:

(A) plan and design products to include working drawings and a complete bill

§181.10. Confidentiality of Birth Records Covering Adoption Placement.

(a) Scope. This section establishes requirements governing the control of public accessibility to birth records and covering adoption placements and indexes of such records in order to insure the confidentiality of adoption placements.

(b) Definitions. The following words and terms, when used in these sections, shall have the following meanings, unless the context clearly indicates otherwise.

Birth records—Records governing births filed pursuant to the Texas Vital Statistics Act.

Department—The Texas Department of Health.

Indexes—An index to or listing of birth records.

Local registration official—A county clerk or person authorized by the Vital Statistics Act to maintain a duplicate system of records for each birth, death, or fetal death that occurs in the person's jurisdiction.

State registrar—The Chief of the Bureau of Vital Statistics, Texas Department of Health.

Vital Statistics Act—Texas Civil Statutes, Article 4477.

(c) Availability of birth records generally. Birth records are not available to the public for searching or inspection. The local registration official, upon receipt of a record of birth based on adoption must either forward the original record filed at the time of the event to the state registrar for enclosure in a sealed file, or delete or expunge such record.

(d) Availability of indexes or listings of birth records. The indexes or listings of birth records are not available to the public for searching or inspection. The local registration official must delete or expunge the identifying information, relating to the original birth record, filed at the time of the event, from the indexes maintained in that office.

Issued in Austin, Texas, on September 21, 1987.

TRD-8708126 Robert A. Maclean Deputy Commissioner for Professional Services Texas Department of Health

Effective date: September 21, 1987 Expiration date: January 29, 1988 For further information, please call (512) 458-7366.



TITLE 34. PUBLIC FINANCE

Part IV. Employees Retirement System

Chapter 71. Creditable Service

★34 TAC §71.5

The Employees Retirement System of

Texas adopts on an emergency basis an amendment to §71.5, concerning the transfer of the Teacher Retirement System of Texas service credit to the Employees Retirement System of Texas. At its scheduled meeting on September 22, 1987, the board of trustees of the Employees Retirement System of Texas adopted amendments to §71.5 to specify that service transferred from the Teacher Retirement System of Texas to the Employees Retirement System of Texas, pursuant to Texas Civil Statutes, Title 110B, §23.508, as enacted by the 70th Texas Legislature, 1987, will be established in the Employees Retirement System of Texas on a month-for-month basis. Since Title 110B, §23.508 became effective September 1, 1987, §71.5 is amended on an emergency basis to be effective immediately. The emergency amendment also updates a citation found in subsection (c).

The amendment is adopted on an emergency basis under Texas Civil Statutes, Title 110B, §25.103, which provide, in part, that, subject to the limitations of this subtitle, the board of trustees may adopt rules for eligibility for membership as well as for the administration of the funds of the Employees Retirement System of Texas.

§71.5. Credit Previously Transferred from Teacher Retirement System (TRS) and Credit Transferred from TRS Pursuant to Texas Civil Statutes, Title 110B, §23.508.

(a)-(b) (No change.)

(c) Credit for military service transferred from the Teacher Retirement System is established in the Employees Retirement System only if that military service was eligible for credit under provisions of Texas Civil Statutes, Title 110B, Subtitle C, [the State Employees Retirement Act, Texas Civil Statutes, Article 6228a].

(d) Credit for service transferred from the Teacher Retirement System of Texas to the Employees Retirement System of Texas pursuant to Texas Civil Statutes, Title 110B, §23.508, shall be established in the Employees Retirement System of Texas on a month-for-month basis notwithstanding any other provision of this section.

Issued in Austin, Texas, on September 22, 1987.

TRD-8708166 Clayton T. Garrison Executive Director Employees Retirement System of Texas

Effective date: September 23, 1987 Expiration date: January 21, 1988 For further information, please call (512) 476-6431, ext. 178.



Chapter 73. Benefits

★34 TAC §73.21

The Employees Retirement System of Texas adopts on an emergency basis an amendment to §73.21, concerning reserve

factors. At its scheduled meeting on September 22, 1987, the board of trustees of the Employees Retirement System of Texas adopted an amendment to §73.21 to change the mortality assumption for disability retirement for females from 60% to 55% of the 1965 RRB Disabled Annuitants Mortality Table. This mortality assumption for disability retirement for females was recommended by the System's actuary, Rudd and Wisdom, Inc., and was adopted by the board at its December 19, 1986, meeting as a result of the most recent actuarial investigation. Since the new reserve factors based on the new mortality assumption will be used with respect to disability retirements with an effective date of September 30, 1987, and later, §73.21 is amended on an emergency basis to be effective immediately. The correction of a typographical error and the addition of the nine-digit zip code to the retirement system's address are also made by the emergency amendment.

The amendment is adopted on an emergency basis under Texas Civil Statutes, Title 110B, §25.105, which provide that the board of trustees shall adopt mortality, service, and other tables the board considers necessary for the retirement system after considering the results of the actuary's investigation of the mortality, service, and compensation experience of the system's members and beneficiaries.

§73.21. Reduction Factor for Age and Retirement Option.

(a)-(c) (No change.)

(d) Reserve factors. The reserve factors vary by sex as well as age. For service retirement and death benefit plan Option 1, the reserve factors are based on the UP-1984 Table with an age set back of one year for males and an age set back of eight years for females. For disability retirement, the mortality basis is 85% of the 1965 RRB Disabled Annuitants Mortality Table for Males [males] and 55% [60%] of the 1965 RRB Disabled Annuitants Mortality Table for Females. Those tables are adopted by reference and made a part of this section for all purposes. Copies of these mortality tables are available from the executive director of the Employees Retirement System of Texas at 18th and Brazos Streets, P.O. Box 13207, Austin, Texas 78711-3207 [78711].

Issued in Austin, Texas, on September 22, 1987.

TRD-8708168 Clayton T. Garrison Executive Director Employees Retirement System of Texas

Effective date: September 23, 1987 Expiration date: January 21, 1988 For further information, please call (512) 476-6431, ext. 178.



Proposed

Rules

Before an agency may permanently adopt a new or amended rule, or repeal an existing rule, a proposal detailing the action must be published in the *Register* at least 30 days before any action may be taken. The 30-day time period gives interested persons an opportunity to review and make oral or written comments on the rule. Also, in the case of substantive rules, a public hearing must be granted if requested by at least 25 persons, a governmental subdivision or agency, or an association having at least 25 members.

Symbology in proposed amendments. New language added to an existing rule is indicated by the use of **bold text**. [Brackets] indicate deletion of existing material within a rule.

TITLE 19. EDUCATION

Part II. Texas Education

Agency

Chapter 69. Proprietary

Schools and Veterans

Education

Subchapter E. Guidelines and

Minimum Standards for

Operation of Texas Proprietary Schools

★ 19 TAC §69.126

The Texas Education Agency proposes new §69.126, concerning applications from small businesses. The new section implements House Bill 5, 70th Legislature, which concerned regulatory relief in the licensing of activities of small businesses. The new section establishes time periods during which applications from small businesses for initial, renewed, and change in ownership certificates of approval will be processed as well as applications for proprietary school representatives, directors, and instructors. The new section also establishes an appeal process through which an applicant can appeal for a resolution of any dispute arising from a violation of the established periods.

The law requires that the agency publish with the new section a statement of the agency's minimum, maximum, and median times for processing applications from small businesses, based on the agency's actual performance during a 12-month period preceding publication of the proposed new section. An analysis of the applications received during the 12-month period of September 1, 1986-August 31, 1987, revealed that often oral notice rather than written notice of all specific additional information is given to the applicant. Consequently, data are not available on incomplete applications. Historical data concerning the period beginning with the date of filing of a complete application to the date of written approval as well as the justification of the periods in the proposed new section are provided as follows, segregated by the type of required authorization for a certificate of approval: the initial application minimum is one day, maximum is 43 days, and median is nine days; the renewal application minimum is one day, maximum is 184

days, and median is 30 days; the change in ownership application minimum is one day, maximum is 42 days, and median is 14 days.

The new section allows for a 30-day processing period on incomplete applications and a 21-day processing period on complete applications. The 30-day processing period on incomplete applications is proposed for initial and renewal applications because of the amount of time needed to investigate the application as required by the Texas Education Code, §32.33. A required part of this investigation is an on-site survey at the applicant's school facility. Scheduling problems caused by a limited staff and the large size of the state warrant the period proposed. During this first period, the application will be examined for completeness as well as for quality, content, and compliance as required by the legal standards. The required written notice of all specific additional information will include quality and compliance deficiencies such as financial instability, inadequate facilities or equipment, unqualified faculty, or an inadequate recordkeeping system or course content. A further justification of the 30-day period for incomplete applications is the statutory mandate for submission of the renewal application 30 days in advance of expiration of the certificate of approval.

The 30-day processing period on an incomplete application for a change in ownership is based on the fact that there is a standard in law that requires a new owner to file an application 30 days prior to a change in ownership and for the reasons cited above. In most cases, however, an on-site survey is not required.

The 21-day processing period for all complete applications is based on historical data and the fact that many of the staff members travel a week at a time and are not available every day to do the necessary review of the application. Three weeks would allow for a review of the final additional information and approval of the complete application by the appropriate staff members. For a representative permit the initial application, including permits associated with a change in ownership of the school, minimum is one day, maximum is 203 days, and median is 25 days; the renewal application minimum is four days, maximum is 211 days, and median is 59 days.

The new section allows for a 10-day processing period on incomplete applications. Complete applications will be processed in a 10-day period if the school is certified and a 21-day period if the school is not certified. A representative may not be authorized to solicit for a school that does not itself have authority to operate. Therefore, the 21-day period is the same time period as is proposed to process a complete application for a certificate of approval.

A further justification of the time periods proposed is the fact that approximately 1,811 applications for representatives have been received this fiscal year. To ensure consistency, one staff member is responsible for reviewing these applications in addition to many other responsibilities. These time periods would allow sufficient time for a comprehensive review to determine the specific deficiencies and preparation of the written notice. For directors and instructional staff approvals, the minimum is the same day, the maximum is 183 days, and the median is 33 days.

The new section allows for a 20-day processing period on incomplete applications. Complete applications will be processed in a 20-day period if the school is certified and a 21-day period if the school is not certified. A director or instructor cannot be approved to direct or instruct for a school if that school does not itself have an authority to operate. Therefore, the 21-day period is the same time period as is proposed to process a complete application for a certificate of approval.

A further justification of the time periods proposed is the fact that approximately 2,221 applications for school directors and instructors have been received this fiscal year. To ensure consistency, one staff member is responsible for reviewing these applications in addition to many other responsibilities some of which require travel. These time periods would allow for travel time as well as sufficient time for a comprehensive review to determine the specific deficiencies and preparation of the written notice.

Lynn M. Moak, deputy commissioner for research and information, has determined that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local



of materials; and

(B) measure accurately using metric or customary units;

(3) concepts and skills related to the tools, materials, and processes of technology. The student shall be provided opportunities to:

(A) solve problems by utilizing a variety of materials and properly selected tools and equipment; and

(B) select the most suitable processes to complete a task;

(4) concepts and skills related to the past, present, and future of technology. The student shall be provided opportunities to:

(A) recognize ideas and inventions of the past and present; and

(B) relate technological change to the skills needed for the future;

(5) concepts and skills related to evaluating products and services of technology. The student shall be provided opportunities to:

(A) recognize good design and construction;

(B) evaluate products based on given standards or applications;

(C) use and maintain products and equipment; and

(D) develop criteria for selecting, purchasing, and contracting services.

(d) **Introductory Industrial Technology I (grades seven-eight— $\frac{1}{2}$ -1 unit).** Every school offering Introductory Industrial Technology I shall include the common essential elements for vocational education and for introductory industrial technology, grades seven-eight, plus the following essential elements:

(1) concepts and skills related to communication technology. The student shall be provided opportunities to:

(A) apply sketching techniques to develop drawing format and graphic problem solving;

(B) describe objects accurately through the principles of shape and size descriptions;

(C) apply design principles to composition and layout techniques;

(D) operate standard reproduction and duplicating equipment;

(G) compare transmission systems that move energy by electrical, electronic, mechanical, and pneumatic-hydraulic technologies;

(H) construct models or use simulation devices or systems used to move people and materials;

(I) construct models or use simulation devices or systems that transmit energy;

(J) read and interpret maps, charts, and schedules; and

(K) explore space-based energy systems;

(3) concepts and skills related to production technology. The student shall be provided opportunities to:

(A) apply organization and

management systems by planning, organizing, and controlling production processes;

(B) apply primary processes of layout, testing, separating, and cutting, drilling, and boring, shaping, and forming, casting, laminating, coating, decorating, joining, and finishing;

(C) research the recycling of materials;

(D) plan and implement the various steps in the construction process;

(E) research the transformation of raw materials into finished products;

(E) use standard graphic finishing techniques;

(F) produce products using accepted methods of image generation;

(G) study the types and uses of communication systems;

(H) use computer software to design and make drawings;

(I) use database software to assist in collecting, storing, retrieving, and applying information; and

(J) explore space-based communication systems;

(2) concepts and skills related to energy technology. The student shall be provided opportunities to:

(A) use apparatus and devices that demonstrate the generation, conversion, and control of mechanical, electrical, and pneumatic-hydraulic power;

(B) construct models or use simulation devices that generate, convert, and control energy;

(C) utilize computers for the collection and analysis of data relevant to energy technology;

(D) compare transportation systems that move people and materials by land, sea, air, and space;

(E) plan and implement the controlled movement of robots;

(F) use instruments with computers to monitor data-based systems;

(G) plan and implement mass production activities;

(H) demonstrate techniques and processes used in automated production systems;

(I) use computers in planning, production, quality control, and management of production systems;

(J) explore the use of function codes in computer numerical control of production machines; and

(K) explore space-based production systems.

(e) **Introductory Industrial Technology II (Grade Eight— $\frac{1}{2}$ -1 unit).** Every school offering Introductory Industrial Technology II shall include the common essential elements for vocational education and for introductory industrial technology, grades seven-eight, plus the following essential elements:

(1) concepts and skills related to production technology in the area of manufacturing. The student shall be pro-

vided opportunities to:

(A) participate in activities involving product researching, designing, and marketing;

(B) investigate financial resources needed in production;

(C) plan and implement mass production activities;

(D) apply organization and management systems by planning, organizing, and controlling production processes;

(E) develop production charts and graphs;

(F) demonstrate an awareness of automated systems used in manufacturing;

(G) recognize basic material standards and terminology used in industry;

(H) apply the basic processes to manufacturing;

(I) research the recycling of manufacturing materials;

(J) use computers in planning, production, quality control, and management of production systems; and

(K) explore space-based manufacturing systems;

(2) concepts and skills related to production technology in the area of construction. The student shall be provided the opportunities to:

(A) analyze those processes involved in selecting and acquiring a construction site;

(B) design and construct a structure;

(C) research prefabricated systems;

(D) participate in electrical systems installation activities;

(E) practice simple plumbing techniques;

(F) practice trimming and finishing techniques;

(G) explore remodeling procedures;

(H) practice basic masonry techniques;

(I) discuss contracting and subcontracting practices;

(J) develop a basic knowledge of landscaping;

(K) research new construction materials and methods;

(L) explore energy conservation principles involved in construction;

(M) explore techniques and processes used in automated production systems;

(N) research the recycling of construction materials; and

(O) explore space-based construction system;

(f) **Career investigation ($\frac{1}{2}$ unit)** shall include the following essential elements:

(1) concepts and skills necessary for self-appraisal. The student shall be provided opportunities to:

(A) assess individual interests, abilities, aptitudes, social/emotional needs, lifestyle needs/desires, and academic poten-

tial through the use of standardized and/or informal assessment data;

(B) analyze the effect that individual personal traits have on career decision making and career success; and

(C) relate his/her personal traits to career planning;

(2) concepts and skills related to career opportunities. The student shall be provided opportunities to:

(A) identify resources which provide pertinent information concerning career opportunities, including new and emerging occupations;

(B) use the United States Office of Employment 15 occupational cluster classifications to analyze career opportunities, including new and emerging occupations;

(C) demonstrate the ability to use a variety of current labor market information and resources, such as computer software and personal interviews, to analyze career opportunities;

(D) identify and apply basic academic skills relevant to the duties of a variety of careers;

(E) identify skills that a variety of careers have in common and that are transferable among many careers;

(F) gain a realistic perception of the world of work by visiting worksites (optional) and by discussions and interviews with representatives of business, industry, and the professions who visit the classrooms;

(G) exhibit productive work habits and attitudes; and

(H) recognize proper safety standards and hazards associated with the duties of a variety of careers;

(3) concepts and skills associated with economic, societal, and technological factors related to career opportunities. The students shall be provided opportunities to:

(A) analyze the function of work and employability traits on the economy and society;

(B) recognize the effect changes in economics, society, and technology have on business ownership and career opportunities, as well as on job duties and the labor force;

(C) prepare for effective citizenship and participation in our democratic society;

(D) recognize opportunities and options for business ownership; and

(E) develop an understanding of the rule of small business in the free enterprise system;

(4) concepts and skills needed for career/education planning. The student shall be provided guidance and given opportunities to:

(A) develop and use critical thinking skills to establish a method of continuing career and educational decision making throughout life;

(B) narrow the 15 occupational clusters to two clusters which most closely

match personal traits;

(C) investigate educational training and financial alternatives needed for career goals attainment;

(D) recognize the purpose of and practice setting short term and long term goals; and

(E) develop an individualized career/education preparation plan.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 15, 1987.

TRD-8708145 W. N. Kirby
Commissioner of
Education

Proposed date of adoption:
January 9, 1988
For further information, please call
(512) 463-9212.

★ 19 TAC §75.50

(Editor's note: The text of the following section proposed for repeal will not be published. The section may be examined in the offices of the Texas Education Agency, 1701 North Congress Avenue, Austin, or in the Texas Register office, Room 503F, Sam Houston Building, 201 East 14th Street, Austin.)

This repeal is proposed under the Texas Education Code, §21.101, which directs the State Board of Education to designate essential elements for subjects in the well-balanced curriculum, including vocational education.

§75.50. Vocational Education.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 15, 1987.

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Subchapter D. Essential
Elements—Grades Nine-12
Vocational Education

★ 19 TAC §§75.81-75.91

(Editor's note: The text of the following sections proposed for repeal will not be published. The sections may be examined in the offices of the Texas Education Agency, 1701 North Congress Avenue, Austin, or in the Texas Register office, Room 503F, Sam

Houston Building, 201 East 14th Street, Austin.)

The repeals are proposed under the Texas Education Code, §21.101, which directs the State Board of Education to designate essential elements for subjects in the well-balanced curriculum, including vocational education.

§75.81. Essential Elements Common to All Programs.

§75.82. Agriculture and Agribusiness Education.

§75.83. Consumer and Homemaking Education.

§75.84. Health Occupations Education.

§75.85. Industrial Arts Education.

§75.86. Marketing and Distributive Education.

§75.87. Occupational Home Economics Education.

§75.88. Occupational Orientation.

§75.89. Office Education.

§75.90. Technical Education.

§75.91. Trade and Industrial Education.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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Subchapter C. Essential
Elements—Grade Seven-Eight

★ 19 TAC §§75.81-75.88

The new sections are proposed under the Texas Education Code, §21.101 which directs the State Board of Education to designate essential elements for subjects in the well-balanced curriculum, including vocational education.

§75.81. Essential Elements Common to All Programs. The elements in this section are common to all vocational programs and shall be included in each addressed course at the appropriate level. They are described here to preclude repetition in each course description. Every school offering vocational education shall provide courses which include the following essential elements.

(1) Leadership concepts and skills. The student shall be provided opportunities to:

(A) demonstrate skills, characteristics and responsibilities of leaders and ef-

fective group members;

(B) demonstrate a knowledge of parliamentary procedure principles (optional in occupational orientation and cluster courses);

(C) plan and conduct leadership activities; and

(D) prepare for effective citizenship and for participation in our democratic society.

(2) Concepts and skills related to successful employment and/or postsecondary training. The student shall be provided opportunities to:

(A) identify employment opportunities and preparation requirements in chosen fields;

(B) identify effective methods to secure and terminate employment;

(C) demonstrate effective communication skills both oral and written and follow through on assigned tasks;

(D) demonstrate dependability and punctuality;

(E) develop and apply good human relation skills; and

(F) demonstrate productive work habits and attitudes.

(3) Concepts and skills associated with entrepreneurship. The student shall be provided opportunities to:

(A) identify opportunities for business ownership; and

(B) explain the role of small business in the free enterprise system.

(4) Concepts and skills related to safety and safe working conditions. The student shall be provided opportunities to identify and apply safe working practices to all training situations.

§75.82. *Agricultural Science and Technology.*

(a) Introduction to world agricultural science and technology (½ unit) shall be a shop/laboratory course that includes the essential elements and the concepts and skills related to the introduction to world/agricultural science and technology. The student shall be provided opportunities to:

(1) recognize the importance of agriculture in the world;

(2) understand and apply safe work practices that apply to this course;

(3) explore career and other opportunities in agriculture;

(4) develop leadership skills in agricultural science and technology;

(5) explain the historical significance of agriculture;

(6) recognize the interdependency of agriculture and world politics;

(7) recognize the interdependency of agriculture and the environment;

(8) explain the food and fiber system;

(9) identify and review research and development in agriculture;

(10) develop personal and social skills;

(11) improve communication skills; and

(12) analyze agricultural experience programs to include personal financial management.

(b) Applied agricultural science and technology (½ unit) shall be a shop/laboratory course that includes the essential elements and the concepts and skills related to the applied agricultural science and technology. The student shall be provided opportunities to:

(1) recognize the importance of applied agricultural science and technology;

(2) understand and apply safe work practices that apply to this course;

(3) explore career and other opportunities in applied agricultural science and technology;

(4) identify soil formations;

(5) identify the nature and properties of soils;

(6) explain basic plant science and technology;

(7) explain basic animal science and technology;

(8) determine basic food science technology;

(9) perform agricultural construction skills;

(10) recognize the protection of the environment;

(11) understand energy and water conservation in agriculture;

(12) develop leadership skills in agricultural science and technology; and

(13) analyze agricultural experience programs to include personal financial management.

(c) Introduction to agricultural mechanics (½ unit) shall be a shop/laboratory-oriented course that includes the essential elements and the concepts and skills related to the introduction to agricultural mechanics. The student shall be provided opportunities to:

(1) understand and apply safe work practices that apply to agricultural mechanics;

(2) explore career opportunities in agricultural mechanics;

(3) plan and conduct leadership activities related to agricultural mechanics;

(4) identify and use hand and power tools;

(5) select and use measuring and marking devices;

(6) identify and perform basic electric wiring skills;

(7) perform basic plumbing skills;

(8) perform basic concrete principles;

(9) practice basic carpentry skills;

(10) select and apply paints and preservatives;

(11) identify fencing methods;

(12) perform cold metal skills;

(13) operate oxy-fuel welding and cutting equipment; and

(14) operate electric arc welding

equipment.

(d) Home maintenance and improvement (½ unit) shall be a shop/laboratory-oriented course that includes the essential elements and the concepts and skills related to home maintenance and improvement. The student shall be provided opportunities to:

(1) understand and apply safe work practices that apply to home maintenance and improvement;

(2) explore career opportunities in home maintenance and improvement;

(3) plan and conduct leadership activities related to home maintenance and improvement;

(4) identify hazards and home safety needs;

(5) select and use home maintenance tools, equipment, and materials;

(6) repair and maintain home plumbing system;

(7) repair and maintain home electrical system;

(8) service and maintain home heating and cooling system;

(9) repair and maintain home interior and exterior;

(10) adjust and maintain doors and windows;

(11) repair and maintain the roof;

(12) estimate concrete needs for porches, patios, sidewalks, and landscaping structures;

(13) service and maintain engines and vehicles; and

(14) maintain household tools and equipment.

(e) Animal and plant production (½ unit) shall be a laboratory-oriented course that includes the essential elements and the concepts and skills related to animal and plant production. The student shall be provided opportunities to:

(1) understand and apply safe work practices that apply to animal and plant production;

(2) explore career opportunities in animal and plant production;

(3) plan and conduct leadership activities related to animal and plant production;

(4) determine the importance of soil, plants, and animals and their influence on society;

(5) identify the physical and chemical properties of soil;

(6) explain the conservation of soil and water for future generations;

(7) recognize methods for improving soil fertility;

(8) identify major crops and the areas in which they are produced;

(9) describe plant and animal anatomy and physiology;

(10) explain plant and animal reproduction;

(11) recognize plant and animal nutrient requirements;

(12) select fundamental plant and animal management techniques; and

(13) evaluate and select livestock and poultry.

(f) Food technology (½ unit) shall be a shop/laboratory oriented course that includes the essential elements and the concepts and skills related to food technology. The student shall be provided opportunities to:

(1) understand and apply safe work practices that apply to food technology;

(2) explore career opportunities in food technology;

(3) plan and conduct leadership activities related to food technology;

(4) determine trends in world food production;

(5) understand the nutritive value of food constituents;

(6) identify procedures and regulations involved in sanitation in the food industry;

(7) discuss the use of cleaning and sanitizing chemicals in the food industry;

(8) understand the various methods of storing and preserving foods;

(9) describe and identify the preparation of animal, poultry, and fish carcasses for processing;

(10) describe the processing, packaging, and quality testing of milk and dairy products for distribution;

(11) explain the preparation of eggs for market;

(12) compare the methods of processing fruits, nuts, and vegetables;

(13) identify government regulations regarding the processing and labeling of foods;

(14) identify methods of fabricating meats;

(15) discuss the processing of by-products of the meat industry;

(16) recognize the procedures involved in marketing foods products; and

(17) manage records in the food science industry.

(g) Introduction to horticultural sciences (½ unit) shall be a laboratory-oriented course that includes the essential elements and the concepts and skills related to horticultural sciences. The student shall be provided opportunities to:

(1) recognize safe work practices that apply to horticultural sciences;

(2) explore career opportunities in horticultural sciences;

(3) plan and conduct leadership activities related to horticultural sciences;

(4) identify and discuss employment skills related to horticultural sciences;

(5) examine entrepreneurship skills needed to establish businesses related to horticultural sciences;

(6) identify and recognize maintenance and storage of tools and equipment used in horticultural sciences;

(7) explore technical skills utilized in horticultural sciences;

(8) identify and recognize horticultural structures and equipment;

(9) recognize greenhouse environ-

ment and the growing of plants;

(10) describe methods of plant propagation, growing components, and plant growth;

(11) understand floral design and landscape establishment and maintenance; and

(12) understand vegetable, fruit, and nut production.

(h) Energy and environmental technology (½ unit) shall be a shop/laboratory-oriented course that includes the essential elements and the concepts and skills related to energy and environmental technology. The students shall be provided opportunities to:

(1) understand and apply safe work practices that apply to energy and environmental technology;

(2) explore career opportunities in energy and environmental technology;

(3) plan and conduct leadership activities related to energy and environmental technology;

(4) determine the importance and scope of natural resources, energy, and the environment;

(5) evaluate conservation and environmental policies;

(6) analyze population demographics in resource management;

(7) recognize the importance of land use planning;

(8) understand water resource management;

(9) identify water uses in urban settings;

(10) identify uses of water in agricultural settings;

(11) explain waste water management;

(12) recognize the use of natural resources for energy;

(13) describe air quality improvement;

(14) determine method of controlling soil erosion; and

(15) discuss the identity, handling, storing, and disposal of hazardous materials.

(i) Agribusiness management and marketing (½ unit) shall be a laboratory-oriented course that includes the essential elements and the concepts and skills related to agribusiness management and marketing. The student shall be provided opportunities to:

(1) understand and apply safe work practices that apply to agribusiness management and marketing;

(2) explore career opportunities in agribusiness management and marketing;

(3) plan and conduct leadership activities related to agribusiness management and marketing;

(4) define and examine agribusiness management and marketing and its importance;

(5) identify economic principles important to agribusiness management and marketing;

(6) define the purposes and functions of agribusiness management and marketing;

(7) analyze the economic opportunities of agribusiness;

(8) select the legal and organizational structure;

(9) understand the financing of agribusiness and identify methods of obtaining capital resources;

(10) identify sources of agribusiness insurance;

(11) analyze business records;

(12) understand the flow of resources;

(13) apply integrated software systems; and

(14) describe the management of human resources.

(j) Personal skill development in agriculture (½ unit) shall be a laboratory-oriented course that includes the essential elements and concepts and skills related to personal skill development in agriculture. The student shall be provided opportunities to:

(1) understand and apply safe work practices that apply to personal skill development in agriculture;

(2) explore career opportunities in personal skill development in agriculture;

(3) plan and conduct leadership activities related to personal skill development in agriculture;

(4) discuss personal development (self-improvement);

(5) describe an effective leader;

(6) develop leadership ability;

(7) describe employee responsibility;

(8) describe employer responsibility;

(9) develop communication with groups and individuals; and

(10) demonstrate group and individual efficiency.

(k) Entrepreneurship in agriculture (½ unit) shall be a laboratory-oriented course that includes the essential elements and the concepts and skills related to entrepreneurship in agriculture. The student shall be provided opportunities to:

(1) understand and apply safe work practices that apply to entrepreneurship in agriculture;

(2) explore career opportunities in entrepreneurship in agriculture;

(3) plan and conduct leadership activities related to entrepreneurship in agriculture;

(4) discuss the nature of entrepreneurship;

(5) identify the components of a business plan;

(6) explain business related laws;

(7) compare product/service promotion strategies;

(8) describe business records management;

(9) describe business financial management;

(10) review human resource management; and

(11) develop a business proposal.

(l) Agricultural structures technology (½ unit) shall be a shop/laboratory-oriented course that includes the essential elements and the concepts and skills related to agricultural structures technology. The student shall be provided opportunities to:

(1) understand and apply safe work practices that apply to agricultural structures technology;

(2) explore career opportunities in agricultural structures technology;

(3) plan and conduct leadership activities related to agricultural structures technology;

(4) reinforce basic technical skills involving terminology, mathematical computations, and application of scientific principles related to agricultural structures technology;

(5) plan, construct, and maintain agricultural buildings;

(6) plan, construct, and maintain fences corrals, and other agricultural structures and equipment;

(7) install, service, and maintain electrical systems;

(8) place, finish, and cure concrete;

(9) recognize nontraditional structural building techniques;

(10) select and use surveying equipment; and

(11) plan, establish, and maintain water management systems.

(m) Agricultural metal fabrication technology (½ unit) shall be a shop/laboratory-oriented course that includes the essential elements and the concepts and skills related to agricultural metal fabrication technology. The student shall be provided opportunities to:

(1) understand and apply safe work practices that apply to agricultural metal fabrication technology;

(2) explore career opportunities in agricultural metal fabrication technology;

(3) plan and conduct leadership activities related to agricultural metal fabrication technology;

(4) reinforce basic technical skills involving terminology, mathematical computations, and application of scientific principles related to agricultural metal fabrication technology;

(5) utilize appropriate tools equipment, and facilities;

(6) recognize, identify, and determine properties, types, and uses of metal;

(7) use appropriate bench metal techniques;

(8) select and use oxy-fuel equipment;

(9) select and use electric arc welding equipment;

(10) apply specialty welding and cutting techniques;

(11) plan and perform cost effective construction techniques; and

(12) perform specialized nonmetallic fabrication techniques.

(n) Agricultural power technology (½ unit) shall be a shop/laboratory-oriented course that includes the essential elements and the concepts and skills related to agricultural power technology. The student shall be provided opportunities to:

(1) understand and apply safe work practices that apply to agricultural power technology;

(2) explore career opportunities in agricultural power technology;

(3) plan and conduct leadership activities related to agricultural power technology;

(4) reinforce basic technical skills involving terminology, mathematical computations, and application of scientific principles related to agricultural power technology;

(5) utilize appropriate tools, equipment, and facilities;

(6) select, operate, and maintain agricultural machines and equipment;

(7) select, operate, and maintain small air-cooled engines;

(8) select, operate, and maintain tractors;

(9) select and maintain electric motors; and

(10) select and maintain hydraulic motors.

(o) Diversified agriculture (½ unit) shall be a shop/laboratory-oriented course that includes the essential elements and the concepts and skills related to diversified agriculture. The student shall be provided opportunities to:

(1) understand and apply safe work practices that apply to diversified agriculture;

(2) explore career opportunities in diversified agriculture;

(3) plan and conduct leadership activities related to diversified agriculture;

(4) identify and select diversified agriculture production enterprises;

(5) determine diversified animal enterprises;

(6) determine diversified plant enterprises;

(7) describe fiscal aspects for diversified agriculture enterprises;

(8) identify innovative marketing strategies;

(9) describe processing, transporting, and storing of diversified products; and

(10) plan integrated systems of diversified enterprises.

(p) Animal science (½ unit) shall be a laboratory-oriented course that includes the essential elements and the concepts and skills related to animal science. The student shall be provided opportunities to:

(1) understand and apply safe work practices that relate to animal science;

(2) explore career opportunities in animal science;

(3) plan and conduct leadership activities related to animal science;

(4) identify the importance of animal health, reproduction, nutrition, and management;

(5) determine nutritional requirements of ruminant and nonruminant animals;

(6) explain animal genetics and reproduction;

(7) identify animal diseases, causes, and treatments;

(8) recognize livestock management techniques;

(9) identify the legal aspects of animal protection;

(10) analyze animal anatomy and physiology;

(11) evaluate and select breeding animals based on performance testing, production records, progeny testing, and visual appraisal; and

(12) use record keeping in animal science.

(q) Soil and plant science (½ unit) shall be a laboratory-oriented course that includes the essential elements and the concepts and skills related to soil and plant science. The student shall be provided opportunities to:

(1) understand and apply safe work practices that apply to soil and plant science;

(2) explore career opportunities in soil and plant science;

(3) plan and conduct leadership activities related to soil and plant science;

(4) recognize the importance and interrelationship of soil and plants;

(5) explain soil formation and its influence on world population;

(6) identify and evaluate properties and nature of soils;

(7) recognize conservation of soil and water and related agencies;

(8) explain plant physiology and reproduction;

(9) select quality seed;

(10) describe plant and soil management practices; and

(11) examine trends in plant production.

(r) Equine science (½ unit) shall be a laboratory-oriented course that includes the essential elements and the concepts and skills related to equine science. The student shall be provided opportunities to:

(1) understand and apply safe work practices that apply to equine science;

(2) explore career opportunities in equine science;

(3) plan and conduct leadership activities related to equine science;

(4) recognize the importance of horse ownership;

(5) evaluate and select classes of horses;

(6) determine nutritional requirements of horses;

(7) describe the anatomy and physiology of horses;

(8) explain methods of maintaining horse health and soundness;

(9) select equipment and facilities for horses;

(10) understand the methods of handling horses safely; and

(11) identify the procedures for breeding horses.

(s) Landscape design, construction, and maintenance (½ unit) shall be a laboratory-oriented course that includes the essential elements and the concepts and skills related to landscape design, construction, and maintenance. The student shall be provided opportunities to:

(1) recognize safe work practices that apply to landscape design, construction, and maintenance;

(2) explore career opportunities in landscape design construction, and maintenance;

(3) plan and conduct leadership activities related to landscape design, construction, and maintenance;

(4) analyze landscape sites and prepare landscape plans to facilitate landscape design, construction, and maintenance;

(5) recognize plants used in landscape design, construction, and maintenance;

(6) identify structures used in landscape design, construction, and maintenance;

(7) evaluate service contracts related to landscape design, construction, and maintenance;

(8) identify and recognize maintenance and storage of tools and equipment used in landscape design, construction, and maintenance;

(9) examine landscape installation principles related to landscape design, construction, and maintenance;

(10) recognize maintenance principles of landscape design, construction, and maintenance; and

(11) review management records related to landscape design, construction, and maintenance.

(t) Horticulture plant production (½ unit) shall be a laboratory-oriented course that includes the essential elements and the concepts and skills related to horticulture plant production. The student shall be provided opportunities to:

(1) recognize safe work practices that apply to horticulture plant production;

(2) explore career opportunities in horticulture plant production;

(3) plan and conduct leadership activities related to horticulture plant production;

(4) classify and identify plants used in horticulture plant production;

(5) identify and recognize maintenance and storage of tools and equipment used in horticulture plant production;

(6) recognize plant propagation techniques related to horticulture plant production;

(7) recognize plant growing principles related to horticulture plant production;

(8) review marketing techniques

related to horticulture plant production;

(9) identify and recognize maintenance of structures and equipment used in horticulture plant production;

(10) discuss management of environmental conditions related to horticulture plant production; and

(11) review management records of enterprises related to horticulture plant production.

(u) Floral design and interior landscape development (½ unit) shall be a laboratory-oriented course that includes the essential elements and the concepts and skills related to floral design and interior landscape development. The student shall be provided opportunities to:

(1) recognize safe work practices that apply to floral design and interior landscape development;

(2) explore career opportunities in floral design and interior landscape development;

(3) plan and conduct leadership activities related to floral design and interior landscape development;

(4) classify and identify flowers and plants used in floral design and interior landscape development;

(5) review techniques of increasing keeping qualities of flowers and plants used in floral design and interior landscape development;

(6) trace the history of floral design and interior landscape development;

(7) recognize design principles related to floral design and interior landscape development;

(8) evaluate geometric floral designs prepared with fresh cut flowers, silk flowers, and dry flowers related to floral design and interior landscape development;

(9) recognize techniques of preparing corsages and boutonnières related to floral design and interior landscape development;

(10) classify and identify tropical foliage plants and blooming plants used in interior landscape development;

(11) discuss proper handling techniques for tropical foliage plants and blooming plants used in interior landscape development;

(12) evaluate designs of commercial clients related to interior landscape development; and

(13) evaluate service contracts related to floral design and interior landscape development.

(v) Fruit, nut, and vegetable production (½ unit) shall be a laboratory-oriented course that includes the essential elements and the concepts and skills related to fruit, nut, and vegetable production. The student shall be provided opportunities to:

(1) recognize safe work practices that apply to fruit, nut, and vegetable production;

(2) explore career opportunities in fruit, nut, and vegetable production;

(3) plan and conduct leadership activities related to fruit, nut, and vegetable production;

(4) identify plants used in fruit, nut, and vegetable production;

(5) evaluate plant production enterprises and cropping systems related to fruit, nut, and vegetable production;

(6) recognize management of soil and nutrients related to fruit, nut, and vegetable production;

(7) identify and recognize control practices of plant pests related to fruit, nut, and vegetable production;

(8) recognize weed control practices related to fruit, nut, and vegetable production;

(9) recognize plant propagation techniques related to fruit, nut, and vegetable production;

(10) recognize plant growing principles related to fruit, nut, and vegetable production;

(11) identify plant pruning techniques related to fruit, nut, and vegetable production;

(12) evaluate harvesting, grading, packing, storing, and marketing of plants related to fruit, nut, and vegetable production; and

(13) review management records of enterprises related to fruit, nut, and vegetable production.

(w) Wildlife and recreation management (½ unit) shall be a shop/laboratory-oriented course that includes the essential elements and the concepts and skills related to wildlife and recreation management. The student shall be provided opportunities to:

(1) understand and apply safe work practices that apply to wildlife and recreation management;

(2) explore career opportunities in wildlife and recreation management;

(3) plan and conduct leadership activities related to wildlife and recreation management;

(4) analyze the importance of wildlife and fish management;

(5) describe the history of wildlife and fish management;

(6) discuss policies, laws, and the administration of wildlife and fish management;

(7) identify the basic ecological concepts;

(8) identify wildlife and fish species;

(9) understand the management of wildlife and fish population;

(10) identify special areas of importance in wildlife and fish management; and

(11) acquire knowledge concerning the use of natural resources for outdoor recreation.

(x) The agribusiness education courses in subsections (y)-(ee) of this section shall include the following essential elements.

(1) Concepts and skills related to opportunities in agribusiness. The student shall be provided opportunities to:

(A) determine employment opportunities and occupational requirements;

(B) choose an occupation;

(C) prepare for an interview;

(D) understand employee-employee and employee-employer relations;

(E) study employee benefits and payroll information;

(F) explain entrepreneurship;

(G) determine occupational interests;

(H) assess personal qualities for training and employment;

(I) prepare applications; and

(J) maintain job security.

(2) Concepts and skills related to safety and safe working conditions. The student shall be provided opportunities to:

(A) understand shop procedure and clean-up;

(B) identify and understand safe working practices; and

(C) apply safe work practices and procedures to all occupational training situations.

(3) Concepts and skills related to supervised occupational experience program. The student shall be provided opportunities to:

(A) plan individual supervised occupational experience programs;

(B) keep records of supervised occupational experience programs;

(C) use records for awards and recognition; and

(D) participate on an individual basis in agricultural leadership activities.

(4) Concepts and skills. The student shall be provided opportunities to learn concepts and skills related to the specific occupation being taught.

(y) Agricultural power and machinery (one-two units) shall be a shop/laboratory-oriented course and shall include the essential elements and the concepts and skills related to agricultural power and machinery. The student shall be provided opportunities to:

(1) recognize the importance of farm machinery in American agriculture;

(2) explore career opportunities in agricultural power and machinery;

(3) plan and conduct leadership activities related to agricultural power and machinery;

(4) understand tractor and equipment safety;

(5) understand information and identify practices related to agricultural power and machinery repair;

(6) service and repair internal combustion engine;

(7) service and repair the power train;

(8) service and maintain hydraulic systems;

(9) service and repair braking, steering, wheels, tires, and cooling systems;

(10) understand lubricating systems and the use of lubricants;

(11) service and maintain fuel systems;

(12) service and repair electrical systems;

(13) service and maintain air conditioning systems;

(14) understand instrumentation; i.e., monitors, on-board computers, sensors, etc.; and

(15) service and repair agricultural machines and equipment.

(z) Agricultural mechanics (one-two units) shall be a shop/laboratory oriented course and shall include the essential agribusiness elements and the concepts and skills related to agricultural mechanics. The student shall be provided opportunities to:

(1) recognize the importance of agricultural mechanics in American agriculture;

(2) explore career opportunities in agricultural mechanics;

(3) plan and conduct leadership activities related to agricultural mechanics;

(4) understand safety practices in agricultural mechanics;

(5) identify and select agricultural tractors and equipment;

(6) diagnose engine conditions;

(7) service and understand electrical, air conditioning, cooling, fuel, air, clutch, tires, wheels, brakes, and power units;

(8) understand and use paint and other preservatives to protect agricultural tractors and equipment;

(9) service and repair small gasoline engines;

(10) set up, adjust, and maintain farm machinery and equipment;

(11) understand and perform electric and oxy-gas repair and maintenance;

(12) perform soldering and cold metal skills;

(13) plan and construct agricultural structures;

(14) understand use of concrete and masonry in agricultural construction;

(15) select materials and equipment and perform electrical wiring skills;

(16) select and maintain electric motors and controls for agricultural applications;

(17) plan, establish, and maintain water management, and understand irrigation systems; and

(18) understand and perform skills in land measuring and leveling.

(aa) Meat processing (one-two units) shall be a laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to meat processing. The student shall be provided opportunities to:

(1) recognize the importance of the meat processing industry;

(2) plan and conduct leadership activities related to meat processing;

(3) explore career opportunities in the meat processing industry;

(4) understand safety practices related to meat processing;

(5) practice equipment care and sanitation;

(6) recognize meat quality;

(7) learn meat identification;

(8) select and grade meat;

(9) develop an understanding of meat fabrication;

(10) practice meat preparation and preservation;

(11) recognize methods of merchandising of meat and meat by-products; and

(12) recognize consumer trends.

(bb) Horticulture (one-two units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to horticulture. The student shall be provided opportunities to:

(1) recognize the importance of the horticulture industry;

(2) explore career opportunities in the horticulture industry;

(3) recognize safety practices related to the horticulture industry;

(4) plan and conduct leadership activities related to horticulture;

(5) learn to classify and identify horticulture plants;

(6) determine structures and equipment requirements for production of horticulture plants;

(7) learn and explain environmental requirements for production of horticulture plants;

(8) learn and use media for plant growth and development;

(9) learn and perform the propagation of plants and the growing of greenhouse plants;

(10) learn and perform nursery plant production;

(11) learn, develop, and maintain the landscape;

(12) learn the establishment and care of turfs;

(13) identify and control soil and plant diseases, insects, and weeds;

(14) determine and perform floral designs;

(15) understand greenhouse and nursery business management; and

(16) learn to produce vegetables, fruits, and nuts.

(cc) Specialty agriculture (one-two units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and concepts and skills related to specialty agriculture. The student shall be provided the opportunity to:

(1) understand and apply safe working practices that apply to specialty agriculture;

(2) explore career opportunities in specialty agriculture;

(3) plan and conduct leadership activities related to specialty agriculture;

(4) recognize the importance of the specialty agriculture industry;

(5) identify and select concepts and skills related to specialty agriculture in one of the following specific areas or other areas as may be approved by the Texas Education Agency.

(A) Animal production (one-two units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to animal production. The student shall be provided opportunities to:

(i) explain the nutritive value and physical properties of meat;

(ii) identify yield and quality grades of beef, lamb, and pork;

(iii) design, observe, and describe the care and maintenance of animal production facilities;

(iv) explain the purchasing, handling, and storing of feed for animal production and feedlot operation;

(v) determine facilities for sick animals, drainage, and pollution control for feedlot operation;

(vi) explain the purchasing, receiving, and providing initial care of feeder livestock (cattle, sheep, and swine);

(vii) identify and use animal health practices and procedures and describe treatment of sick animal and carcass disposal;

(viii) understand feeds and feeding as related to animal production and feedlot operation;

(ix) identify classes of feed and feed additives, and understand analysis and preparation;

(x) describe the marketing of live and carcass animals; and

(xi) explain record keeping finances, cost accounting, computer use, and performance records.

(B) Forestry (one-two units) shall be a shop/laboratory-oriented course and include the essential agribusiness elements and concepts and skills related to forestry. The student shall be provided opportunities to:

(i) explain the forest environment;

(ii) explain tree physiology, identification, and classification, and utilization of forest products;

(iii) determine forest protection against fire, insects, diseases, animals, weather, undesirable species, and chemicals;

(iv) describe the harvesting and marketing of forest products;

(v) explain the multiple use of forests;

(vi) perform forestry measurements;

(vii) understand the fundamentals of reforestation and applied silviculture;

(viii) identify and understand forest management activities and economics;

(ix) describe business methods and aspects relating to forestry; and

(x) identify the equipment, labor, financing, accounting system, purchasing stumpage, and marketing for pulpwood production.

(C) Agricultural pest and pesticide management (one-two units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to agricultural pest and pesticide management. The student shall be provided opportunities to:

(i) recognize the importance of environmental protection and identify federal and state laws;

(ii) perform computation of dilutions, and calibration and use of application equipment;

(iii) outline/summarize plant and animal physiology;

(iv) identify insect pests and methods of control using insecticides;

(v) recognize plant diseases caused by fungi and bacteria and perform methods of control;

(vi) recognize nematodes infecting the soil and perform methods of control;

(vii) recognize rodents and predators and perform methods of control;

(viii) explain and identify the principles, classification, properties, and characteristics of herbicides;

(ix) perform and/or demonstrate methods of controlling weeds using herbicides;

(x) determine the use and application of fertilizers and harvest-aid chemicals;

(xi) determine the use and application of chemicals used as plant regulators and noncrop chemicals; and

(xii) recognize nonchemical alternatives to pest management.

(D) Agricultural resources (one-two units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to agricultural resources. The student shall be provided opportunities to:

(i) explain land resource management and outline/summarize the real estate industry;

(ii) explain and describe the management of water resources;

(iii) explain and describe the management of air resources;

(iv) identify, establish, and manage fish and other aquatic life;

(v) identify and manage wildlife and wildlife environment;

(vi) develop, maintain, and finance outdoor recreational enterprises;

(vii) explain forest resource management;

(viii) service and repair equipment related to the agricultural resources industry; and

(ix) demonstrate the fundamentals of taxidermy.

(dd) Coordinated vocational-academic education (CVAE)—farm and ranch mechanical repair (one-three units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to CVAE farm and ranch mechanical repair. The student shall be provided opportunities to:

(1) identify and use hand and power tools;

(2) identify and use fasteners, building materials, and farm level;

(3) plan and construct buildings and equipment;

(4) read plans and blueprints;

(5) compute bill of materials;

(6) select and apply paint;

(7) perform skills needed to install and maintain farm water supply and sanitation system;

(8) perform electrical wiring, care, and maintenance of electric motors;

(9) estimate amount needed, forms, reinforcing, placing, finishing, and curing of concrete;

(10) perform electric and oxyacetylene welding and soldering;

(11) service and repair small gasoline engines;

(12) service and maintain the air cleaner, lubrication, cooling, fuel, ignition, power train, braking, hydraulics, steering, and tires for farm trucks and tractors;

(13) perform farm machinery and equipment inspection, adjustments, and reconditioning; and

(14) plan, build, and maintain fences.

(ee) Coordinated vocational-academic education (CVAE)—horticultural related occupations (one-three units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to CVAE horticultural related occupations. The student shall be provided opportunities to:

(1) understand plant classification;

(2) identify plants by leaf, flower, bud, and stem characteristics;

(3) identify structures and equipment used in producing greenhouse ornamental, and nursery plants;

(4) determine greenhouse environmental controls;

(5) water and feed greenhouse plants;

(6) select and identify propagation media, nursery soils, compost, mulches, soil mixtures fertilizers, and other growth materials;

(7) understand and perform the methods of propagation of plants;

(8) understand selection, breeding, and reproduction of plants;

(9) grow greenhouse plants;

(10) grow nursery stock and ornamentals in containers;

(11) develop and maintain the landscape and turf grasses;

(12) identify and control diseases, insects, organisms, and weeds;

(13) determine floral design accessories, arranging, and judging;

(14) calculate production costs;

(15) understand marketing, labeling, pricing, displaying, advertising, financial control, credit, records, and accounts; and

(16) select, operate, maintain, and repair horticultural tools and equipment.

§75.83. *Vocational Home Economics.*

(a) Comprehensive home economics (½-one unit) shall be a laboratory oriented course and shall include the following essential elements.

(1) Concepts and skills related to family living. The student shall be provided opportunities to:

(A) apply techniques to develop self-awareness and skills for self-direction;

(B) describe the physical, social, emotional, and intellectual development of teenagers;

(C) analyze factors involved in socially responsible behavior;

(D) apply techniques which contribute to positive relationships with family, peers, authority figures, and others;

(E) apply strategies for managing peer pressure;

(F) describe the functions of the family in meeting personal and societal needs;

(G) relate personal commitment to family strength and well-being;

(H) describe rights and responsibilities of family members and families; and

(I) relate the effects of career choice on the family.

(2) Concepts and skills related to child development. The student shall be provided opportunities to:

(A) describe the basic needs of children;

(B) describe responsibilities of the caregiver in meeting developmental needs of children;

(C) explain various methods of management and guidance; and

(D) summarize forms of child abuse, their causes, and methods of control.

(3) Concepts and skills related to clothing and textiles. The student shall be provided opportunities to:

(A) describe the consumer aspects of apparel;

(B) apply decision making procedures in individual and family apparel choices;

(C) apply basic clothing construction and/or alteration techniques; and

(D) apply clothing care procedures.

(4) Concepts and skills related to housing for the family. The student shall be provided opportunities to:

(A) describe environmental and human influences on family housing needs;

(B) describe types and costs of housing;

(C) identify elements and principles of design;

(D) describe guidelines for use and care of home furnishings and equipment; and

(E) outline procedures for home maintenance tasks and safety.

(5) Concepts and skills related to the meaning and elements of management for daily living. The student shall be provided opportunities to:

(A) identify personal priorities, goals, and standards;

(B) distinguish between needs and wants;

(C) describe the steps of management;

(D) describe various types of resources and their responsible use;

(E) identify the decision making steps, influences, and implications;

(F) describe factors which influence family management practices; and

(G) analyze roles of family members and division of responsibilities.

(6) Concepts and skills related to individual consumer responsibilities. The student shall be provided opportunities to:

(A) summarize rights and responsibilities as a consumer;

(B) determine sources of income;

(C) develop a plan for managing income; and

(D) analyze influences on personal spending.

(7) Concepts and skills for managing food and nutrition for families and individuals. The student shall be provided opportunities to:

(A) analyze basic nutrition needs and results of dietary practices;

(B) relate sanitation and safety to food and nutrition;

(C) discuss etiquette and types of meal service;

(D) apply management techniques in planning and preparing simple meals; and

(E) outline consumer management techniques for food and nutrition.

(8) Concepts and skills related to personal and family health. The student shall be provided opportunities to:

(A) summarize ways to promote individual and family health;

(B) evaluate methods of meeting the safety needs of family members;

(C) explain factors affecting individual family health decisions; and

(D) relate personal achievement to one's health and that of family members.

(9) Concepts and skills related to occupational adjustments. The student shall be provided opportunities to:

(A) describe management prac-

tices facilitating individuals assuming multiple roles; and

(B) discuss occupational demands and rewards in relation to personal and family life.

(b) Individual and family life (½ unit) shall include the following essential elements.

(1) Concepts and skills related to individuals and the family. The student shall be provided opportunities to:

(A) explain the basic functions of the family;

(B) outline rights and responsibilities of family members;

(C) analyze one's individual role as a family member;

(D) analyze the impact of change and technology on families; and

(E) describe the influence of culture and tradition on family life.

(2) Concepts and skills related to family life patterns. The student shall be provided opportunities to:

(A) describe various family structures;

(B) discuss characteristics contributing to family strengths;

(C) outline adjustments incurred by progression through the family life cycle;

(D) investigate the impact of the increasing population of older adults on family and society; and

(E) investigate laws related to the family.

(3) Concepts and skills related to adult roles. The student shall be provided opportunities to:

(A) summarize responsibilities of living as an independent adult;

(B) demonstrate communication and conflict resolution skills;

(C) determine decisions to be made in interpersonal relationships and implications for the future;

(D) analyze the impact of technology on interpersonal relationships;

(E) describe the impact of cultural background on interpersonal behavior;

(F) summarize effects of societal trends on interpersonal relationships;

(G) summarize factors affecting mate selection;

(H) discuss commitments involved in marriage; and

(I) describe adjustments and decisions involved in marriage.

(4) Concepts and skills related to management in family life. The student shall be provided opportunities to:

(A) apply procedures for meeting individual and family needs through resource management;

(B) analyze financial considerations related to the family life cycle;

(C) relate the use of community resources to family well-being;

(D) outline the roles and responsibilities of family members as managers

and consumers;

(E) relate the use of leisure time to quality family life;

(F) determine the interrelationship of the family institution and economic development; and

(G) explain techniques for family members assuming the multiple roles of homemaker and wage earner.

(5) Concepts and skills related to parenting. The student shall be provided opportunities to:

(A) analyze factors affecting the decision to parent;

(B) determine components of responsible parenthood; and

(C) discuss distribution of parenting roles.

(6) Concepts and skills related to special concerns in the family. The student shall be provided opportunities to:

(A) discuss potential family problems and crises;

(B) describe methods of meeting special needs of family members;

(C) describe methods for preventing and coping with family problems and crises; and

(D) describe domestic violence, including causes, prevention, and coping resources.

(7) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in family life services;

(B) describe management practices facilitating individuals assuming multiple roles; and

(C) discuss demands and rewards in relation to personal and family life.

(c) Parenting and child development (½ unit) shall include the following essential elements.

(1) Concepts and skills related to the decision to parent. The student shall be provided opportunities to:

(A) summarize the responsibilities of human sexuality;

(B) project how one's present behavior impacts future goals;

(C) discuss the roles and responsibilities of parents at different stages of the family life cycle;

(D) identify considerations involved in family planning;

(E) analyze the impact of marital relationships on the children;

(F) discuss the effects of heredity and environment on the family; and

(G) relate the effects of life styles and cultures on parenting behavior.

(2) Concepts and skills related to child development. The student shall be provided opportunities to:

(A) summarize ways to promote optimum physical development of children;

(B) describe the emotional development of children and how it can be fostered;

(C) discuss the social development of children and how it can be fostered;

(D) propose methods for developing intellectual abilities of children;

(E) identify characteristics of children at different ages;

(F) analyze the effects of play on the development of children;

(G) explain methods of guidance and discipline; and

(H) determine techniques to promote character development.

(3) Concepts and skills related to family relationships and child development. The student shall be provided opportunities to:

(A) describe methods of sharing parenting responsibilities;

(B) discuss the implications of parental employment on the family;

(C) point out the impacts of single parenting;

(D) discuss the implications of step parenting and adoptive parenting;

(E) discuss the implications of foster parenting;

(F) discuss ways to foster wholesome sibling relationships;

(G) discuss the roles and relationships of individuals in an extended family;

(H) analyze alternatives for child care; and

(I) outline local, state, and national resources focusing on children.

(4) Concepts and skills related to special parenting needs. The student shall be provided opportunities to:

(A) identify parenting behavior indicative of child abuse tendencies;

(B) point out parenting behaviors abusive to children; and

(C) explain ways to meet needs of children in crisis.

(5) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in family life services;

(B) describe management practices facilitating individuals assuming multiple roles; and

(C) discuss demands and rewards in relation to personal and family life.

(d) Advanced child development (½ unit) shall be a laboratory oriented course and shall include the following essential elements.

(1) Concepts and skills related to parenthood. The student shall be provided opportunities to:

(A) describe responsibilities of parenting;

(B) summarize the financial impact of children on the family;

(C) discuss social, emotional, intellectual, and physical factors related to parenting; and

(D) describe responsible behavior in prevention and control of disease.

(2) Concepts and skills related to prenatal and postnatal care. The student shall be provided opportunities to:

(A) describe the stages of prenatal and neonatal development;

(B) outline the impact of genetics, environment, and mother's health on prenatal development;

(C) identify neonatal care essential to the well-being of the child; and

(D) describe postnatal care essential to the well-being of the mother.

(3) Concepts and skills related to the development of children. The student shall be provided opportunities to:

(A) explain various theories and principles of growth and development;

(B) describe the interrelationships social, emotional, intellectual, physical, and moral development of the child;

(C) point out the practices which foster healthy social, emotional, intellectual, physical, and moral development;

(D) identify developmentally appropriate sex-related information for children of different ages;

(E) analyze the influence of role modeling on children; and

(F) point out the impact of parenting/caregiver practices on a child's self-esteem.

(4) Concepts and skills related to selection and use of appropriate child guidance techniques. The student shall be provided opportunities to:

(A) describe guidance methods and factors influencing their effectiveness; and

(B) assess society's role in protecting the rights of children.

(5) Concepts related to the social implications on the development of the child. The student shall be provided opportunities to:

(A) discuss the effects parent/guardian employment has on the well being of the child;

(B) identify local, state, and national resources related to children; and

(C) discuss societal trends impacting children.

(6) Concepts and skills related to special needs. The student shall be provided opportunities to:

(A) describe methods for identifying children with special needs;

(B) evaluate methods for challenging gifted and talented children;

(C) summarize ways to care for and guide children with handicaps; and

(D) summarize forms, causes, effects, prevention, and treatment of child abuse.

(7) Concepts and skills related to career and job opportunities. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in child care;

(B) describe management prac-

tices facilitating individuals assuming multiple roles; and

(C) relate demands and rewards of child care careers to personal and family life.

(e) Child care and guidance, management, and services (two-three units) shall include the following essential elements.

(1) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in child care;

(B) describe management practices facilitating individuals assuming multiple roles;

(C) discuss demands and rewards in relation to personal and family life; and

(D) demonstrate effective money management.

(2) Concepts and skills related to the growth and development of children. The student shall be provided opportunities to:

(A) describe factors affecting the growth and development of young children;

(B) point out developmental differences in children of various ages; and

(C) demonstrate techniques to assist children in developing acceptable behavior patterns.

(3) Concepts and skills related to the care of children. The student shall be provided opportunities to:

(A) identify competencies needed to be an effective child care employee;

(B) identify signs of child abuse;

(C) describe appropriate procedures for responding to suspected child abuse;

(D) plan ways to assist children in their adjustment to child care;

(E) describe guidelines for communicating with parents/guardians of children;

(F) evaluate nutritional value of snacks and/or meals;

(G) point out important considerations concerning children's clothing;

(H) demonstrate ways to assist children with clothing; and

(I) point out guidelines for assisting children with routine activities.

(4) Concepts and skills related to physical facilities (learning environment) for care of children. The student shall be provided opportunities to:

(A) summarize the need for proper climate control and lighting;

(B) analyze the components of a stimulating environment;

(C) apply principles for maintaining a safe and healthy environment; and

(D) apply housekeeping and maintenance at the child care setting.

(5) Concepts and skills related to child care providers. The student shall be provided opportunities to:

(A) apply procedures and poli-

cies in a child care setting;

(B) demonstrate appropriate teaching methods and skills;

(C) apply techniques for learning activities of children;

(D) point out appropriate techniques when working with children with special needs;

(E) apply classroom management and program planning techniques; and

(F) assist with management procedures in the child care setting.

(f) Resource management (½ unit) shall include the following essential elements.

(1) Concepts and skills related to resources. The student shall be provided opportunities to:

(A) identify types of resources;

(B) explain the concept of resource scarcity;

(C) relate substitutions/trade-offs to utilization of resources; and

(D) apply procedures for conserving resources.

(2) Concepts and skills related to decision making. The student shall be provided opportunities to:

(A) describe the impact of technology on management techniques;

(B) determine sociological and psychological influences affecting decisions;

(C) explain the influence of personal priorities and goals on decision making;

(D) relate the influence of economic systems on decision making;

(E) explain the importance of accepting and sharing responsibilities for decisions; and

(F) apply the decision making process.

(3) Concepts and skills related to self management. The student shall be provided opportunities to:

(A) explain how management assists in reaching personal and family goals;

(B) explain the management process;

(C) describe the role of management in controlling stress;

(D) relate the effects of changing lifestyles on management roles; and

(E) summarize the effects of management on the quality of life.

(4) Concepts and skills related to time and energy management. The student shall be provided opportunities to:

(A) apply general principles of work simplification; and

(B) describe contracted services available to the family.

(5) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to resource management careers;

(B) describe management practices facilitating individuals assuming multi-

ple roles; and

(C) relate demands and rewards of careers in resource management to personal and family life.

(g) Consumer and family economics (½ unit) shall include the following essential elements.

(1) Concepts and skills related to family economics. The student shall be provided opportunities to:

(A) relate the family life cycle to family economics;

(B) analyze the relationship of family financial behavior and personal priorities and goals;

(C) relate the decision making process to financial planning;

(D) describe an effective spending plan and record keeping system; and

(E) relate personal spending patterns to external economic influences and outcomes.

(2) Concepts and skills related to consumers in the economy. The student shall be provided opportunities to:

(A) list characteristics of a free enterprise system;

(B) explain how the American market system functions;

(C) determine the role of competition and profit incentives in business;

(D) relate the business cycle to economic conditions; and

(E) explain the influence of international trade on the family.

(3) Concepts and skills related to the role of government. The student shall be provided opportunities to:

(A) describe the role of government in the American economy;

(B) identify local, state, and national government services and legislation affecting the family as consumers; and

(C) summarize the concept of opportunity costs in relation to tax responsibilities and government regulations.

(4) Concepts and skills related to consumer purchasing and assertiveness. The student shall be provided opportunities to:

(A) evaluate factors which influence consumer purchases of goods and services;

(B) identify guidelines for consumer purchasing;

(C) describe the rights and responsibilities of consumers; and

(D) outline ways to protect against fraudulent and deceptive practices.

(5) Concepts and skills related to obtaining income. The student shall be provided opportunities to:

(A) identify methods of and influences on obtaining income;

(B) analyze the psychological aspects of money;

(C) compare sources and cost of credit; and

(D) describe responsible use of credit.

(6) Concepts and skills related to

protecting family economic security. The student shall be provided opportunities to:

- (A) explain the functions, types, and services of financial institutions;
- (B) identify saving and investment opportunities;
- (C) relate insurance types to family needs; and

(D) explain the relationship between Social Security and family financial security.

(7) Concepts and skills related to consumer careers. The student shall be provided opportunities to:

(A) describe occupational opportunities and preparation requirements for careers in consumer and family economics; and

(B) identify entrepreneurial opportunities in careers related to consumer and family economics.

(h) Food science and nutrition (½ unit) shall be a laboratory oriented course and include the following essential elements.

(1) Concepts and skills related to nutrition. The student shall be provided opportunities to:

(A) discuss the functions and sources of nutrients;

(B) analyze the relationship of digestion and metabolism to health;

(C) determine nutritional needs throughout the life cycle;

(D) assess long term effects of food choices on health;

(E) compare various guidelines for dietary planning;

(F) analyze nutritional adequacy of selected diets;

(G) relate food intake to individual and family health;

(H) evaluate nutrition information for reliability; and

(I) compare food fads, fallacies, and facts.

(2) Concepts and skills related to the cultural influence on food and nutrition. The student shall be provided opportunities to:

(A) compare cultural influences on individual and family food options; and

(B) analyze nutritional adequacy of diets representative of different cultures.

(3) Concepts and skills related to management. The student shall be provided opportunities to:

(A) apply principles of consumerism;

(B) apply management skills in meeting daily food needs;

(C) relate the effects of work space and equipment on meal preparation;

(D) apply safety and sanitation procedures in food preparation tasks;

(E) prepare nutritious meals appropriate for families and other groups; and

(F) plan nutritious diets to meet various budgetary needs.

(4) Concepts and skills relating food and nutrition to special needs. The stu-

dent shall be provided opportunities to:

(A) compare special dietary needs caused by age and health conditions;

(B) contrast dietary needs related to sports and other activities;

(C) differentiate eating disorders, their effects, and treatment; and

(D) propose ways persons in self care such as children, elderly, and handicapped may meet nutritional needs.

(5) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in food science and nutrition;

(B) describe management practices facilitating individuals assuming multiple roles; and

(C) relate demands and rewards of careers in food science and nutrition to personal and family life.

(i) Advanced food science and nutrition (½ unit) shall be a laboratory oriented course and include the following essential elements.

(1) Concepts and skills related to the significance of nutrition. The student shall be provided opportunities to:

(A) analyze the influence of economics on obtaining adequate nutrition;

(B) relate the role of nutrition to the prevention and treatment of health problems;

(C) plan diets to meet special dietary needs;

(D) summarize methods for retaining nutrients in foods;

(E) assess the safety factors of various intentional and incidental food additives;

(F) determine factors affecting the world food supply;

(G) describe international organizations contributing to improved nutrition; and

(H) relate nutrition to international trade, governmental relations, and world progress.

(2) Concepts and skills related to food processing and marketing. The student shall be provided opportunities to:

(A) summarize the scientific and creative aspects of food processing and marketing;

(B) outline safety and sanitation considerations for food processing and packaging;

(C) assess methods for processing foods;

(D) analyze the impact of processing on product quality, nutrition, and taste; and

(E) discuss chemical reactions that occur during food processing.

(3) Concepts and skills related to food science and food products. The student shall be provided opportunities to:

(A) evaluate the quality of food products for compliance with established

standards;

(B) compare the effects of various forms of ingredients on food products;

(C) compare the effects of various manipulative procedures on the quality of selected food products;

(D) compare the effects of cooking utensils on food products;

(E) determine the effect of various temperatures on food products;

(F) evaluate the effects of various leavening agents on food products;

(G) analyze factors which affect protein cookery;

(H) analyze factors which affect carbohydrates cookery;

(I) analyze factors which affect fat absorption when frying foods; and

(J) determine methods for making food products more nutritious.

(4) Concepts and skills related to foods and nutrition technology. The student shall be provided opportunities to:

(A) evaluate new forms and sources of foods and food products;

(B) summarize major research in nutrition and food science;

(C) discuss the effect of technology on food and nutrition and food supply, marketing, and distribution; and

(D) propose ways to disseminate and use reliable nutrition information.

(5) Concepts and skills related to career and job opportunities. The student shall be provided opportunities to:

(A) relate personal characteristics to career in food science and nutrition;

(B) describe management practices facilitating individuals assuming multiple roles; and

(C) relate demands and rewards of careers in food science and nutrition to personal and family life.

(j) Food production, management, and services (two-three units) course of study shall include the following essential elements.

(1) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in food production, management, and services;

(B) describe management practices facilitating individuals assuming multiple roles;

(C) discuss demands and rewards in relation to personal and family life; and

(D) demonstrate effective money management.

(2) Concepts and skills related to managing food service business responsibilities. The student shall be provided opportunities to:

(A) demonstrate how to function effectively in routine operations;

(B) demonstrate interpersonal qualities which lead to job success in food

service careers;

(C) demonstrate techniques for maintaining good client relationships; and

(D) apply organizational goals, policies, and procedures.

(3) Concepts and skills related to nutrition. The student shall be provided opportunities to:

(A) classify nutrients according to their sources and functions;

(B) determine food choices to meet special dietary needs; and

(C) relate food preparation and service techniques to retention of nutrients.

(4) Concepts and skills related to equipment, safety, and sanitation. The student shall be provided opportunities to:

(A) apply federal, state, and local sanitation codes for food service establishments;

(B) apply safety and sanitation techniques in food handling preparation, service, storage, and cleanup;

(C) inventory food supplies, utensils, and equipment;

(D) use large and small food service equipment as appropriate for prescribed task; and

(E) demonstrate appropriate maintenance of food service equipment and tools.

(5) Concepts and skills related to achieving quality standards when preparing a variety of dishes and products. The student shall be provided opportunities to:

(A) apply principles for preparing beverages;

(B) apply procedures for preparing appetizers and garnishes;

(C) apply principles for preparing main entrees;

(D) demonstrate salad preparation techniques;

(E) apply principles for preparing fruit and vegetable dishes;

(F) apply principles for preparing desserts; and

(G) apply principles for preparing breads.

(6) Concepts and skills for coordinating various phases of meal planning, preparation, and service to ensure customer satisfaction. The student shall be provided opportunities to:

(A) point out how various food combinations are aesthetically pleasing;

(B) demonstrate ways to assist other employees during emergencies or rush periods;

(C) utilize work schedule so tasks are completed at prescribed times;

(D) demonstrate portion control and food/beverage service techniques;

(E) demonstrate holding and storing techniques for prepared food;

(F) apply techniques for welcoming guests and overseeing customer satisfaction; and

(G) demonstrate techniques for serving customers.

(7) Concepts and skills for performance of various catering tasks. The student shall be provided opportunities to:

(A) outline procedures to follow in packing catering utensils and equipment for transport;

(B) describe techniques for transporting food to maintain quality; and

(C) describe the relationship between catering and in-house food preparation.

(k) Family/individual health (½ unit) shall include the following essential elements.

(1) Concepts and skills related to personal health and wellness. The student shall be provided opportunities to:

(A) analyze individual and family health decisions, influencing factors, and implications;

(B) outline principles of good personal health;

(C) describe stress, contributing factors, and effects of prolonged excess stress; and

(D) demonstrate stress management techniques.

(2) Concepts and skills related to family health. The student shall be provided opportunities to:

(A) explain principles of family health and safety;

(B) determine coping strategies for dealing with family health problems;

(C) identify local and state health resources;

(D) analyze ways to meet financial needs resulting from illness or accident; and

(E) determine home health emergencies, typical causes, and appropriate first aid procedures.

(3) Concepts and skills related to home health care. The student shall be provided opportunities to:

(A) describe methods of meeting social and psychological needs through home health care;

(B) explain the causes, symptoms, methods of transmission, and prevention of communicable diseases;

(C) describe procedures for providing home health care; and

(D) determine alternatives to home health care.

(4) Concepts and skills related to contemporary health issues. The student shall be provided opportunities to:

(A) describe behavior symptomatic of eating disorders;

(B) describe causes, prevention, and consequences of sexually transmitted diseases;

(C) explain the effects of substance abuse on the individual and family; and

(D) discuss forms and causes of domestic violence.

(5) Concepts and skills related to world health issues. The student shall be

provided opportunities to:

(A) relate the impact of technology to individual and family health;

(B) identify major world health concerns; and

(C) describe the impact of health issues on individual, family, and the global society.

(6) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to health careers;

(B) describe management practices facilitating individuals assuming multiple roles; and

(C) relate demands and rewards of careers in family/individual health to personal and family life.

(l) Families with special health needs (½ unit) shall include the following essential elements.

(1) Concepts and skills related to family health needs. The student shall be provided opportunities to:

(A) identify special health needs of individuals;

(B) discuss the impact of special health needs on financial well being;

(C) discuss the impact of special health needs on the psychological health of the family; and

(D) relate societal values to the contributions and perceived worth of individuals with special needs.

(2) Concepts and skills related to special health needs (including birth defects and disabilities/handicaps occurring later in life). The student shall be provided opportunities to:

(A) discuss special health conditions, their causes, and prevention;

(B) outline characteristics and care associated with special health conditions;

(C) identify the social and psychological effects of handicaps on individuals and their families;

(D) describe the impact of technology on the treatment and care of individuals with special health needs;

(E) describe health services and their acquisition;

(F) summarize laws related to the special needs population; and

(G) describe employment and training opportunities for individuals with special health needs.

(3) Concepts and skills related to aging. The student shall be provided opportunities to:

(A) describe the aging process;

(B) outline the physical and psychological needs of the aging individual;

(C) identify characteristics and care needed by aging individuals;

(D) describe employment and training opportunities for the elderly;

(E) contrast the role of the elderly their status, and contributions in various

cultures;

(F) describe services available for the elderly and how they can be evaluated;

(G) appraise the effects of laws related to health of the aging; and

(H) discuss considerations for planning and providing care for aging individuals.

(4) Concepts and skills related to family adjustment. The student shall be provided opportunities to:

(A) describe coping/adjustment strategies for individuals and families of the elderly and handicapped;

(B) discuss nutrition, clothing, housing, and health needs caused by emotional, intellectual, and/or physical impairments; and

(C) point out forms, causes, and preventive measures for abuse of elderly and handicapped family members.

(5) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in services for elderly or handicapped individuals;

(B) describe management practices facilitating individuals assuming multiple roles; and

(C) relate demands and rewards of careers in services for elderly or handicapped individuals to personal and family life.

(m) Services for the elderly (two-three units) shall include the following essential elements.

(1) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in services for the elderly;

(B) describe management practices facilitating individuals assuming multiple roles;

(C) discuss demands and rewards in relation to personal and family life; and

(D) demonstrate effective money management.

(2) Concepts related to the aging process. The student shall be provided opportunities to:

(A) describe the aging process;

(B) identify characteristics and care needs of the elderly;

(C) contrast the role of the elderly, their status, and contributions in various cultures; and

(D) identify laws, trends, and issues affecting the elderly.

(3) Concepts and skills related to meeting social and psychological needs. The student shall be provided opportunities to:

(A) explain social needs and psychological needs of the elderly; and

(B) determine appropriate methods to meet the social and psychological needs of the elderly.

(4) Concepts and skills related to meeting physical needs. The student shall be provided opportunities to:

(A) identify the functions and sources of nutrients;

(B) explain the relationship of digestion and metabolism to health;

(C) plan diets to meet special needs;

(D) relate food preparation and service techniques to retention of nutrients;

(E) demonstrate knowledge of physical activities appropriate for the elderly;

(F) describe personal hygiene and grooming needs of the elderly; and

(G) determine strategies for facilitating self-help.

(5) Concepts and skills related to health care. The student shall be provided opportunities to:

(A) explain the causes, symptoms transmission, and prevention of communicable diseases;

(B) contrast alternatives to home health care; and

(C) provide a safe and healthy environment for the elderly.

(6) Concepts and skills related to sanitation. The student shall be provided opportunities to:

(A) demonstrate housekeeping and maintenance skills associated with the care of the elderly;

(B) demonstrate procedures for handling clothing and linens;

(C) describe procedures for sanitizing items; and

(D) explain personal sanitation measures to prevent the spread of infection.

(7) Concepts and skills related to interaction on the job. The student shall be provided opportunities to:

(A) point out considerations affecting interaction with the elderly's family or responsible parties;

(B) demonstrate communication skills; and

(C) describe crisis management techniques for the elderly and for care providers.

(n) Apparel (½ unit) shall be a laboratory oriented course and shall include the following essential elements.

(1) Concepts and skills affecting individual and family apparel decisions. The student shall be provided opportunities to:

(A) identify factors and resources affecting individual and family clothing decisions;

(B) describe social and cultural influences on apparel preferences;

(C) identify fashion trends and how they are determined;

(D) explain the impact of technology on apparel needs, material, and practices; and

(E) relate design elements to apparel design.

(2) Concepts and skills of apparel

management. The student shall be provided opportunities to:

(A) apply principles of effective wardrobe planning;

(B) describe the influence of advertising on consumer apparel choices;

(C) identify labeling requirements for fabric and apparel;

(D) compare clothing-care products and equipment; and

(E) explain how lifestyle changes affect apparel choices and management.

(3) Concepts and skills for selecting fabrics. The student shall be provided opportunities to:

(A) identify fiber and fabric characteristics; and

(B) relate textile characteristics, design, and finishes to specific uses.

(4) Concepts and skills for apparel construction. The student shall be provided opportunities to:

(A) demonstrate proper use and care of equipment, tools, and notions;

(B) apply basic pattern alteration techniques;

(C) demonstrate construction pressing, and repair techniques; and

(D) apply principles for altering ready-made garments.

(5) Concepts related to the apparel industry. The student shall be provided opportunities to:

(A) compare sources of supply for apparel and fabric;

(B) describe various factors influencing the apparel industry; and

(C) describe interrelationship of the apparel industry and the national economy.

(6) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in apparel;

(B) describe management practices facilitating individuals assuming multiple roles; and

(C) relate demands and rewards of apparel careers to personal and family life.

(o) Textiles and apparel design (½ unit) shall be a laboratory oriented course and shall include the following essential elements:

(1) Concepts related to fiber/fabric characteristics and textile development. The student shall be provided opportunities to:

(A) classify properties of fibers;

(B) analyze characteristics of natural and synthetic fibers;

(C) discuss methods of fabrication;

(D) describe fabric characteristics; and

(E) compare processes for dyeing, printing, and finishing.

(2) Concepts related to the textile and apparel design industries. The student shall be provided opportunities to:

(A) discuss the history of apparel design and manufacturing;

(B) relate the world economy to the textile and apparel design industries; and

(C) outline the organizational structure of an apparel manufacturing company.

(3) Concepts related to textile selection, use, and care. The student shall be provided opportunities to:

(A) summarize textile applications in domestic, business, and industry;

(B) analyze textile suitability for specific uses and validity of manufacturer's claims; and

(C) determine care of textile products.

(4) Concepts and skills related to regulations upon textiles and apparel design industry. The student shall be provided opportunities to:

(A) identify federal legislation regulating fabric and fashion design;

(B) summarize how governmental agencies affect the textile and fashion industries;

(C) identify the assets and liabilities of finishes; and

(D) outline the effects of various environmental conditions on textiles.

(5) Concepts and skills related to design procedures. The student shall be provided opportunities to:

(A) identify tasks to be achieved in the design process;

(B) determine factors which enhance design;

(C) apply design elements and principles; and

(D) apply draping and flat pattern techniques.

(6) Concepts and skills related to costing and producing the final design product. The student shall be provided opportunities to:

(A) identify process for product completion;

(B) relate product design to construction requirements;

(C) describe product marketing procedures; and

(D) describe effect of technology on the textile and apparel industries.

(7) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in textiles and apparel design;

(B) describe management practices facilitating individuals assuming multiple roles; and

(C) relate demands and rewards of textiles and apparel design careers to personal and family life.

(p) Apparel and textiles production, management, and services (two-three units) shall include the essential elements in this subsection. All courses shall include the essential elements in paragraphs (1)-(3) of this subsection. In addition, training pro-

grams emphasizing apparel and textiles production shall include the essential elements in paragraphs (4)-(6) of this subsection, training programs emphasizing apparel and textiles management and services shall include the essential elements in paragraphs (7)-(9) of this subsection, and training programs emphasizing apparel and textiles services shall include the essential elements in paragraphs (10) and (11) of this subsection.

(1) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in apparel and textiles production, management, and services;

(B) describe management practices facilitating individuals assuming multiple roles;

(C) discuss demands and rewards in relation to personal and family life; and

(D) demonstrate effective money management.

(2) Concepts and skills related to managing apparel business and responsibilities. The student shall be provided opportunities to:

(A) demonstrate how to function effectively in routine operations;

(B) demonstrate interpersonal qualities which lead to job success in apparel and textiles industry;

(C) describe techniques for maintaining good customer relationships;

(D) demonstrate safety practices and sanitation procedures; and

(E) apply organizational goals, policies, and procedures.

(3) Concepts and skills related to identifying and describing apparel. The student shall be provided opportunities to:

(A) apply correct textiles and apparel terminology;

(B) identify textile characteristics and care; and

(C) relate textile characteristics to garment design, construction, alteration, and repair.

(4) Concepts and skills related to the production of clothing and accessories. The student shall be provided opportunities to:

(A) select fabrics and notions suitable for garment design;

(B) apply design elements when designing, constructing, or altering apparel;

(C) apply appropriate sewing and pressing techniques in garment construction; and

(D) apply safety procedures while operating equipment.

(5) Concepts and skills related to constructing custom-made garments. The student shall be provided opportunities to:

(A) apply appropriate procedures when measuring for custom garment;

(B) demonstrate pattern alteration procedures to ensure custom fit of garment; and

(C) apply unit construction techniques.

(6) Concepts and skills related to garment alteration and repair. The student shall be provided opportunities to:

(A) describe considerations for fitting garments;

(B) demonstrate garment adjustments following alteration markings; and

(C) apply appropriate garment repair techniques.

(7) Concepts and skills related to clothing and accessories. The student shall be provided opportunities to:

(A) apply design elements when designing, constructing, or altering apparel;

(B) identify signs of quality in clothing and accessories; and

(C) illustrate coordination of clothing and accessories for infants, children, or adults.

(8) Concepts and skills related to advertising and promotional activities. The student shall be provided opportunities to:

(A) apply marketing techniques when assisting with promotions and special events; and

(B) prepare fashion displays.

(9) Concepts and skills related to selection, storage, use, and care of sewing tools and equipment. The student shall be provided opportunities to:

(A) demonstrate safety practices while using and storing equipment;

(B) demonstrate appropriate use and care of sewing or pressing equipment; and

(C) demonstrate sewing, repairing, or pressing techniques.

(10) Concepts and skills related to garment alterations and repairs. The student shall be provided opportunities to:

(A) describe considerations for fitting garments;

(B) demonstrate garment adjustments following alteration markings; and

(C) apply appropriate techniques to make garment repair.

(11) Concepts and skills related to commercial care of clothing. The student shall be provided opportunities to:

(A) demonstrate procedures to receive, mark, and identify laundry or dry cleaning;

(B) determine appropriate laundry and dry cleaning procedures;

(C) demonstrate safety and sanitary procedures while laundering, pressing, or dry cleaning;

(D) apply commercial laundry or dry cleaning techniques; and

(E) demonstrate pressing procedures.

(q) Housing, design, and furnishings (½ unit) shall be a laboratory oriented course and shall include the following essential elements.

(1) Concepts and skills related to the societal aspects of housing. The student shall be provided opportunities to:

(A) determine the relationship of housing and the economy;

(B) determine the impact of population trends on housing; and

(C) discuss housing characteristics common to various cultures and locales.

(2) Concepts and skills related to family housing needs and selection. The student shall be provided opportunities to:

(A) discuss the impact of psychological, physiological, and social needs on housing decisions;

(B) compare housing alternatives;

(C) explain rights and responsibilities associated with housing;

(D) explain factors affecting housing choices;

(E) describe housing modifications necessary to accommodate the special needs of family members; and

(F) determine the impact of needs and wants on the cost of housing.

(3) Concepts and skills related to design of the home. The student shall be provided opportunities to:

(A) discuss considerations for site selection;

(B) describe basic construction and finishing considerations;

(C) identify architectural styles;

(D) illustrate furniture arrangement and space plans;

(E) apply elements and principles of design;

(F) relate design to the use of human and nonhuman resources; and

(G) explain effects of landscaping on design and conservation.

(4) Concepts and skills related to home safety. The student shall be provided opportunities to:

(A) relate housing conditions to health and safety;

(B) discuss the importance of home maintenance and safety; and

(C) describe housing features for family members with special needs.

(5) Concepts and skills related to futurist housing. The student shall be provided opportunities to:

(A) analyze the impact of technology on housing; and

(B) discuss future housing trends.

(6) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in housing and home furnishings;

(B) describe management practices facilitating individuals assuming multiple roles; and

(C) relate demands and rewards of housing and home furnishings careers to personal and family life.

(r) Interior design (½ unit) shall be a laboratory oriented course and shall in-

clude the following essential elements.

(1) Concepts and skills related to period styles of interiors. The student shall be provided opportunities to:

(A) point out characteristics of period styles; and

(B) describe the influence of period styles on interior design.

(2) Concepts and skills related to furniture and accessories. The student shall be provided opportunities to:

(A) describe aesthetic and functional aspects of furniture;

(B) identify role of accessories; and

(C) explain selection, use, and care of furniture and accessories.

(3) Concepts and skills related to surface treatments and lighting. The student shall be provided opportunities to:

(A) outline criteria for selection, use, and care of materials for walls, floors, and ceilings;

(B) outline criteria for selection, use, and care of materials for window treatments;

(C) discuss the functions and principles of lighting; and

(D) identify lighting types and methods of control.

(4) Concepts and skills related to appliances and equipment. The student shall be provided opportunities to:

(A) identify the functional and aesthetic aspects of appliances and equipment;

(B) determine the process for selection; and

(C) describe the use and care of equipment.

(5) Concepts and skills related to use of design and space planning in homes and business settings. The student shall be provided opportunities to:

(A) apply elements and principles of design;

(B) relate user activities to space allocations and arrangement;

(C) identify functions of public, private, and service zones; and

(D) explain considerations for placement of furnishings.

(6) Concepts and skills related to occupant needs. The student shall be provided opportunities to:

(A) contrast design practices used to meet the occupant needs in homes and in business settings; and

(B) explain the effect of technology on interior design practices.

(7) Concepts and skills related to acquisition of professional service. The student shall be provided opportunities to:

(A) identify available design resources;

(B) identify responsibilities of the person providing interior design services; and

(C) determine costs and benefits of professional services.

(8) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in interior design;

(B) describe management practices facilitating individuals assuming multiple roles; and

(C) relate demands and rewards of careers in interior design to personal and family life.

(s) Housing, home furnishings, and equipment management, production, and services (two-three units) shall include the essential elements in this subsection. All programs shall include the essential elements in paragraphs (1) and (2) of this subsection. In addition, training programs emphasizing home furnishings production shall include the essential elements in paragraphs (3)-(5) of this subsection, training programs emphasizing home furnishings management and services shall include the essential elements in paragraphs (6)-(9) of this subsection, and training programs emphasizing floral design shall include the essential elements in paragraphs (10)-(13) of this subsection.

(1) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in housing, home furnishings, and equipment management, production, and services;

(B) describe management practices facilitating individuals assuming multiple roles;

(C) discuss demands and rewards in relation to personal and family life; and

(D) demonstrate effective money management.

(2) Concepts and skills related to managing housing and home furnishings business responsibilities. The student shall be provided opportunities to:

(A) demonstrate how to function effectively in routine operations;

(B) demonstrate interpersonal qualities which lead to job success in home furnishings careers;

(C) demonstrate techniques for maintaining good client relationships;

(D) demonstrate safety practices and sanitation procedures; and

(E) apply organizational goals, policies, and procedures.

(3) Concepts and skills related to identifying and describing material. The student shall be provided opportunities to:

(A) utilize correct terminology for home furnishings materials;

(B) identify home furnishings material characteristics, use, and care; and

(C) relate characteristics of materials used in home furnishings to design and construction.

(4) Concepts and skills related to the production of home furnishings. The

student shall be provided opportunities to:

(A) determine fabrics, accessories, and/or treatments suitable for product design and application;

(B) identify tools and equipment and their appropriate use and care;

(C) apply design elements to home furnishing designs or construction; and

(D) apply appropriate techniques in product construction.

(5) Concepts and skills related to costing. The student shall be provided opportunities to:

(A) follow procedures for determining the cost of a product; and

(B) apply effective communication skills with client.

(6) Concepts and skills related to identifying and describing home furnishings. The student shall be provided opportunities to:

(A) apply correct terminology;

(B) identify characteristics, use, and care of home furnishings materials;

(C) describe guidelines for selecting home furnishings; and

(D) point out characteristics of good workmanship.

(7) Concepts and skills related to accessorizing. The student shall be provided opportunities to:

(A) identify the role of accessories;

(B) describe guidelines for selecting appropriate accessories; and

(C) relate trends and accessorizing to decorating costs

(8) Concepts and skills related to coordinating home furnishings. The student shall be provided opportunities to:

(A) apply the elements and principles of design; and

(B) apply principles of home furnishings coordination.

(9) Concepts and skills related to advertising and promotional activities. The student shall be provided opportunities to:

(A) apply marketing techniques when assisting with promotions; and

(B) prepare floor displays.

(10) Concepts and skills related to floral service management. The student shall be provided opportunities to:

(A) identify management functions related to operation of floral services;

(B) contrast various ownership/management structures in the floral industry; and

(C) describe applications of technology in the floral industry.

(11) Concepts and skills related to client needs. The student shall be provided opportunities to:

(A) utilize work schedules so tasks are completed as prescribed;

(B) apply complaint resolution techniques;

(C) describe guidelines for assisting customers in selecting floral prod-

ucts; and

(D) demonstrate ways to estimate and verify product cost.

(12) Concepts and skills related to marketing strategies. The student shall be provided opportunities to:

(A) discuss the psychological and sociological aspects of flowers, foliage, and plants;

(B) discuss design trends and their effects on floral product use;

(C) discuss the impact of the economy on the floral industry;

(D) determine product marketing strategies; and

(E) prepare floral displays.

(13) Concepts and skills related to floral design. The student shall be provided opportunities to:

(A) apply correct terminology;

(B) identify characteristics, use, and care of composition materials;

(C) apply the elements and principles of design;

(D) demonstrate proper use and care of equipment;

(E) plan fresh and permanent floral arrangements suitable for specific purposes;

(F) describe guidelines for selecting floral products;

(G) demonstrate coordination of floral settings with giftware and props;

(H) explain procedures to control plant pests and diseases;

(I) apply procedures for proper packaging and delivery of floral products; and

(J) explain care procedures for live plants.

(t) Institutional maintenance (one-three units) shall include the following essential elements.

(1) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in institutional maintenance;

(B) describe management practices facilitating individuals assuming multiple roles;

(C) discuss demands and rewards in relation to personal and family life; and

(D) demonstrate effective money management.

(2) Concepts and skills related to managing institutional maintenance business responsibilities. The student shall be provided opportunities to:

(A) demonstrate how to function effectively in routine operations;

(B) demonstrate interpersonal qualities which lead to job success in institutional maintenance careers;

(C) demonstrate techniques for maintaining good client relationships;

(D) apply effective communication skills; and

(E) apply organizational goals,

policies, and procedures.

(3) Concepts and skills related to safety, sanitation, policies, and instruction. The student shall be provided opportunities to:

(A) apply policies and employer/supervisor instructions; and

(B) apply safety and sanitary procedures when performing assigned tasks.

(4) Concepts and skills related to institutional maintenance and housekeeping. The student shall be provided opportunities to:

(A) select equipment and supplies appropriate for assigned tasks;

(B) apply appropriate procedures while operating equipment and using tool and cleaning products;

(C) apply required methods and sequences when performing tasks;

(D) apply principles of time management and work simplification when performing assigned tasks;

(E) discuss disinfection techniques and appropriate uses; and

(F) apply recommended procedures for entering and exiting assigned cleaning area.

(5) Concepts and skills related to laundry services. The student shall be provided opportunities to:

(A) describe required procedures when performing laundry tasks;

(B) describe procedures for operating equipment;

(C) describe procedures for folding, storing, and handling linens and clothing; and

(D) describe procedures for routine linen repair.

(u) Hospitality services (two-three units) shall include the following essential elements.

(1) Concepts and skills related to career options and adjustments. The student shall be provided opportunities to:

(A) relate personal characteristics to careers in hospitality services;

(B) describe management practices facilitating individuals assuming multiple roles;

(C) discuss demands and rewards in relation to personal and family life; and

(D) demonstrate effective money management.

(2) Concepts and skills related to hospitality services. The student shall be provided opportunities to:

(A) describe management functions related to property operation and support services;

(B) discuss a code of professional ethics for hospitality employees;

(C) contrast various ownership/management structures in the hospitality industry;

(D) demonstrate safety practices and emergency procedures; and

(E) describe applications of

technology in the hospitality industry.

(3) Concepts and skills related to supportive services. The student shall be provided opportunities to:

(A) describe simple procedures for property maintenance and repair;

(B) identify procedures for purchasing equipment and supplies;

(C) describe property security procedures;

(D) discuss strategies for public relations and special promotions; and

(E) describe legal considerations of the hospitality industry, including guest, property, and employee liability.

(4) Concepts and skills related to the psychology of guests. The student shall be provided opportunities to:

(A) define the concept of guest/customer;

(B) discuss the needs of guests/customers; and

(C) apply techniques for complaint resolution and guest/customer service.

(5) Concepts and skills related to lodging operations. The student shall be provided opportunities to:

(A) identify front office procedures;

(B) explain typical departments and functions;

(C) select equipment and supplies appropriate for various housekeeping and laundry tasks;

(D) outline required methods and sequences to be used for performing housekeeping and laundry tasks;

(E) apply time and energy management techniques in performing housekeeping or laundry tasks;

(F) apply sanitation and disinfection techniques in performing housekeeping or laundry tasks;

(G) describe procedures for entering and exiting assigned cleaning area; and

(H) describe procedures for routine linen repair and maintenance.

(6) Concepts and skills related to food and beverage operations. The student shall be provided opportunities to:

(A) describe the sources and functions of nutrients;

(B) relate food preparation and service techniques to the retention of nutrients;

(C) demonstrate appropriate housekeeping procedures and sanitation standards;

(D) use appropriate large and small food service equipment for prescribed task;

(E) identify management principles related to food production and services;

(F) apply quantity food production techniques;

(G) demonstrate a variety of food presentation techniques; and

(H) demonstrate food server techniques.

(v) Home economics career cluster (½-1 unit) shall include the following essential elements.

(1) Concepts and skills related to career options. The student shall be provided opportunities to:

(A) identify personal priorities related to employment;

(B) describe ways personal health may influence employability;

(C) describe management practices facilitating individuals assuming multiple roles;

(D) describe employment considerations that influence career choices;

(E) explain how family lifestyle affects career choices;

(F) describe community service experiences that contribute to employability; and

(G) discuss the contribution of work experience to employability.

(2) Concepts and skills related to home economics business operations. The student shall be provided opportunities to:

(A) analyze career opportunities related to home economics businesses;

(B) identify educational requirements for home economics business careers; and

(C) outline future trends in home economics business careers.

(3) Concepts and skills related to home economics education and communication. The student shall be provided opportunities to:

(A) analyze career opportunities related to home economics education and communication;

(B) identify educational requirements for careers in home economics education and communication; and

(C) outline future trends in home economics education and communication careers.

(4) Concepts and skills related to home economics human services. The student shall be provided opportunities to:

(A) analyze career opportunities related to home economics human services;

(B) identify educational requirements for home economics human service careers; and

(C) outline future trends in home economics human service careers.

(5) Concepts and skills related to home economics sciences and technology. The student shall be provided opportunities to:

(A) analyze career opportunities related to home economics sciences and technology;

(B) identify educational requirements for home economics science and technology careers; and

(C) outline future trends in home economics science and technology careers.

(6) Concepts and skills related to home economics arts. The student shall be provided opportunities to:

(A) analyze career opportunities related to home economics arts;

(B) identify educational requirements for home economics art careers; and

(C) outline future trends in home economics art careers.

(w) Instruction for students enrolled in VEH or CVAE shall be modified from the appropriate elements described in this section. In addition to the courses for job specific training described in this section, schools may offer home economics education for any of the occupations listed in this section or in other home economics subject matter areas justified by supply/demand data. Schools offering training in these occupations shall provide a program that provides concepts and skills associated with the specific occupation or cluster of occupations involved. The following may be offered:

(1) fashion design;

(2) PL/home economics production, management, and services;

(3) CVAE/home economics production, management, and services;

(4) VEH/home economics production, management, and services.

§75.84. Health Occupation Education.

(a) Health care science (one unit) shall include the following essential elements.

(1) Concepts and skills necessary for entering a health care specialty. The student shall be provided opportunities to:

(A) identify interpersonal and patient relationships;

(B) describe or practice the elements of a safe working environment and correct body mechanics;

(C) identify ethical and legal responsibilities of the health care industry;

(D) demonstrate the practice of medical aseptic and isolation techniques for infection control;

(E) demonstrate basic first aid and CPR procedures;

(F) demonstrate correct technique for taking vital signs;

(G) identify the basic anatomy and physiology of the body systems as they relate to wellness and illness;

(H) demonstrate conversions of English and metric systems; and

(I) identify principles of record keeping and records management.

(2) Concepts and skills necessary to function in health care/occupations. The student shall be provided opportunities to:

(A) identify chain of command and the role of health care workers;

(B) develop money management skills;

(C) identify basic medical terminology;

(D) develop an awareness of

communication equipment utilized by the health care industry; and

(E) identify correct telephone techniques.

(b) Health Occupations Education I (two-three units) shall include the essential elements in this subsection. For students who have not taken health care science, the essential elements of health care science must be incorporated into the essential elements of Health Occupations I.

(1) Concepts and skills necessary for entering a health care specialty. The student shall be provided opportunities to:

(A) apply concepts of good interpersonal and patient relationships;

(B) recognize skills and educational requirements for entrance into selected health care specialties;

(C) practice safe procedures for patients co-workers and self;

(D) practice good grooming and personal hygiene as appropriate in the health care industry;

(E) practice ethical and legal behavior and appropriate work habits in the work place;

(F) relate medical asepsis to infection control;

(G) review current first aid and CPR procedures to be applied in emergency situations;

(H) review techniques and normal parameters of vital signs;

(I) review and identify anatomy, physiology, and pathophysiology of the body systems;

(J) recognize the components of community health resources;

(K) convert temperature, weights, and measures to metric systems; and

(L) identify the different systems that finance the cost of health care.

(2) Concepts and skills necessary for employment in health care. The student shall be provided opportunities to:

(A) identify factors of effective working relationships and responsibilities to employers and co-workers;

(B) utilize basic medical terminology relevant to the health care industry;

(C) demonstrate correct telephone skills; and

(D) utilize or demonstrate communication equipment specific to health occupations.

(3) Practice opportunities. The student shall be provided opportunities to practice entry level skills and/or observe skills in specific health occupations.

(c) Health Occupations Education II (two-three units) shall include the following essential elements.

(1) Concepts and skills necessary for entering a health care specialty. The student shall be provided opportunities to:

(A) demonstrate understanding of interpersonal relationships;

(B) identify educational re-

quirements for advanced health care specialties;

(C) preview safety practices in clinical environment and identify hazardous conditions;

(D) maintain good grooming and personal hygiene as appropriate to the health care industry;

(E) apply principles of ethical and legal behavior in the health care industry;

(F) identify standards for licensure/certification in selected occupations;

(G) identify methods used in health care industry for evaluating patient care services and/or health care providers;

(H) practice infection control as prescribed by the center for disease control;

(I) review current first aid and CPR measures and apply in selected emergency situations;

(J) recognize significance of abnormal vital signs;

(K) identify the populations and services provided by the community health resources;

(L) practice use of metrics in health care industry;

(M) identify cultural differences that affect people's beliefs in health care and health care professionals.

(2) Concepts and skills necessary for employment in health care. The student shall be provided opportunities to:

(A) determine effective means of establishing good employer-employee relations;

(B) demonstrate the qualities of effective leadership; and

(C) utilize terminology specific to the selected health occupation.

(3) Concepts and skills. The student shall be provided the opportunity to learn concepts and skills necessary to the specific occupation being taught.

(d) Central-supply aide (two-three units) shall include the health occupations core and the concepts and skills associated with material management supply. The student shall be provided opportunities to:

(1) store prepared articles and supplies in designated areas of central supply;

(2) fill requisitions, write charges, and inventory supplies;

(3) distribute stock supplies to proper departments; and

(4) develop concepts of dirty and clean rooms and supplies.

(e) Dental assistant (two-three units) shall include the health occupations core and the concepts and skills associated with dental assisting. The student shall be provided opportunities to:

(1) perform chairside assisting duties;

(2) recognize the pathophysiology of the oral cavity;

(3) practice and demonstrate proper dental terminology;

(4) provide diagnostic aids, in-

cluding developing, mounting radiographs, and charting;

(5) mix and pour preliminary impressions for study casts;

(6) perform clinical supportive functions, including preparing and dismissing patients and providing postoperative instructions prescribed by the dentist;

(7) assist the dentist in management of medical and dental emergencies;

(8) assist in maintaining patient treatment records, operatory equipment, and instruments;

(9) provide oral hygiene instruction, such as conducting plaque control program;

(10) perform basic business office procedures, including maintaining appointment control, receiving payment for dental services, and inventory control;

(11) sterilize and disinfect instruments and equipment;

(12) prepare tray setups for dental procedures; and

(13) demonstrate a knowledge of the anatomy and physiology of the oral cavity.

(f) Dental laboratory aide (two-three units) shall include the health occupations core and the concepts and skills associated with the occupation of dental laboratory aide. The student shall be provided opportunities to:

(1) practice safety measures which pertain to casting, polishing, and finishing processes;

(2) apply knowledge of oral anatomy and restoration procedures;

(3) position teeth in wax model in specified plane of occlusal harmony;

(4) mold wax over denture setup to form contours of gums, using laboratory knives and spatula;

(5) cast plaster models of dentures to be repaired and select and mount replacement teeth in model to match color and shape of natural or adjacent teeth, using color chart and tooth illustrations;

(6) utilize appropriate materials and equipment to cast reproductions of gums;

(7) test repaired dentures for accuracy of occlusion;

(8) polish metal, plastic, and porcelain surfaces to specified finish; and

(9) fabricate dental castings using the appropriate process.

(g) Diet clerk (two-three units) shall include the health occupation core and the concepts and skills associated with the occupations of diet clerk. The student shall be provided opportunities to:

(1) assist in the preparation of food;

(2) apply knowledge of food handling regulations;

(3) assist dietician in receiving orders and tallying portions and foods;

(4) process new diets and changes as required;

(5) maintain records and prepare reports on perpetual inventory food purchases, meals served, and food costs;

(6) develop and understand the basic four food groups and how they inter-relate for total nutrition;

(7) convert the foods on the exchange list to maintain good nutrition according to the patient's preferences as related to the prescribed diets;

(8) differentiate between special diets and exhibit knowledge of pathophysiology requiring these diets;

(9) prepare trays on serving lines; and

(10) distribute trays to patients.

(h) Electrocardiograph technician (two-three units) shall include the health occupations core and the concepts and skills associated with the occupation of electrocardiograph technician. The student shall be provided opportunities to:

(1) prepare patient for procedure;

(2) attach electrodes to specified areas of patient's body;

(3) edit and mount final results and forward results to cardiologist for analysis and interpretation;

(4) apply knowledge of normal and abnormal tracing by observing tracing;

(5) maintain, store, clean, and supply EKG equipment;

(6) develop a knowledge of the theory and practicum of taking an EKG;

(7) position patients to obtain an accurate EKG;

(8) care for the patient following the procedure; and

(9) show a knowledge of safety in utilizing electrical equipment.

(i) Home health aide (two-three units) shall include the health occupations core and the concepts and skills associated with the occupation of home health aide. The student shall be provided opportunities to:

(1) bathe, dress, and undress patients;

(2) serve and feed patients requiring help;

(3) transport patients to treatment units, using wheelchair or wheeled carriage, or assist them to walk;

(4) drape patients for examinations and treatment, and remain with patients, performing such duties as holding instruments and adjusting lights;

(5) dust and clean patients' rooms;

(6) change bedlinens, run errands, and answer telephone; and

(7) take and record temperature, pulse and respiration rates, and food and liquid intake and output, as directed.

(j) Medical laboratory aide (two-three units) shall include the health occupations core and the concepts and skills associated with the occupation of medical laboratory aide. The student shall be provided opportunities to:

(1) wash, rinse, and dry glassware and instruments, using acceptable methods;

(2) fill tubes and bottles with specified solutions and apply identification labels;

(3) label and file microscope slides;

(4) arrange specimens and samples on trays to be placed in incubators and refrigerators; and

(5) perform routine tests in medical laboratory under supervision of medical technologist or other qualified individual utilizing prescribed procedures.

(k) Medical office assistant aide (two-three units) shall include the health occupations core and the concepts and skills associated with the occupation of medical office assistant aide. The student shall be provided opportunities to:

(1) prepare treatment rooms for examination of patient;

(2) drape patients and position instruments and equipment;

(3) hand instruments and materials to doctor as directed;

(4) maintain sterile supply of instruments;

(5) prepare inventory and replenish supplies;

(6) assist with charting procedures;

(7) interview patients, collect historical data, check vital signs, and obtain weight and height;

(8) assist in the administration of selected treatments under direct supervision;

(9) perform clerical and secretarial tasks, including scheduling appointments;

(10) maintain radiographs and other medical records;

(11) receive payments, complete insurance forms, and maintain financial records; and

(12) assist patients after examination.

(l) Nursing assistant (two-three units) shall include the health occupations core and the concepts and skills associated with the occupation of nursing assistant. The student shall be provided opportunities to:

(1) answer signal lights and bells to determine patients' needs;

(2) bathe, dress, and undress patients;

(3) serve and collect food trays;

(4) assist and feed patients as required;

(5) transport patient to treatment units;

(6) drape patients for examinations and treatments, remain with patients, and perform such duties as holding instruments and adjusting lights;

(7) change bed linens and direct visitors;

(8) take and record vital signs;

(9) measure and record liquid intake and output;

(10) admit and dismiss patients;

(11) observe patients and report changes;

(12) care for personal needs of patients;

(13) collect and label specimens;

(14) distribute water and nourishments; and

(15) fill out requisitions and lab and therapy slips.

(m) Nursing assistant, radiology (two-three units), shall include the health occupations core and the concepts and skills associated with the occupation of nursing assistant, radiology department. The student shall be provided opportunities to:

(1) transport patients to treatment units;

(2) assist with robbing and disrobing patients;

(3) change linen and clean room;

(4) record pertinent information in the patient's chart;

(5) adjust inventory and supplies as directed;

(6) maintain inventory and supplies as directed;

(7) prepare and maintain work area;

(8) distribute radiograph reports to the appropriate unit for placement on the chart; and

(9) assist in record keeping.

(n) Nursing assistant, respiratory therapy (two-three units), shall include the health occupations core and the concepts and skills associated with the occupation of nursing assistant, respiratory therapy department. The student shall be provided opportunities to:

(1) assist in setting up equipment such as respirators, mechanical ventilators, and therapeutic gas administration apparatus;

(2) assist the patient to perform breathing exercises;

(3) clean and sterilize equipment;

(4) assist in the maintenance of equipment;

(5) record pertinent information in the patients' charts;

(6) maintain inventory and supplies as directed;

(7) prepare and maintain work areas;

(8) assist with pulmonary function tests;

(9) distribute and adjust oxygen setups; and

(10) record and file daily patient charges.

(o) Physical therapy aide (two-three units) shall include the health occupations core and the concepts and skills associated with the occupation of physical therapy aide. The student shall be provided opportunities to:

(1) assist patient to robe and disrobe;

(2) assist with supportive devices;

(3) position patient for treatments, tests, and evaluations;

(4) secure patient into or onto therapy equipment;

(5) administer routine treatments, such as hydrotherapy, hot and cold packs, and paraffin bath;

(6) safeguard, motivate, and assist

patients practicing exercise and functional activities;

(7) observe patients during treatments and report signs of fatigue, distress, or other problems;

(8) transport patients to and from treatment areas and transfer patients between conveyances and treatment equipment, using transfer techniques appropriate to patient's condition;

(9) change linen and arrange treatment supplies and equipment according to standard procedures, written or oral instructions;

(10) clean work area and equipment after treatment; and

(11) assist in record keeping.

(p) Surgical technician aide (two-three) units shall include the health occupations core and the concepts and skills associated with the occupation of surgical technician aide. The student shall be provided opportunities to:

(1) prepare operative site;

(2) scrub hands and don cap, mask, gown, and rubber gloves;

(3) aid team to don gowns and gloves;

(4) maintain specified supply of such fluids as saline and intravenous fluids for use during operation;

(5) adjust lights and other equipment as directed;

(6) wash and sterilize used equipment, using germicides, autoclave, and sterilizer;

(7) clean operating room;

(8) transport to and from operative area;

(9) demonstrate a knowledge of surgical packs;

(10) assist surgeon as needed.

(q) In addition to the courses described in subsections (a)-(p) of this section, schools may offer health occupations education in any of the occupations listed in this subsection or in those justified by employment needs through a cooperative arrangement. The following may be offered:

(1) biomedical instrument aide;

(2) electroencephalogram aide;

(3) emergency medical aide;

(4) environmental health aide;

(5) hospital entrance aide;

(6) orthopedic appliance aide;

(7) orthotics aide;

(8) optometric aide;

(9) occupational therapy aide; and

(10) central supply aide.

§75.85. *Industrial Technology Education.*

(a) Industrial technology education common essential elements (grades nine-12). The elements in this subsection are common to all industrial technology education courses in grades nine-12. They are described here to preclude repetition. Every school offering industrial technology courses, grades nine-12, shall include the following common essential elements.

(1) Concepts and skills related to the application of safety practices. The student shall be provided opportunities to:

(A) demonstrate safe operation of appropriate tools, machines, and equipment;

(B) maintain a safe and clean laboratory environment; and

(C) investigate appropriate state and federal safety laws.

(2) Concepts and skills related to social/cultural impacts of technology. The student shall be provided opportunities to:

(A) investigate ideas and technological developments of the past and present;

(B) assess the characteristics of technological change on society and culture;

(C) predict how selected technological developments will impact future cultures and societies; and

(D) explore the impact technology has on the environment.

(3) Concepts and skills related to the application of technology to daily life. The student shall be provided opportunities to:

(A) evaluate selected products based on given standards or applications;

(B) develop criteria for selecting, purchasing, and contracting services;

(C) practice the servicing of selected products and equipment of technology;

(D) investigate the interrelationship of all technology areas;

(E) use computer-controlled systems and/or devices related to each course; and

(F) apply the design process to product development.

(4) Concepts and skills related to the tools, materials, and processes of technology. The student shall be provided opportunities:

(A) become proficient in the use of appropriate tools, machines, and equipment;

(B) analyze the properties of a wide range of materials of technology through testing;

(C) explore the processes of various technologies; and

(D) practice conservation and recycling of products and materials of technology.

(5) Concepts and skills related to the application of problem solving techniques. The student shall be provided opportunities to:

(A) identify and creatively solve technological problems using the scientific method;

(B) explore standards of measurement used in technology and apply measurement in the solution of problems; and

(C) communicate oral, written, and computational technical information.

(b) Communication systems (½-1

unit). Communication systems is a laboratory oriented course that includes the common essential elements for vocational education and for industrial technology education, grades nine-12, plus concepts and skills related to communication systems. The student shall be provided opportunities to:

(1) use accepted standards, symbols, and conventions;

(2) use design principles of style, energy efficiency, safety, security, and human engineering;

(3) use appropriate drafting conventions to describe the shape and size of products and objects;

(4) utilize appropriate photographic, graphic, electronic, and telecommunication equipment to produce communication products;

(5) apply drafting conventions to produce drawings in the fields of manufacturing and construction graphics;

(6) produce products using photographic materials and equipment;

(7) produce products using graphic arts materials and equipment;

(8) produce products using electronic communication technology;

(9) apply the principles of telecommunication; and

(10) investigate space-based information services through satellite systems.

(c) Manufacturing graphics (½-1 unit). Manufacturing graphics is a laboratory oriented course that includes the common essential elements for vocational education, grades nine-12, plus concepts and skills related to manufacturing graphics. The student shall be provided opportunities to:

(1) apply accepted lettering practices and styles used in manufacturing graphics;

(2) apply sketching techniques to develop drawing format and graphic problem solving;

(3) understand the relationship between points, lines, and planes through multiview drawing principles;

(4) describe objects accurately through the principles of shape and size description;

(5) describe objects through various pictorial development techniques;

(6) describe layout and assembly methods through graphic techniques;

(7) apply the principles of descriptive geometry to solve graphic problems;

(8) apply the principles of descriptive geometry in developing revolution, auxiliary, and successive auxiliary drawings;

(9) produce drawings related to manufacturing;

(10) apply the principles of size description related to geometric tolerance and precision dimensioning;

(11) use accepted standards, symbols, and conventions;

(12) use computer software and hardware as a drafting tool to produce technical drawings appropriate to manufacturing processes;

(13) use reproduction/media equipment; and

(14) produce drawings related to space-based production systems.

(d) Construction graphics (½-1 unit). Construction graphics is a laboratory oriented course that includes the common essential elements for vocational education and for industrial technology education, grades nine-12, plus concepts and skills related to construction graphics. The student shall be provided opportunities to:

(1) apply accepted lettering practices and styles used in construction graphics;

(2) apply sketching techniques to develop drawing format and graphic problem solving;

(3) understand the relationship between points, lines, and planes through multiview drawing;

(4) describe structures accurately through the principles of shape and size description;

(5) describe structures through various pictorial development techniques;

(6) describe layout and construction methods through graphic techniques;

(7) produce drawings related to the field of construction;

(8) identify legal requirements, schedule sequencing, and construction methods;

(9) use accepted standards, symbols, and conventions;

(10) produce drawings using design principles of style, energy efficiency, safety, security, and human engineering;

(11) identify minimum standards established by local, state, and national building standards and codes;

(12) identify types of structural systems;

(13) use computer software and hardware as a drafting tool to produce technical drawings appropriate to construction processes;

(14) use reproduction/media equipment;

(15) develop schedules and written specifications for construction; and

(16) produce drawings related to space habitat/environmental systems.

(e) Communication graphics (½-1 unit). Communication graphics is a laboratory oriented course that includes the common essential elements for vocational education and for industrial technology education, grades nine-12, plus concepts and skills related to communication graphics. The student shall be provided opportunities to:

(1) apply the principles of composition and design;

(2) apply the principles of optics and light control;

(3) utilize appropriate photographic, graphic, and electronic equipment to produce graphic communication products;

(4) produce graphic images using the production stages of design, image generation, preproduction, production, and finishing;

(5) produce products using photographic materials and equipment;

(6) produce products using graphic arts materials and equipment;

(7) participate in activities that demonstrate the interrelationship of communication graphics to other types of communication;

(8) use the appropriate chemistry for graphic arts and continuous tone photography;

(9) explore the major electronic communication systems;

(10) analyze and apply the principles of telecommunication; and

(11) investigate space-based information services through satellite systems.

(f) Energy systems (½-1 unit). Energy systems is a laboratory oriented course that includes the common essential elements for vocational education and for industrial technology education, grades nine-12, plus concepts and skills related to energy systems. The student shall be provided opportunities to:

(1) convert, control, store, and transmit various forms of energy;

(2) investigate conventional and alternate sources of energy;

(3) demonstrate the principles and operation of internal/external combustion engines;

(4) apply the principles of mechanical, electrical, and fluidic power;

(5) apply the principles of basic electron theory;

(6) apply the basic principles of magnetism and electromagnetism;

(7) apply the electrical codes to wiring systems;

(8) demonstrate passive electronic components;

(9) apply the components of solid state technology;

(10) investigate methods of transporting people and cargo;

(11) experiment with land, marine, air, and space transportation environments;

(12) investigate the impact energy systems will have in the future; and

(13) investigate space-based energy technology through researching power generation and transmission techniques.

(g) Power/transportation systems (½-1 unit). Power/transportation systems is a laboratory oriented course that includes the common essential elements for vocational education and for industrial technology education, grades nine-12, plus concepts and skills related to power/transportation systems. The student shall be provided opportunities to:

(1) research methods of power conversion/utilization in the residential, commercial, industrial, and transportation sectors of society;

(2) apply the principles of mechanical, electrical, pneumatic, and hydraulic power systems;

(3) demonstrate the principles and operation of internal/external combustion engines;

(4) explain the fuel cycle, types of reactors, and waste problems associated with nuclear power;

(5) manipulate common test instruments utilized in power applications;

(6) investigate transportation activities that are representative of the urban, inner-city, air, and water environments;

(7) explore shipping procedures utilized by various transportation systems;

(8) investigate the principles of air navigation and the effects of weather conditions on flight;

(9) interpret and use transportation documents such as maps, charts, and schedules;

(10) identify the service and support industries which serve the transportation systems;

(11) investigate space-based energy technology through researching power generation and transmission techniques; and

(12) explore space vehicle, non-vehicle, and people mover transportation systems.

(h) Electricity/electronics systems (½-1 unit). Electricity/electronics systems is a laboratory oriented course that includes the common essential elements for vocational education and for industrial technology education, grades nine-12, plus concepts and skills related to electricity/electronics systems. The student shall be provided opportunities to:

(1) investigate AC/DC electrical current and voltage;

(2) recognize the relationship between electrical energy and work;

(3) recognize the properties of conductors, insulators, and semiconductors;

(4) investigate solar cells, fuel cells, and other alternative sources;

(5) assess power generation and distribution of electricity by public utilities;

(6) explore magnetic field theory and static electrical charges;

(7) apply the National Electrical Code and its local variations;

(8) investigate DC motors, generators, alternators, and transformers;

(9) examine resistive components, capacitors, and inductors;

(10) recognize the properties of N-type and P-type semiconductors;

(11) analyze opto-electronic components and lasers;

(12) compare the various types of integrated circuits;

(13) recognize binary and hex-

adecimal numbering systems;

(14) analyze the application of analog and digital components to computers;

(15) investigate radio, television, telephone systems, and fiberoptics; and

(16) investigate space-based information services through satellite systems.

(i) Production systems (½-1 unit). Production systems is a laboratory-oriented course that includes the common essential elements for vocational education and for industrial technology education, grades nine-12, plus concepts and skills related to production systems. The student shall be provided opportunities to:

(1) describe the types of metallic, polymers, ceramics, organic, and composite materials used in production;

(2) identify types and grades of materials;

(3) trace the transformation of raw materials into finished products;

(4) organize an enterprise to construct a structure or to produce a product;

(5) conduct tests to evaluate the strengths of materials;

(6) illustrate the different classifications of structures;

(7) compare the management components of the construction and manufacturing industry;

(8) illustrate the manufacturing process from the idea of a product to the marketing of the product;

(9) simulate automation systems used in the production of structures and products;

(10) use the manufacturing components of planning, organizing, directing, and controlling personnel to design, engineer, produce, and market a product;

(11) compare the relationships of the three construction sub-systems: design, management, and building;

(12) use the processes of forming, separating, combining, and conditioning;

(13) calculate quantities and costs of appropriate production materials; and

(14) explore space-based production systems.

(j) Manufacturing systems (½-1 unit). Manufacturing systems is a laboratory oriented course that includes the common essential elements for vocational education and for industrial technology education, grades nine-12 plus concepts and skills related to manufacturing systems. The student shall be provided opportunities to:

(1) investigate the types and grades of selected materials used in manufacturing;

(2) calculate the quantity and cost of manufacturing materials;

(3) show how the properties, ease of maintenance, cultural values, and ease of disposal influence the selection of materials;

(4) compare custom, intermittent, and continuous manufacturing systems;

(5) use the processes of forming,

separating, combining, and conditioning;

(6) simulate the automated manufacturing processes of robotics, computer-aided-design/computer-aided-manufacturing (CAD/CAM), computer-integrated-manufacturing (CIM), flexible manufacturing system (FMS), and just-in-time manufacturing (JIT);

(7) design a manufacturing cell;

(8) organize a manufacturing enterprise and mass produce a product using the accepted manufacturing procedures of conducting market research, researching and developing, developing prototypes, preparing production flow charts, producing a product, packaging, and distributing;

(9) show the interrelationship of the technological resources for manufacturing systems: people, information, materials, tools, machines, energy, capital, and time by construction of a product;

(10) investigate recycling procedures and recycled materials used in manufacturing;

(11) describe how the two sub-systems of material processing and business and management combine to produce the complete manufacturing system;

(12) investigate the stages of converting raw materials into a finished product; and

(13) explore space-based manufacturing systems.

(k) Construction systems (½-1 unit). Construction systems is a laboratory oriented course that includes the common essential elements for vocational education and for industrial technology education, grades nine-12, plus concepts and skills related to construction systems. The student shall be provided opportunities to:

(1) compare the relationships of the three construction sub-systems: design, management, and building;

(2) illustrate the different classifications of structures;

(3) identify the types and grades of selected materials used in construction;

(4) determine the criteria for selecting materials for various types of structures;

(5) calculate quantities and cost of construction materials;

(6) use accepted practices to design and build structures full size or to scale;

(7) illustrate light, heavy, industrial, and civil construction processes and techniques;

(8) conduct tests to determine the strength of selected simulated structures;

(9) describe the interrelationship between management, personnel, and production practices;

(10) organize a construction enterprise to design and build a simulated structure;

(11) compile local legal requirements and construction documents;

(12) explore remodeling and enlarging structures;

(13) apply automated processes related to construction;

(14) identify tools and equipment related to various construction industries;

(15) apply the techniques and processes used in manufactured construction products;

(16) investigate recycling and recycled construction materials;

(17) explore automated systems used for security and environmental control in building structures;

(18) use the processes of forming, separating, combining, and conditioning;

(19) conduct tests to determine the behavior of different construction materials under the same specified conditions; and

(20) investigate space habitat/environmental systems.

(l) Technology systems (½-1 unit). Technology systems is a laboratory oriented course that includes the common essential elements for vocational education and for industrial technology education, grades nine-12, plus the following essential elements.

(1) Concepts and skills related to communication technology. The student shall be provided opportunities to:

(A) apply the design process to produce a product/project;

(B) apply sketching techniques to develop drawing format and graphic problem solving;

(C) describe objects accurately through the principles of shape and size description;

(D) produce products using photographic materials and equipment;

(E) produce products using graphic arts materials and equipment;

(F) explore the major electronic communication systems;

(G) apply the principles of telecommunication; and

(H) investigate space-based communication systems.

(2) Concepts and skills related to energy technology. The student shall be provided opportunities to:

(A) convert, control, store, and transmit various forms of energy;

(B) investigate conventional and alternate sources of energy;

(C) demonstrate the principles and operation of internal/external combustion engines;

(D) apply the principles of mechanical, electrical, and fluidic power;

(E) apply the principles of basic electron theory;

(F) investigate methods of transporting people and cargo; and

(G) investigate space-based energy systems.

(3) Concepts and skills related to production technology. The student shall be provided opportunities to:

(A) apply the processes of casting, forming, separating, conditioning,

assembling, and finishing to selected materials;

(B) use the manufacturing management components of planning, organizing, directing, and controlling personnel to design, engineer, produce, and market a product;

(C) compare the relationships of the three construction sub-systems: design, management, and building;

(D) investigate space-based production systems;

(E) apply automated systems in the production of products;

(F) define the properties of selected materials;

(G) organize a construction enterprise to design and build a simulated structure; and

(H) determine the criteria for selecting materials used in various types of structures.

(m) Computer applications (½-1 unit). Computer applications is a laboratory oriented course that includes the appropriate common essential elements for vocational education and for industrial technology education, grades nine-12, plus concepts and skills related to computer applications. The student shall be provided opportunities to:

(1) apply computer input/output devices through direct experiences with computers as they relate to various technologies;

(2) use computer software and hardware to collect, store, retrieve, and apply data appropriate to communication, energy, and production technologies;

(3) identify technological applications of artificial intelligence (AI);

(4) use computers to simulate industrial applications;

(5) describe the need for different computer languages used in industry;

(6) program computer-numerical-controlled equipment;

(7) utilize computer-aided-design/drafting (CAD/CADD) hardware and software;

(8) simulate the use of computer-aided-manufacturing (CAM) to plan, produce, control, and manage manufacturing processes;

(9) model computer-integrated-manufacturing (CIM) through the use of robots, programmable controllers, and computer-numerical-controlled (CNC) machine tools;

(10) apply computers to telecommunications systems;

(11) use computer image generation methods to communicate information; and

(12) participate in activities that demonstrate how computers are related to systems of communication, energy, and production technologies.

(n) Research and development (½-1 unit). Research and development is a

laboratory oriented course that includes the appropriate common essential elements for vocational education and for industrial technology education, grades nine-12, plus concepts and skills related to research and development. The student shall be provided opportunities to:

(1) identify the methodologies of basic and applied research;

(2) utilize the scientific method of problem solving;

(3) utilize the input, process, output, and feedback model;

(4) distinguish between imitation, adaptation, and innovation related to industrial products and processes;

(5) make use of human engineering factors;

(6) design or improve products or processes to meet stated performance standards;

(7) prepare production flow charts;

(8) build experimental models, mock-ups, or prototypes as appropriate;

(9) conduct quality control tests;

(10) investigate marketing processes; and

(11) develop a technical report following accepted research format.

(o) Introductory industrial technology common essential elements (grades seven-eight—½-2 units). The elements in this subsection are common to Introductory Industrial Technology I and Introductory Industrial Technology II, grades seven-eight, and shall be included in each course. They are described here to preclude repetition. Every school offering these courses shall include the following common essential elements.

(1) Concepts and skills in the application of safety procedures. The student shall be provided opportunities to:

(A) demonstrate safe operation and use of selected tools and equipment to avoid injury; and

(B) maintain safe conditions in the laboratory.

(2) Concepts and skills related to planning, designing, and problem solving. The student shall be provided opportunities to:

(A) plan and design products to include working drawings and a complete bill of materials; and

(B) measure accurately using metric or customary units.

(3) Concepts and skills related to the tools, materials, and processes of technology. The student shall be provided opportunities to:

(A) solve problems by utilizing a variety of materials and properly selected tools and equipment; and

(B) select the most suitable processes to complete a task.

(4) Concepts and skills related to the past, present, and future of technology. The student shall be provided opportunities to:

(A) recognize ideas and inventions of the past and present; and

(B) relate technological change to the skills needed for the future.

(5) Concepts and skills related to evaluating products and services of technology. The student shall be provided opportunities to:

(A) recognize good design and construction;

(B) evaluate products based on given standards or applications;

(C) use and maintain products and equipment; and

(D) develop criteria for selecting, purchasing, and contracting services.

(p) Introductory Industrial Technology I (grades seven-eight—½-1 unit). Every school offering Introductory Industrial Technology I shall include the common essential elements for vocational education and for introductory industrial technology, grades seven-eight, plus the following essential elements.

(1) Concepts and skills related to communication technology. The student shall be provided opportunities to:

(A) apply sketching techniques to develop drawing format and graphic problem solving;

(B) describe objects accurately through the principles of shape and size descriptions;

(C) apply design principles to composition and layout techniques;

(D) operate standard reproduction and duplicating equipment;

(E) use standard graphic finishing techniques;

(F) produce products using accepted methods of image generation;

(G) study the types and uses of communication systems;

(H) use computer software to design and make drawings;

(I) use data base software to assist in collecting, storing, retrieving, and applying information; and

(J) explore space-based communication systems.

(2) Concepts and skills related to energy technology. The student shall be provided opportunities to:

(A) use apparatus and devices that demonstrate the generation, conversion, and control of mechanical, electrical, and pneumatic-hydraulic power;

(B) construct models or use simulation devices that generate, convert, and control energy;

(C) utilize computers for the collection and analysis of data relevant to energy technology;

(D) compare transportation systems that move people and materials by land, sea, air, and space;

(E) plan and implement the controlled movement of robots;

(F) use instruments with computers to monitor data-based systems;

(G) compare transmission systems that move energy by electrical, electronic, mechanical, and pneumatic-hydraulic technologies;

(H) construct models or use simulation devices or systems used to move people and materials;

(I) construct models or use simulation devices or systems that transmit energy;

(J) read and interpret maps, charts, and schedules; and

(K) explore space-based energy systems.

(3) Concepts and skills related to production technology. The student shall be provided opportunities to:

(A) apply organization and management systems by planning, organizing, and controlling production processes;

(B) apply primary processes of layout, testing, separating and cutting, drilling and boring, shaping and forming, casting, laminating, coating, decorating, joining, and finishing;

(C) research the recycling of materials;

(D) plan and implement the various steps in the construction process;

(E) research the transformation of raw materials into finished products;

(F) plan and implement mass production activities;

(G) demonstrate techniques and processes used in automated production systems;

(H) use computers in planning, production, quality control, and management of production systems;

(I) explore the use of function codes in computer numerical control of production machines; and

(J) explore space-based production systems.

(q) Introductory Industrial Technology II (grade eight—½-1 unit). Every school offering Introductory Industrial Technology II shall include the common essential elements for vocational education and for introductory industrial technology, grades seven-eight, plus the following essential elements.

(1) Concepts and skills related to production technology in the area of manufacturing. The student shall be provided opportunities to:

(A) participate in activities involving product researching, designing, and marketing;

(B) investigate financial resources needed in production;

(C) plan and implement mass production activities;

(D) apply organization and management systems by planning, organizing, and controlling production processes;

(E) develop production charts and graphs;

(F) demonstrate an awareness of automated systems used in manufacturing;

(G) recognize basic material standards and terminology used in industry;

(H) apply the basic processes to manufacturing;

(I) research the recycling of manufacturing materials;

(J) use computers in planning, production, quality control, and management of production systems; and

(K) explore space-based manufacturing systems.

(2) Concepts and skills related to production technology in the area of construction. The student shall be provided the opportunities to:

(A) analyze those processes involved in selecting and acquiring a construction site;

(B) design and construct a structure;

(C) research prefabricated systems;

(D) participate in electrical systems installation activities;

(E) practice simple plumbing techniques;

(F) practice trimming and finishing techniques;

(G) explore remodeling procedures;

(H) practice basic masonry techniques;

(I) discuss contracting and subcontracting practices;

(J) develop a basic knowledge of landscaping;

(K) research new construction materials and methods;

(L) explore energy conservation principles involved in construction;

(M) explore techniques and processes used in automated production systems;

(N) research the recycling of construction materials; and

(O) explore space-based construction systems.

§75.86. *Marketing Education.*

(a) Marketing Education I (two-three units) shall include the following essential elements.

(1) Concepts and skills associated with basic marketing principles. The student shall be provided opportunities to:

(A) understand the role of marketing in American business;

(B) understand the basic vocabulary of marketing; and

(C) define marketing as it impacts on consumers.

(2) Concepts and skills associated with basic marketing functions. The student shall be provided opportunities to:

(A) describe the application and use of economic resources in marketing;

(B) understand how marketing provides our standard of living; and

(C) learn how marketing is organized by its functions.

(3) Concepts and skills associated with human relations and personality development. The student shall be provided opportunities to:

(A) maintain good health and proper appearance for effective job performance;

(B) understand oneself and others;

(C) exercise self-control;

(D) accept and use criticism;

(E) recognize basic human relationships as they relate to business success; and

(F) demonstrate characteristics for successful working relationships.

(4) Concepts and skills associated with business policies, forms, and records. The student shall be provided opportunities to:

(A) interpret and carry out business policies;

(B) follow employer's safety rules and regulations; and

(C) complete required business forms and records.

(5) Concepts and skills associated with business environment, law, and ethics. The student shall be provided opportunities to:

(A) understand how laws, policies, and regulations are applied to business situations;

(B) identify ethical practices and responsibilities; and

(C) identify external and internal security procedures.

(6) Concepts and skills associated with management principles and practices. The student shall be provided opportunities to:

(A) identify the role and functions of management;

(B) understand lines of authority; and

(C) identify effective supervisory techniques

(7) Concepts and skills associated with communication. The student shall be provided opportunities to:

(A) demonstrate an ability to speak and write clearly;

(B) identify forms of business communication;

(C) understand the importance of listening skills; and

(D) recognize the dynamics of non-verbal communications.

(8) Concepts and skills associated with the free enterprise system and its benefits. The student shall be provided the opportunities to:

(A) understand the risk and profit motive factor;

(B) understand the elements and advantages of the free enterprise system;

(C) identify the concept of supply and demand;

(D) identify types of business ownership; and

(E) identify the role of the entrepreneur in a free enterprise system.

(9) Concepts and skills associated with computer literacy and applications. The student shall be provided opportunities to:

(A) develop computer literacy as applicable to marketing occupations; and

(B) develop an awareness of specific applications of computers in marketing.

(10) Concepts and skills associated with inventory control systems. The student shall be provided opportunities to:

(A) recognize various inventory factors and systems;

(B) recognize an inventory control system;

(C) check incoming stock and complete stock control records; and

(D) understand and recognize the differences between recorded and physical inventory.

(11) Concepts and skills associated with merchandising, selling, and service. The student shall be provided the opportunities to:

(A) understand the personality traits needed by an effective salesperson;

(B) demonstrate the ability to assist a customer in making a good buying decision;

(C) demonstrate the ability to merchandise products and services properly; and

(D) understand the use of promotion for pre-selling.

(12) Concepts and skills associated with the distribution process and systems. The student shall be provided opportunities to:

(A) identify channels of distribution and use appropriate terminology; and

(B) select appropriate channels for products and services.

(13) Concepts and skills associated with marketing mathematics. The student shall be provided opportunities to:

(A) understand and apply mark-up, mark-down, and stock turn;

(B) demonstrate ability to calculate profit, loss, payroll, invoices, taxes, interest, sales check, and credit card;

(C) demonstrate cashiering proficiency; and

(D) demonstrate skills in job-related applications such as sales slips, cash register operations, invoices, and purchase orders.

(14) Develop concepts and skills relevant to the specific occupational objectives of the students.

(b) Marketing Education II (two-three units) shall include the following essential elements.

(1) Concepts and skills associated with the marketing process. The student shall be provided opportunities to:

(A) identify the marketing

functions;

(B) understand the concept of marketing;

(C) recognize trends and developments of the marketing functions;

(D) analyze the activities of the competition; and

(E) understand the importance of marketing research.

(2) Concepts and skills associated with promotion. The student shall be provided opportunities to:

(A) identify types of promotion;

(B) develop an annual promotion plan;

(C) explain marketing mix;

(D) develop a promotional campaign; and

(E) use promotion as it relates to other marketing functions.

(3) Concepts and skills associated with buying. The student shall be provided opportunities to:

(A) evaluate the criteria for effective buying;

(B) explain the elements of a buying plan;

(C) apply the formula for determining planned purchases and open-to-buy;

(D) use the stock/sales ratio; and

(E) understand the terms of an invoice.

(4) Concepts and skills associated with management principles and practices. The student shall be provided opportunities to:

(A) identify basic management skills;

(B) understand methods of solving management problems;

(C) compare management styles and roles;

(D) recognize elements in personnel management; and

(E) develop skills in planning and organizing work.

(5) Concepts and skills associated with entrepreneurship. The student shall be provided with the opportunities to:

(A) evaluate opportunities for business ownership;

(B) understand the types of business ownership;

(C) develop a marketing plan for a selected business;

(D) develop a management plan for a selected business;

(E) develop a financial plan for a selected business; and

(F) identify sources of securing business financing.

(6) Concepts and skills associated with careers in marketing. The student shall be provided opportunities to:

(A) recognize the responsibilities and levels of management;

(B) enhance the skills and attitudes needed by marketing professionals; and

(C) explore career opportunities in marketing.

(7) Concepts and skills relevant to the specific marketing career objective of the students enrolled.

(c) Advertising and display services (two-three units) shall include the essential elements of Marketing Education I and the concepts and skills associated with advertising and display. The student shall be provided the opportunities to:

(1) understand that the ultimate goal of advertising is to sell goods and services;

(2) recognize that advertising plans and schedules should be based upon factual information;

(3) select the advertising media best suited to the product or service being advertised;

(4) identify advertising objectives;

(5) demonstrate establishing an overall campaign strategy;

(6) develop a theme or idea for an advertisement;

(7) analyze problems associated with advertising, copywriting, layout, and media;

(8) write correct attention-getting advertising copy;

(9) understand that displays' role is to sell merchandise;

(10) demonstrate the fundamentals of good display;

(11) use displays for one specific purpose;

(12) build seasonal or storewide themes in displays; and

(13) use color, harmony, balance, and proportion in display construction.

(d) Apparel and accessories marketing (two-three units) shall include the essential elements of Marketing Education I and the concepts and skills associated with apparel and accessories marketing. The student shall be provided the opportunities to:

(1) recognize the value of designer and brand names;

(2) understand the historical trends in fashions;

(3) recognize current fashions and new trends;

(4) apply color, line, and design theory;

(5) determine sources to buy from;

(6) learn how and when to buy;

(7) analyze factors that influence pricing;

(8) understand textiles and information labels;

(9) use standard trade terminology; and

(10) prepare merchandise plans.

(e) Financial services marketing (two-three units) shall include a program that includes the essential elements of Marketing Education I and the concepts and skills associated with financial services marketing. The student shall be provided opportunities to:

(1) learn policies, procedures, and public relations associated with banks, credit unions, or savings and loan associations;

(2) understand state, federal, and local laws and their implications to the financial industry;

(3) recognize that management, supervisors, and employees require a framework of policies and procedures within which to operate;

(4) understand lines of authority;

(5) understand, evaluating and collecting delinquent accounts;

(6) define the various kinds of credit;

(7) learn current trends in the use of credit;

(8) practice translating credit information to the customer; and

(9) understand and demonstrate knowledge of data processing as a management process.

(f) Food marketing (two-three units) shall include the essential elements of Marketing Education I and the concepts and skills associated with food marketing. The student shall be provided opportunities to:

(1) understand the operations and merchandising of grocery, produce, dairy, meat, frozen foods, and bakery departments;

(2) demonstrate the use of mathematics related to food marketing;

(3) learn front-end operations;

(4) understand the operation and merchandising of the non-food departments; and

(5) understand the best location of merchandise lines to help the customer shopping flow.

(g) Entrepreneurship (one-three units) shall include the essential elements for Marketing Education I and the concepts and skills associated with entrepreneurship. The student shall be provided opportunities to:

(1) explore career options in small business ownership;

(2) understand the basic steps involved in starting a new business;

(3) explore the sources of technical assistance available to the entrepreneur;

(4) understand the importance of financing to a new business;

(5) develop planning skills needed to plan for the new business and the development of marketing, management, and financial plans;

(6) demonstrate correct methods for computing payroll, discounts, interest, turnover, and profit;

(7) determine the suitability of their own qualities for entrepreneurship;

(8) understand the importance of entrepreneurship to the American economy; and

(9) understand the advantages and disadvantages of owning one's own busi-

ness.

(h) Hotel-motel management (two-three units) shall include the essential elements for Marketing Education I and the concepts and skills associated with hotel-motel management. The student shall be provided opportunities to:

(1) explore career options in the hotel-motel industry;

(2) understand the functional organization of staffing arrangements used by the industry;

(3) recognize the various types of groups who stay in hotels and motels;

(4) learn the services and functions provided in the reservations, rooms, catering, and banquet departments;

(5) learn the front desk operations;

(6) understand the tasks performed by the housekeeping department;

(7) understand the benefits to a community from tourism; and

(8) learn how to recognize tourists and how their needs differ from those of other travelers.

(i) Travel services marketing (two-three units) shall include the essential elements for Marketing Education I and the concepts and skills associated with travel services marketing. The student shall be provided opportunities to:

(1) explore the career options in the travel marketing industry;

(2) learn the functions and tasks performed by enterprises engaged in travel services marketing;

(3) gather information that will facilitate the use of any form of transport designed primarily for the transportation of people;

(4) recognize the modes of travel that may be used by travel agencies;

(5) observe the making, changing, and canceling of reservations for lodging, travel, and other travel-related services;

(6) select, validate, and write a standard airline ticket;

(7) understand the uses of various bus and air tickets and related documents;

(8) use the appropriate guides to locate, choose, and construct travel itineraries appropriate to the client needs;

(9) understand how retail travel agencies are helpful to travel service companies as sales representatives, sales outlets, and intermediaries between these companies and the public; and

(10) recognize the value of travel agencies in saving travelers time and money and helping to make their trips more enjoyable.

(j) In addition to the courses described in subsections (a)-(i) of this section, schools may offer marketing education courses in other new and emerging marketing occupations deemed appropriate by employment needs.

(k) Principals of marketing (½ unit) shall include the following essential elements.

(1) The marketing process. The student shall be provided opportunities to:

(A) define marketing;

(B) understand the marketing concept;

(C) identify the functions of marketing; and

(D) analyze the marketing mix.

(2) Characteristics of the marketplace. The student shall be provided opportunities to:

(A) identify the types of goods;

(B) examine types of businesses;

(C) explain the concept of market segmentation; and

(D) understand what motivates consumers to buy.

(3) Marketing research. The student shall be provided opportunities to:

(A) analyze marketing problems;

(B) determine the methods of collecting data; and

(C) describe how market research information may be interpreted.

(4) New product ideas. The student shall be provided opportunities to:

(A) understand how new products are developed;

(B) describe how new products are tested;

(C) explain product life cycle;

(D) explore product branding, labeling, and packaging strategies; and

(E) recognize that services are products.

(5) Product pricing. The student shall be provided opportunities to:

(A) understand pricing as a marketing strategy;

(B) determine factors affecting price;

(C) identify the goals of pricing; and

(D) explain various pricing strategies.

(6) Marketing institutions. The student shall be provided opportunities to:

(A) recognize the characteristics of retailers;

(B) identify the characteristics of wholesalers;

(C) explain the characteristics of agents and brokers; and

(D) determine the most suitable channel of distribution for various products.

(7) Physical distribution. The student shall be provided opportunities to:

(A) investigate the various modes of transportation used to move products; and

(B) discuss storage and warehousing of products.

(8) Sales promotion. The student shall be provided opportunities to:

(A) understand the importance of sales promotion in stimulating product demand;

(B) explain personal selling as a

method of sales promotion; and

(C) identify various kinds of non-personal selling.

(9) Marketing management. The student shall be provided opportunities to:

(A) explore the role of marketing management in achieving business goals;

(B) investigate how marketing plans are developed;

(C) discuss the organization of marketing department staff; and

(D) understand that reducing business risk is a major goal of business.

(10) Career planning. The student shall be provided opportunities to:

(A) learn the sources for securing marketing career information;

(B) develop a tentative career plan(s);

(C) examine the educational needs for achievement of the career selected; and

(D) develop an educational and training plan to accomplish the career plan selected.

(l) Retail merchandising (½ unit) shall include the following essential elements.

(1) Retailing. The student shall be provided opportunities to:

(A) understand the meaning of retailing and merchandising;

(B) understand the various types and kinds of retail establishments;

(C) explore the retailing careers available; and

(D) explore trends in retailing.

(2) Economics and marketing. The student shall be provided opportunities to:

(A) recognize the role of the consumer in retailing;

(B) determine the kinds of consumer information needed by retailers;

(C) understand the concept and need of a business producing a profit;

(D) examine the role of retail merchandising in a free or private enterprise system;

(E) describe the characteristics of different kinds of business ownership; and

(F) recognize how market research is used by retailers.

(3) Merchandising. The student shall be provided opportunities to:

(A) determine the importance of accuracy and efficiency in receiving, checking, and marking merchandise;

(B) understand the importance of stockkeeping, handling, and caring for stock;

(C) recognize the need for general safety practices;

(D) learn ways to prevent shortage, damage, and theft of merchandise;

(E) explain stock turnover;

(F) explain inventory control systems;

(G) understand the basic calcu-

lations related to retailing; and

(H) examine the elements and use of a merchandise plan.

(4) Selling. The student shall be provided opportunities to:

(A) distinguish between convenience, shopping, and specialty goods;

(B) recognize the need for knowledge of product or service being sold;

(C) distinguish between personal and non-personal selling;

(D) identify the steps of personal selling;

(E) recognize the importance of understanding consumer behavior; and

(F) explore selling careers.

(5) Sales promotion. The student will be provided opportunities to:

(A) understand that advertising, display, and personal selling are the principle forms of sales promotion;

(B) recognize the commonly used media for retail advertising;

(C) understand the basic elements of newspaper advertising;

(D) understand promotional mix; and

(E) understand the principles of display.

(6) Store operation. The student will be provided opportunities to:

(A) understand the need for store security;

(B) explain the importance of store policies;

(C) understand why retailers offer credit; and

(D) identify areas of retail merchandising where computer technology is used.

§75.87. Office Education.

(a) Office education shall include the following essential elements.

(1) Concepts and skills related to all office occupations. The student shall be provided opportunities to:

(A) identify ethical procedures;

(B) identify careers in office occupations;

(C) list or identify traits for desirable human relations in interpersonal business relationships;

(D) recognize personal qualities that will enhance one's career plans;

(E) identify and use resources and references available;

(F) identify and prepare business communications, forms, and reports; and

(G) demonstrate basic knowledge and usage of business machines.

(2) Concepts and skills involved in financial responsibilities. The student shall be provided opportunities to:

(A) solve problems involving addition, subtraction, multiplication, and division of whole numbers, fractions, and numbers containing decimals; and

(B) maintain a checking account.

(3) Concepts and skills necessary for effective communication. The student shall be provided opportunities to:

(A) identify proper techniques in business telephone usage;

(B) prepare effective communication;

(C) identify and use language skills relating to business; and

(D) identify terminology relating to basic business, information processing, and computer applications.

(b) Office administration (one, two, or three units) shall include office education core elements and the following essential elements.

(1) Concepts and skills involved in keyboarding in office administration. The student shall be provided opportunities to:

(A) recognize proofreader's marks and use them in editing;

(B) select appropriate methods and apply proper techniques for correcting errors;

(C) demonstrate procedures necessary in preparing mailable letters and envelopes and packages; and

(D) identify methods of transmitting information electronically.

(2) Concepts and skills necessary for records control and management in office administration. The student shall be provided opportunities to:

(A) identify correct usage in applying terminology and procedures for indexing, coding, and filing using the alphabetic, numeric, subject, and geographic system;

(B) identify, describe, and/or demonstrate procedures for controlling manual and automated records; and

(C) identify the procedures of handling incoming and outgoing mail.

(3) Concepts and skills necessary for the operation of office machines in office administration. The student shall be provided opportunities to:

(A) use the touch system on the electronic calculator to compute mathematical business problems accurately;

(B) identify correct procedures for producing legible copies; and

(C) produce accurate, legible business forms and mailable business communications on the electronic typewriter and/or computer.

(c) Business information processing (one, two, or three units) shall include office education core elements and the following essential elements.

(1) Concepts and skills related to production of business documents and correspondence. The student shall be provided opportunities to:

(A) demonstrate proficiency in business English;

(B) identify and apply correct format for business correspondence and documents;

(C) demonstrate proficiency in

spelling and proofreading;

(D) demonstrate proficiency in transcription; and

(E) identify and use computer-based tools for document production, at least including word processing and automated proofreading.

(2) Concepts and skills related to business records management. The student shall be provided opportunities to:

(A) identify procedures for controlling manual records by applying terminology and procedures for indexing, coding, and filing alphabetically;

(B) identify and apply procedures for automated management of business records, at least including use of database management software for storage, retrieval manipulation, selection, and reporting of records;

(C) identify business applications of electronic spreadsheets and understand and/or demonstrate fundamental concepts and operational procedures related to their use.

(3) Concepts and skills related to management of information flow out of, into, and within an office. The student shall be provided opportunities to:

(A) demonstrate proficiency in computer-aided preparation and distribution of personalized correspondence, at least including use of mail merge and electronic mail;

(B) identify and use tools for preparing information for mass distribution, at least including desktop publishing, production of presentation graphics, and maintenance of electronic bulletin boards;

(C) demonstrate proficiency in use of communication systems both for accessing remotely stored information (at least including use of on-line information services) and for transmission of outgoing information; and

(D) understand concepts related to transporting of images electronically.

(4) Identify characteristics of contemporary office systems related to information processing and management. The student shall be given opportunities to:

(A) observe office activity related to information processing and information management;

(B) discuss responsibilities and procedures involved in business information processing with individuals working in the field;

(C) read and discuss current literature related to business information processing; and

(D) identify emerging information processing tools and understand their impact on business information processing.

(d) Business office services (one, two, or three units) shall include office education core elements concepts and skills related to business office services. The student shall be provided opportunities to:

(1) identify and demonstrate image

processing for duplicating;

(2) demonstrate the procedures and equipment used in completing layouts and masters for reprographics; and

(3) identify and demonstrate the procedures used in operating reprographic equipment;

(4) identify and demonstrate the use of the machines used in bindery operations;

(5) demonstrate the ability to keyboard materials for duplication;

(6) demonstrate the ability to solve mathematical problems using the touch method on the electronic calculator;

(7) identify and practice the correct procedures in alphabetic filing; and

(8) identify and/or use correct mailing procedures.

(e) Business Computer Applications I (one, two, or three units) shall include the following essential elements.

(1) Concepts and skills related to general data processing. The student shall be provided opportunities to:

(A) demonstrate comprehension of data processing terms;

(B) identify the major components of data processing;

(C) identify and apply the functions of an operating system;

(D) demonstrate the ability to enter, manipulate, and retrieve data on a computer terminal; and

(E) understand concepts of networked and multi-user configurations.

(2) Concepts and skills related to information processing. The student shall be provided opportunities to:

(A) demonstrate basic information processing concepts and process; and

(B) apply the general capabilities of information processing tools and software.

(3) Concepts and skills related to spreadsheets. The student shall be provided opportunities to:

(A) demonstrate basic spreadsheets concepts; and

(B) apply general capabilities of spreadsheets.

(4) Concepts and skills related to database management. The student shall be provided opportunities to:

(A) demonstrate basic database concepts, procedures, and capabilities; and

(B) apply general capabilities of database management.

(5) Concepts and skills related to business application software. The student shall be provided opportunities to demonstrate the ability to use automated business application concepts, principles, and practices in realistic situations.

(f) Business Computer Applications II (one, two, or three units) shall include the following essential elements.

(1) Concepts and skills related to teleprocessing. The student shall be provided opportunities to:

(A) describe the basic components of a teleprocessing system;

(B) demonstrate an understanding of network organization; and

(C) use teleprocessing system for data exchange in a simulated and/or actual business setting.

(2) Concepts and skills related to integrated systems. The student shall be provided opportunities to:

(A) understand and identify the advantages, capabilities, and functions of integrated software systems;

(B) manipulate data through the use of an integrated system; and

(C) use integrated systems to merge data from different applications.

(3) Concepts and skills related to graphics. The student shall be provided opportunities to:

(A) analyze and interpret business graphs and charts; and

(B) demonstrate graphic representation of data.

(4) Concepts and skills related to algorithmic approaches to problem solving. The student shall be provided opportunities to:

(A) demonstrate the ability to solve problems using appropriate analytical analysis techniques; and

(B) demonstrate an awareness of the phases related to systems analysis and design.

(5) Concepts and skills related to applying algorithmic processes to programming. The student shall be provided opportunities to:

(A) apply the concepts of logic to programming problems;

(B) translate the applied solution into a common programming language; and

(C) demonstrate the ability to debug and audit a solution.

(6) Concepts and skills related to computer operations. The student shall be provided opportunities to:

(A) observe and/or participate in computer activities in business and industry;

(B) understand responsibilities and procedures involved in computer operations with individuals working in the field; and

(C) identify emerging computer tools and understand their impact on business and industry.

(g) Business Computer Programming I (one, two, or three units) shall include the following essential elements.

(1) Concepts and skills related to general data processing. The student shall be provided opportunities to:

(A) demonstrate comprehension of data processing terms; and

(B) identify the major components of data processing system.

(2) Concepts and skills related to hardware equipment utilization. The student shall be provided opportunities to:

(A) become familiar with operating computer hardware;

(B) categorize hardware according to size, application, and configuration; and

(C) demonstrate the ability to use basic operating systems.

(3) Concepts and skills associated with programming. The student shall be provided opportunities to:

(A) demonstrate the skills related to algorithmic approaches to problem solving;

(B) demonstrate an understanding of computer language concepts;

(C) translate problems into logical steps using appropriate analytical analysis techniques;

(D) translate solutions to a common programming language; and

(E) demonstrate an understanding of preparation and uses of process documentation.

(4) Concepts and skills associated with data storage. The student shall be provided opportunities to:

(A) demonstrate an understanding of the types of data storage;

(B) identify methods of storing data on storage devices;

(C) create and maintain a program to store and retrieve data from a file; and

(D) demonstrate knowledge of computer numbering systems and data representation on storage devices.

(h) Business Computer Programming II (one, two, or three units) shall include the following essential elements.

(1) Concepts and skills related to application system development. The student shall be provided opportunities to:

(A) demonstrate a comprehension of the system cycle development;

(B) analyze the problem;

(C) design a solution;

(D) program and test the solution;

(E) develop an understanding of the implementation process; and

(F) demonstrate an understanding of the preparation of user documentation.

(2) Concepts and skills related to language application. The student shall be provided opportunities to:

(A) develop an understanding of structured programming;

(B) identify the concepts of random and sequential files;

(C) translate solutions into major structural elements of a program;

(D) translate solutions into language statements for input, processing, and output; and

(E) develop ability to use advanced operating system computer.

(3) Concepts and skills related to testing. The student shall be provided opportunities to:

(A) develop test data and testing techniques;

(B) apply test data to programs run on the computer; and

(C) demonstrate the ability to debug and audit programs.

(4) Concepts and skills associated with software implementation and maintenance. The student shall be provided opportunities to:

(A) write documentation for maintaining a system;

(B) understand the process of implementing a system into production status; and

(C) develop an understanding of the programmer responsibilities in program maintenance.

(i) Office support systems (½ or 1 unit) shall include the following essential elements.

(1) Concepts and skills involved in keyboarding. The student shall be provided opportunities to:

(A) demonstrate the skill of keyboarding letters, memos, forms, and reports;

(B) apply appropriate procedures for proofreading and correcting errors; and

(C) demonstrate and identify information processing concepts in keyboarding.

(2) Concepts and skills necessary for filing. The student shall be provided opportunities to:

(A) demonstrate procedures used in alphabetic, numeric, subject, and geographic filing; and

(B) identify procedures used in electronic filing.

(3) Concepts and skills necessary for financial activities. The student shall be provided opportunities to:

(A) demonstrate the ability to maintain a checking account; and

(B) demonstrate the procedures involved in preparing a payroll and preparing tax reports.

(4) Concepts and skills necessary for processing mail. The student shall be provided opportunities to:

(A) identify the procedures involved in processing incoming and outgoing mail; and

(B) identify the procedures involved in transmitting mail electronically.

(5) Concepts and skills necessary for effective communications. The student shall be provided opportunities to:

(A) identify and use proper business techniques when using the telephone;

(B) prepare effective written communications; and

(C) identify and use proper language usage skills in business.

(6) Concepts and skills necessary for effective understanding of business operations. The student shall be provided

opportunities to:

(A) describe the role of business in the enterprise system; and

(B) identify the general responsibilities of employees.

(7) Concepts and skills necessary for securing and maintaining employment. The student shall be provided opportunities to:

(A) demonstrate the skills necessary for job application and interview; and

(B) apply human relations skills and the ability to work with others.

(j) Microcomputer applications (½ or 1 unit) shall include the following essential elements.

(1) Fundamental concepts and operational skills related to microcomputer systems. The student shall be provided opportunities to:

(A) understand the background and uses for computer systems;

(B) demonstrate competency in touch keyboarding, including technique, speed, and accuracy;

(C) understand the components of computer systems, including hardware, operating environments, and application software; and

(D) demonstrate competency in microcomputer systems operation.

(2) Concepts and skills necessary for microcomputer-based document production, formatting, and proofreading, at least including use of word processing software and automated spellchecking software. The student shall be provided opportunities to:

(A) identify and use the terminology related to word processing;

(B) demonstrate the operational procedures used in document production and page layout; and

(C) employ appropriate steps in producing documents.

(3) Concepts and skills necessary for use of microcomputer-based storage, retrieval, manipulation, and reporting information, at least including use of database management software. The student shall be provided opportunities to:

(A) identify and use the terminology related to information management;

(B) demonstrate the operational procedures and techniques used in information management software;

(C) use microcomputer software to design databases, enter and manipulate information, and produce reports (including graphic display of summary reports); and

(D) conduct keyword database searches using logic operations such as AND, OR, and NOT.

(4) Concepts and skills necessary for use of microcomputer-based computation, analysis, planning, and reporting with numeric data, at least including use of electronic spreadsheets. The student shall be provided opportunities to:

(A) identify and use the terminology related to electronic manipulation of numeric data;

(B) demonstrate operational procedures and techniques used with microcomputer software for processing numeric data;

(C) use microcomputer software for computation, analysis, planning, and reporting (including graphic display) with numeric data; and

(D) apply electronic spreadsheet software both through use of prepared templates and with student designed problem solutions.

(5) Concepts and skills related to emerging microcomputer-based information processing tools. The student shall be provided opportunities to:

(A) understand and use exchange of information via telecommunication software, at least including electronic mail, remote bulletin board access, and access of on-line information services;

(B) understand and use features of integrated software packages to share data among applications;

(C) understand concepts and identify characteristics and uses associated with tools for desktop publishing and generation of presentation graphics;

(D) understand concepts related to transporting of textual and non-textual data both locally and remotely, at least including transporting of text and facsimile images electronically, and physical transfer of ultra-high density storage media; and

(E) understand concepts related to networked and multi-user configurations.

(6) Concepts associated with the social implications of computers. The student shall be provided opportunities to:

(A) examine issues concerning responsible use of computer systems;

(B) understand the social ramifications of computer applications related to privacy, values, and reliability of systems; and

(C) understand the impact of computing on leisure, and household management.

(k) Business financial applications ($\frac{1}{2}$ or 1 unit) shall include concepts and skills related to business financial applications. The student shall be provided opportunities to:

(1) identify and define banking operations:

(A) checking accounts;

(B) fundamentals of teller operations; and

(C) bookkeeping;

(2) understand credit administration:

(A) credit investigation; and

(B) credit analysis;

(3) demonstrate and describe the differences in loans:

(A) type and purpose; and

(B) calculation of interest and

payoff;

(4) identify and define legal aspects of banking:

(A) customer and consumer services; and

(B) regulations of financial intermediaries;

(5) explore savings and loan operations; and

(6) explore credit union operations.

(l) In addition to the courses described in subsections (a)-(k) of this section, schools may offer office education in any of the occupations listed in this section or in those justified by employment needs. The following may be offered:

(1) medical secretary;

(2) legal secretary;

(3) insurance;

(4) banking; and

(5) business data entry.

§75.88. Trade and Industrial Education.

(a) Trade and industrial education shall include the following essential elements.

(1) Concepts and skills associated with safe working practices and conditions. The student shall be provided opportunities to:

(A) identify safe working practices and conditions;

(B) understand safe working practices and conditions;

(C) demonstrate skills in working safely; and

(D) apply safe working practices to all job-training situations.

(2) Care and use of hand tools and equipment. The students shall be provided opportunities to develop proper techniques for use, maintenance, selection, and storage of tools and equipment.

(3) Academic and communicative skills. The student shall be provided opportunities to apply academic and communicative skills to the work environment.

(4) Specific occupational concepts and skills. The student shall be provided opportunities to learn concepts and skills associated with the specific occupation being taught.

(b) Introduction to construction careers (one unit) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with air conditioning and refrigeration (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment/ career opportunities and training requirements in air conditioning and refrigeration;

(B) understand basic electricity;

(C) identify air conditioning and refrigeration tools and materials;

(D) understand basic concepts of refrigeration;

(E) be familiar with the effect of atmosphere conditions upon air conditioners;

(F) understand the operation of a compression system;

(G) be familiar with the operation of motors and electrical controls;

(H) understand air conditioning requirements for ventilation; and

(I) perform minor service and maintenance (clean coils, change filters, etc.).

(2) Concepts and skills associated with bricklaying/stone masonry (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment/ career opportunities and training requirements in the bricklaying/stone masonry trade;

(B) identify tools of the trade;

(C) identify materials used in bricklaying/stone masonry;

(D) review mathematic skills necessary in bricklaying/stone masonry;

(E) be familiar with various types of drawings and blueprints utilized by bricklayers/stone masons;

(F) understand the use of masonry ties and reinforcing bars;

(G) demonstrate cleaning procedures for tools and walls;

(H) be familiar with basic construction processes used in the trade;

(I) prepare, mix, and spread mortar;

(J) construct a simple brick wall; and

(K) construct a simple block masonry wall.

(3) Concepts and skills associated with carpentry (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment/ career opportunities and training requirements for carpentry;

(B) identify tools of the trade;

(C) identify materials used in the carpentry trade;

(D) understand carpentry terminology;

(E) understand the fundamentals of carpentry;

(F) demonstrate the ability to square, measure, and cut materials to specified dimensions with hand and power tools;

(G) build and set forms for a simple concrete slab or beam; and

(H) construct a cabinetry component.

(4) Concepts and skills associated with the residential electrician trade (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment/ career opportunities and training requirements in the electrical trades;

(B) identify sources of electrical power;

(C) be familiar with uses of electrical power (residential, industrial);

(D) identify tools used by electricians;

(E) identify materials used by electricians;

(F) understand basic electrical theory;

(G) wire light and single pole switch circuit; and

(H) practice simple electrical troubleshooting.

(5) Concepts and skills associated with painting and decorating (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment/ career opportunities and training requirements for painters and decorators;

(B) be familiar with the basics of color, including psychology, selection, and styling;

(C) identify materials for painting, drywall finishing, and paper hanging;

(D) identify tools and equipment necessary for painting, drywall finishing, and paper hanging;

(E) understand painting and cleanup procedures;

(F) prepare a surface for painting;

(G) paint, lacquer, or varnish wood, metal or synthetic surfaces;

(H) be familiar with the fundamental processes of drywall finishing; and

(I) demonstrate basic techniques of selection of materials, estimation of materials, preparation of surfaces, and paper hanging.

(6) Concepts and skills associated with plumbing/pipefitting (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment/ career opportunities and training requirements in the piping trades;

(B) identify tools used as a plumber/pipefitter;

(C) identify materials used as a plumber/pipefitter;

(D) understand the fundamentals of the piping trades;

(E) cut, thread, and bend pipe according to instructions;

(F) sweat a joint; and

(G) join piping by at least one other method (glue, couple, weld, etc.).

(c) Air conditioning and refrigeration (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with air conditioning and refrigeration. The student shall be provided opportunities to:

(1) understand basic fundamentals of refrigeration and air conditioning systems;

(2) understand the function of various compression systems;

(3) understand the fundamentals and applications of refrigerants;

(4) service and repair refrigerant systems controls;

(5) understand the basic fundamentals of electrical, electronic, and pneumatic circuits and controls;

(6) understand domestic and commercial refrigeration systems application;

(7) install, service, and repair domestic and commercial refrigeration systems;

(8) install, service, and repair heating and humidifying systems, cooling and dehumidifying systems, distributing and cleaning systems, and complete air conditioning systems;

(9) perform maintenance and repair operations on air conditioning controls, circuits, and instruments; and

(10) demonstrate the proper utilization

of cutting copper tubing and joining copper tubing by various accepted methods; familiarize students with maintenance and repair operations for automobile air conditioning systems.

(d) Bricklaying/stone masonry (two-three units) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills for courses emphasizing bricklaying. The student shall be provided opportunities to:

(A) identify and demonstrate knowledge in the use of brick producers;

(B) identify the concepts and skills associated with bricklaying;

(C) demonstrate knowledge of mortar types, ingredients, admixtures, and their use;

(D) read and interpret architectural prints applicable to the bricklaying trade;

(E) demonstrate knowledge of mathematic skills necessary to estimate materials and labor costs;

(F) prepare, mix, and spread mortar;

(G) construct a simple brick wall, fireplace, block masonry wall, and arches;

(H) identify standard brick courses, bonds and joints;

(I) prepare brick and masonry products for installation: cuts, splits and templets;

(J) identify types of brick and masonry tools and equipment and demonstrate their proper use and care;

(K) demonstrate knowledge of the manufacturing processes of brick, masonry products, and cement;

(L) identify types of masonry ties and reinforcing bars and demonstrate knowledge of proper placement techniques; and

(M) demonstrate knowledge of cleaning procedures for tools and walls.

(2) Concepts and skills for courses emphasizing stone masonry. The student shall be provided opportunities to:

(A) identify and demonstrate knowledge in the use of stone masonry products;

(B) identify the concepts and skills associated with stone masonry;

(C) demonstrate knowledge of mortar types, ingredients, admixtures, and their use;

(D) demonstrate knowledge of the basic fundamentals of carpentry;

(E) read and interpret architectural prints applicable to the stone masonry trade;

(F) demonstrate knowledge of mathematic skills necessary to estimate materials and labor costs;

(G) prepare, mix, and spread mortar;

(H) identify standard stone masonry bonds, and joints;

(I) prepare masonry products for installation: cuts, splits, and templets;

(J) identify masonry products by types, size, and shape;

(K) identify types of masonry tools and equipment and demonstrate their proper use and care;

(L) identify types of masonry ties and reinforcing bars, and demonstrate knowledge of proper placement techniques; and

(M) demonstrate knowledge of cleaning procedures for tools and walls.

(e) Building trades (two-three units) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with residential carpentry. The student shall be provided opportunities to:

(A) understand the basic fundamentals of carpentry;

(B) read blueprints and work drawings;

(C) apply basic mathematics to carpentry measurement processes;

(D) identify and estimate costs of various building materials;

(E) demonstrate appropriate concrete form setting techniques;

(F) understand concrete placement and finishing procedures;

(G) utilize appropriate framing techniques including walls, floors, ceilings, rafters, and trusses;

(H) install roof flashing and covering;

(I) understand and demonstrate proper techniques in door and window installation;

(J) identify and install various exterior and interior wall covering and trim; and

(K) understand proper techniques in stair framing.

(2) Concepts and skills associated with bricklaying. The student shall be provided opportunities to:

(A) identify and understand the use of brick and masonry products; and

(B) understand construction processes utilized in the construction of footings, piers, pilasters, chimneys, fireplaces, and arches.

(3) Concepts and skills associated with residential electrician. The student shall be provided opportunities to:

(A) understand the basic fundamentals of residential electrical wiring procedures;

(B) understand schematic diagrams and symbols; and

(C) understand the installation of electric service, wiring, and fixtures.

(4) Concepts and skills associated with painting and decorating. The student shall be provided opportunities to understand the basic principle of dry wall, interior, and exterior finishes.

(5) Concepts and skills associated with plumbing. The student shall be provided opportunities to:

(A) understand the basic fundamentals of residential plumbing operations; and

(B) understand the process and sequence of installing external and internal plumbing in residential construction.

(f) Construction carpentry (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with construction carpentry. The student shall be provided opportunities to:

(1) understand the fundamentals of construction carpentry;

(2) read basic blueprints and basic work drawings;

(3) apply basic principles of mathematics to carpentry measurement processes;

(4) understand and demonstrate the use of hand and power tools used in construction carpentry;

(5) identify and understand the uses of hardware and fasteners;

(6) identify and understand the uses of and types of scaffolding;

(7) identify and estimate costs of construction supplies, materials, labor, and operations;

(8) demonstrate concrete form setting procedures;

(9) understand concrete placement and finishing procedures;

(10) utilize framing techniques to include floors, walls, ceiling trusses, rafters, structural-timbers, stairs, and fireproof metal-studs;

(11) demonstrate the basic principles of dry wall applications;

(12) understand and demonstrate proper procedures to install doors, windows, and interior and exterior wall covering and trim;

(13) understand rigging and handling different type loads using proper hand signals at job site;

(14) understand fire ratings in construction materials; and

(15) demonstrate proper procedures to set up and use an oxyfuel cutting unit and make relevant cuts.

(g) Cement laying and finishing (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with cement laying and finishing. The student shall be provided opportunities to:

(1) understand the fundamental principles of cement mixing, laying, and finishing;

(2) understand the use of subgrades and sand uses in leveling and compacting;

(3) demonstrate a knowledge of the use, care, and cleaning of wood and steel forms;

(4) demonstrate an understanding of the use of wire and rebar reinforcement;

(5) understand math required to estimate job costs, including materials and labor;

(6) mix cement/concrete to specifications;

(7) place concrete and spread to specified depth and workable consistency;

(8) work concrete, level, smooth, and shape surface;

(9) mold expansion joints and edges;

(10) add stone, chips, coloring, etc., as necessary to create unique surface;

(11) finish step, curbs, walks, walls, and special designs as directed;

(12) remove undesirable spots and patch with new cement or epoxy compound; and

(13) recognize variable factors affecting curing time and understand techniques of curing agent application.

(h) Electrical trades (two-three units) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with residential wiring. The student shall be provided opportunities to:

(A) develop a basic understanding of the theory of electricity;

(B) understand the processes of generating and distributing electrical power and the role of the electric utility company;

(C) understand, identify, and apply electrical codes regulating residential electrical construction;

(D) read and interpret residential blueprints and schematic diagrams;

(E) plan residential electrical service entrance and individual and general purpose branch circuits;

(F) identify and properly install electrical switch and outlet boxes;

(G) identify and demonstrate proper techniques for the installation of various conductors and connectors;

(H) identify and properly install residential service entrance, power panel, and power feeders;

(I) identify and install internal and external light fixtures, switches and receptacles; and

(J) troubleshoot residential electrical problems.

(2) Concepts and skills associated with commercial and industrial wiring. The student shall be provided opportunities to:

(A) identify the differences between residential, commercial, and industrial electrical wiring;

(B) understand electrical codes regulating commercial and industrial construction;

(C) read and interpret commercial and industrial blueprints and specifications;

(D) understand sizing of conduits and conductors;

(E) identify and demonstrate proper techniques for installing rigid conduit and non-metallic rigid conduit;

(F) identify and demonstrate proper techniques for installing electrical metallic tubing;

(G) identify and properly install flexible metal and non-metallic tubing;

(H) demonstrate proper techniques for pulling conductors;

(I) connect and disconnect single phase capacitor start and repulsion type motors;

(J) connect and disconnect three phase motors;

(K) identify, connect, and disconnect electric motor controls;

(L) troubleshoot commercial and industrial wiring, including motors; and

(M) understand math and other elements of estimating labor and material costs.

(i) Mill and cabinetmaking (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with mill and cabinet-making. The student shall be provided opportunities to:

(1) understand the fundamentals of cabinetmaking, including design and function;

(2) identify and understand the uses of woods, fasteners, hardware, glass, and mirrors;

(3) read blueprints and work drawings;

(4) plan material needs and estimate costs;

(5) understand and apply principles of mathematics to measurements, including metric;

(6) understand and demonstrate proper procedures in sawing, planing, shaping, turning, boring, mortising, and sanding various types of woods;

(7) identify and construct various cabinetmaking joints;

(8) understand and demonstrate proper procedures in gluing, clamping, laminating, veneering, and inlaying;

(9) utilize proper procedures to construct and install cabinet doors, furniture doors, drawers, drawer guides, shelves, cabinet interiors, legs, posts, table tops, and cabinet tops;

(10) construct and install kitchen and work cabinets;

(11) understand and demonstrate proper procedures in finishing, including staining, filling, distressing, glazing, and applying protective coatings;

(12) identify and understand industrial production processes and procedures; and

(13) understand numerical control and computer controlled production devices.

(j) Painting and decorating (two-three units) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with painting. The student shall be provided opportunities to:

(A) understand the basic fundamentals of painting;

(B) understand the basics of color, including psychology, selection, and styling;

(C) identify painting tools and equipment;

(D) mix and match paints to desired color;

(E) understand requirements for preparing various kinds of surfaces for painting;

(F) demonstrate ability to apply primers and finish coats to various types of surfaces with appropriate hand and power tools;

(G) demonstrate knowledge of equipment cleaning techniques; and

(H) identify paint base and matching thinners.

(2) Concepts and skills associated with drywall finishing. The student shall be provided opportunities to:

(A) tape and bed drywall joints;

(B) set nails and apply filler to holes, dents, and cracks; and

(C) identify drywall problems and understand how to avoid them.

(3) Concepts and skills associated with paperhanging. The student shall be provided opportunities to:

(A) identify tools, equipment, and materials necessary for paperhanging;

(B) understand factors involved in the selection process;

(C) demonstrate knowledge of math required to estimate wallpaper needs and labor costs;

(D) understand how to prepare surfaces for paper application;

(E) demonstrate knowledge of wallpaper application techniques; and

(F) demonstrate skills in cleaning wallpapered area, tools, and equipment.

(k) Piping trades/plumbing (two-three units) shall include the essential trades and industrial education elements and the following essential elements.

(1) Concepts and skills for courses emphasizing piping trades. The student shall be provided opportunities to:

(A) understand the fundamentals of the piping trades;

(B) understand the installation and maintenance of high and low pressure process piping;

(C) fabricate, assemble, install, and maintain piping and piping systems;

(D) install piping according to blueprints, basic work drawings, and specifications, and develop working drawings and sketches;

(E) cut pipe using various procedures;

(F) thread pipe using threading machine;

(G) bend pipe by hand or with pipe-bending machine and tools;

(H) assemble and install a variety of metal and nonmetallic pipe;

(I) joint piping by various accepted methods;

(J) understand the installation and maintenance of pneumatic and hydraulic controls and piping;

(K) demonstrate the proper utilization of welding, soldering, and brazing; and

(L) install and service air conditioning systems, heating systems, fuel burning equipment, and boiler room piping systems.

(2) Concepts and skills for courses emphasizing plumbing trades. The student shall be provided opportunities to:

(A) understand the fundamentals of the plumbing trade;

(B) understand blueprints and working drawings;

(C) fabricate, assemble, install, and maintain piping and piping systems;

(D) cut pipe using various procedures;

(E) understand and install

plumbing fixtures;

(F) locate, diagnose, and repair causes of plumbing malfunctions;

(G) understand and demonstrate excavation methods needed for the installation of certain piping systems;

(H) identify pipe fittings by function size, and make-up material, and

(I) demonstrate proper grading techniques for sanitary systems.

(l) Introduction to electrical/electronics careers (one unit) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with communications electronics (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment/career opportunities and training requirements;

(B) understand basic electrical and electronics theories;

(C) understand use of basic test equipment;

(D) understand the product systems to be serviced;

(E) have knowledge of basic maintenance procedures; and

(F) understand troubleshooting techniques.

(2) Concepts and skills associated with electrical motor repair (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment/career opportunities and training requirements;

(B) understand theories of electric motors;

(C) understand types, usages, and parts of motors;

(D) understand electric motor controls; and

(E) troubleshooting techniques to identify problems.

(3) Concepts and skills associated with business machine repair (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment/career opportunities and training requirements;

(B) understand the theories of electricity and electronics;

(C) understand the basic operational features of business machines;

(D) have knowledge of electrical, electronic, and mechanical measuring and test equipment;

(E) understand preventative maintenance using maintenance documents and service manuals; and

(F) understand troubleshooting procedures and techniques.

(4) Concepts and skills associated with major appliance repair (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment/career opportunities and training requirements;

(B) understand electrical meters and test equipment;

(C) understand schematics, service manuals, parts, catalogs, and publications used in repair;

(D) understand electrical and gas systems;

(E) understand installation, service, and repair procedures; and

(F) understand troubleshooting techniques used in testing, servicing, and repairing products.

(5) Concepts and skills associated with industrial electronics (approximately 30 hours). The student shall be provided opportunities to understand:

(A) employment/career opportunities and training requirements;

(B) hand tools and test instruments;

(C) electrical switches and timers;

(D) electrical meters and controls;

(E) electrical troubleshooting.

(6) Concepts and skills associated with computer electronics (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment/career opportunities and training requirements;

(B) understand CPUs;

(C) be familiar with storage devices;

(D) be familiar with peripheral devices;

(E) understand troubleshooting techniques;

(F) understand preventative maintenance procedures;

(G) understand systems environment and control devices;

(H) understand use of tools for systems repair; and

(I) understand systems maintenance documents.

(m) Business machine repair (two-three units) shall include the essential trade and industrial elements and concepts and skills associated with business machine repair. The student shall be provided opportunities to:

(1) develop basic understanding of the theories of electricity and electronics;

(2) understand basic operational features and proper terminology related to business machines, installing, repairing, and servicing;

(3) use schematics and service manuals to install, repair, and service equipment, using proper troubleshooting techniques;

(4) understand and use basic computer terminology;

(5) demonstrate understanding of telephone/communications systems;

(6) perform procedures using electrical, electronic, and mechanical test equipment;

(7) perform routine installations, inspections, adjustments, and maintenance; and

(8) demonstrate ability to use parts and catalog list and to estimate repair cost and follow proper billing procedures.

(n) Computer maintenance technician (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with computer maintenance technician. The student shall be provided opportunities to:

(1) develop basic understanding of the theories of electricity, electronics, and proper troubleshooting techniques;

(2) identify basic operational features and proper terminology related to computer systems;

(3) understand relationship of data-communications systems;

(4) understand fundamentals of digital electronics theory;

(5) use electrical and electronic test equipment to measure current, voltage, power, and resistance;

(6) perform routine installations, inspections, adjustments, repairs, and maintenance-using systems maintenance documents;

(7) demonstrate ability to use parts list and catalogs to order necessary parts for repair and maintenance; and

(8) understand fundamentals of microcomputers, microprocessor theory, and logic.

(o) Industrial electronics (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with industrial electronics. The student shall be provided opportunities to:

(1) understand the science of electronics and applied mathematics;

(2) apply Ohm's law and power theory;

(3) investigate direct current circuit analysis;

(4) understand magnetism as it relates to electronic circuits;

(5) design and build electronic circuits utilizing schematic diagrams;

(6) understand the structure, theory, and operation of semiconductors and integrated circuits;

(7) apply a method of testing semiconductor devices using test equipment;

(8) investigate voltage regulation devices;

(9) understand the relationship of voltage, current, resistance, and reactance in alternating current circuits;

(10) understand electronic theory and application as it applies to generators, electric motors, power supplies, electronic amplifiers, electronic oscillators, communication circuits, and communication systems;

(11) investigate AC circuit analysis;

(12) analyze malfunctions in electronic circuitry;

(13) understand the operation of basic transistor circuits and operational amplifiers in linear circuits;

(14) analyze digital electronic circuits;

(15) investigate microprocessor applications;

(16) become aware of state of the art technology; and

(17) apply the proper procedures for the use of electronic test equipment.

(p) Instrumentation (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with instrumentation. The student shall be provided opportunities to:

(1) understand units of measurement of length, area, volume, weight, and mass;

(2) understand mechanical and electrical measurement of length, volume, ph factor, weight, mass, pressure, temperature, humidity, viscosity, and windspeed systems;

(3) understand and demonstrate ability to use measuring devices gauges, test equipment, and specific hand tools;

(4) read schematic drawings and apply appropriate electronic theory;

(5) understand data transmission, computation, and reduction;

(6) understand basic electrical and electronic principles;

(7) understand basic digital electronics; and

(8) become aware of the state of the art technology.

(q) Major appliance repair (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with major appliance repair. The student shall be provided opportunities to:

(1) develop knowledge of electrical and magnetic fundamentals;

(2) demonstrate a knowledge of electromagnetic fundamentals of AC generators, transformers, and motors;

(3) display knowledge of theory and measurement of alternating current;

(4) use electrical meters and test equipment;

(5) read schematic diagrams;

(6) use and apply service manuals and publications to perform repairs;

(7) demonstrate knowledge of electrical and gas systems;

(8) demonstrate troubleshooting techniques in testing and repairing products;

(9) perform installation and repair procedures on major appliances;

(10) investigate procedures for pricing and billing customers; and

(11) understand warranty disposition of defective parts and equipment.

(r) Vocational electronics (two-three

units) shall include the essential trade and industrial education elements and concepts and skills associated with vocational electronics. The student shall be provided opportunities to:

(1) understand direct current electronics;

(2) understand Ohm's law and power theory;

(3) understand magnetism as it relates to inductance;

(4) build direct current circuits using bread board and printed circuit;

(5) understand alternating currents as related to measurements, wave forms, capacitive and inductive circuits transformer, and tuned circuits as used in electronics;

(6) understand generators and alternators;

(7) determine effects of resistors, capacitors, and inductors on alternating current;

(8) understand and apply the characteristics of series parallel resonant circuits and filter systems;

(9) understand semiconductors' structure theory and operation;

(10) demonstrate the operation of transistors by observing and measuring electrical characteristics;

(11) investigate basic theory of frequency modulation (FM) and amplitude modulation (AM);

(12) have knowledge of television systems and subsystems;

(13) have knowledge of digital electronic circuits; and

(14) have knowledge of microprocessor theory and logic.

(s) Introduction to precision metal manufacturing careers (one unit) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with machine shop (approximately 45 hours). The student shall be provided opportunities to:

(A) understand career opportunities associated with machine shop operations;

(B) understand the basic metal cutting processes, including drilling, turning, boring, milling, and grinding;

(C) understand and demonstrate the use of precision measuring devices; and

(D) understand and demonstrate the use of mathematics as it applies to machining operations.

(2) Concepts and skills associated with welding (approximately 45 hours). The student shall be provided opportunities to:

(A) understand career opportunities associated with welding;

(B) understand the basic theory of oxyfuel cutting, including types and use of flames and types of fuels;

(C) utilize the oxyfuel cutting process to produce straight line cuts;

(D) understand the brazing process of welding on various metals;

(E) understand the basic theories of shielded metal arc welding, metal inert gas welding, and tungsten inert gas welding;

(F) utilize the shielded metal arc process to weld on metal plate; and

(G) read welding symbols.

(3) Concepts and skills associated with sheet metal (approximately 45 hours). The student shall be provided opportunities to:

(A) understand career opportunities associated with sheet metal;

(B) understand the basic fundamentals of sheet metal construction;

(C) utilize the principles of mathematics in measuring;

(D) understand types, sizes, and properties of sheet metal materials and fasteners;

(E) understand principles of sheet metal construction in fabrication of ventilation and air conditioning projects; and

(F) identify common sheet metal seams.

(4) Concepts associated with quality control operations (approximately 45 hours). The student shall be provided opportunities to:

(A) understand career opportunities associated with quality control;

(B) understand the basic fundamentals of quality control;

(C) understand the purpose of measuring devices used in quality control;

(D) understand and read simple blueprints;

(E) understand the manufacturing process; and

(F) understand the theory of testing materials for strength, compression, and hardness.

(t) Machine shop (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with machine shop. The student shall be provided opportunities to:

(1) understand the basic metal cutting processes, including drilling, turning, boring, milling, and broaching;

(2) demonstrate proper precision measuring skills;

(3) read blueprints and work drawings;

(4) utilize mathematics as it applies to precision measuring operations and machining operations;

(5) demonstrate proper drilling and reaming procedures;

(6) understand and utilize various work mounting procedures and devices on all machines;

(7) machine metal to specified tolerances on the engine lathe;

(8) demonstrate proper procedures to cut threads, turn tapers, polish, knurl, and bore on the engine lathe;

(9) mill flat surfaces, bevels, chamfers, grooves, and keyseats utilizing proper milling machine procedures;

(10) understand the types of abrasives and their uses;

(11) utilize proper machines and procedures for surface grinding operations;

(12) demonstrate a basic understanding of numerically controlled machining;

(13) machine and fit precision pieces;

(14) understand the processes of hardening, tempering, annealing, normalizing, and case hardening steel;

(15) understand the basic theory of coated tooling; and

(16) identify the resources found in *The Machinery's Handbook*.

(u) Metal trades (two-three units) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with machine shop. The student shall be provided opportunities to:

(A) understand the basic metal cutting operations of the drill press, engine lathes, and milling machines;

(B) demonstrate proper precision measuring skills;

(C) read blueprints and sketch working drawings;

(D) utilize mathematics in precision measuring operations;

(E) understand and utilize various work mounting procedures and devices on the engine lathe, drill press, and milling machine;

(F) demonstrate proper procedures to turn, cut threads, turn tapers, drill, ream, polish, knurl, and bore on the engine lathe;

(G) utilize proper procedures to mill flat surfaces, bevels, chamfers, grooves, and keyseats;

(H) understand bench and pedestal grinders, abrasives, and their uses;

(I) machine and fit precision pieces;

(J) understand the various heat treating processes;

(K) understand the use of basic conventional and power hand tools; and

(L) introduce basic numerical control and computerized operation.

(2) Concepts and skills associated with welding. The student shall be provided opportunities to:

(A) understand the basic theory of oxyfuel cutting procedures;

(B) utilize the oxyfuel cutting process to produce freehand straight line, pierce, and beveled cuts;

(C) understand the basic theory of shielded metal arc welding, metal inert gas, and tungsten inert gas welding;

(D) understand and identify common types of electrodes and their uses;

(E) utilize the shielded metal arc

(gas tungsten arc and gas metal arc) processes to weld various points on metal plate in all appropriate positions;

(F) utilize the shielded metal arc (gas tungsten arc and gas metal arc) processes to weld various pipe joints in vertical and horizontal positions;

(G) inspect and test welds;

(H) read welding symbols; and

(I) understand the concepts of numerically controlled, computer numerically controlled, and robotic controlled welding machines.

(v) Sheetmetal (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with sheetmetal. The student shall be provided opportunities to:

(1) understand the basic fundamentals of sheetmetal construction;

(2) utilize the principles of mathematics in measuring;

(3) draw sheetmetal layouts and patterns utilizing current accepted methods;

(4) understand types, sizes, and properties of sheetmetal material;

(5) identify and construct common sheetmetal seams;

(6) understand and demonstrate proper techniques in constructing transitions and offsets;

(7) understand how to estimate material and labor costs;

(8) understand and practice the basic fundamentals of oxyfuel welding, brazing, soldering, and cutting;

(9) understand and practice the basic fundamentals of shielded metal arc welding;

(10) understand and properly utilize the gas tungsten arc welding process in sheetmetal construction; and

(11) apply the principles of sheetmetal construction to the fabrication and installation of ventilation and air conditioning ducts.

(w) Welding (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with welding. The student shall be provided opportunities to:

(1) understand the basic theory and application of oxyfuel welding and cutting;

(2) utilize the oxyfuel cutting process to produce freehand, straight line, pierce, and beveled cuts, and inspect and test the cutting process;

(3) understand the basic theory of shielded metal arc welding;

(4) utilize the shielded metal arc process to weld edge, lap, butt, tee, outside corner, and grooved butt joints on metal plate in all appropriate positions;

(5) utilize the shielded metal arc process to weld various pipe joints in vertical and horizontal positions;

(6) practice basic plate welding procedures utilizing the gas tungsten arc and gas metal arc welding processes;

(7) inspect and test welds;

(8) read welding symbols and blueprints; and

(9) understand the applications of specialized cutting processes.

(x) Introduction to graphic communications careers (one unit) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with printing trades (approximately 45 hours). The student shall be provided opportunities to:

(A) understand employment/career opportunities and training requirements in printing trades;

(B) understand concepts and basic theory skills associated with offset printing;

(C) understand legal restrictions and copyright laws; and

(D) understand layout procedures, principles of copy planning, and computer type composition.

(2) Concepts and skills associated with advertising design (approximately 45 hours). The student shall be provided opportunities to:

(A) understand employment/career opportunities and training requirements in advertising design;

(B) investigate occupational outlook and definition of occupations;

(C) understand the elements and principles of design;

(D) understand the basic procedures to create and design graphic material for use in advertising and instruction areas; and

(E) investigate advertising theory and preparation of copy, lettering, poster design, and other display devices and exhibits.

(3) Concepts and skills associated with drafting (approximately 45 hours). The student shall be provided opportunities to:

(A) understand employment/career opportunities and training requirements in drafting;

(B) understand the fundamentals of drafting;

(C) develop an understanding of multiview drawings, sectional views, and pictorial drawings;

(D) investigate techniques in using various drafting tools and machines; and

(E) investigate computer graphics.

(4) Concepts and skills associated with commercial photography (approximately 45 hours). The student shall be provided opportunities to:

(A) understand employment/career opportunities and training requirements in commercial photography;

(B) understand the basic theories of photography;

(C) investigate different types of cameras and film;

(D) identify camera components and functions; and

(E) investigate procedures in taking photographs.

(y) Advertising design (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with advertising design. The student shall be provided opportunities to:

(1) understand, create, and design graphic materials for use as ornamentation, illustration, advertising, packaging, and on manufactured materials;

(2) receive assignments from customer or supervisor to create, draw, or modify to achieve desired effect;

(3) understand traditional, period, and contemporary design styles to obtain perspective in design;

(4) review marketing trends and preferences of target and related markets;

(5) demonstrate production techniques used in advertising design;

(6) create designs for advertising, display, and instructional manuals;

(7) comprehend advertising theory, layout, and preparation as used in advertising design;

(8) fabricate specific items, such as signs, design emblems, and monogram design; and

(9) demonstrate techniques and procedures of computer graphics.

(z) Commercial photography (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with commercial photography. The student shall be provided opportunities to:

(1) understand the basic theories of photography;

(2) recognize different types of cameras, lenses, shutters, and their applications to photography;

(3) understand the components of a good commercial composition;

(4) understand how to make a quality picture through utilization of correct exposure, lighting, focus, and filters;

(5) demonstrate math skills necessary for photography;

(6) understand the characteristics of film and the techniques of film processing;

(7) identify print-making equipment and materials;

(8) demonstrate understanding of print-making steps and techniques;

(9) understand the basics of color photography and types of color processes;

(10) understand the process of color printing and color correction;

(11) understand principles of flash operation and techniques;

(12) demonstrate knowledge of proper safety procedures; and

(13) demonstrate proper finishing techniques.

(aa) Drafting (two-three units) shall include the essential trade and industrial education elements concepts and skills associated with drafting. The student shall be provided opportunities to:

(1) develop skills in sketching, lettering, dimensioning, and line development;

(2) exercise manual skill in manipulation of drafting tools;

(3) develop ink drawing;

(4) apply appropriate industrial techniques to the development of multiview drawings, sectional views, and pictorial drawings;

(5) understand and demonstrate skills in the use of descriptive geometry relating to auxiliary views, revolutions, intersections, and developments;

(6) apply appropriate techniques to the development of architectural drawings;

(7) apply appropriate techniques to the development of electrical and electronic drawings;

(8) apply appropriate techniques to the development of structural welding drawings;

(9) understand and apply the various processes of drawing reproduction;

(10) understand the fundamentals of computer aided drafting;

(11) utilize knowledge to draft detailed working drawings of machinery and mechanical devices;

(12) draft multiple-view assembly and sub-assembly drawings;

(13) draw topographical maps from appropriate source data;

(14) understand the principle of surveying;

(15) apply appropriate techniques to the development of piping drawings; and

(16) apply appropriate techniques to the development of technical illustrations.

(bb) Graphic arts (two-three units) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with offset printing. The student shall be provided opportunities to:

(A) understand the basic principles of offset printing;

(B) identify typeface families designs, and sizes;

(C) plan, layout, and copyfit jobs;

(D) compose type using impact and computerized phototypesetting processes;

(E) understand the basic techniques of desk top publishing (computer technology);

(F) understand proofreaders' marks;

(G) prepare line copy, halftone copy, and multi-color copy for camera reproduction;

(H) understand and practice the basic fundamentals of camera reproduc-

tion;

(I) understand and properly utilize half tone photography;

(J) understand the four color process reproduction method;

(K) develop film utilizing proper darkroom procedures;

(L) understand and practice proper layout and stripping processes;

(M) prepare direct image, presensitized, and photo-direct plates utilizing appropriate platemaking procedures;

(N) understand paper and ink characteristics and uses;

(O) understand the basic fundamentals of sheet-fed and web presses;

(P) demonstrate an understanding of offset press operating procedures, including preventive maintenance and troubleshooting;

(Q) understand principles of job estimating, job scheduling, and trade practices relating to obtaining legal restrictions;

(R) demonstrate the ability to safely operate a power paper cutter and math skills necessary to figure paper cuts; and

(S) demonstrate proficiency in various tasks in bindery work, including stitching, fastening, drilling, collating, jogging, padding, wrapping, cutting, and folding.

(2) Concepts and skills associated with letterpress printing. The student shall be provided opportunities to:

(A) understand basic letterpress theory;

(B) demonstrate knowledge of makeup procedures;

(C) understand the techniques of hot type composition;

(D) demonstrate basic proficiency in printing processes, including photoengravings, duplicate plates, stereotypes, gravure, photo-gelatin, and various kinds of letterpress processes; and

(E) perform preventive maintenance service and troubleshooting letterpress machinery.

(cc) Introduction to transportation service careers (one unit) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with aircraft mechanics (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment and training opportunities available in aircraft mechanics;

(B) understand the fundamentals of basic aircraft systems;

(C) understand the basic operations in aircraft maintenance;

(D) understand the basic need for math and science necessary for aircraft maintenance operations;

(E) understand the fundamentals of basic aircraft major components;

(F) understand the fundamentals of servicing fuel, lubrications, and hydraulic systems; and

(G) understand the fundamentals of towing, parking, taxing, and storage of aircraft.

(2) Auto body and collision repair (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment and training opportunities available in auto body and collision repair;

(B) understand automobile construction;

(C) understand the basic operations in collision repair;

(D) understand the basic math and science necessary for auto body and collision repair;

(E) understand basis of adjusting doors, tailgates, and windows, and adjust sheet metal components;

(F) identify and understand use of fillers, paints, and paint products;

(G) understand basis of preparing surface for painting and prepare surface for painting and spraying area; and

(H) read and interpret appropriate repair manuals and service bulletins.

(3) Auto mechanics (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment and training opportunities available in auto mechanics;

(B) understand the function of the major automobile components;

(C) understand the basic math and science necessary for auto mechanics;

(D) read and interpret appropriate repair manuals and service bulletins;

(E) understand the basic fundamentals of automobile engines, power train, and chassis components;

(F) understand the principles of servicing fuel system, engine lubricating system, engine cooling system, transmission and differential system, battery, tires, wheel bearing, hydraulic system, and lubricate chassis; and

(G) understand the basic fundamentals of the automotive electrical system.

(4) Diesel engine mechanics (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment and training opportunities available in diesel engine mechanics;

(B) understand the function of the major diesel engine components;

(C) understand the basic math and science necessary for diesel mechanics;

(D) read and interpret appropriate repair manuals and service bulletins;

(E) understand the basic fundamentals of diesel engine and system components;

(F) understand the principles of servicing fuel system, engine lubricating system, engine cooling system, and battery

system; and

(G) understand the basic fundamentals of diesel engine electrical system and hydraulic system.

(5) Small engine repair (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment and training opportunities available in small engine repair;

(B) understand the function of the small engine and its components;

(C) understand the basic math and science necessary for small engine repair;

(D) read and interpret appropriate manuals and service bulletins;

(E) understand the types of small engines; and

(F) understand the basic principles of inspecting, cleaning, and servicing cooling system, carburetor air cleaners, fuel systems, crankcase breathers, prepare proper fuel-oil mixture; and service and check batteries, spark plugs, rope-wind and wind-up starters, and ropes.

(6) Marine engine mechanics (approximately 30 hours). The student shall be provided opportunities to:

(A) understand employment and training opportunities available in marine engine repair;

(B) identify some application of marine outboard, marine inboard-outboard, and marine inboard engines and components;

(C) understand the basic math and science necessary for marine engine mechanics;

(D) read and interpret appropriate repair manuals and service bulletins;

(E) identify some points of servicing the fuel system, lubricating system, cooling system, outdrive system, hydraulic system, battery, and friction points;

(F) identify some basic components of the marine engine electrical system; and

(G) identify and define some point of inspection and servicing spark plugs, ignition system, and starting system.

(dd) Aircraft mechanics (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with aircraft maintenance. The student shall be provided opportunities to:

(1) understand the fundamentals of the aircraft electrical and electronic systems and components;

(2) understand basic aircraft drawings and blueprints;

(3) understand and perform safe and accurate calculation of aircraft weight and balance;

(4) fabricate and install fluid lines;

(5) identify and select basic materials and processes used in aircraft maintenance;

(6) understand fundamentals

associated with cleaning, ground handling, servicing, and securing of aircraft;

(7) select cleaning materials and identify corrosion and the process of controlling it;

(8) understand and apply principles of math and physical science as it applies to aircraft maintenance;

(9) read and interpret appropriate maintenance, repair, and service manuals, and federal aviation regulations;

(10) understand and perform required aircraft and engine inspections;

(11) understand airframe construction and repair methods and techniques;

(12) understand aircraft assembly and rigging procedures;

(13) service and repair aircraft hydraulic and landing gear systems and components;

(14) understand basic maintenance and operation of aircraft systems and components;

(15) understand the basic fundamentals and maintenance of aircraft engines, engine systems, and components; and

(16) understand the basic fundamentals and maintenance of aircraft propellers, propeller systems, and components.

(ee) Automotive collision repair and refinishing technology (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with auto body repair. The student shall be provided opportunities to:

(1) identify types of automobile body construction and different repair procedures for the different types of construction;

(2) develop proper techniques for the application of oxyfuel welding, cutting, brazing, soldering, and electric welding processes;

(3) identify the basic operations in collision repair;

(4) repair auto body sheet metal, including shaping and shrinking of sheet metal and replace sheet metal parts both attached and bolted;

(5) straighten and align frames and replace any body welded units;

(6) repair damaged sheet metal panels and fiberglass and synthetic body parts using various body fillers;

(7) repair or adjust doors, tailgates, liftgates;

(8) remove and install auto glass and mechanical and automated parts;

(9) replace and repair trim parts and automobile seats;

(10) identify and understand the proper application of automotive paint and refinishing products;

(11) demonstrate how to prepare surfaces for painting and facilities used;

(12) analyze automotive paint problems; and

(13) demonstrate how to estimate

costs of automotive collision repairs.

(ff) Auto specialization (two-three units) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills for courses emphasizing auto diesel mechanics. The student shall be provided opportunities to:

(A) understand the function of the major automobile components;

(B) read and interpret appropriate repair manuals;

(C) estimate parts and labor costs on repair orders;

(D) analyze malfunctions in auto diesel components;

(E) understand the basic fundamentals of the auto diesel engine;

(F) remove, repair, and replace auto diesel engine components;

(G) understand the fundamentals of the auto diesel engine systems;

(H) understand the fundamentals of diesel engine fuel injection systems;

(I) service and repair fuel injection systems, engine lubricating systems, engine cooling systems, and air intake and exhaust system;

(J) understand the fundamentals of auto diesel electrical and electronic equipment systems;

(K) service and repair auto diesel electrical and electronic units and systems;

(L) service and repair emission control system;

(M) understand the fundamentals of automobile power trains;

(N) service and repair automotive power train components;

(O) understand the fundamentals of the automobile chassis;

(P) service and repair automotive chassis components; and

(Q) understand the fundamentals of automotive heating and air conditioning systems.

(2) Concepts and skills for courses emphasizing automotive electrician. The student shall be provided opportunities to:

(A) understand the fundamentals of electrical theory;

(B) understand the basic math and science necessary for automotive electrical operations;

(C) understand the function of major automotive electrical and electronic systems;

(D) analyze malfunctions in automotive electrical and electronic systems;

(E) read and interpret appropriate repair manuals;

(F) estimate parts and labor costs on repair orders;

(G) remove, repair, and replace automotive electrical and electronic components;

(H) understand the fundamentals of the automotive electrical and electronic components;

(I) service, repair and change starters, distributors, alternators, computers, and batteries;

(J) test electrical and electronic systems on scope and other electronic analyzers for diagnosis; and

(K) remove and replace fuses, circuit breakers, switches, lights, connections, sockets, instrument gages, warning lamps, control module, pickup coil, sensors and voltage regulators.

(3) Concepts and skills for courses emphasizing brake and wheel alignment mechanic. The student shall be provided opportunities to:

(A) understand the basic math and science necessary for automotive brake and wheel alignment operations;

(B) understand the function of automotive suspension systems;

(C) analyze malfunctions in automotive suspension systems;

(D) understand the function of automotive braking systems;

(E) analyze malfunction in automotive braking systems;

(F) understand the function of automotive wheel and tire systems;

(G) analyze malfunctions in automotive tire and wheel systems;

(H) understand the function of automotive steering systems;

(I) analyze malfunctions in automobile steering systems;

(J) understand the function of automotive wheel alignment;

(K) analyze malfunctions in automotive wheel alignment;

(L) read and interpret appropriate repair manuals, charts, and bulletins.

(M) inspect, repair, and replace parts in automotive suspension systems, braking systems, tire and wheel systems, steering systems, and wheel alignment systems; and

(N) understand how to estimate parts and labor costs on repair orders, and properly fill out repair orders and related paper work.

(4) Concepts and skills for courses emphasizing automotive power train mechanics. The student shall be provided opportunities to:

(A) understand the function of the major power train components;

(B) analyze malfunctions in automotive power train components;

(C) understand the basic math and science necessary for automotive power train operations;

(D) read and interpret appropriate repair manuals, service bulletins, and charts;

(E) estimate parts and labor costs on repair orders and properly fill out repair orders and related paperwork;

(F) understand the basic fundamentals of the automotive power train;

(G) remove, repair, and replace automotive power train components;

(H) understand the fundamentals of the automotive power train systems;

(I) service and repair clutch assembly u-joint assembly, transmission extension housing seals and bushings, pinion shaft seal and flange, rear axle and wheel bearings, and differential ring and pinion gears;

(J) adjust pinion and ring gear, clutch assembly, transmission bands, and pre-load on pinion and ring gears;

(K) remove and replace standard and automatic transmissions, u-joints, clutch assemblies, and other component parts; and

(L) diagnose automotive power train malfunctions.

(5) Concepts and skills for courses emphasizing bus mechanics. The student shall be provided opportunities to:

(A) understand the function of the major bus components;

(B) analyze malfunctions in bus components;

(C) understand the basic math and science necessary for bus mechanics;

(D) read and interpret appropriate repair manuals, service bulletins, and charts;

(E) understand how to estimate parts and labor costs, and properly fill out repair orders and other trade related paperwork;

(F) understand the basic fundamentals of bus engines;

(G) remove, repair, and replace bus engine components;

(H) understand the fundamentals of bus engine systems;

(I) service and repair carbureted fuel systems, engine lubricating systems, and engine cooling systems;

(J) understand the fundamentals of gasoline and diesel engine fuel injection systems;

(K) understand the fundamentals of bus electrical and electronic equipment and systems;

(L) service and repair bus electrical units, electronic units, and systems;

(M) service and repair bus emission control systems;

(N) understand the fundamentals of bus power train;

(O) service and repair bus power train;

(P) understand the fundamentals of the bus chassis;

(Q) service and repair bus chassis components; and

(R) understand the fundamentals of bus heating and air conditioning systems.

(gg) Automotive technician (two-three units) shall include the essential trade and industrial education elements concepts and skills associated with automobile mechanics. The student shall be provided opportunities to:

(1) understand the functions of the

major automobile components;

(2) analyze malfunctions in automobile components;

(3) read and interpret appropriate repair and labor manuals;

(4) understand the basic fundamentals of the automobile engine and repair of internal systems;

(5) service and repair carbureted fuel systems and engine cooling systems;

(6) understand the fundamentals of gasoline engine fuel injection systems and diesel engine fuel injection systems;

(7) understand the fundamentals of automotive electrical and electronic equipment and service or replace units;

(8) service and repair automotive emission control systems;

(9) understand the fundamentals of automotive power trains and service, repair, or replace units;

(10) understand the fundamentals of the automobile chassis, and service, repair, or replace units;

(11) understand the fundamentals of automotive heating and air conditioning systems, and service and repair; and

(12) service and repair automotive heating and air conditioning systems and components.

(hh) Diesel mechanics (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with diesel mechanics. The student shall be provided opportunities to:

(1) understand the functions of the major diesel engine components;

(2) analyze malfunctions in diesel engine components;

(3) read and interpret appropriate repair manuals;

(4) understand how to estimate parts and labor costs on repair orders, and properly fill out repair orders and other related paperwork;

(5) remove, repair, and replace diesel engine components;

(6) understand the basic fundamentals of the diesel engine systems;

(7) service and repair fuel injection systems, engine lubricating systems, engine cooling systems, and air intake and exhaust air systems;

(8) understand the fundamentals of diesel engine electrical, electronic, and emission control systems;

(9) inspect, service, repair, remove, and install diesel engine electrical, electronic, and emission control system components, and starting system (electrical, air, and hydraulics); and

(10) understand the fundamentals of a basic hydraulic system as powered by the diesel engine.

(ii) Marine engine repair (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with marine engine repair. The student shall be provided op-

portunities to:

(1) understand the fundamentals of marine engines;

(2) understand basic math and sciences necessary for marine engine repair;

(3) read and interpret repair manuals, service bulletins, and charts;

(4) understand how to estimate parts and labor costs on repair orders, and fill out repair orders and related paperwork;

(5) understand the fundamentals and functions of marine engine systems and components;

(6) analyze malfunctions in marine engine systems and components;

(7) inspect, clean, remove, repair, replace and overhaul marine engines, marine engine systems, and components;

(8) service all fluid systems; and

(9) understand different propeller design and application.

(jj) Small engine repair (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with small engine repair. The student shall be provided opportunities to:

(1) understand the function of the small gasoline engine and its components;

(2) identify types of small gasoline engines;

(3) repair and service cooling system, carburetor air cleaner fuel system, and lubricating system;

(4) understand and repair various types of lubrication systems;

(5) refuel small engines, select the proper fuel, and prepare the fuel mixtures;

(6) understand, adjust, and repair various types of carburetors;

(7) evaluate engine compression;

(8) understand and repair various types of starting systems;

(9) repair alternating current starter and generating systems;

(10) understand and repair various types of ignition systems; and

(11) trouble shoot and repair various types of small engines and their components, valves, cylinders, pistons rings and rod assemblies, crankshaft, and camshaft.

(kk) Cleaning and pressing (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with cleaning and pressing. The student shall be provided opportunities to:

(1) understand the basic fundamentals of cleaning and pressing fabrics and materials;

(2) understand and apply principles of math and science as applies to cleaning and pressing of fabrics and materials;

(3) understand the fundamentals of cleaning solvents, soaps, and fluids;

(4) identify types of solvents, soaps, and fluids as to use and storage;

(5) understand the fundamentals of fabrics and their properties;

(6) identify fabrics, garments, and materials, their construction, and the process for cleaning;

(7) understand the fundamentals for cleaning preparation;

(8) identify wet clean, pre-spotting, unremovable stains, removable stains, and wash items;

(9) understand the fundamentals of pressing and ironing clean items;

(10) identify items and process for pressing or ironing;

(11) understand the fundamentals of the steam press, hand iron, and drip dry process;

(12) demonstrate knowledge of steam press, hand iron, and drip dry process;

(13) understand the fundamentals of packaging and wrapping cleaned items; and

(14) perform packaging and wrapping services;

(ll) Culinary arts (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with culinary arts. The student shall be provided opportunities to:

(1) understand the fundamentals of culinary arts;

(2) understand math and science necessary for culinary arts;

(3) understand the fundamentals of hygiene and control;

(4) identify insecticides, rodent poisons, and proper usage of each;

(5) understand the fundamentals of appetizers, beverages, breakfast foods, structure and composition of eggs, cheeses, cereals, pastas, meats, including beef, veal, pork, lamb, mutton, poultry, fish, and shell fish;

(6) understand and demonstrate the preparation, serving and processing of appetizers, beverages, breakfast foods, cheeses, cereals, pastas, meats, poultry, and fish;

(7) identify classes, grades, and cuts of eggs, cheeses, meats, poultry, and fish;

(8) understand the fundamentals of fruit, vegetables, salads, soups, sauces, and gravies;

(9) understand and demonstrate the preparation, serving, and processing of fruit, vegetables, salads, soups, sauces, and gravies;

(10) identify classes, grades, types, and forms of fruit, vegetables, salads, soups, sauces, and gravies;

(11) understand the fundamentals of baking, baking ingredients, yeast made products, cake and cookie batters, pie fillings and crusts, and puddings and pastries;

(12) understand and demonstrate the preparation of baking breads, cakes, cookies, and pies, and puddings and pastries;

(13) understand the fundamentals of various cooking utensils, knives, and

dishes, and

(14) demonstrate proper technique for cleaning, storing, and use of cooking utensils, knives, and dishes.

(mm) Cosmetology (three units) shall include the essential trade and industrial education elements and concepts and skills associated with cosmetology. The student shall be provided opportunities to:

(1) understand the fundamentals of cosmetology;

(2) understand and utilize required sterilization and sanitation processes and procedures;

(3) prepare patrons for various cosmetic services;

(4) shampoo and rinse hair;

(5) apply specialized reconditioning, medicated cream, and color rinses;

(6) analyze various scalp and hair conditions;

(7) apply various scalp and hair treatments in accordance with identified conditions;

(8) understand and practice the basic fundamentals of manicuring;

(9) shape and thin hair using thinning shears, scissors, and razor;

(10) understand and utilize various curls in the hairstyling process;

(11) practice proper comb-out, blow drying, and finishing techniques;

(12) recognize appropriate hairstyles to compliment various facial and neck types;

(13) understand and properly utilize the chemicals procedures, and processes associated with permanent waving;

(14) utilize appropriate processes and procedures in chemical hair relaxing;

(15) apply basic massage manipulations to the scalp, face, and neck;

(16) understand and utilize proper procedures to bleach, dye, and color hair;

(17) apply accepted procedures for the removal of superfluous facial hair;

(18) understand and demonstrate proper procedures in applying facial make-up; and

(19) analyze facial types and determine appropriate facial treatment to compliment the type.

(nn) Hydraulics and pneumatics (two-three units) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with hydraulics. The student shall be provided opportunities to:

(A) understand the math and science necessary for hydraulics;

(B) develop a basic understanding of the theory of hydraulics;

(C) read and interpret blueprints, work drawings, maintenance repair, and service manuals;

(D) understand the fundamentals of cleaning, flushing, servicing, inspection, installing, removing, repairing, and replacing hydraulic systems and compo-

nents; and

(E) understand the installation and maintenance of high and low pressure process piping.

(2) Concepts and skills associated with pneumatics. The student shall be provided opportunities to:

(A) understand the math and science necessary for pneumatics;

(B) develop a basic understanding of the theory of pneumatics;

(C) understand the fundamentals of pressure and force in containers;

(D) read and interpret maintenance manuals and service bulletins and charts;

(E) understand the function of pneumatic machinery, systems, and components;

(F) develop a basic understanding of inspection, service, removal, repair, replacement, and installation of pneumatic systems and components; and

(G) understand the installation and maintenance of pneumatic hoses and piping.

(oo) Media technology (two-three units) shall include the essential trade and industrial elements and concepts and skills associated with media technology. The student shall be provided opportunities to:

(1) demonstrate safety procedures utilized in all phases of media productions;

(2) understand and operate different types of cameras;

(3) demonstrate an understanding and mastery of audio techniques;

(4) demonstrate videotape recorder operation and electronic editing skills;

(5) demonstrate ability to create media graphics;

(6) identify and apply the basic principles of lighting;

(7) demonstrate ability to script, direct, and produce media productions;

(8) understand and utilize various capabilities of TV switching and special effects systems;

(9) understand and utilize various video signal control and monitoring equipment; and

(10) utilize the principles of basic set design.

(pp) Law enforcement training (one, two, or three units) shall include the essential trade and industrial education elements and concepts and skills associated with law enforcement training. The student shall be provided opportunities to:

(1) explain the purpose and need for the laws and describe Peel's Principles and British influences on the American system of law enforcement;

(2) trace the development of the legal system in the United States and the development of municipal, county, and state police organizations;

(3) list goals of investigation, interview, and interrogation, and explain the difference between them;

(4) demonstrate knowledge of the effect of constitutional law on law enforcement;

(5) describe sequential procedures to be followed upon arrival at a crime scene, and explain chain of evidence, preserving evidence and legal aspects of physical evidence;

(6) write investigative reports relating elements of the crime;

(7) demonstrate proper search procedures;

(8) explain various patrol procedures;

(9) describe the development and organizational development of the court system;

(10) describe the purposes of juvenile and family code;

(11) demonstrate knowledge of arrest, search, and seizure procedures;

(12) describe the development of the penal system and its functions;

(13) demonstrate knowledge of the Texas Penal Code;

(14) demonstrate skills in communications; and

(15) understand basic use of computers.

(qq) Leather trades (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with leather trades. The student shall be provided opportunities to:

(1) understand the science of leather processing;

(2) understand and demonstrate knowledge of various leathers and synthetics used in manufacturing of leather products;

(3) demonstrate knowledge of processing and sorting leather;

(4) apply appropriate industrial techniques used in tooling of leather;

(5) develop skills in carving and stamping leather designs;

(6) understand and demonstrate knowledge of assembling, lacing, and attaching metal hardware to leather products;

(7) demonstrate ability to use stitching and sewing machines; and

(8) utilize appropriate procedures in cleaning and finishing leather.

(rr) Marine related occupations (two-three units) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with seamanship. The student shall be provided opportunities to:

(A) understand common marine terms;

(B) understand the responsibility to stop and render aid;

(C) understand the proper display of numbers;

(D) demonstrate knowledge of the lighting system used for navigation;

(E) understand the buoyage system used in Texas waters;

(F) tie basic knots; and

(G) recall names of the parts of the boat.

(2) Concepts and skills associated with harvesting equipment. The student shall be provided opportunities to:

(A) construct a cast net;

(B) construct a crab trap;

(C) build an oyster knife;

(D) understand the techniques of using oyster tongs and dredge;

(E) understand the techniques involved in using a cast net;

(F) understand the life cycle of shrimp, oyster and crab;

(G) cull shrimp and prepare them for sale;

(H) open and prepare oysters for distribution; and

(I) perform duties of boat operation during oyster season and shrimp season.

(3) Concepts and skills associated with welding. The student shall be provided opportunities to:

(A) understand the fundamentals of arc welding and oxy-acetylene cutting;

(B) demonstrate the ability to set up and secure cutting equipment;

(C) demonstrate the ability to run a bead in the flat position using E6011 electrode, make butt weld, and make "T" weld; and

(D) demonstrate the ability to cut, puddle, run a bead, and braze with oxygen-acetylene equipment;

(4) Concepts and skills associated with operation and maintenance of marine engines. The student shall be provided opportunities to:

(A) understand the operation principles of the four and two stroke cycle engines;

(B) determine correct fuel for each engine;

(C) describe the lubricating system used in four and two stroke cycle engines;

(D) identify tools and engine parts;

(E) disassemble, clean, inspect, and reassemble engine;

(F) recognize and service different types of air cleaners;

(G) service fuel filters; and

(H) understand how to remove inspect, and install a camshaft.

(5) Concepts and skills associated with boat construction. The student shall be provided opportunities to:

(A) recognize the characteristics of different hull types;

(B) identify construction materials, fasteners, and glues;

(C) demonstrate the ability to loft; and

(D) demonstrate the ability to construct a small boat.

(6) Concepts and skills associated

with boat operation. The student shall be provided opportunities to understand and perform the duties of the deck hand, rigman, and captain during the spring season oyster harvest, and shrimp harvest.

(ss) Needle trades (two-three units) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills for courses emphasizing garment manufacturing. The student shall be provided opportunities to:

(A) understand math required to estimate labor and costs of a finished product;

(B) demonstrate skills in measuring, marking, cutting, and following a pattern and instructions;

(C) demonstrate appropriate use and care of sewing equipment;

(D) apply appropriate sewing techniques on industrial and domestic type machines;

(E) identify textiles characteristics and care;

(F) apply correct textiles and apparel terminology;

(G) identify indicators of quality in clothing and accessories; and

(H) relate textiles characteristics to garment design and construction.

(2) Concepts and skills for courses emphasizing fashion design. The student shall be provided opportunities to:

(A) apply design elements when designing, constructing, or altering apparel;

(B) illustrate coordination of clothing and accessories for infants, children, or adults;

(C) select fabrics and notions suitable for garment design;

(D) apply appropriate procedures when measuring for custom garment;

(E) apply unit construction techniques;

(F) identify and use methods of pattern alteration; and

(G) evaluate creative clothing designs for specific individuals.

(tt) Petro-chemical laboratory technician (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with chemical laboratory technician. The student shall be provided opportunities to:

(1) understand the fundamental role and duties of a chemical laboratory technician;

(2) understand the math and science necessary to perform chemical calculations;

(3) set up laboratory equipment and instrumentation required for tests and experimentations;

(4) understand the function of research, development, and quality control;

(5) conduct laboratory tests to determine chemical and physical properties;

(6) follow standardized formula-

tions and experimental procedures;

(7) conduct laboratory tests for chemical and physical properties;

(8) apply wet and instrumental methods to the qualitative and quantitative analysis of elements, compounds, and mixtures;

(9) analyze and log test results, and prepare reports of findings;

(10) follow standardized formulas and experimental procedures;

(11) understand units of concentration and prepare solutions of a given volume and concentrations; and

(12) synthesize and characterize selected organic and inorganic compounds.

(uu) Plant maintenance (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with plant maintenance. The student shall be provided opportunities to:

(1) understand the fundamentals of plant maintenance;

(2) understand the math and science necessary for plant maintenance;

(3) read and interpret repair manuals, service bulletins, blueprints, work drawings and charts, and codes;

(4) estimate equipment, supplies, and labor costs for repair work orders;

(5) understand the function of plant equipment, services, and plant construction;

(6) analyze malfunction, repair cost, material needs personnel costs, and time to repair;

(7) inspect, dismantle, repair, maintain, paint, lubricate, remove, and replace machinery, shafts, equipment, and fixtures; and

(8) inspect, repair, replace, and paint counters, benches, partitions, walls, sidewalks, drives, and woodwork.

(vv) Plant processing (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with plant processing. The student shall be provided opportunities to:

(1) understand the fundamentals of plant processing operations;

(2) understand the math and science necessary for plant processing operations;

(3) understand the relationship of pressure, temperature, levels, and flow;

(4) understand the function, adjustment, and monitor warning indicators and alarms;

(5) lubricate, adjust, and make minor repairs to operating equipment;

(6) analyze specifications and control operations of refining units;

(7) determine operation and control to produce specified quantity and quality of produce;

(8) operate controllers in manual, automatic, and computer modes;

(9) draw flow plan sketches of

refinery and chemical plant units; and

(10) understand the operation and nature of separation, conversion, and polymerization units in refinery and chemical plants.

(ww) Pre-technical law enforcement technology (one-two units) shall include the essential trade and industrial education elements and concepts and skills associated with pre-technical law enforcement technology. The student shall be provided opportunities to:

(1) understand the purpose and need for the laws and describe Peel's Principles and British influences on the American system of law enforcement;

(2) trace the development of the legal system in the United States and the development of municipal, county, and state police organizations;

(3) list goals of investigation, interview, and interrogation, and explain the difference between them;

(4) demonstrate knowledge of the effect of constitutional law on law enforcement;

(5) understand systematic procedures upon arriving at a crime scene and explain chain of evidence, preserving evidence, and legal aspects of physical evidence;

(6) write investigative reports relating elements of the crime;

(7) demonstrate proper search procedures;

(8) explain various patrol procedures;

(9) describe the development and organizational development of the court systems;

(10) describe the purposes of juvenile and family code;

(11) demonstrate knowledge of arrest, search, and seizure procedures;

(12) describe the development of the penal system and its functions;

(13) demonstrate knowledge of the Texas Penal Code;

(14) demonstrate skills in communications; and

(15) understand basic use of computers.

(xx) Quality control (two-three units) shall include the essential trade and industrial elements and concepts and skills associated with quality control. The student shall be provided opportunities to:

(1) understand the basic fundamentals of quality control;

(2) read blueprints and work drawings;

(3) understand and use the fundamentals of metrology using 1st, 2nd, and 3rd order measuring instruments;

(4) understand use of machining tools, drill press, grinder, and lathe;

(5) practice techniques of soldering, brazing, welding, crimping, wiring, and wrapping;

(6) understand and use mechanical

drafting techniques;

(7) understand characteristics of metals, plastics, and various materials;

(8) perform physical testing, compression, hardness tensile, and shear strength;

(9) understand theory of tolerance and fits;

(10) investigate and perform inspections involving quality control procedures and products; and

(11) understand manufacturing processes.

(yy) Stationary energy sources (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with stationary energy sources. The student shall be provided opportunities to:

(1) understand the fundamentals of stationary energy sources;

(2) understand the basic math and science necessary for stationary energy sources;

(3) read and interpret repair manuals, blueprints, work drawings service bulletins and repair orders;

(4) understand the function of stationary energy source equipment, systems, and components;

(5) analyze malfunctions in equipment, systems and components;

(6) inspect, clean, lubricate, service, remove, repair, and replace equipment and system components;

(7) understand the function of power generating equipment, systems, and components;

(8) dismantle and overhaul motors, pumps, compressors, hydroelectrical, and electrical generators; and

(9) install and service wiring, switchboards, control panels, automatic recorders, and graphs.

(zz) Upholstery/furniture repair (two-three units) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills for courses emphasizing upholstery. The student shall be provided opportunities to:

(A) analyze the fundamentals of upholstery;

(B) utilize upholstery terminology;

(C) recognize traditional, period, and contemporary design styles to obtain perspective;

(D) identify different fabrics, materials, finishes, and their characteristics;

(E) demonstrate math skills necessary to estimate materials and labor costs to repair or re-upholster items;

(F) receive instructions from customer or supervisor to create or modify to achieve desired effect; and

(G) perform related tasks of fabrication and/or repair processes of disassembly and reassembly such as tacking, nailing, gluing, measuring, lay-out, cut-

ting, sewing, and fitting materials, and application of filling, padding, springs, and fabric.

(2) Concepts and skills for courses emphasizing furniture repair. The student shall be provided opportunities to:

(A) understand the fundamentals of furniture finishing/repair;

(B) identify styles and periods of furniture;

(C) recognize various types of woods and their different properties;

(D) understand types, properties and uses of paints, varnishes, polishes, and waxes;

(E) understand procedures for disassembly and reassembly of furniture;

(F) understand techniques for repairing dents, mars, and scratches by utilizing fillers and stains; and

(G) develop woodworking skills required for furniture finishing/repair.

(aaa) Vocational plastics (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with vocational plastics. The student shall be provided opportunities to:

(1) develop a basic understanding of chemistry of plastics ingredients, and properties;

(2) read and use measuring instruments;

(3) investigate and use molding techniques;

(4) investigate and use thermoforming techniques;

(5) investigate and use extrusion techniques;

(6) investigate and use reinforced molding techniques;

(7) investigate methods of fabrication;

(8) demonstrate processes of joining and fastening of plastics;

(9) investigate decorating processes using hot stamping, silk screening, engraving, and other techniques;

(10) investigate and use casting and coating processes;

(11) investigate and demonstrate foaming techniques;

(12) produce tools and dies for plastics processing methods;

(13) read blueprints, create a simple plan, sketch, and calculate cost and a bill of materials involving various types of plastics; and

(14) understand the use of computer and robots in plastic manufacturing processes.

(bbb) Security services (two-three units) shall include the essential trade and industrial education elements and concepts and skills associated with security services. The student shall be provided opportunities to:

(1) understand Peel's Principles and the British influence on the American system of law enforcement and private

security;

(2) trace the development of the legal system and the history and development of private security;

(3) understand goals of private security investigation, interview, and interrogation;

(4) demonstrate knowledge of the effect of constitutional law concerning private security;

(5) describe sequential procedures to be followed upon arriving at a crime scene;

(6) explain various security patrol procedures;

(7) understand the purposes of juvenile law and family code and the organizational structure of the courts;

(8) understand procedures and limits of apprehension and detention by private security;

(9) develop an understanding of the penal system, Texas Penal Code, and the code of criminal procedures pertaining to private security;

(10) understand basic use of computers and communication systems in private security;

(11) understand licensing certification requirements for private security;

(12) understand crime prevention devices, equipment, and procedures related to the protection of private individuals, businesses, and industry;

(13) understand retail, industrial, and private security precautions and procedures; and

(14) demonstrate ability to provide various private security oral and written reports.

(ccc) Coordinated vocational-academic education (CVAE)—building maintenance (two-three units) shall include the essential trade and industrial elements and the following essential elements.

(1) Concepts and skills associated with carpentry. The student shall be provided opportunities to:

(A) understand the basic carpentry building repair procedures;

(B) apply basic mathematics to carpentry measurement processes; and

(C) demonstrate proper techniques in repairing floors, walls, ceilings, roofs, and interior and exterior materials.

(2) Concepts and skills associated with electrical trades. The student shall be provided opportunities to:

(A) understand the basic fundamentals of electrical repair and maintenance; and

(B) demonstrate the proper techniques in repairing and replacing electrical wiring and controls.

(3) Concepts and skills associated with painting. The student shall be provided opportunities to:

(A) understand the basic fundamentals of interior and exterior paint refinishing; and

(B) demonstrate the proper techniques in refinishing floors, walls, and ceilings, and interior and exterior materials.

(4) Concepts and skills associated with plumbing. The student shall be provided opportunities to:

(A) understand the basic fundamentals of plumbing repair and maintenance; and

(B) demonstrate proper techniques in repairing and replacing plumbing fixtures and lines.

(5) Concepts and skills associated with building cleanliness and sanitization. The student shall be provided opportunities to:

(A) understand the basic fundamentals of building cleanliness and sanitization;

(B) identify basic cleansing and sanitizing compounds, solutions, and chemicals; and

(C) understand the basic techniques for the application of cleansing and sanitizing solutions.

(ddd) Coordinated vocational-academic education (CVAE)—general construction trades (two-three units) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with carpentry. The student shall be provided opportunities to:

(A) understand the basic fundamentals of carpentry;

(B) read blueprints and working drawings;

(C) apply basic mathematics to carpentry measurement processes;

(D) utilize appropriate framing techniques;

(E) understand proper techniques in roof construction;

(F) install various interior and exterior wall coverings; and

(G) understand proper techniques of door and window installation.

(2) Concepts and skills associated with bricklaying. The student shall be provided opportunities to:

(A) identify and understand the use of basic brick and masonry products; and

(B) construct simple brick walls.

(3) Concepts and skills associated with electrical trades. The student shall be provided opportunities to:

(A) understand the basic fundamentals of residential wiring; and

(B) install basic residential electrical wiring fixtures and controls.

(4) Concepts and skills associated with plumbing. The student shall be provided opportunities to:

(A) understand the basic fundamentals of residential plumbing; and

(B) install basic residential plumbing fixtures.

(5) Concepts and skills associated

with concrete masonry. The student shall be provided opportunities to:

- (A) understand the basic fundamentals of concrete masonry;
- (B) erect simple concrete forms;
- (C) install concrete reinforcement; and
- (D) pour and finish a simple concrete slab.

(6) Concepts and skills associated with painting. The student shall be provided opportunities to:

- (A) understand the basic principles of dry wall, interior finishes, and exterior finishes; and
- (B) apply exterior finish.

(eee) Coordinated vocational-academic education (CVAE)—general mechanical repair (two-three units) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with automobile mechanics. The student shall be provided opportunities to:

- (A) understand the functions of the major automobile components;
- (B) perform basic preventive maintenance functions on the automobile;
- (C) demonstrate proper techniques in performing a tune-up on an automobile; and
- (D) remove, repair, and replace automobile brake system components.

(2) Concepts and skills associated with small engine repair. The student shall be provided opportunities to:

- (A) understand the functions of the small gasoline engine and its components;
- (B) identify types of small gasoline engines;
- (C) understand the proper fuel and fuel mixtures required for various types of small engines;
- (D) service and repair small engine fuel systems, lubrication systems, and starting systems; and
- (E) troubleshoot and repair small engines.

(3) Concepts and skills associated with welding. The student shall be provided opportunities to:

- (A) understand the basic theory of oxyfuel welding, brazing, and cutting;
- (B) utilize the oxyfuel cutting process to produce freehand cuts;
- (C) weld and braze metal plate using the oxyfuel process;
- (D) understand the basic theory of shielded metal arc welding; and
- (E) utilize the shielded metal arc process to weld butt and tee joints on metal plate.

(fff) Coordinated vocational-academic education (CVAE)—general metal trades (two-three units) shall include the essential trade and industrial education elements and the following essential elements.

(1) Concepts and skills associated with metal benchwork. The student shall be provided opportunities to:

- (A) understand the basic metal benchwork processes;
- (B) read basic blueprints and drawings; and
- (C) demonstrate proper benchwork techniques, including hand sawing, filing, cutting metal with cold chisels, cutting external threads with dies, and cutting internal threads with taps.

(2) Concepts and skills associated with machine shop. The student shall be provided opportunities to:

- (A) understand the basic metal cutting processes, including drilling, grinding, turning, and milling;
- (B) demonstrate the proper use of the bench or pedestal grinder;
- (C) drill and ream holes using the drill press; and
- (D) demonstrate the proper use of basic measuring tools, including rules, calipers, and micrometers.

(3) Concepts and skills associated with welding. The student shall be provided opportunities to:

- (A) understand the basic theory of oxyfuel welding, brazing, and cutting;
- (B) utilize the oxyfuel cutting process to produce freehand cuts;
- (C) weld and braze metal plate using the oxyfuel process;
- (D) understand the basic theory of shielded metal arc welding;
- (E) utilize the shielded metal arc process to weld edge, lap, butt, tee, and grooved butt joints on metal plate in various positions; and
- (F) utilize the shielded metal arc process to weld various pipe joints in vertical and horizontal positions.

(4) Concepts and skills associated with sheetmetal work. The student shall be provided opportunities to:

- (A) understand the basic sheetmetal work processes;
- (B) develop basic sheetmetal patterns;
- (C) demonstrate proper sheetmetal layout techniques; and
- (D) demonstrate proper techniques in hand bending and cutting sheetmetal.

(ggg) In addition to the occupations described in subsections (a)-(fff) of this section, schools may offer trade and industrial education in any of the occupations listed in this section or in other industrial occupations justified by supply/demand data.

- (1) The following may be offered:
 - (A) CVAE air conditioning and refrigeration;
 - (B) CVAE auto mechanics;
 - (C) CVAE bricklaying;
 - (D) CVAE building maintenance;
 - (E) CVAE commercial cooking;
 - (F) CVAE commercial display

and decoration;

- (G) CVAE cosmetology;
 - (H) CVAE furniture repair and upholstery;
 - (I) CVAE general construction trades;
 - (J) CVAE general marine repair;
 - (K) CVAE general mechanical repair;
 - (L) CVAE home appliance repair;
 - (M) CVAE marine engine repair;
 - (N) CVAE metal trades;
 - (O) CVAE mill and cabinetmaking;
 - (P) CVAE printing and decorating;
 - (Q) CVAE plumbing, heating, and cooling;
 - (R) CVAE printing;
 - (S) CVAE service station attendant;
 - (T) CVAE sheetmetal worker;
 - (U) CVAE small engine repair;
 - (V) CVAE welding;
 - (W) VEH auto body repair;
 - (X) VEH auto mechanic;
 - (Y) VEH bricklaying;
 - (Z) VEH building maintenance;
 - (AA) VEH cabinetmaking;
 - (BB) VEH electrician's helper;
 - (CC) VEH electronic assembly;
 - (DD) VEH furniture repair and upholstery;
 - (EE) VEH general construction trades;
 - (FF) VEH general mechanical repair;
 - (GG) VEH house painting;
 - (HH) VEH laundry service;
 - (II) VEH metal trades;
 - (JJ) VEH small engine repair;
- and
- (KK) VEH service station attendant.

(2) Schools offering training in these occupations shall provide a program that includes the basic trade and industrial education elements and also the concepts and skills associated with the specific occupation or cluster of occupations involved.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 15, 1987

TRD-8708150 W. N. Kirby
Commissioner of
Education

Proposed date of adoption:
January 9, 1988
For further information, please call
(512) 463-9212.

Subchapter F. Graduation Requirements

★ 19 TAC §75.152

The Texas Education Agency proposes an amendment to §75.152, concerning the advanced high school program. The amendment deletes the requirement that the fourth unit of English be English IV (academic).

English IV (academic) is a two-semester course in which one semester is devoted to literature and the other to grammar and composition. The amendment deletes the requirement for this course and replaces it with English IV, an integrated instructional approach that blends literature, grammar, and composition in a full-year program.

Lynn M. Moak, deputy commissioner for research and information, has determined that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the section.

Mr. Moak and Beverly Bardsley, director for policy development, have determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be improved instruction in the advanced high school program. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to Beverly Bardsley, Director for Policy Development, 1701 North Congress Avenue, Austin, Texas 78701, (512) 463-9682. All requests for a public hearing submitted in accordance with the Administrative Procedure and Texas Register Act must be received by the commissioner of education not more than 15 calendar days after notice of the proposed amendment has been published in the *Texas Register*.

The amendment is proposed under the Texas Education Code, §21.101, which provides the State Board of Education with the authority to make rules concerning the public school curriculum and §21.257, which directs the board to specify what constitutes an advanced high school program.

§75.152. *Advanced High School Program.*

(a) (No change.)

(b) The required units shall include the following:

(1) English language arts-four units, English I, II, III, and IV [academic];

(2)-(11) (No change.)

(c)-(e) (No change.)

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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W. N. Kirby
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(512) 463-9212.



Chapter 85. Student Services Subchapter B. Guidance Services

★ 19 TAC §85.22

(Editor's note: The Texas Education Agency proposes for permanent adoption the amendment it adopts on an emergency basis in this issue. The text of the amendment is published in the Emergency Rules section of this issue.)

The Texas Education Agency proposes an amendment to §85.22, concerning school-community guidance centers. The amendment implements the General Appropriations Act, Article III, Section 1, Rider Number 13 (70th Legislature, 1987), which changed the criteria for establishing school-community guidance centers by deleting the requirement that such centers be established in urban areas. Such centers may now be established by school districts or cooperative with at least 6,000 ADA.

Lynn M. Moak, deputy commissioner for research and information, has determined that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the section. Since more districts are now eligible to apply for funds, there may be a redistribution of funds which will probably provide increased funding for some districts and decreased funding for others. Exact amounts cannot be estimated.

Mr. Moak and Beverly Bardsley, director for policy development, also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be rules consistent with current law and expanded availability of school community guidance centers. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to Dr. Beverly Bardsley, Director for Policy Development, 1701 North Congress Avenue, Austin, Texas, 78701, (512) 463-9682. All requests for a public hearing on proposed sections submitted in accordance with the Administration Procedure and Texas Register Act must be received by the commissioner of education not more than 15 calendar days after notice of a proposed change in section has been published in the *Texas Register*.

The amendment is proposed under the Texas Education Code, §21.601, which authorizes the establishment of school-community guidance centers.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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Chapter 129. Student Attendance Subchapter D. Student Attendance Accounting

★ 19 TAC §129.61

The Texas Education Agency proposes an amendment to §129.61, concerning requirements for student attendance accounting for state funding purposes. The amendment implements Senate Bill 1, 70th Legislature, 1987, which mandated timely reporting of student attendance information and directed the withholding of Foundation School Program payments from school districts that do not meet reporting deadlines. The amendment also authorizes school districts to use and report only the fall report of pupil attendance as the district's best four of eight weeks of attendance accounting for state funding purposes.

Lynn M. Moak, deputy commissioner for research and information, has determined that for the first five-year period the proposed section will be in effect there will be fiscal implications for state and local government as a result of enforcing or administering the section. There will be an anticipated increase in revenue to the state, since any delays in payments to school districts will result in higher interest earnings for the state. The amount of increased revenue cannot be quantified at this time. For local school districts, delays in receipt of payments from the state will result in loss of short-term interest earned. Again, because there is no way to anticipate which districts will fail to meet reporting deadlines, the amount of loss cannot be quantified. There will be no fiscal implications for small businesses as a result of enforcing or administering the section.

Mr. Moak and Beverly Bardsley, director for policy development, have determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be to ensure timely reporting

of student attendance information and simplify reporting for certain districts. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to Dr. Beverly Bardsley, Director for Policy Development, 1701 North Congress Avenue, Austin, Texas 78701, (512) 463-9682. All requests for a public hearing on proposed sections submitted in accordance with the Administrative Procedure and Texas Register Act must be received by the commissioner of education not more than 15 calendar days after notice of a proposed change in sections has been published in the *Texas Register*.

The amendment is proposed under the General Appropriations Act, 70th Legislature, 1987, Article III, Section 1, Rider Number 17, which directs the State Board of Education to establish reporting deadlines for student attendance information and to withhold Foundation School Program funds from districts not in compliance.

§129.61. *Requirements for Student Attendance Accounting for State Funding Purposes.*

(a) (No change.)

(b) The State Board of Education shall establish reporting deadlines for the counts of students in average daily attendance. If a school district has not filed the required report by the deadline prescribed, then payments from the Foundation School Fund will be withheld from the district until an acceptable report is filed. The commissioner of education may establish a later deadline for specific districts where unusual circumstances justify a later date.

(c)(b) Average daily attendance shall be determined [based] on the best four weeks of eight weeks of attendance.

(1) (No change.)

(2) Districts may opt to use the fall report of pupil attendance as their best four of eight weeks of attendance accounting for purposes of calculating foundation school funds. Districts choosing to report the fall four weeks only will annually notify the Central Education Agency of their intent to do so on an agency form provided for that purpose. Districts opting for the fall four weeks will not be required to maintain attendance accounting data in the daily register of pupil attendance, or equivalent system, for the spring four week attendance accounting period. Entry and withdrawal data must, however, continue to be maintained for the entire school year.

(3)(2) Any district in which fewer than four school days are scheduled or held during one of the designated weeks shall inform the commissioner of education, who may approve the next full week at the end of the reporting period for that district. Districts which count attendance in an alternate week shall report to the commissioner of education such information concerning

transfers into and out of the district as the commissioner may require.

(4)(3) Districts shall maintain records and make reports concerning student attendance and participation in bilingual education, special language programs, vocational education, special education, and gifted and talented education as required by the commissioner of education.

(5)(4) If a school chooses to use a locally developed record, it must contain the minimum information required by the commissioner of education.

(d)(c) When classroom instruction is organized on a departmentalized basis, a central attendance accounting system must be used.

(e)(d) A student must be enrolled for at least two hours to be considered in membership for half-day, and for at least four hours to be considered in membership for one full day.

(f)(e) Attendance for all grades shall be determined by the absences recorded in the second or fifth period of the day, unless permission has been obtained from the Central Education Agency for an alternate period to record absences.

(1)-(3) (No change.)

(g)(f) A student who is not actually in school at the time attendance is taken shall not be counted in attendance for Foundation School Program funding purposes unless the student is participating in an activity which meets the conditions set out in subsection h(g) of this section.

(h)(g) A student not actually on campus at the time attendance is taken may be considered in attendance for Foundation School Program purposes under the following conditions:

(1)-(3) (No change.)

(i)(h) In accordance with the Texas Education Code, §21.035, students may be excused for medical, dental, and psychological appointments; for special education assessment procedures; and for special education related services. However, if such students are absent when attendance is taken, they shall not be counted present for Foundation School Program purposes.

(j)(i) The superintendent of schools is responsible for the safekeeping of all attendance records and reports. The superintendent of schools may determine whether the properly certified attendance records or reports for the school year are to be filed in the central office or properly stored on the respective school campuses of the district. Regardless of where such records are filed or stored, they must be readily available for audit by the Division of Audits of the Central Education Agency.

(k)(j) Each teacher or other school employee who records student attendance shall certify in ink that all such records are true and correct to the best of the teacher's knowledge and that they have been prepared in accordance with laws and regulations pertaining to student attendance accounting.

(l)(k) Late afternoon and evening schools. The requirements concerning pupil attendance accounting for late afternoon and evening school are as follows:

(1)-(3) (No change.)

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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Chapter 137. Teacher Education

Subchapter I. Program

Requirements for Preparation of School Personnel: Standard VII—Instructional Patterns Requirements for Persons with Bachelor's Degrees Seeking Initial Teacher Certification Through Approved Texas Colleges and Universities

★ 19 TAC §137.321

The Texas Education Agency proposes new §137.321, concerning general program requirements. Current sections cause difficulties for college graduates who wish to become teachers because they make no distinction between candidates with and without a bachelor's degree. The new section gives institutions of higher education the flexibility to develop programs especially designed for the post-baccalaureate candidate. The section requires at least a bachelor's degree with at least a 2.5 grade average and demonstration of competence in basic skills as admission requirements. Certification requirements include demonstration of competence in educational computing and speech, the required semester hours specified for a teaching specialty and in professional development, and a passing score on the appropriate examination for the certification of educators in Texas (ExCET) test.

Lynn M. Moak, deputy commissioner for research and information, has determined that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the section.

Mr. Moak and Beverly Bardsley, director for policy development, also has determined that for each year of the first five

years the section is in effect the public benefit anticipated as a result of enforcing the section will be the availability of more flexible preparation programs for persons with a bachelor's degree who wish to acquire teacher certification. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to Beverly Bardsley, Director for Policy Development, 1701 North Congress Avenue, Austin, Texas 78701, (512) 463-9682. All requests for a public hearing submitted in accordance with the Administrative Procedure and Texas Register Act must be received by the commissioner of education not more than 15 calendar days after notice of the proposed new section has been published in the *Texas Register*.

The new section is proposed under the Texas Education Code, §13.032, which provides the State Board of Education with the authority to establish standards for teacher education programs.

§137.521. General Program Requirements.

(a) General provisions. Colleges and universities with approved programs for teacher education may admit to a special program and recommend for teacher certification candidates who meet the requirements of this section. Certification plans developed under these requirements should be completed expeditiously by the candidate in a period of three calendar years. A plan may be renewed at the request of the candidate based upon justification acceptable to the college or university.

(b) Admission. Each candidate for an initial teaching certificate who possesses at least a bachelor's degree from a regionally accredited institution must meet the following qualifications for admission to an approved program:

(1) an overall grade point average of at least 2.5 on a 4.0 system at the baccalaureate level; and

(2) demonstration of basic skills on a state-mandated test in mathematics, reading, and writing in accordance with Subchapter S of this chapter (relating to Testing Program).

(c) Certification. Each candidate must meet the following qualifications for the certificate to be earned:

(1) demonstration of skill in educational computing and technology through either successful completion of coursework or proficiency review;

(2) demonstration of speech competency (with emphasis on oral proficiency in the English language) through either successful completion of coursework or proficiency review; and

(3) successful completion of the minimum number of semester hours, including upper-division hours, for teaching specialties as specified for the respective certificate options in Subchapter M of this chapter (relating to the 1987 Program Requirements for

Preparation of School Personnel for Initial Certificates and Endorsements) to the extent that a reasonable representation of the essential elements is identifiable and that guidelines of relevant learned societies are addressed (for secondary certification, a single teaching field of 24 semester hours with 12 upper-division hours is permissible);

(4) successful completion of a minimum of 18 semester hours of professional development which shall include, but not be limited to:

(A) core studies, including legal aspects of teaching with emphasis on the recognition of, and response to, signs of abuse and neglect in children, special education, multicultural education, media, and technology;

(B) methodology inclusive of curriculum and planning, developmental and corrective reading, including dyslexia and other reading disorders, classroom management and discipline, teaching strategies, and human growth and development;

(C) a pre-student teaching/pre-internship student contact experience; and

(D) a student teaching experience of at least eight weeks of full days in a school or schools accredited or recognized by the Central Education Agency or a field internship of one school year that is jointly supervised by the college or university and a cooperating school district that is accredited or recognized by the Central Education Agency (intern may be employed on a permit as teacher of record); and

(5) demonstration of expertise in the teaching specialty and professional studies as evidenced by passing scores on the appropriate state-adopted examination for certification in accordance with Subchapter S of this chapter (relating to Testing Program).

(d) Deficiencies. Based on a formal evaluation of the individual's performance in student teaching, the field internship, and/or on examination for certification of educators in Texas (ExCET) scores, additional courses may be required to address actual identified deficiencies in general education, teaching specialties, and/or professional development.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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Chapter 141. Teacher Certification

Subchapter S. Testing Program General Provisions

★ 19 TAC §141.421

The Texas Education Agency proposes an amendment to §141.421, concerning testing requirements. The amendment concerns persons seeking a provisional vocational certificate based on experience and preparation in skill areas and requires that, effective with the 1988-1989 school year, evidence of successful performance on the Texas Examination of Current Administrators and Teachers (TECAT) be provided prior to the first renewal of the vocational emergency teaching permit.

Lynn M. Moak, deputy commissioner for research and information, have determined that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the section.

Mr. Moak and Beverly Bardsley, director for policy development, have determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be assurance that Texas students are taught by teachers with competence in basic skills. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to Beverly Bardsley, Director for Policy Development, 1701 North Congress Avenue, Austin, Texas 78701, (512) 463-9682. All requests for a public hearing submitted in accordance with the Administrative Procedure and Texas Register Act must be received by the commissioner of education not more than 15 calendar days after notice of the proposed amendment has been published in the *Texas Register*.

The amendment is proposed under the Texas Education Code, §13.032, which provides the State Board of Education with the authority to establish requirements for teacher certificates and permits.

§141.421. Testing Requirements.

(a)-(d) (No change.)

(e) Persons seeking a provisional vocational certificate based on experience and preparation in skill areas as required under §141.451 of this title (relating to General Provisions) shall be required to achieve a satisfactory level of performance on a test of reading and writing skills prescribed by the State Board of Education in order to be approved for a teacher's certificate. **Effective with the beginning of the 1988-1989 school year, evidence of successful performance on the Texas Examination of Current Administrators and Teachers (TECAT) is re-**

quired prior to the first renewal of the vocational emergency teaching permit.
(f) (No change.)

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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(512) 463-9212.



Chapter 149. Education Personnel Development Subchapter B. Inservice Education

★ 19 TAC §149.21

The Texas Education Agency proposes an amendment to §149.21, concerning general requirements for inservice education. The amendment implements House Bill 1619, 70th Legislature, 1987, which deletes from statute specified topics for inservice education, the specified number of preparation days, and their placement in the school calendar. The amendment requires school districts to schedule four days of inservice and four preparation days. Specific required inservice topics are deleted from the section and replaced with the more general requirement that the inservice education program be derived from instructional and/or professional needs identified through the teacher appraisal system.

Lynn M. Moak, deputy commissioner for research and information, has determined that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the section.

Mr. Moak and Dr. Beverly Bardsley, director for policy development have determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be that school districts will have the authority to design inservice education programs related to the needs of their professional staff, as indicated by the teacher appraisal system. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to Beverly Bardsley, Director for Policy Development, 1701 North Congress Avenue, Austin, Texas 78701, (512) 463-9682. All requests for a public hearing

submitted in accordance with the Administrative Procedure and Texas Register Act must be received by the commissioner of education not more than 15 calendar days after notice of the proposed amendment has been published in the *Texas Register*.

The amendment is proposed under the Texas Education Code, §16.052, which specifies required numbers of inservice and preparation days and §16.005, which provides the State Board of Education with the authority to make rules for administration of the Foundation School Program.

§149.21. *General Requirements for Inservice Education.*

(a) (No change.)
(b) Each local school district shall provide annually [for a minimum of] four days of inservice education **and four preparation (work) days. Two of the preparation (work) days are to be used to prepare for the beginning of the school year. One preparation (work) day must immediately follow the end of each semester. Teachers shall not be required to participate in group meetings, training, or other activities outside the classroom on preparation days.**

(c) The district's inservice education program [must include those topics required by statute or rule, including special education (the Texas Education Code, §21.501(6), abuse or neglect in students (the Texas Education Code, §16.052(d)), dyslexia (the Texas Education Code, §11.15(b)), discipline management (the Texas Education Code, §21.705), and teacher appraisal orientation (this section).] **shall be derived from instructional and/or professional needs which the district has identified through the Texas teacher appraisal system. These needs shall be in the domains of instructional strategies, classroom management and organization, presentation of subject matter, the learning environment, and/or growth and responsibilities.**

(d) **In addition to the requirements in subsection (c) of this section, the district's inservice education program may include one or more of the following:**

(1)-(2) (No change.)
(3) instructional and/or professional needs identified through the teacher appraisal process; and

(3)[(4)] professional needs of beginning teachers and teachers new to the district; [.] and

(4) **other topics designated by the State Board of Education and topics such as special education, abuse or neglect in students, dyslexia, discipline management, and teacher appraisal orientation.**

(e) (No change.)
(f) Participants shall include all professional personnel and those paraprofessionals who regularly work with students in **an instructional setting.** Districts are encouraged to offer inservice opportunities for all personnel.

(g) (No change.)

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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★ 19 TAC §149.24

The Texas Education Agency proposes an amendment to §149.24, concerning standards for inservice training in management and leadership for district administrators. The amendment provides for a core curriculum, covering skills needed by all administrators, and skills that are job specific. The curriculum will be developed by a group of representatives from the Central Education Agency, universities, education service centers, professional organizations, school districts, and the private sector, and will be recommended to the State Board of Education.

Each school district must evaluate its training needs based on the core and job-specific content requirements and submit to the Central Education Agency the results of needs assessments and plans for training based on individual and district growth plans. During the 1988-1989 school year, each district must identify and pilot a program suitable for district needs. Each district must document the completion and effectiveness of administrator inservice. Each school district's evaluation process will result in a growth plan for each administrator which will serve as the basis for continued training.

Lynn M. Moak, deputy commissioner for research and information, has determined that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the section. Local school districts will develop programs themselves so there will be local district fiscal implications but costs will vary from district to district and cannot be estimated.

Mr. Moak and Beverly Bardsley, director for policy development, has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be improvement in the performance of administrators in local school districts. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to Dr. Beverly Bardsley, Director for Policy Development, 1701 North Congress Avenue, Austin, Texas, 78701, (512) 463-9682. All requests for a public hearing on proposed sections submitted in accordance with the Administrative Procedure and Texas Register Act must be received by the commissioner of education not more than 15 calendar days after notice of a proposed change in sections has been published in the *Texas Register*.

The amendment is proposed under the Texas Education Code, §13.353, which requires each school district to offer inservice training in management skills for district administrators, in accordance with State Board of Education standards.

§149.24. Standards for Inservice Training in Management/Leadership [Instructional Leadership] for District Administrators.

(a) General provisions. The training required in accordance with the Texas Education Code, §13.353 (relating to Management Skills and Practices) applies to [certified] school district administrators in positions listed in the Texas Education Code, §16.056(b), starting with supervisor (I) through superintendent—district with 50,000 or more average daily attendance (ADA) and shall include paperwork reduction.

(1) Continuing inservice. After fulfilling the initial required training for instructional leadership and the Texas teacher appraisal system, each school administrator shall participate annually in continuing management inservice.

(2)(1) Program approval.

(A) Each inservice program and sponsoring agency provided under subsection (b)(1) and (2) of this section must be submitted to the Central Education Agency for approval prior to delivery of the program. Program delivery dates must be submitted to the Central Education Agency 30 days prior to delivery.

(B) The criteria as specified in subsection (b)(1) and (2) of this section will be used for the review and approval of training programs. The review shall consider the comprehensiveness of the program, including a performance-based outcomes concept, and its compliance with the law and State Board of Education rules.

(C) Approved programs and sponsoring agencies must have an evaluation design which includes the assessment of the knowledge and skills of the participants before and after the training. An expected level of performance will be identified. The program design must correlate measures of training effectiveness with such factors as application by practitioners, state, or local student performance measures, and campus goal attainment. Sponsors will be responsible for providing the Central Education Agency with documentation from the practitioners that program content is related to their job-specific skills. This information will be available for program renewal and for the

accreditation review process. Sponsors will be required to provide certificates for those meeting the program expectations.

(D) Approved inservice programs and sponsoring agencies will be reviewed by the Central Education Agency at least every [three] five years with compliance audits scheduled at any times. All programs will maintain approved status unless notified by the agency.

(3)(2) Training institutions and trainers.

(A) Approved inservice programs for district administrators must be sponsored by an education service center, college or university, appropriate professional organization, school district, approved private organization, or the Central Education Agency.

(B) (No change.)

(C) Institutions sponsoring programs will verify and document the qualifications of program trainers.

(D) Institutions providing training in general management, instructional leadership, and teacher evaluation must designate a member of their training staff to attend a Central Education Agency sponsored workshop on training standards and techniques.

(4)(3) Certification. The commissioner of education will establish a process for issuing and recording certification of the required inservice training for district administrators.

(b) Inservice programs are required in the following areas.

(1) General management inservice.

(A) A core curriculum and job-specific content of general management inservice programs will be developed by a consortium of representatives from the Central Education Agency, universities, education service centers, professional organizations, school districts, and private sector, and recommended to the State Board of Education for final approval.

(B) The general management advisory committee will identify exemplary assessment instruments and develop state-wide guidelines for local districts to initially assess their district and individual management training needs. These guidelines will be presented to the State Board of Education for approval. Continuing training will be based on individual and district needs assessment as prescribed by the development of the growth plan for each individual administrator. The initial implementation plan [inservice requirement] in general management will begin with the 1987-1988 school year.

(C) Each school district, with the assistance of the education service center as needed, will review or develop general management inservice programs to address its individual and district needs.

(D) During the 1987-1988 school year each school district, with the assistance of the education service center, if needed,

will appoint a local advisory committee to develop or select an assessment process for evaluating the districts' training needs based on the core and job-specific content requirements established by the State Board of Education. Following this assessment the local advisory committee will review and validate exemplary programs for pilot purposes. The Central Education Agency will provide technical assistance to the districts with pilot program efforts. The outcomes of these pilots will be to identify exemplary training programs, to determine if identified training improves student growth, and to validate content for meeting expected district needs.

(E) During the 1987-1988 school year each school district, with the assistance of the education service center, if needed, will submit to the Central Education Agency the results of needs assessment and plans for training as determined by individual and district growth plans. A date for submission to the Central Education Agency will be established by the State Board of Education.

(F) During the 1988-1989 school year each school district, with the assistance of the education service center, if needed, will identify and pilot a program commensurate with individual and district needs and consistent with the district's long-range plan.

(G) Each school district will document the completion and effectiveness of administrator inservice based on the State Board of Education core and job-specific requirements, as identified through the Central Education Agency's effective school correlates. A review of this documentation will be made through the accreditation process.

(H) To help ensure effective implementation of the State Board of Education's long-range plan, each school district will implement an approved management inservice program.

(I) Each school district's evaluation process will result in growth plans for each administrator which will serve as the basis for continuing training needs.

(2) Instructional leadership inservice.

(A) Content of instructional leadership training programs. Inservice programs for instructional leadership must address the following content areas:

(i) knowledge and skills related to learners and learning;

[(I) know the contents of the sequence curriculum and be able to discuss these fluently with teachers;

[(II) be able to analyze the content of objectives; and

[(III) possess an up-to-date understanding of the basic variations in the ways learners receive and process information and master curriculum elements;]

(ii) knowledge and skills related to teaching;

[(I) understand and be able to recognize, discuss, and demonstrate the

fundamental effective teaching practices;

[(II) know and be able to demonstrate various methods of assessing learner mastery of curriculum elements;

[(III) be aware of and be able to recognize a variety of frameworks or designs for organizing and delivering lessons;

[(IV) understand and be able to apply the basic elements of planning a lesson (selection and analysis of an objective, diagnostic of various learners' levels of mastery, selection of learning activities and materials, and designation of means of assessing mastery); and

[(V) be able to evaluate the effectiveness of lessons against objective criteria and refine the lesson on the basis of findings;]

(iii) knowledge and skills related to managing and supervising teaching and learning;

[(I) know the basic purposes of instructional supervision and how the process relates to teacher appraisal and inservice training;

[(II) be able to establish criteria for effective teaching, involving teachers in the process;

[(III) be able to establish and communicate procedures for the supervision and improvement of teaching;

[(IV) be able to observe and objectively record important events in a teaching/learning episode (through anecdotal notes, structured instruments, electronic recording);

[(V) be able to analyze recorded observations of a teaching/learning episode and draw conclusions about strengths and weaknesses in teaching;

[(VI) be able to conduct a skillful and effective conference with a teacher to evaluate an observed teaching/learning episode; and]

(iv) knowledge, skills, and attitudes related to climate for instruction; and

[(I) view instruction as the primary function in the school, find time to devote to it, and reflect this priority clearly to teachers;

[(II) keep abreast of the most recent findings and developments in learning styles, teaching practices, and supervision techniques;

[(III) secure and protect fiscal and other resources needed for effective instruction;

[(IV) maintain a positive climate (expectations, support) in the school conducive to and reinforcing to teaching and learning;

[(V) recognize that different teachers put effective teaching practices and frameworks together in different ways that get results, and continuously learn about effective training from observing teachers; and

[(VI) apply criteria for effective teaching in the screening, hiring, and placement of teachers.]

(v) **knowledge and skills related to diverse presentation models.**

(B) Length of training program. Initial inservice training for administrators in instructional leadership shall consist of not less than 36 hours. [Each school administrator shall thereafter attend continuing inservice programs in the topics listed in this paragraph on an annual basis. The continuing inservice shall consist of not less than 12 hours.]

(C) (No change.)

(D) Primary position with fiscal responsibility. [In addition to the school district administrators listed in subsection (a) of this section, noncertified] Personnel who hold the primary position charged with fiscal responsibility for a district's instructional resources must complete the initial instructional leadership inservice requirement. **Thereafter, inservice training may be job-specific.**

(3) Teacher evaluation inservice.

(A) As an exception to subsection (a) of this section, teacher evaluation inservice is required of superintendents and of those school district administrators who serve as appraisers of teacher performance. **Superintendents who previously have been certified for teacher evaluation and who will not be conducting appraisals during the school year are required to complete only that portion of appraisal inservice training that focuses on changes in the system.**

(B) (No change.)

(C) **Continuing inservice requirements relating to teacher evaluation will be satisfied by maintenance of the required level of proficiency for certification as an appraiser of teacher performance and/or by completion of appraisal update training.**

[(c) Exemplary programs in instructional leadership training conducted prior to standards being adopted by the State Board of Education may be submitted to the Central Education Agency for review. These programs must be able to document content, length of program, knowledge and performance objectives, trainer expertise, and attendance of all participants to quality for approval.]

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 15, 1987.

TRD-8708149

W. N. Kirby
Commissioner of
Education

Proposed date of adoption:

January 9, 1988

For further information, please call
(512) 463-9212.



Flower



Millium

Name: Adriana Lopez

Grade: 6

School: Clifton Middle School, Houston

**TITLE 22. EXAMINING
BOARDS
Part XI. Board of Nurse
Examiners
Chapter 223. Fees
★ 22 TAC §223.1**

(Editor's note: The Board of Nurse Examiners proposes for permanent adoption the amendment it adopts on an emergency basis in this issue. The text of the amendment is published in the Emergency Rules section of this issue.)

The Board of Nurse Examiners proposes an amendment to §223.1, concerning fees. The amendment represents changes which occurred as a result of Senate Bill 1160, 70th Legislature, 1987. The amendment changes the amount of the reregistration fee to conform with changes made by Senate Bill 1160, 70th Legislature, 1987.

Louise Sanders, R.N., Ph.D., executive secretary, has determined that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the section.

Ms. Sanders also has determined that for each year of the first five years the section is in effect there will be no public benefit anticipated as a result of enforcing the section. Only registered nurses licensed in the State of Texas will be affected upon renewal of their license to practice professional nursing. The anticipated economic cost to individuals who are required to comply with the proposed section will be an additional \$6.00 every two years upon renewal of license.

Comments may be submitted to Louise Sanders, R.N., Ph.D., Board of Nurse Examiners, 1300 East Anderson Lane, Building C, Suite 225, Austin, Texas 78752.

The amendment is proposed under Texas Civil Statutes, Article 4514, §1, and Article 4527, which provide the Board of Nurse Examiners with the authority to make and enforce all rules and regulations necessary for the performance of its duties and conducting of proceedings before it, to establish standards of professional conduct for all persons licensed under the provisions of this law in keeping with its purpose and objectives, to regulate the practice of professional nursing and to determine whether or not an act constitutes the practice of professional nursing, not inconsistent with the Act, provided that such rules and regulations shall not be inconsistent with the provisions of the law. The amendment is also proposed under Texas Civil Statutes, Article 4527, which provide the Board of Nurse Examiners with the authority to establish reasonable and necessary fees for the administration of its functions.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 21, 1987.

TRD-8708131 Louise Sanders, R.N.,
Ph.D.
Executive Secretary
Board of Nurse
Examiners

Earliest possible date of adoption.

October 30, 1987

For further information, please call
(512) 835-4880.



**Part XV. Texas State Board
of Pharmacy
Chapter 291. Pharmacies
All Classes of Pharmacy**

★ 22 TAC §291.12

The Texas State Board of Pharmacy proposes new §291.12, concerning fire or other disasters. This new section would advise a pharmacist-in-charge of his/her responsibility with regard to the procedures to follow in the event of a fire or other disaster in a pharmacy.

Fred S. Brinkley, Jr., R.Ph., executive director/secretary, has determined that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the section.

Mr. Brinkley also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be better protection of the interests of the public health, safety, and welfare by specifying procedures to follow in the event of a fire or other disaster in a pharmacy. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to Fred S. Brinkley, Jr., R.Ph., 8505 Cross Park Drive, Suite 110, Austin, Texas 78754.

The new section is proposed under Texas Civil Statutes, Article 4542a-1, §32, which provide the Texas State Board of Pharmacy with the authority to require that a pharmacy report a theft or significant loss of any controlled substance to the board. The section also requires that disasters, accidents, and emergencies that may affect the strength, purity, or labeling of drugs, medications, devices, or other materials used in the diagnosis or the treatment of injury, illness, and disease shall be immediately reported to the board.

§291.12. Fire or Other Disaster. If a pharmacy experiences a fire or other disaster, the following requirements are applicable:

(1) Responsibilities of the pharmacist-in-charge.

(A) The pharmacist-in-charge shall be responsible for reporting the date of the fire or other disaster which may affect the strength, purity, or labeling of drugs, medications, devices, or other materials used in the diagnosis or the treatment of injury, illness, and disease; such notification shall be immediately reported to the board, but in no event shall exceed 10 days from the date of the disaster.

(B) The pharmacist-in-charge or designated agent shall comply with one of the following procedures.

(i) If controlled substances or DEA order forms are lost or destroyed in the disaster, the pharmacy shall notify the Drug Enforcement Administration (DEA), Department of Public Safety (DPS), and the Texas State Board of Pharmacy (board) of the loss of the controlled substances or order forms. A pharmacy shall be in compliance with this section by submitting to the board a copy of the Drug Enforcement Administration's report of theft or loss of controlled substances, DEA Form-106, within 10 days of the loss.

(ii) If the extent of the loss of controlled substances is not able to be determined, the pharmacy shall:

(1) take a new, complete inventory of all remaining controlled substances; and

(11) submit to DEA, DPS, and the board a statement attesting that the loss of controlled substances is indeterminable and that a new, complete inventory of all remaining controlled substances was conducted and state the date of such inventory.

(C) If the pharmacy changes to a new, permanent location, the pharmacist-in-charge shall comply with §291.4 of this title (relating to Change of Ownership).

(D) If the pharmacy moves to a temporary location, the pharmacist-in-charge shall send written notification to the board of the change of address within 10 days and further, shall send written notification to the board of the return to the permanent location within 10 days of the return.

(E) If the pharmacy discontinues business (ceases to operate as a pharmacy), the pharmacist-in-charge shall comply with §291.2 of this title (relating to Change of Location and/or Name).

(F) The pharmacist-in-charge shall maintain copies of all inventories, reports, or notifications required by this section for a period of two years.

(2) Drug stock

(A) Any drug which has been exposed to excessive heat, smoke, or other conditions which may have caused deterioration shall not be dispensed.

(B) Any potentially adulterated

or damaged drug shall only be sold, transferred, or otherwise distributed pursuant to the provisions of the Texas Food Drug and Cosmetic Act (Article 4476-5) administered by the Food and Drug Division of the Texas Department of Health.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 18, 1987.

TRD-8708089 Fred S. Brinkley, Jr.,
R.Ph.
Executive
Director/Secretary
Texas State Board of
Pharmacy

Earliest possible date of adoption:
October 30, 1987

For further information, please call
(512) 832-0661.



Nuclear Pharmacy (Class B)

★22 TAC §§291.51-291.54

The Texas State Board of Pharmacy proposes amendments to §§291.51-291.54, concerning nuclear pharmacy (Class B). The amendments relate to persons or facilities that are exempt from the Class B (nuclear) pharmacy rules. The amendments clarify that the exemption does not apply to companies who prepare radioactive drugs in one hospital for delivery to patients in other hospitals.

Fred S. Brinkley, Jr., R.Ph., executive director/secretary, has determined that for the first five-year period the proposed sections will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the sections.

Mr. Brinkley also has determined that for each year of the first five years the sections are in effect the public benefit anticipated as a result of enforcing the sections will be protection of the public health, safety, and welfare, by requiring the mobile nuclear services to either comply with TSBP rules and regulations, or register with the Texas Department of Health, which sets standards for quality control. There is no anticipated economic cost to individuals who are required to comply with the proposed sections.

Comments on the proposal may be submitted to Fred S. Brinkley, Jr., 8505 Cross Park Drive, Suite 110, Austin, Texas 78754.

The amendments are proposed under Texas Civil Statutes, Article 4542a-1, §29, which provide the Texas State Board of Pharmacy with the authority to establish by rule the standards that each pharmacy and its employees or personnel involved

in the practice of pharmacy shall meet to qualify for the licensing or relicensing as a pharmacy in each classification.

§291.51. *Definitions.* The following words and terms, when used in these sections, shall have the following meanings, unless the context clearly indicates otherwise. Any term not defined in this section shall have the definition set forth in the Act, §5.

Authorized user—Any individual (or institution) named on a **Texas radioactive material license**, [radioactive materials license,] issued by the Texas Department of Health, **Bureau of Radiation Control.**

Mobile nuclear services—A business which provides nuclear technical services for administration of radiopharmaceuticals and conduct of diagnostic nuclear studies.

Nuclear pharmacy—A pharmacy that has been issued a Class B pharmacy license by the board, which receives, prepares, possesses, uses, transfers, owns, acquires, or distributes radioactive material (drugs and devices) **under authorization of a Texas radioactive material license as provided** [as specified] in *Texas Regulations for Control of Radiation*, Part 1, Texas Department of Health.

§291.52. *Personnel.*

(a) Pharmacist-in-charge of a nuclear pharmacy.

(1) (No change.)

(2) General qualifications for a nuclear pharmacy pharmacist-in-charge **are the following.** A pharmacist shall:

(A) meet minimal standards of training and experience in the handling of radioactive materials in accordance with the requirements of the *Texas* [Department of Health,] *Regulations for Control of Radiation of the Bureau of Radiation Control, Texas Department of Health;*

(B)-(C) (No change.)

(3) (No change.)

(b)-(f) (No change.)

§291.53. *Operational Standards.*

(a) Licensing requirements.

(1) (No change.)

(2) Permits. It is unlawful for a person to provide radioactive drug services unless such provision is performed by a person licensed to act as a qualified pharmacist, as defined by the board, or is a person acting under the direct supervision of a qualified pharmacist acting in accordance with the Act and its rules, and the regulations of the Texas Department of Health, Bureau of Radiation Control.

(3) **Exceptions.** This section does not apply to:

(A) a licensed practitioner or [and] his or her designated agent for administration to his or her patient **in the practitioner's office, provided** no person may receive, possess, use, transfer, own, acquire, or dispose of radioactive drugs except as authorized in a specific or a general license as provided in *Texas Regulations for Control of Radiation*, Part 41, Texas Department

of Health, or the Act.

(B) [Exempted from these rules are] Institutions and/or facilities with [licensed] nuclear medicine services operated by practitioners **and who are** licensed by the Texas Department of Health, Bureau of Radiation Control, to prescribe, administer, and dispense radioactive materials (drugs and/or devices), **provided however, this exemption does not apply to mobile nuclear services.**

(4)(3) A nuclear pharmacy may be managed only by a qualified pharmacist acting in the capacity of a pharmacist-in-charge. All supportive personnel performing tests, preparations, formulations, and distributions of radioactive drugs shall be under the direct supervision of a qualified pharmacist. A qualified pharmacist is responsible for all operations of the licensed facility and shall give final approval of all dispensing activities before distribution of the radioactive drug in fulfillment of the medication order.

(b) Environment.

(1)-(4) (No change.)

(5) Construction. The facility shall be so constructed as to prevent radioactive drugs or materials from escaping into non-restricted areas either by air exhaustion or liquid or solid waste in excess of quantities permitted in *Texas Regulations for Control of Radiation*, Part 21 [41], Texas Department of Health.

(c) (No change.)

(d) Library. A nuclear pharmacy shall maintain a reference library which shall include the following:

(1)-(2) (No change.)

(3) *Texas Regulations for Control of Radiation* [Texas radiation control regulations];

(4)-(7) (No change.)

(e) (No change.)

§291.54. *Records.*

(a) (No change.)

(b) Prescriptions (radioactive medication orders).

(1) (No change.)

(2) In addition to any labeling requirements of the Federal Food and Drug Administration for drugs, the outer container of any radioactive drug to be dispensed shall also be labeled with:

(A)-(D) (No change.)

(E) the amount of radioactive material contained in millicuries (mCi), or microcuries (uCi) **and the corresponding time that applies to this activity, if different from subparagraph (G) of this paragraph;**

(F)-(H) (No change.)

(3) (No change.)

(4) The amount of radioactivity shall be determined by radiometric methods for each individual preparation immediately at the time of dispensing **and calculations shall be made to determine the amount of activity that will be present at the requested calibration date and time, due to radioactive**

decay in the intervening period, and this activity and time shall be placed on the label requirements set out in paragraph (2) of this subsection.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 17, 1987

TRD-8708091 Fred S. Brinkley, Jr.
R. Ph.
Executive
Director/Secretary
Texas State Board of
Pharmacy

Earliest possible date of adoption

October 30, 1987

For further information, please call
(512) 832-0661



Chapter 303. Destruction of Dangerous Drugs and Controlled Substances

★ 22 TAC §303.2

The Texas State Board of Pharmacy proposes an amendment to §303.2, concerning the disposal of stock prescription drugs. The amendment updates the section in accordance with current federal Drug Enforcement Administration (DEA) procedures.

Fred S. Brinkley, Jr., R. Ph., executive director/secretary has determined that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the section.

Mr. Brinkley also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be further promotion of the health, safety, and welfare of the public due to outlining proper procedures for the disposal of controlled substances. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to Fred S. Brinkley, 8505 Cross Park Drive, Suite 110, Austin, Texas 78754.

The amendment is proposed under Texas Civil Statutes, Article 4542a-1, §26(a)(8), which provide the Texas State Board of Pharmacy with the authority to refuse to issue or renew a license, fine, reprimand, revoke, restrict, cancel, or suspend any license granted by the board; and probate any license suspension if the board finds that the applicant or licensee has failed to keep and maintain records required by the Act, or failed to keep and maintain complete and accurate records of pur-

chases and disposals of drugs listed in the Controlled Substances Act or the Dangerous Drugs Act.

§303.2. Disposal of Stock Prescription Drugs.

(a)-(b) (No change.)

(c) Disposal of stock controlled substances. A pharmacist, licensed by the board, may dispose of stock controlled substances owned by a licensed pharmacy in accordance with procedures authorized by the federal and Texas Controlled Substances Acts and sections adopted pursuant to such Acts. Disposal of controlled substances is deemed to be in accordance with the federal and Texas Controlled Substances Acts and sections adopted pursuant to such Acts if any one of the following actions is taken:

(1) (No change.)

(2) inventorying the controlled substances to be destroyed on **DEA Form-41** and [an appropriate form] delivering the controlled substances to a **DEA divisional** [regional] office or agent, either in person or by common carrier;

(3) inventorying the controlled substance on an appropriate form for destruction of the controlled substances by [a DEA agent or in the presence of:

(A) commissioned peace officers authorized by the DEA to destroy controlled substances listed in Schedules III-V of the Controlled Substances Act; or

(B) agent of] an agent of the Texas State Board of Pharmacy authorized by DEA to destroy controlled substances listed in the Controlled Substances Act, Schedules I-V; or

(4) destruction of the controlled substances according to following guidelines.

(A) Community (Class A) pharmacies. This method of drug destruction may be used only one time in each calendar year.

(i) The pharmacy shall inventory the controlled substances to be destroyed and itemize the inventory on **DEA Form-41**, making three copies.

(ii) DEA approval shall be obtained by submitting a registered or certified letter to DEA at least 14 days prior to the anticipated destruction date indicating the day, time, and place of the anticipated destruction, and including a copy of **DEA Form-41** which lists the controlled substances to be destroyed. No written or other response from DEA regarding the planned destruction will constitute DEA approval of the destruction.

(iii) The controlled substances shall be destroyed beyond reclamation on the approved date/time/place in the presence of one of the following witnesses:

(I) a commissioned peace officer;

(II) an agent of the Drug Enforcement Administration;

(III) an agent of the Department of Public Safety; or

(IV) an agent of the Texas

State Board of Pharmacy.

(iv) After destruction of the drugs, **DEA Form-41** shall be completed to indicate the method of destruction and be signed and dated by the registrant and witness.

(v) The pharmacy shall distribute copies of the completed **DEA Form-41** as follows:

(I) maintain the original in the records of the pharmacy for at least two years; and

(II) mail one copy to the appropriate DEA divisional office.

(B) Institutional (Class C) pharmacies.

(i) Written DEA approval giving authorization to destroy controlled substances must be obtained from the appropriate DEA divisional office. The hospital may destroy controlled substances at any time provided the written authorization is maintained in the files of the hospital pharmacy.

(ii) The pharmacy shall inventory the controlled substances to be destroyed and itemize the inventory on **DEA Form-41**, making two copies.

(iii) The controlled substances shall be destroyed beyond reclamation in the presence of one of the following witnesses:

(I) a commissioned peace officer;

(II) a supervisory member of the hospital's security department;

(III) an agent of the Drug Enforcement Administration;

(IV) an agent of the Department of Public Safety; or

(V) an agent of the Texas State Board of Pharmacy.

(iv) After destruction of the drugs, **DEA Form-41** shall be completed to indicate the method of destruction and be signed and dated by the registrant and witness.

(v) The hospital pharmacy shall distribute copies of the completed **DEA Form-41** as follows:

(I) maintain the original in the records of the pharmacy for at least two years; and

(II) mail one copy to the appropriate DEA divisional office.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 18, 1987.

TRD-8708090 Fred S. Brinkley, Jr.,
R. Ph.
Executive
Director/Secretary
Texas State Board of
Pharmacy

Earliest possible date of adoption:

October 30, 1987

For further information, please call
(512) 832-0661.



Chapter 305. Educational Requirements

★ 22 TAC §305.1

(Editor's note: The text of the following section proposed for repeal will not be published. The section may be examined in the offices of the Texas State Board of Pharmacy, 8505 Cross Park Drive, Suite 110, Austin, or in the Texas Register office, Room 503F, Sam Houston Building, 201 East 14th Street, Austin.)

The Texas State Board of Pharmacy proposes the repeal of §305.1, concerning pharmacy education requirements. The repeal allows for the simultaneous proposal of a new section, regarding programs which are accredited at a college of pharmacy.

Fred S. Brinkley, Jr., R.Ph., executive director/secretary, has determined that for the first five-year period the proposed repeal will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the repeal.

Mr. Brinkley also has determined that for each year of the first five years the repeal is in effect the public benefit anticipated as a result of enforcing the repeal will be accurate reflection of the fact that the American Council on Pharmaceutical Education accredits professional degree programs of a college of pharmacy. There is no anticipated economic cost to individuals who are required to comply with the proposed repeal.

Comments on the proposal may be submitted to Fred S. Brinkley, Jr., R.Ph., 8505 Cross Park Drive, Suite 110, Austin, Texas 78754.

The repeal is proposed under Texas Civil Statutes, Article 4542a-1, §17(a)(3), which provide the Texas State Board of Pharmacy with the responsibility for the determination and issuance of standards for recognition and approval of degree requirements of colleges of pharmacy whose graduates shall be eligible for licensing in this state, and the specification and enforcement of requirements for practical training, including internship.

§305.1. Pharmacy Education Requirements.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 18, 1987.

TRD-8708088

Fred S. Brinkley, Jr.,
R.Ph.
Executive
Director/Secretary
Texas State Board of
Pharmacy

Earliest possible date of adoption
October 30, 1987

For further information, please call
(512) 832-0661



The Texas State Board of Pharmacy proposes new §305.1, concerning pharmacy education requirements. The new section would replace a currently existing section regarding the programs which are accredited at a college of pharmacy.

Fred S. Brinkley, Jr., R.Ph., executive director/secretary, has determined that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the section.

Mr. Brinkley also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be a more accurate reflection of the fact that the American Council on Pharmaceutical Education accredits professional degree programs of a college of pharmacy. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to Fred S. Brinkley, Jr., R.Ph., 8505 Cross Park Drive, Suite 110, Austin, Texas 78754.

The new section is proposed under Texas Civil Statutes, Article 4542a-1, §17(a)(3), which provide the Texas State Board of Pharmacy with the responsibility for the determination and issuance of standards for recognition and approval of degree requirements of colleges of pharmacy whose graduates shall be eligible for licensing in this state and the specification and enforcement of requirements for practical training, including internship.

§305.1. Pharmacy Education Requirement.

(a) Minimum standards. The minimum standards for the first professional undergraduate degree programs or the advanced professional practice degree programs of a university, school, or college of pharmacy whose graduates shall be eligible for licensing in this state, shall be the minimum standards required by the American Council on Pharmaceutical Education. The universities, schools, and colleges of pharmacy whose first professional undergraduate degree programs or advanced pro-

fessional practice degree programs have been approved by the board shall be published in the minutes of each annual meeting of the board.

(b) Definitions. The following words and terms, when used in this section, shall have the following meanings, unless the context clearly indicates otherwise.

(1) First professional undergraduate degree—A bachelor of science in pharmacy degree.

(2) Advanced professional practice degree—A doctorate in pharmacy degree.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 18, 1987.

TRD-8708087

Fred S. Brinkley, Jr.,
R.Ph.
Executive
Director/Secretary
Texas State Board of
Pharmacy

Earliest possible date of adoption:
October 30, 1987

For further information, please call
(512) 832-0661.



TITLE 25. HEALTH SERVICES

Part I. Texas Department of Health

Chapter 181. Vital Statistics Miscellaneous Provisions [Vital Statistics]

★ 25 TAC §181.10

(Editor's note: The Texas Department of Health proposes for permanent adoption the new section it adopts on an emergency basis in this issue. The text of the new section is published in the Emergency Rules section of this issue.)

The Texas Department of Health proposes new §181.10, concerning confidentiality of birth records covering adoption placement. The new section will establish procedures to insure that birth records and indexes of such records, which are subject to the control of the department or local registrars and accessible to the public, do not contain information or cross-references through which the confidentiality of adoption placements can be broken, directly or indirectly.

Stephen Seale, chief accountant III, has determined that for the first five-year period the section as proposed will be in effect there will be fiscal implications as a result of enforcing or administering the section. There will be no effect on state

government for the first five-year period the section will be in effect. There will be little or no fiscal implications for the majority of local registrars throughout the state. For a few registrars, there may be a minimal cost for searching or indexing records. It is difficult to determine this cost for these registrars as a group because each registrar will be affected differently as regards cost. There will be no effect on small businesses.

Mr. Seale also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section as proposed will be to safeguard the confidentiality of birth records covering adoption placements which are on file with the department's Bureau of Vital Statistics and local registrars. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Written comments on the proposal may be submitted to J. L. Howze, State Registrar and Chief, Bureau of Vital Statistics, Texas Department of Health, 1100 West 49th Street, Austin, Texas 78756-3191.

Comments will be accepted for 30 days after the publication of this proposed section in the *Texas Register*.

The new section is proposed under the Vital Statistics Act, Texas Civil Statutes, Article 4477, Rule 51a, as amended by House Bill 1994, 70th Legislature, 1987, which provides the Texas Department of Health with the authority to adopt rules to insure the confidentiality of birth records covering adoption placements.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 21, 1987.

TRD-8708125 Robert A. Maclean
Deputy Commissioner
for Professional
Services
Texas Department
of Health

Earliest possible date of adoption:
December 5, 1987
For further information, please call
(512) 458-7366.

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**TITLE 31. NATURAL
RESOURCES AND
CONSERVATION**
**Part II. Texas Parks and
Wildlife Department**
Chapter 65. Wildlife
Nongame-Elk
★31 TAC §65.500

(Editor's note: The text of the following sec-

tion proposed for repeal will not be published. The section may be examined in the offices of the Texas Parks and Wildlife Department, 4200 Smith School Road, Austin, or in the Texas Register office, Room 503F, Sam Houston Building, 201 East 14th Street, Austin.)

The Texas Parks and Wildlife Commission proposes the repeal of §65.500, concerning nongame: elk. The commission adopted emergency new §65.500 in January 1987, to protect elk from hunting in six panhandle counties. The commission adopted permanent §65.500 in May 1987. Senate Bill 150, 70th Legislature, 1987, effective September 1, 1987, provides protection for elk under the Wildlife Conservation Act of 1983, the Texas Parks and Wildlife Code, Chapter 61. The nongame-elk regulation is no longer needed, as protection for panhandle elk is now under the statewide hunting and fishing proclamation, §65.38.

Jim Dickinson, director of finance, has determined that for the first five-year period the proposed repeal will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the repeal.

Mr. Dickinson also has determined that for each year of the first five years the repeal is in effect the public benefit anticipated as a result of enforcing the repeal will be the clarification of which regulation has authority over the elk resources of Texas. There is no anticipated economic cost to individuals who are required to comply with the proposed repeal.

Comments on the proposal may be submitted to Phil Evans, Regulatory Coordinator, Texas Parks and Wildlife Department, 4200 Smith School Road, Austin, Texas 78744, (512) 389-4974 or 1-(800)-792-1112, ext. 4974.

The repeal is proposed under the Texas Parks and Wildlife Code, Chapter 67, which provides the Texas Parks and Wildlife Commission with the authority to establish any limitations on the taking, possession, transportation, exportation, sale, and offering for sale of nongame.

§65.500. *Nongame: Elk.*

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 22, 1987.

TRD-8708155 Boyd M. Johnson
General Counsel
Texas Parks and Wildlife
Department

Earliest possible date of adoption:
October 30, 1987
For further information, please call
(512) 389-4974.

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Part X. Texas Water Development Board

Chapter 355. Research and Planning Fund General Policy

★31 TAC §355.1

The Texas Water Development Board proposes new §355.1, concerning fund allocation. The new section establishes the board's policy concerning the allocation of research and planning fund by rule. Senate Bill 1, the General Appropriations Act, 70th Legislature, 1987, Article I, Rider 16 to the Texas Water Development board, requires the board to establish through rule a system of prioritizing the use of the research and planning fund, giving first priority to studies required by statute. The new section establishes the allocation of funds between bays and estuaries studies, regional water supply and wastewater planning, flood protection planning, and water research. The board policy gives priority to regional planning along the Rio Grande due to the water problems facing that area. The board also gives priority to board-requested planning efforts in other areas of the state facing severe water supply or water quality problems.

Gladys Stansberry, director of accounting, has determined that for the first five-year period the proposed new section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the new section.

Ms. Stansberry also has determined that for each year of the first five years the new section is in effect the public benefit anticipated as a result of enforcing the new section will be the increased efficiency of having a section relating to the different components of the research and planning fund separated. The new section identifies the priorities used by the board to insure the greatest benefit from these limited funds. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to Herbert Grubb, Director of Planning, Texas Water Development Board, P.O. Box 13231, Austin, Texas 78711.

The new section is proposed under the Texas Water Code, §6.101, which provides the board with the authority to adopt rules necessary to carry out its powers and duties.

§355.1. *Fund Allocation.*

(a) Pursuant to Senate Bill 1, the General Appropriations Act, 70th Legislature, 1987, Article I, Rider Number 16 to Texas Water Development Board, the board hereby allocates research and planning funds in the amount of \$2.3 million for fiscal year 1988 as follows:

<u>Purpose</u>	<u>Quantity</u>
Bays and Estuaries Studies	\$800,000
Regional Water Supply and Regional Wastewater Planning	1,250,000
Flood Protection Planning	150,000
Water Research	100,000
Total	\$2,300,000

(b) The board specifies that the \$1.25 million allocation for regional water supply and regional wastewater planning, \$500,000 shall be for solicited (board-requested) proposals and \$750,000 shall be for unsolicited (open-competition) proposal. The board further specifies that proposals from political subdivisions in counties located within and adjacent to the Rio Grande Basin shall be given the highest priority for funding of regional water supply and regional wastewater planning using \$300,000 of the solicited category of funding, with the remaining \$200,000 of solicited category funding allocated to other areas of the state where severe water supply or water quality problems exist.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 21, 1987.

TRD-8708086 Nancy Matchus
Assistant General
Counsel
Texas Water
Development Board

Earliest possible date of adoption:
October 30, 1987
For further information, please call
(512) 463-7850.



Regional Water Supply and Wastewater Planning

★ 31 TAC §§355.10-355.19

The Texas Water Development Board proposes new §§355.10-355.19, concerning regional water supply and wastewater planning. The new sections contain new application requirements and evaluation criteria for regional water supply and wastewater planning projects for the limited amounts of funds in the board's research and planning fund under the Texas Water Code, §15.40.

Section 355.10 gives definitions to the terms used in the new sections; new §355.11 states the purpose of the new sections, and new §355.12 states that the board will provide not to exceed 50% of the planning costs with the applicant supplying the remainder in cash or limited in-kind services. Additionally, new §355.12(b)

states that for unsolicited proposals, applicants must follow the *Texas Register* to find out when unsolicited proposals will be accepted. The method for board solicitation of proposals in areas of the state where there is a need for regional water supply or wastewater facilities is outlined in new §355.13. The board will publish the areas and type and scope of the project in the *Texas Register*. In the *Texas Register* notice, deadlines for submission will be established. In new §355.14, the criteria for eligibility is designed to insure that appropriate applicants apply and that all other political subdivisions in the area are given notice. New §355.15 identifies the information that must be contained in any application. The form published in the Uniform Grants and Contract Management Act (UGCMA), Texas Civil Statutes, Article 4413(32g), does not have to be used because the board has been given certain statutory requirements in Texas Water Code, §15.405, for the content of the applications. The UGCMA form does not include the information needed by the board so that form does not need to be used. To assure the board that all local political subdivisions in the planning area are aware of the project, notice under new §355.16 must be given. New §355.17 outlines the evaluation criteria which will be used by the board to choose which applications will be funded out of the limited amount of funds available. Important considerations such as the immediacy and urgency of the need, the probability that the planning proposal will be implemented, and the ability of the applicant to provide its matching share are described in this section. The applicant is responsible for supplying information which addresses each of these criteria in the applications. The method of contracting with the board is described in new §355.18. The board will contract with the local political subdivision. Any subcontracts that the political subdivision enters into for professional services must be approved by the executive administrator. Also, no subcontracts can be entered into until the board approves the application because the board intends to negotiate the project budgets to insure that the fees charged by professionals are fair and reasonable. The definitions of direct costs, fringe costs, overhead, travel, and subsistence are included in §355.18 and are designed to provide the applicant and the subcontractors guidance in putting together their

proposed budget for their application. New §355.19 states that the results of a regional water supply or wastewater planning study are public information and will be made available to the public, and that the board will contract with the applicants regarding copyrights and patents.

The new sections insure fairness in selecting planning proposals for funding, and insure that contracts entered into by the board achieve the most benefit for the planning of state water resources.

Gladys Stansberry, director of accounting, has determined that for the first five-year period the sections will be in effect, there will be no fiscal implications as a result of enforcing or administering the sections.

Ms. Stansberry also has determined that for each year of the first five years the sections as proposed are in effect the public benefit anticipated as a result of enforcing the new sections will be the most effective use of limited state funds for regional water and wastewater planning so that the most critical areas of the state are helped. Additionally, the new sections provide for the improved accountability for the use of public funds. There is no anticipated economic cost to individuals who are required to comply with the sections as proposed.

Comments on the proposal may be submitted to Dr. Herbert W. Grubb, Director of Planning, Texas Water Development Board, P.O. Box 13231, Austin, Texas, 78711.

The new sections are proposed under the Texas Water Code, §6.101, which provides the board with authority to make rules necessary to carry out its powers and duties.

§355.10. Definitions. The following words and term, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

Applicant—Political subdivision(s) that apply(ies) for financial assistance from the research and planning fund.

Fund—The research and planning fund authorized and described in the Texas Water Code, Chapter 15, Subchapter F.

Planning—
(A) For regional water supply and wastewater facilities, studies and analyses to:

(i) determine and describe problems relating to water supply and/or water

quality protection;

(ii) determine the views and needs of the affected public;

(iii) identify potential solutions;

(iv) estimate benefits and costs of potential solutions;

(v) evaluate environmental, social, and cultural factors, including the preparation of environmental assessments and environmental impact statements; and

(vi) recommend feasible solutions to water supply and/or wastewater problems. All proposed solutions must be consistent with appropriate regional or statewide plans and relevant laws and regulations.

(B) It does not include those activities directly related to the preparation of applications for state or federal permits or other approvals, nor does it include activities associated with administrative or legal proceedings by regulatory agencies.

(C) Activities comparable to comprehensive basin studies, reconnaissance and feasibility grade studies, and other phases of pre-construction planning of the United States Army Corps of Engineers, but not including advanced engineering and design, which involves the preparation of final project plans and specifications for construction bids.

(D) The equivalent to Stage I planning of the United States Bureau of Reclamation, but not including most activities associated with Stage II activities, which involve the preparation of final engineering plans and specifications for construction of the selected project or projects.

(E) For the development of publicly-owned wastewater treatment works, generally equivalent to Step I facility planning as defined by the United States Environmental Protection Agency, but not including the preparation of final construction design drawings, specifications, and bidding documents.

Political subdivision—A city, county, district, or authority created under the Texas Constitution, Article III, §52, or Article XIV, §59; any other political subdivision of the state; any interstate compact commission to which the state is a party; and any non-profit water supply corporation created and operating under Texas Civil Statutes, Article 1434a.

Reconnaissance-level or feasibility investigation—The level of investigations and studies which normally can be carried out using existing data, with the basic objective of formulating an implementable solution or alternative solutions to existing or potential water supply and/or wastewater treatment problems. Such investigations should be sufficient in scope to support the preparation of cost estimates for recommended or alternative solutions within a reasonable degree of accuracy.

Regional facility—A water supply, wastewater collection and treatment, or

other public system which incorporates multiple service areas or drainage areas into an areawide service facility, thereby reducing the number of required facilities, or any system which serves an area that is other than a single county, city, special district, or other political subdivision of the state with a specified size which is determined by any one or combination of population, number of governmental entities served, and/or service capacity.

§355.11. *Purpose.* It is the intent of the board to establish a general policy for processing applications to fund planning for regional water supply and wastewater collection and treatment facilities by political subdivisions. Because of the limited supply of funds, each applicant will have 90 days from board approval to enter into the contract and to demonstrate to the executive administrator that it has its matching share committed and available. Funding of regional planning projects shall be at the discretion of the board from funds in the research and planning fund created in the state treasury, and in accordance with §355.1 of this title (relating to General Policy).

§355.12. *Applicability.*

(a) The board will consider applications and may enter into contracts with political subdivisions to provide funding from the research and planning fund for the development of regional water supply or wastewater collection and treatment facility plans.

(b) The board will provide funding not to exceed 50% of planning costs.

(c) Subject to board approval, an applicant may substitute in-kind services for any part of the required local share of planning costs if such services are related to the proposed planning project and reimbursement by any other party does not occur.

§355.13. *Solicitation Procedures.*

(a) Solicited proposals.

(1) The board may solicit planning proposals for areas of the state where there is a perceived need for regional water supply or regional wastewater collection and treatment facility planning.

(2) The board will specify the planning area and the type and scope of project for which planning proposals are being solicited. The board will publish information on the solicitation in the *Texas Register*, including appropriate schedules for submission of planning proposals by applicants. Proposal solicitations for water supply or wastewater collection and treatment facility planning will include the following:

(A) a description of planning objectives;

(B) a description of funding considerations;

(C) an explanation of review criteria and procedures;

(D) a deadline and address for proposal submission;

(E) a target date for contract

award;

(F) guidelines for proposal contents; and

(G) the designation of a contact person for additional information.

(3) Publication of a solicitation does not obligate the board to make an award if an appropriate or adequate proposal is not received.

(b) Unsolicited proposals.

(1) The board will consider unsolicited proposals for water supply and wastewater collection and treatment facility planning provided the proposals satisfy the eligibility criteria in §355.14 of this title (relating to Criteria for Eligibility). Unsolicited proposals will receive appropriate consideration within time and funding limitations.

(2) The board will periodically publish notices in the *Texas Register* that unsolicited proposals will be accepted. The announcement will indicate the period during which proposals may be submitted for consideration.

§355.14. *Criteria for Eligibility.* To be eligible for funding from the research and planning fund, the applicant must demonstrate:

(1) the legal authority to plan, develop, and operate regional facilities, with specific reference to its legal authority;

(2) a need for funds;

(3) an indication that the proposed planning does not duplicate previously completed plans or on-going planning, with the exception that updating regional water supply or wastewater facility plans, if needed, would be eligible;

(4) all cities, counties, non-profit water supply corporations, regional planning agencies, and all districts and authorities created under the Texas Constitution, Article III, Chapter 52, or Article XVI, Chapter 59, in the planning area have been notified by certified mail that an application for planning assistance to develop regional water supply or wastewater facility plans for the area is being filed with the board. The notice shall include the name and the address of the applicant and the name of the applicant's manager or official representative; a brief description of the planning area; the purposes of the planning project; the board's name, address, and the name of a contact person with the board; a statement that any comments must be filed with the board and the applicant within 30 days of the date on which the notice is mailed. With its application to the board, the applicant must provide one copy of the notice sent to affected political subdivisions, a list of the political subdivisions to which notice was sent, and the date on which the notice was sent; and

(5) in the case of wastewater planning, information on the designation of a lead water quality management planning agency.

§355.15. *Submission of Proposals.*

(a) The application need not be in the form prescribed by the Uniform Grants and Contract Management Act, Texas Civil Statutes, Article 4413(32g).

(b) The following information shall be included in a regional water supply or wastewater facility planning application:

(1) the legal name and address of the applicant;

(2) the type of facility or facilities (regional water supply, regional wastewater collection and treatment, or both) being investigated;

(3) a citation of the laws under which the applicant was created and has authority to plan, develop, and operate regional facilities;

(4) the geographic area to be included in the plan, justification for specific area boundary selection, and the need for the planning area and the applicant to receive state financial assistance in order to develop the proposed plan;

(5) a description of the existing facilities, the existing or projected water supply or wastewater problem which the planning is intended to address, and the way in which the proposed plan will address the problem;

(6) a description of the relationship to, and effect of, any proposed water supply or wastewater planning project(s) on other water supply or wastewater collection and treatment plans or facilities in the planning area, the surrounding region, and the state, if any;

(7) assurances that a water conservation plan will be developed as a part of the overall planning project, that the proposed project does not duplicate existing studies or plans, and, with respect to regional wastewater planning, that the proposed alternatives developed in, and recommended by, the plan will conform to a certified water quality management plan or will be submitted for certification in a conforming amendment;

(8) a list of work tasks and a time schedule for the tasks to be completed;

(9) a detailed object class cost budget, as defined in §355.18(h) of this title (relating to Disbursement of Contracted Funds and Cost Accounting), and a detailed task budget for all aspects of the planning project;

(10) the total planning cost, the source of the local matching share, and the total amount of money requested from the fund;

(11) potential sources and amounts of funding for implementation of all projects proposed in the plan;

(12) assurance by the applicant that if a viable solution is formulated, implementation of the solution will be diligently pursued;

(13) if the plan is to be prepared through subcontracts, a list of the staff qualifications and direct experience that

potential subcontractors must demonstrate;

(14) all information required by §355.14 of this title (relating to Criteria for Eligibility);

(15) all information necessary to evaluate the application under §355.17 of this title (relating to Evaluation Criteria); and

(16) any other pertinent information deemed necessary by the executive administrator.

§355.16. *Comments from Affected Political Subdivisions.* For regional water supply or wastewater planning applications, the board will allow 30 days from the date notice is sent to affected political subdivisions to receive comments from affected political subdivisions. However, the board may act on an application before the end of the 30-day period if all political subdivisions to which notice is required to be mailed agree in writing to waive the notice period.

§355.17. *Evaluation Criteria.* Regional water supply or wastewater planning proposals will be evaluated and selected according to the following criteria:

(1) an indication that the planning will not duplicate previously completed or on-going water supply or wastewater planning within the proposed planning area;

(2) the probability that the planning will result in implementation of viable regional water supply or wastewater systems for the planning area;

(3) a history of raw water availability, water supply, or water quality problems, including violation of public drinking water standards, ambient water quality criteria, or wastewater effluent limitations;

(4) the urgency of addressing water supply or water quality problems;

(5) the potential cost-effectiveness of a regional system, including controlling utility service charges, compared to individual or separate facilities;

(6) the potential elimination of redundant facilities and a reduction in the need to upgrade or replace individual or separate facilities;

(7) the extent to which the plan would promote conversion from groundwater to surface water supply sources;

(8) the ability of a regional water supply system to substantially extend the life of existing or planned supply sources;

(9) the number of political subdivisions participating in the planning project;

(10) the population and population density within the proposed service area;

(11) the contribution of the regional planning proposal to the area's general economic welfare, including income, earnings, and employment;

(12) the potential for preventing water supply or water quality problems that are being or could be caused by rapid or high growth;

(13) the need for the planning area and the applicant to receive state financial assistance in order to conduct needed water

supply or wastewater planning; and

(14) the ability of the applicant to provide the required matching funds for planning.

§355.18. *Disbursement of Contracted Funds and Cost Accounting.*

(a) *Contracts.* A contract between the applicant (contractor) and the board will be used. Contracts entered into shall contain terms and conditions considered appropriate to protect the interests of the state and the contractor. The applicant has 90 days from the date of board approval to execute the contract and to provide written evidence acceptable to the executive administrator that the applicant has available its matching share of funds.

(b) *Subcontracts.* The applicant may not enter into a subcontract until after the date of board approval. Professional service contracts shall be selected and awarded in accordance with the Professional Services Procurement Act, Texas Civil Statutes, Article 664-4. All subcontracts between the contractor and subcontractors must be approved in writing by the executive administrator.

(c) *Method of payment.* State of Texas contractors will be paid on an actual cost reimbursement basis provided for in the State Purchasing and General Services Commission's rules and regulations and board policies and procedures. Contractor billings must be submitted on a State of Texas purchase voucher and be accompanied by sufficiently detailed invoice information from the contractor and subcontractors to verify the authenticity of billing charges and amounts. All contracts shall provide that 10% of the contract amount be retained for final payment until after receipt and acceptance of all required reports and documentation. All contract payments shall be made in accordance with the Prompt Payment Act, Texas Civil Statutes, Article 601f, unless otherwise noted in the contract.

(d) *Records.* Contractors and subcontractors shall maintain satisfactory financial accounts, documents, and records and shall make all records available for examination and audit by the staff of the board and the state. Accounting by contractors and subcontractors shall be in a manner consistent with generally accepted accounting procedures.

(e) *Uniform grants and contract management.* The contractor will be subject to the Uniform Grants and Contract Management Act, Texas Civil Statutes, Article 4413(32g).

(f) *Capital equipment.* Capital equipment may not be purchased with regional water supply or regional wastewater planning grant funds.

(g) *Computer programs.* All computer programs and models that are acquired or developed as a part of the planning project are to be provided to the board for use by board staff and other state agencies, as appropriate.

(h) Project budgets. Budgets of applications shall be based upon fair and reasonable rates for all cost items. The board reserves the right to require specific information to explain and justify each cost element, including salary rates for professional staff, fringe benefits, overhead, and profits.

(1) Direct costs are defined to include the cost of salaries for professional staff, draftsmen, stenographers, surveymen, clerks, and laborers, etc., for time directly chargeable to the planning project; computer services, communication expenses, travel expenses, and expendable supplies.

(2) Fringe costs are defined to include social security contributions, unemployment compensation insurance, retirement benefits, medical and insurance benefits, and sick leave, vacation, and holiday pay applicable thereto.

(3) Overhead costs are those costs incurred in maintaining a place of business and performing professional services. In all cases, overhead rates are to be reasonable and are subject to negotiation. Overhead or indirect cost rates developed for federal projects may be acceptable.

(4) Travel and subsistence expenses are limited to those amounts authorized for state employees by Senate Bill 1, General Appropriations Act, 70th Legislature, 1987, Article V, §13 and §14, or as amended.

(5) Profit may be included in applications in which all or a part of the work is to be done by private sector contractors or subcontractors. In all cases, profit rates are to be reasonable and are subject to negotiation.

§355.19. Dissemination of Results

(a) Reports. Results of all planning completed under contract with the board will be submitted by the applicant in the form of a written report, which will then become public information. A minimum of 12 copies of all final reports shall be delivered to the board. The applicant and subcontractors shall be available for brief presentations of results as required by the board. Specific provisions will be included in each contract to establish eventual ownership of results and potential patents, copyrights, and licenses at the conclusion of the planning project.

(b) Patents. In the absence of statutory or contractual limitations, the contractor may apply for patents on any discoveries made through the planning project. If the contractor does not wish to make the application, the state may request and receive title to the discovery. If the contractor receives a patent, the State of Texas and its political subdivisions shall be entitled to an irrevocable, nonexclusive, royalty-free license to use the discovery(ies) for governmental purposes.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 21 1987

TRD-8708084

Nancy Matchus
Assistant General
Counsel
Texas Water
Development Board

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For further information, please call
(512) 463-7840.



Research and Planning Fund

★31 TAC §§355.101-355.110

(Editor's note: The text of the following sections proposed for repeal will not be published. The sections may be examined in the offices of the Texas Water Development Board, 1700 North Congress Avenue, Room 511, Austin, or in the Texas Register office, Room 503F, Sam Houston Building, 201 East 14th Street, Austin.)

The Texas Water Development Board proposes the repeal of §§355.101-355.110, concerning the research and planning fund. The sections cover the various requirements for applications for grants from the research and planning fund. The repeals allow for the adoption of a consolidated and revised set of research and planning sections, which are proposed elsewhere in this issue.

Gladys Stansberry, director of accounting, has determined that for the first five-year period the proposed repeals will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the repeals.

Ms. Stansberry also has determined that for each year of the first five years the repeals are in effect the public benefit anticipated as a result of enforcing the repeals will be the increased efficiency of having sections relating to the different components of the research and planning fund better defined and explained in new §§355.1 and 355.11-355.19. There is no anticipated economic cost to individuals who are required to comply with the proposed repeals.

Comments on the proposal may be submitted to Herbert W. Grubb, Director of Planning, Texas Water Development Board, P.O. Box 13231, Austin, Texas 78711

The repeals are proposed under the Texas Water Code, §6.101, which provides the board with authority to make rules necessary to carry out its powers and duties.

§355.101. Definitions.

§355.102. Purpose.

§355.103. Applicability.

§355.104. Criteria for Eligibility.

§355.105. Procedures, Priorities, and Criteria for Selection of Candidate Projects.

§355.106. Request for Submission of Proposals.

§355.107. Evaluation and Selection of Proposals.

§355.108. Contract Project Reporting.

§355.109. Disbursement of Contracted Funds and Cost Accounting.

§355.110. Dissemination of Results.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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Nancy Matchus
Assistant General
Counsel
Texas Water
Development Board

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(512) 463-7850.



TITLE 34. PUBLIC FINANCE

Part IV. Employees

Retirement System of Texas

Chapter 71. Creditable Service

★34 TAC §71.5

(Editor's note: The Employees Retirement System of Texas proposes for permanent adoption the amendment it adopts on an emergency basis in this issue. The text of the amendment is published in the Emergency Rules section of this issue.)

The Employees Retirement System of Texas proposes an amendment to §71.5, concerning the transfer of service credit from the Teacher Retirement System of Texas to the Employees Retirement System of Texas for certain Texas Department of Mental Health and Mental Retardation employees pursuant to Texas Civil Statutes, Title 110B, §23.508, as enacted by the 70th Legislature, 1987. The proposed amendment to §71.5 specifies that service transferred from the Teacher Retirement System of Texas to the Employees Retirement System of Texas will be established in the Employees Retirement System of Texas on a month-to-month basis. Since Texas Civil Statutes, Title 110B, §23.508, is now effective, the proposed amendment to §71.5 is simultaneously filed on an emergency basis to be effective immediately. The proposed amendment also updates a citation found in subsection (c) of this section and changes the title of the section.

James T. Herod, deputy director for programs and general counsel, has determined

that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the section.

Mr. Herod also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be that certain Texas Department of Mental Health and Mental Retardation employees whose normal duties on August 31, 1985, included the provision of educational services to school-age residents of state schools, but whose duties changed after that date because of a federal lawsuit will be entitled to transfer service credit from the Teacher Retirement System of Texas to the Employees Retirement System of Texas and establish service in the Employees Retirement System of Texas on a month-by-month basis. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to James T. Herod, Deputy Director for Programs and General Counsel, Employees Retirement System of Texas, 18th and Brazos Streets, P.O. Box 13207, Austin, Texas 78711-3207.

The amendment is proposed under Texas Civil Statutes, Title 110B, §25.103, which provide the Board of Trustees of the Employees Retirement System of Texas with the authority to adopt rules for eligibility for membership and for the administration of the funds of the retirement system.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt

Issued in Austin, Texas, on September 22, 1987

TRD-8708165 Clayton T Garrison
Executive Director
Employees Retirement
System of Texas

Earliest possible date of adoption
October 30, 1987

For further information, please call
(512) 476-6431 ext 178



Chapter 73. Benefits

★ 34 TAC §73.21

(Editor's note: The Employees Retirement System of Texas proposes for permanent adoption the amendment it adopts on an emergency basis in this issue. The text of the amendment is published in the Emergency Rules section of this issue.)

The Employees Retirement System of Texas proposes an amendment to §73.21, concerning reserve factors in the mortality

assumption for disability retirement for females. Subsection (d) of this section is amended to change the mortality assumption for disability retirement for females from 60% to 55% of the 1965 RRB Disabled Annuitants Mortality Table. This amendment will reflect the mortality assumption for disability retirement for females recommended by the Employees Retirement System of Texas actuary, Rudd and Wisdom, Inc., and adopted by the Board of Trustees of the Employees Retirement System of Texas at its December 19, 1986, meeting as a result of the most recent actuarial investigation. Since the new reserve factors based on the new mortality assumption will be used with respect to disability retirements with an effective date of September 30, 1987, and later, the proposed amendment to subsection (d) of this section is simultaneously filed on an emergency basis to be effective immediately. The proposed amendment also includes the correction of a typographical error and the addition of the nine-digit zip code to the retirement system's address.

James T. Herod, deputy director for programs and general counsel, has determined that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the section.

Mr. Herod also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be that the reserve factors used by the Employees Retirement System of Texas to establish reserves to fund disability retirements for females will be consistent with the mortality assumptions adopted by the Employees Retirement System of Texas Board of Trustees. As a result, the reserves will more closely reflect the actuarial present value of the disability retirement benefit. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to James T. Herod, Deputy Director for Programs and General Counsel, Employees Retirement System of Texas, 18th and Brazos Streets, P.O. Box 13207, Austin, Texas 78711-3207.

The amendment is proposed under Texas Civil Statutes, Title 110B, §25.105, which provide the Board of Trustees of the Employees Retirement System of Texas with the authority to adopt mortality, service, and other tables the board considers necessary for the retirement system after considering the results of the actuary's investigation of the mortality, service, and compensation experience of the system's members and beneficiaries.

This agency hereby certifies that the proposal has been reviewed by legal counsel

and found to be within the agency's authority to adopt

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TRD-8708167 Clayton T Garrison
Executive Director
Employees Retirement
System of Texas

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For further information, please call
(512) 476-6431, ext 178



Part VII. State Property Tax Board Chapter 153. Truth in Taxation Requirements

★ 34 TAC §153.2

The State Property Tax Board proposes new §153.2, concerning notice of effective and rollback tax rates. The new section details the form in which taxing units must publish the notice of effective and rollback tax rates, certain other schedules, and other information under the requirements of the Tax Code, §26.04(e), as amended by House Bill 1866, 70th Legislature, 1987, effective January 1, 1988. In addition, the new section requires that the notice state the maximum tax rate that the taxing unit's governing body may adopt without publishing notices and holding a public hearing on the increase.

Sands Stiefer, staff attorney, has determined that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the section. However, taxing units that published the required information in smaller format than that required by the new section in previous years may experience additional administrative cost.

Mr. Stiefer also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be better notification of the public of a taxing unit's effective tax rate, financial responsibilities, and surplus funds. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to Ron Patterson, Executive Director, State Property Tax Board, P.O. Box 15900, Austin, Texas 78761.

The new section is proposed under the Tax Code, §26.04(e), as amended by House Bill 1866, 70th Legislature, 1987, effective January 1, 1988, which requires taxing units to publish their effective tax rates and additional financial information in the form specified by the State Property Tax Board.

§153.2. Notice of Effective and Rollback Tax Rates.

(a) A taxing unit shall employ the form and wording of Model Form 26.04 in publishing the notice of effective tax rate and other information required to be published by the Tax Code, §26.04. A county may modify the model form by inserting additional columns of effective and rollback rate calculations for each type of tax the county levies. A form so modified must also state the total effective and rollback tax rates for the county.

(b) The type size employed in the notice may not be smaller than eight points.

(c) Notices for taxing units may not be combined. However, notices for more than one taxing unit may appear on the same page of the newspaper, provided each meets the requirements of subsection (b) of this section.

(d) Model Form 26.04 is adopted by reference. Copies may be obtained from the State Property Tax Board, 9501 North IH-35, P.O. Box 15900, Austin, Texas 78761-5900.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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TRD-8708179 Ron Patterson
Executive Director
State Property Tax Board

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For further information, please call
(512) 834-4802.



Chapter 161. Valuation Procedures

★34 TAC §161.1

The State Property Tax Board (SPTB) proposes an amendment to §161.1, concerning valuation of open space and agricultural lands. The section adopts by reference the SPTB publication, *Manual for the Valuation of Agricultural Lands*. The amendment adopts by reference a new edition of the manual, which sets forth the method of appraising qualified open-space and agricultural land and develops procedures to verify that land qualifies for a special agricultural appraisal for property tax purposes.

Sands Stiefer, staff attorney, has determined that for the first five-year period the proposed section will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the section.

Mr. Stiefer also has determined that for each year of the first five years the section is in effect the public benefit anti-

ciated as a result of enforcing the section will be provision of an updated version of the agricultural valuation manual so that taxpayers and public officials can better understand their rights and obligations under the law. There is no anticipated economic cost to individuals who are required to comply with the proposed section.

Comments on the proposal may be submitted to Ron Patterson, Executive Director, State Property Tax Board, P.O. Box 15900, Austin, Texas 78761.

The amendment is proposed under the Property Tax Code, §23.41, which requires the board to promulgate rules specifying the methods to apply and the procedures to use in appraising land designated for agricultural use; the Property Tax Code, §23.52, which requires the board to develop and distribute to each appraisal office manuals setting forth methods of appraising and administering special appraisal of open-space agricultural land; and the Property Tax Code, §5.07, which requires the board to prescribe the contents of all forms necessary for the administration of the property tax system, and a uniform records system to be used by all appraisal offices.

§161.1. Valuation of Open-Space and Agricultural Lands. The State Property Tax Board adopts by reference the *Manual [Guidelines] for the Valuation of Agricultural Lands* [as amended January 1, 1986, the amendment to be effective February 1, 1986]. This document is published by and available from the State Property Tax Board, 9501 North IH 35, P.O. Box 15900, Austin, Texas 78761.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 22, 1987.

TRD-8708180 Ron Patterson
Executive Director
State Property Tax Board

Earliest possible date of adoption:
October 30, 1987
For further information, please call
(512) 834-4802.



Chapter 165. Practice and Procedure

★34 TAC §§165.101-165.107

The State Property Tax Board proposes new §§165.101-165.107, concerning performance audits of appraisal districts. Beginning January 1, 1988, the State Property Tax Board will be required to audit the performance of appraisal districts at the written request of taxing units or property owners. The new sections describe procedures and qualifications for requesting an audit, specify methods

for clarifying requests and determining costs, define security requirements for audit costs, and provide procedures for conducting an audit and reporting on the results.

Sands Stiefer, staff attorney, has determined that for the first five-year period the proposed sections will be in effect there will be no fiscal implications for state or local government or small businesses as a result of enforcing or administering the sections. Taxing units and taxpayers will be required to reimburse the board for costs incurred in conducting an audit, but reimbursement is required by statute, not by the new rules.

Mr. Stiefer also has determined that for each year of the first five years the sections are in effect the public benefit anticipated as a result of enforcing the sections will be the listing of clear and concise procedures for requesting, conducting, and reporting on performance audits of appraisal districts. There is no anticipated economic cost to individuals who are required to comply with the proposed sections.

Comments on the proposal may be submitted to Ron Patterson, Executive Director, State Property Tax Board, P.O. Box 15900, Austin, Texas 78761-5900.

The new sections are proposed under the Tax Code, §5.12, which allows the State Property Tax Board to adopt procedures, audit standards, and forms for the administration of performance audits of appraisal districts.

§165.101. Procedures for Request of Performance Audit.

(a) The following parties may request a performance audit of an appraisal district under this section as provided by the Property Tax Code, §5.12:

(1) the governing bodies of a majority of the taxing units participating in an appraisal district;

(2) the governing bodies of a majority of the taxing units entitled to vote on the appointment of appraisal district directors;

(3) the owners of not less than 10% of the number of accounts or the owners of not less than 10% of the number of parcels of property in an appraisal district belonging to a class of property established by the State Property Tax Board for purposes of the study conducted under the Education Code, §11.86, if the class constitutes at least 5.0% of the appraised value of taxable property within the district in the preceding year; or

(4) the owners of property representing not less than 10% of the appraised value of all property in the district belonging to a class of property established for purposes of the study conducted by the board under the Education Code, §11.86, if the class constitutes at least 5.0% of the appraised value of taxable property in the district in the preceding year.

(b) A performance audit must be requested in writing on a State Property Tax Board form. Taxing units must use State Property Tax Board Form 5.12a. Property owners must use State Property Tax Board Form 5.12b. State Property Tax Forms 5.12(a) and (b) are adopted by reference. Copies may be obtained from the State Property Tax Board, 9501 North IH 35, P.O. Box 15900, Austin, Texas 78761-5900.

(c) A request for a performance audit must contain the following information:

(1) a request from taxing units must include the name and original signature of the presiding officer of each requesting unit and a copy of the resolution or other evidence of official action that authorizes the request;

(2) a request from property owners must include the name and original signature of each requesting property owner, the account or parcel number(s) of the owner's property, and the appraised value of the property the preceding tax year;

(3) the name of the appraisal district that is the subject of the request;

(4) the tax year that is the subject of the request;

(5) information showing that the parties to the request meet all requirements for requesting a performance audit established by the Property Tax Code, §5.12(a) and (b);

(6) whether the performance audit requested is a general audit or is to be limited to one or more specific areas of performance, and identifying the specific areas; and

(7) the designation of an individual as the sole representative of all parties to the request for performance audit. All matters pertaining to the audit and requiring communications or transactions between the board and the parties making the request will be directed by the board to the requesting parties through the designated representative.

(d) A general audit shall consider and report on the following areas of performance:

(1) the extent to which the district complies with applicable law or generally accepted standards of appraisal or other relevant practice;

(2) the uniformity and level of appraisal of major kinds of property and the cause of any significant deviations from ideal uniformity and equality of appraisal of major kinds of property;

(3) duplication of effort and efficiency of operation;

(4) the general efficiency, quality of service, and qualification of appraisal district personnel; and

(5) except as otherwise provided by subsection (e) of this section, any other matter included in the request for the audit.

(e) Parties may not request an audit of:

(1) the financial condition of the appraisal district;

(2) an appraisal district's tax collections;

(3) an appraisal district function that is not required of the appraisal district by the Property Tax Code, the Education Code, or other laws of the State of Texas;

(4) a function the appraisal district performs under interlocal contract or pursuant to a consolidation election held under the Tax Code, §6.26;

(5) an action of an individual not directly related to the performance of the appraisal district;

(6) an alleged criminal act or act of official misconduct as defined in the Texas Penal Code;

(7) a matter that is currently the subject of litigation or a protest or challenge before the appraisal review board in the county; or

(8) a matter that involves actions or determinations in any year earlier than the year preceding the request.

(f) The executive director shall approve all requests for performance audits meeting the requirements set forth within this section.

(g) The executive director shall disapprove those request for performance audits that do not meet the requirements of this section and those portions of requests for performance audits containing requests to audit any of the areas listed within subsection (e) of this section.

(h) For purposes of this chapter, the property value study conducted by the board under the Education Code, §11.86, and the Property Tax Code, §5.10, is a performance audit on a matter of uniformity and level of appraisal of property in an appraisal district.

§165.102. Pre-Audit Conference. Following approval of an audit request, the executive director may require a pre-audit conference with the requesting parties or their representative. The purpose of the conference will be to clarify the elements of the audit request and to provide a foundation for an accurate cost estimate.

§165.103. Cost Estimate of Performance Audit.

(a) Prior to the start of a performance audit, the executive director shall prepare and deliver to the requesting parties an estimate of anticipated costs of conducting the audit. Costs include expenses related to salaries, professional fees, travel, reproduction or other printing services, and consumable supplies that are directly attributable to conducting the audit.

(b) If at any time during the audit the executive director finds that additional costs are anticipated above the original cost estimate, the executive director shall amend the cost estimate to include the additional anticipated costs.

§165.104. Security Requirements for Audit Costs.

(a) Following completion of a cost estimate, the executive director shall direct

the requesting parties to deposit with the board security in the amount of the cost estimate to secure payment of the costs of conducting the audit.

(b) The security required by this section shall be a cash deposit or other financial security the executive director determines is adequate to cover the expected costs to the board of conducting the audit.

(c) Security shall be deposited in the name of or assigned to the State Property Tax Board.

(d) If the executive director finds that costs are anticipated above the cost estimate, he may require additional security from the requesting parties.

§165.105. Notice of Commencement of Audit. Following the satisfaction of all security requirements, the executive director shall provide written notice of the commencement date of the audit. Notice shall be made to the authorized representative of the requesting parties, to the presiding officer of the appraisal district board of directors, and to the chief appraiser at least 14 days prior to the beginning of fieldwork on the audit.

§165.106. Performance Audit Procedures and Report Requirements.

(a) The State Property Tax Board staff shall develop standards and procedures for conducting performance audits under this chapter, and make copies available to the public.

(b) Following payment of the costs of conducting the audit and completing the report, the board shall report the results of its audit. The report shall address all elements of the request as approved by the executive director. If the request is for an audit limited to one or more particular matters, the report shall be limited to those matters. The report shall be in writing to the governing body of each taxing unit that participates in the appraisal district, to the chief appraiser, and to the presiding officer of the appraisal district board of directors. If the audit was requested by property owners, a written report shall also be provided to the representative of the property owners who requested the audit.

§165.107. Discontinuation of Audit.

(a) The executive director may discontinue the audit in whole or in part:

(1) if requested to do so by the requesting parties;

(2) if any matter within the audit request becomes the subject of litigation or a protest or challenge before the appraisal review board in the county; or

(3) if any matter within the audit request becomes the subject of a criminal investigation or prosecution.

(b) If the audit is discontinued, the board shall make and distribute a report of costs incurred and elements of the request considered by the board, if any.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on September 22, 1987

TRD-8708178 Ron Patterson
Executive Director
State Property Tax Board

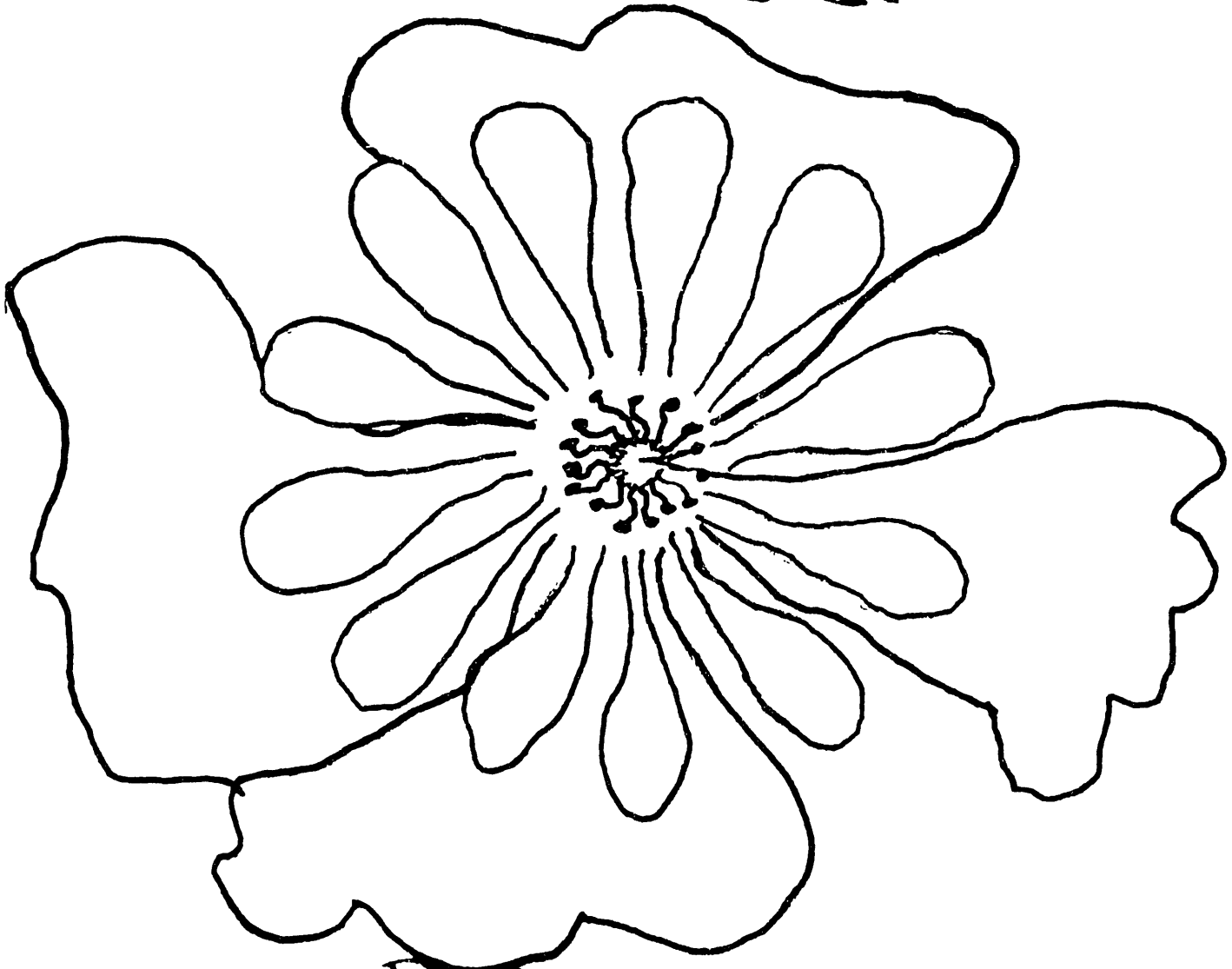
Earliest possible date of adoption:

October 30, 1987

For further information, please call
(512) 834-4802.



Flower



Bloodroot

Name: Adriana Lopez
Grade: 6
School: Clifton Middle School, Houston

Withdrawn

Rules

An agency may withdraw proposed action or the remaining effectiveness of emergency action on a rule by filing a notice of withdrawal with the *Texas Register*. The notice is effective immediately upon filing or 20 days after filing. If a proposal is not adopted or withdrawn within six months after the date of publication in the *Register*, it will automatically be withdrawn by the *Texas Register* office and a notice of the withdrawal will appear in the *Register*.

**TITLE 16. ECONOMIC
REGULATION**
**Part I. Railroad Commission
of Texas**
**Chapter 9. Liquefied Petroleum
Gas Division**
**Subchapter A. General
Applicability and Requirements**
★ 16 TAC §9.1

Pursuant to Texas Civil Statutes, Article 6252-13a, §5(b), and 1 TAC §91.24(b), the proposed amendment to §9.1, submitted by the Railroad Commission of Texas has been automatically withdrawn, effective September 22, 1987. The amendment as proposed appeared in the March 20, 1987, issue of the *Texas Register* (12 TexReg 934).

TRD-8708154
Filed: September 22, 1987



TITLE 19. EDUCATION
**Part II. Texas Education
Agency**
**Chapter 141. Teacher
Certification**
**Subchapter T. Requirements for
Provisional Certificates and
Specialized Assignments or
Programs**
★ 19 TAC §§141.453-141.455

The Texas Education Agency has withdrawn the emergency effectiveness of an amendment to §§141.453-141.455, concerning the requirements for provisional certificates and specialized assignments or programs. The text of the emergency amendments appeared in the June 26, 1987, issue of the *Texas Register* (12 TexReg 2042). The effective date of this withdrawal is October 12, 1987.

Issued in Austin, Texas, on September 21, 1987.

TRD-8708114 Beverly J. Bardsley
Director for Policy
Development
Texas Education Agency

Filed: September 21, 1987
For further information, please call
(512) 463-9212.



**TITLE 31. NATURAL
RESOURCES AND
CONSERVATION**
**Part II. Texas Parks and
Wildlife Department**
Chapter 65. Wildlife
**Subchapter U. Type II Wildlife
Management Area—Public
Hunting Lands**
★ 31 TAC §65.701, §65.704

The Texas Parks and Wildlife Department has withdrawn from consideration for permanent adoption proposed amendments concerning type II wildlife management area—public hunting lands. The text of the proposed amendments appeared in the August 11, 1987, issue of the *Texas Register* (12 TexReg 2634). The effective date of this withdrawal is September 22, 1987.

Issued in Austin, Texas, on September 22, 1987.

TRD-8708156 Boyd M. Johnson
General Counsel
Texas Parks and Wildlife
Department

Filed: September 22, 1987
For further information, please call
(512) 389-4974.



Adopted

Rules

An agency may take final action on a rule 30 days after a proposal has been published in the *Register*. The rule becomes effective 20 days after the agency files the correct document with the *Texas Register*, unless a later date is specified or unless a federal statute or regulation requires implementation of the action on shorter notice.

If an agency adopts the rule without any changes to the proposed text, only the preamble of the notice and statement of legal authority will be published. If an agency adopts the rule with changes to the proposed text, the proposal will be republished with the changes.

TITLE 4. AGRICULTURE

Part I. Texas Department of Agriculture

Chapter 21. Seed Certification Standards

Acreage Inspection Fees for Certification

★4 TAC §21.31

The Texas Department of Agriculture adopts an amendment to §21.31, with changes to the proposed text published in the August 14, 1987, issue of the *Texas Register* (12 TexReg 2669).

The amendment complies with the directive of the 70th Legislature, 1987, to set and collect fees for seed certification in an amount of \$20 per field and \$.24-\$42 per acre inspected. The acreage inspection fee for grass (vegetatively propagated) was proposed with an increase of \$3.00 in error and has been corrected to remain at \$10. All other fees are adopted as proposed. The amendment increases inspection fees for each production field applied or for certification on a per field and per acre basis.

On September 1, 1987, the department held a public hearing regarding adoption of the amendment. The Texas Seed Trade Association and Birdsong Peanuts, Gorman, commented against adoption of the amendment. The Texas Seed Trade Association commented that the increases add to the input cost burden for farmers;

that the increases price many certified seed growers out of the certified seed program; that the level of enforcement of the Texas certified seed standards is inadequate; and that doubling of the field application fee increases the disparity in production costs of crop seed produced in smaller fields as compared to those customarily grown in larger fields, placing an undue burden on Central Texas growers with smaller fields. Birdsong Peanuts submitted written comments stating that the increase in fees creates a burden on farmers at a time of economic recession.

The department does not disagree that the increases in fees add to the cost burden for farmers, however, the increase in fees is necessary in order for the department to maintain an acceptable level of service. The department is currently understaffed to enforce the Texas certified seed standards, but is able to respond to all complaints and sample a large percentage of the certified lots of seed. Fees collected allow the department to improve its quality of service and increase the number of inspections.

In regards to the per field increase placing an undue burden on smaller producers, the department's experience is that the cost to the state is virtually the same whether an inspector goes to a large field or to a small field since most of the time spent is travel time and time filling out the required form.

Finally, the legislative directive in the Appropriations Act gives the department the authority to raise acreage inspection fees to a maximum of \$42. The department chooses to raise fees to a much lesser amount in most cases, in order to more equally distribute the burden.

The amendment is adopted under the Agriculture Code, §12.001 and §12.016, which provides the Texas Department of Agriculture with the authority to adopt rules to enforce the Texas Agriculture Code; §62.008, which provides the department with the authority for purposes of seed certification, to fix and collect a fee in an amount necessary to cover costs of inspection and labels; and Senate Bill 1, Appropriations Act, 70th Legislature, 1987, which directs the department to set and collect a fee for seed certification in an amount of \$20 per field and \$.24-\$42 per acre inspected.

§21.31. Inspection Fees for Seed Certification. The following inspection fees for certification chart, as amended, designates fees per acre for various crop kinds as required for seed certification for genetic identity only. Copies may be obtained from the Seed Division, Texas Department of Agriculture, P.O. Box 12847, Austin, Texas 78711, or by telephoning (512) 463-7614.

Acreage Inspection Fees For Certification
Table 1

All Classes

Agrotricum	\$.52
Alfalfa	1.04
Buckwheat	.52
Cantaloupe	5.20
Clover (all kinds)	1.04
Corn	3.25
Cotton	.24
Cowpea, field bean, & flat pea	1.04
Flax	1.30
Forest tree seed	5.20

Forest tree seedlings	42.00
Grass (seeded)	4.16
Grass (vegetatively propagated)	10.00
Guar	3.25
Illinois Bundleflower	3.25
Millet (foxtail & pearl)	1.04
Millet (gahi & hybrids)	2.73
Okra	3.25
Peanut	.78
Small grain	.52
Rice	3.25
Sorghum (open-pollinated)	.91
Sorghum (commercial hybrids)	2.73
Sorghum (A, B, & R Lines)	7.80
Soybean	.60
Sugar Cane	5.20
Sunflower (commercial hybrids)	2.60
Sunflower (A & R Lines)	7.80
Watermelon	5.72

\$20 fee for each production field applied on for certification

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on September 21, 1987.

TRD-8708138 Dolores Alvarado Hibbs
Director of Hearings
Texas Department of
Agriculture

Effective date: October 13, 1987
Proposal publication date: August 14, 1987
For further information, please call
(512) 463-7583.



TITLE 19. EDUCATION

Part II. Texas Education Agency

Chapter 75. Curriculum Subchapter F. Graduation Requirements

★ 19 TAC §75.151, §75.152

The Texas Education Agency adopts amendments to §75.151 and §75.152. Section 75.152 is adopted with changes to the proposed text published in the June 23, 1987, issue of the *Texas Register* (12 TexReg 2001). Section 75.151 is adopted without changes and will not be republished. Section 75.152, contains one editorial change; the substitution of the word "or" for a slash.

The amendment to §75.151 adds a reference to transfer students from Texas nonpublic schools, requiring that they complete all state requirements for graduation and including references to rules concerning advanced placement

and correspondence courses as options for fulfilling state graduation requirements. All amendments are made for clarification. The amendment to §75.152 changes requirements for the advanced high school program to require one unit from fine arts or speech, to allow more flexibility for students.

No comments were received regarding adoption of the amendment to §75.151. The agency received comments in favor of the amendment to §75.152 from the Texas Speech Communication Association. The College of Fine Arts, University of Texas at Austin; the Department of Speech Communication and Theatre Arts, Southwest Texas State University; the Texas Educational Theatre Association; the Texas Art Education Association; the National Art Education Association; and several individuals expressed concern about the impression created by an earlier draft of the amendment that seemed to classify speech as a fine art. Concern was also expressed that students who selected speech would miss an opportunity for experience in and exposure to the fine arts at the high school level.

The section, as adopted, does not classify speech as a fine art. The need for increased flexibility in the advanced high school program outweighs the concern that some students in the advanced high school program might not have a unit of fine arts in grades 9-12.

The amendments are adopted under the Texas Education Code, §21.101, which provides the State Board of Education with the authority to make rules concerning the public school curriculum.

§75.152. *Advanced High School Program.*
(a) (No change.)

(b) The required units shall include the following:

- (1)-(9) (No change.)
- (10) fine arts or speech—one unit to be selected from the list of State Board of Education approved courses;
- (11) (No change.)
- (c)-(d) (No change.)

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on September 15, 1987.

TRD-8708107 W. N. Kirby
Commissioner of
Education

Effective date: October 12, 1987
Proposal publication date: June 23, 1987
For further information, please call
(512) 463-9212.



Chapter 141. Teacher Certification Subchapter T. Requirements for Provisional Certificates and Specialized Assignments or Programs

★ 19 TAC §§141.453-141.455

The Texas Education Agency adopts amendments to §§141.453-141.455, without changes to the proposed text published in the June 26, 1987, issue of the *Texas Register* (12 TexReg 2041).

The amendments remove from the Central Education Agency the responsibility for review and approval or disapproval of

work experience required of individuals seeking certification to teach in certain vocational programs. The responsibility is transferred to an employing school district or a teacher preparation institution, effective with the 1987-1988 school year.

Comments on the proposed amendments were received from the Texas Vocational Consortium, which expressed concern that the new procedure for approval of work experience includes insufficient quality control.

The 69th Legislature's reduction of appropriations for the Central Education Agency included the elimination of 10 positions in the Division of Vocational Finance and Compliance, which means the agency is no longer able to evaluate individual statements of qualifications. Staff will briefly review each statement of qualifications before an emergency permit is issued and will review statements of qualifications in local school districts as part of monitoring efforts. This is the best approach possible within resources available.

The amendments are adopted under the Texas Education Code, §13.032(a), which provides the State Board of Education with the authority to make rules concerning the issuance of teacher certificates.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on September 18, 1987.

TRD-8708113 W. N. Kirby
Commissioner of
Education

Effective date October 12, 1987
Proposal publication date June 26, 1987
For further information, please call
(512) 463-9212



TITLE 34. PUBLIC FINANCE

Part IV. Employees Retirement System of Texas

Chapter 81. Insurance

★ 34 TAC §81.3

The Employees Retirement System of Texas adopts an amendment to §81.3, without changes to the proposed text published in the August 7, 1987, issue of the *Texas Register* (12 TexReg 2560).

The amendment corrects wording in subsection (c)(5), regarding health maintenance organizations. Also, applicants for disability retirement benefits whose applications are pending, who subsequently terminate state employment, are treated the same as other terminating

state employees in light of the fact that coverage is now available pursuant to the Consolidated Omnibus Budget Reconciliation Act of 1986 (COBRA). Persons ultimately approved for disability retirement would suffer no loss of health benefits.

The amendment corrects the word "participate" to the word "participants" in subsection (c)(5). In subsection (d)(2) the amendment eliminates references to a terminated employee whose application for disability retirement benefits is pending from language prescribing the method by which premiums are paid by certain health plan participants.

No comments were received regarding adoption of the amendment.

The amendment is adopted under the Insurance Code, Article 3.50-1, §4, which provides the Employees Retirement System of Texas with the authority to promulgate all rules, regulations, plans, procedures, and orders reasonably necessary to implement and to carry out the purposes and provisions of the Texas Employees Uniform Group Insurance Benefits Act in all its particulars; and the Consolidated Omnibus Budget Reconciliation Act of 1986 (COBRA), §1002, Public Law 99-272, which requires the Texas employees uniform group insurance plan administered by this system to provide continuation coverage for certain eligible individuals.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on September 22, 1987.

TRD-8708164 Clayton T. Garrison
Executive Director
Employees Retirement
System of Texas

Effective date: November 1, 1987
Proposal publication date: August 7, 1987
For further information, please call
(512) 476-6431, ext. 178.



★ 34 TAC §81.5

The Employees Retirement System of Texas adopts an amendment to §81.5, without changes to the proposed text published in the August 7, 1987, issue of the *Texas Register* (12 TexReg 2561).

The amendment treats terminated disability retirement applicants in the same manner as any other terminated state employees. During the interim period between termination and a decision with respect to their application, they will be entitled to continue health insurance under the Consolidated Omnibus Budget Reconciliation Act of 1986 (COBRA) and not be entitled to continue life insurance unless they are entitled to extended insurance benefits. Applicants

ultimately approved for disability retirement will be entitled to retroactive health and life insurance benefits and will suffer no loss of benefits

The amendment eliminates the category of terminated employee whose application for disability retirement benefits is pending with respect to eligibility for certain group insurance coverage.

No comments were received regarding adoption of the amendment.

The amendment is adopted under the Insurance Code, Article 3.50-2, §4, which provides the Employees Retirement System of Texas with the authority to promulgate rules, regulations, plans, procedures, and orders reasonably necessary to implement and to carry out the purposes and provisions of the Texas Employees Uniform Group Insurance Benefits Act in all its particulars, and the Consolidated Omnibus Budget Reconciliation Act of 1986 (COBRA), §1002, Public Law 99-272, which requires the Texas employees uniform group insurance plan administered by this system to provide continuation coverage for certain eligible individuals

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on September 22, 1987

TRD-8708163 Clayton T. Garrison
Executive Director
Employees Retirement
System of Texas

Effective date November 1, 1987
Proposal publication date August 7, 1987
For further information, please call
(512) 476-6431 ext 178



★ 34 TAC §81.7

The Employees Retirement System of Texas adopts an amendment to §81.7, with changes to the proposed text published in the August 7, 1987, issue of the *Texas Register* (12 TexReg 2562).

The amendment treats terminated disability retirement applicants in the same manner as any other terminated state employees. During the interim period between termination and a decision with respect to their application, they will be entitled to continue health insurance under the Consolidated Omnibus Budget Reconciliation Act of 1986 (COBRA) and not be entitled to continue life insurance unless they are entitled to extended insurance benefits. Applicants ultimately approved for disability retirement will be entitled to retroactive retiree health and life insurance benefits and will suffer no loss of benefits. Additionally, former members and employees of the legislature will now receive equal treatment to other direct pay participants

through the extension of the grace period of the premium due date from 10 to 30 days

The amendment eliminates the category of terminated employee whose application for disability retirement benefits is pending with respect to the enrollment of retirees and their dependents. The amendment removes reference to subsection (i)(3) but retains and transfers relevant language from that paragraph, concerning retiree insurance coverage effective dates in certain circumstances, to subsection (c)(3). Additionally, the amendment replaces the incorrectly used word "retiree" with the word "member." Subsection (i)(3) is deleted to eliminate the category of a terminated employee whose application for disability retirement benefits is pending. All subsequent paragraphs are renumbered as a result of its deletion. The amendment also extends the grace period allowed from the premium due date to the date beyond which coverage will be cancelled for all former members and employees of the legislature to 30 days

No comments were received regarding adoption of the amendment.

The amendment is adopted under the Insurance Code, Article 3.50-2, §4, which provides the Employees Retirement System of Texas with the authority to promulgate all rules, regulations, plans, procedures, and orders reasonably necessary to implement and to carry out the purposes and provisions of the Texas Employees Uniform Group Insurance Benefits Act in all its particulars; and the Consolidated Omnibus Budget Reconciliation Act of 1986 (COBRA), §10002, Public Law 99-272, which requires the Texas employees uniform group insurance plan administered by this system to provide continuation coverage for certain eligible individuals.

§81.7. Enrollment and Participation.

(a)-(b) (No change.)

(c) Retirees and their dependents.

(1) (No change.)

(2) If a retiree was not covered as an active employee immediately prior to becoming an annuitant, the retiree will be automatically enrolled in the basic retiree plan. Coverage for an eligible dependent of a retiree will be effective on the same day the retiree's coverage becomes effective if an application is received on or before the retiree's effective date of coverage. Applications received after the first 31 days will be governed by subsection (f) of this section.

(3) An application to delete optional life coverages or to change health coverage will be effective on the day the member becomes an annuitant if the application is postmarked or received by the Employees Retirement System on or before the effective date of retirement, unless other coverages are in effect at that time. If other coverages are in effect at that time, the dele-

tion or change in coverage will become effective on the first day of the month following the date of approval of retirement by the Employees Retirement System of Texas; or, if cancellation of the other coverages preceded the date of approval of retirement, the first day of the month following the date the other coverages were canceled. If the application is received after the date the member becomes an annuitant, but within 30 days after the date the member becomes an annuitant, the deletion or change of coverage will become effective the first day of the month following the date the application for deletion or change is received, unless other coverages are in effect at that time. If other coverages are in effect at that time, the deletion or change in coverage will become effective on the first day of the month following the date of approval of retirement by the Employees Retirement System of Texas; or, if cancellation of the other coverages preceded the date of approval of retirement, the first day of the month following the date the other coverages were canceled. All other enrollment rules stated in subsections (a), (e)-(g), and (i) of this section apply to retirees.

(d)-(h) (No change.)

(i) Continuing coverage in special circumstances.

(1)-(2) (No change.)

(3) A former member or employee of the legislature, who is eligible to continue to participate in the program, must notify the Employees Retirement System within 30 days after leaving office or employment of his or her intent to continue the coverage in effect. Coverage will be canceled if a premium is not received within 30 days of the due date. A former member or employee of the legislature is not eligible to continue disability insurance coverage.

(4) Continuation of health coverage benefits for a surviving spouse and or dependent child/children of a deceased employee or retiree. The surviving spouse and/or dependent child/children of a deceased employee/retiree, who, in accordance with §81.5(j)(1) of this title (relating to Eligibility), elects to continue health coverage may do so by submitting the required election notification and enrollment forms to the Employees Retirement System. The enrollment form, including all premiums due for the election/enrollment period, must be postmarked or received by the Employees Retirement System on or before the date indicated on the continuation of coverage enrollment form. Continuing health coverage will begin on the first day of the month following the month in which the employee/retiree dies, provided all group insurance premiums due for the month in which the employee/retiree died and for the election/enrollment period have been paid in full.

(5) Continuation of health coverage benefits for a covered employee whose employment has been terminated, voluntari-

ly or involuntarily. A terminated employee, his or her spouse and/or dependent child/children, who, in accordance with §81.5(j)(2) of this title (relating to Eligibility), elects to continue health coverage may do so by submitting the required election notification and enrollment forms to the Employees Retirement System. The enrollment form, including all premiums due for the election/enrollment period, must be postmarked or received by the Employees Retirement System on or before the date indicated on the continuation of coverage enrollment form. Continuing health coverage will begin on the first day of the month following the month in which the covered employee terminates employment, provided all group insurance premiums due for the month in which the employee terminates and for the election/enrollment period have been paid in full.

(6) Continuation of health coverage benefits for a spouse who is divorced from an employee/retiree and/or the spouse's dependent child/children. The divorced spouse and/or the spouse's dependent child/children (not provided for by §81.5(a) of this title (relating to Eligibility)) of an employee/retiree who, in accordance with §81.5(j)(3) of this title (relating to Eligibility), elects to continue health coverage may do so by submitting the required election notification and enrollment forms to the Employees Retirement System. The enrollment form, including all premiums due for the election/enrollment period, must be postmarked or received by the Employees Retirement System on or before the date indicated on the continuation of coverage enrollment form. Continuing health coverage will begin on the first day of the month following the month in which the divorce decree is signed, provided all group insurance premiums due for the month in which the divorce decree is signed and for the election/enrollment period have been paid in full.

(7) Continuation of health coverage benefits for a dependent child under 25 years of age who marries. A dependent child under 25 years of age who marries and who, in accordance with §81.5(j)(4) of this title (relating to Eligibility), elects to continue health coverage may do so by submitting the required election notification and enrollment forms to the Employees Retirement System. The enrollment form, including all premiums due for the election/enrollment period, must be postmarked or received by the Employees Retirement System on or before the date indicated on the continuation of coverage enrollment form. Continuing health coverage will begin on the first day of the month following the month in which the marriage occurred, provided all group insurance premiums due for the month in which the dependent child's marriage occurred and for the election/enrollment period have been paid in full.

(8) Continuation of health coverage

benefits for a dependent child who has attained 25 years of age. A 25-year-old dependent child (not provided for by §81.5(d) of this title (relating to Eligibility)) of an employee/retiree who, in accordance with §81.5(j)(5) of this title (relating to Eligibility), elects to continue health coverage may do so by submitting the required election notification and enrollment forms to the Employees Retirement System. The enrollment form, including all premiums due for the election enrollment period, must be postmarked or received by the Employees Retirement System on or before the date indicated on the continuation of coverage enrollment form. Continuing health coverage will begin on the first day of the month following the month in which the dependent child of the employee/retiree attains 25 years of age, provided all group insurance premiums due for the month in which the dependent child attained age 25 and for the election/enrollment period have been paid in full.

(9) Extension of continuation of health coverage for certain spouses and or dependent child/children of former employees who are continuing health coverage under the provisions of paragraph (5) of this subsection.

(A)-(D) (No change.)

(10) Continuation coverage defined. Continuation coverage as provided for in paragraphs (4)-(9) of this subsection means the continuation of only health coverage benefits which meets the following requirements.

(A)-(D) (No change.)

(E) Conversion option. An option to enroll under the conversion plan available to employees/retirees is also available to a participant who continues health coverage for the maximum period as provided in paragraph (9)(B)(i) of this subsection and paragraph (9)(B)(ii) of this subsection. The conversion notice will be provided to a participant during the 180-day period immediately preceding the end of the continuation period.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on September 22, 1987

TRD-8708169 Clayton T Garrison
Executive Director
Employees Retirement
System of Texas

Effective date: November 1, 1987
Proposal publication date: August 7, 1987
For further information, please call
(512) 476-6431, ext 178



TITLE 40. SOCIAL SERVICES AND ASSISTANCE

Part I. Texas Department of Human Services

Chapter 14. County Indigent Health Program

The Texas Department of Human Services (DHS) adopts amendments to §§14.1, 14.204, and 14.205, without changes to the proposed text published in the August 14, 1987, issue of the *Texas Register* (12 TexReg 2675).

The justification for the amendments is to conform with changes made by the 70th Legislature, 1987, to the Indigent Health Care and Treatment Act. The changes to the Act were effective September 1, 1987.

The sections as amended will function by requiring counties to provide health care services to indigents living in areas previously served by hospital authority hospitals.

No comments were received regarding adoption of the amendments.

Subchapter A. County Program Administration

★40 TAC §14.1

The amendment is adopted under the Human Resources Code, Title 2, Chapters 22 and 32, which provides the department with the authority to administer public and medical assistance programs.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on September 22, 1987.

TRD-8708134 Marlin W. Johnston
Commissioner
Texas Department
of Human Services

Effective date: October 13, 1987
Proposal publication date: August 14, 1987
For further information, please call
(512) 450-3765.



Subchapter C. Providing Services

★40 TAC §14.204, §14.205

The amendments are adopted under the Human Resources Code, Title 2, Chapters 22 and 32, which provides the department with the authority to administer public and medical assistance programs.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on September 22, 1987.

TRD-8708135

Marlin W. Johnston
Commissioner
Texas Department
of Human Services

Effective date: October 13, 1987
Proposal publication date: August 14, 1987
For further information, please call
(512) 450-3765.



Chapter 15. Medicaid Eligibility

Subchapter DDD. Interstate Requests for Assistance

★40 TAC §15.5506

The Texas Department of Human Services (DHS) adopts an amendment to §15.5506, without changes to the proposed text published in the July 24, 1987, issue of the *Texas Register* (12 TexReg 2413).

The amendment is justified because its enforcement will result in more timely denial of ineligible clients, thereby saving Medicaid dollars.

The amendment will function by specifying that department staff take action within 10 days after receiving information that could affect a client's eligibility or applied income, and that department staff conduct special reviews every three months when a client's resources are within \$100 of program limits.

No comments were received regarding adoption of the amendment.

The amendment is adopted under the Human Resources Code, Title 2, Chapters 22 and 32, which provides the department with the authority to administer public and medical assistance programs.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on September 22, 1987.

TRD-8708129 Marlin W. Johnston
Commissioner
Texas Department
of Human Services

Effective date: October 26, 1987
Proposal publication date: July 24, 1987
For further information, please call
(512) 450-3765.



Chapter 29. Purchased Health Services

Subchapter G. Hospital Services

★40 TAC §29.606

The Texas Department of Human Services (DHS) adopts an amendment to §29.606, without changes to the proposed text published in the August 14, 1987, issue of the *Texas Register* (12 TexReg 2676).

The amendment is justified as it will help ensure the continued accessibility of services for Medicaid recipients.

The amendment will function by specifying that the department or its designee establishes a minimum standard dollar amount of \$1,200 and applies it to those hospitals whose standard is less than the minimum.

No comments were received regarding adoption of the amendment.

The amendment is adopted under the Human Resources Code, Title 2, Chapters 22 and 32, which provides the department with the authority to administer public and medical assistance programs.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on September 23, 1987.

TRD-8708171

Marlin W. Johnston
Commissioner
Texas Department
of Human Services

Effective date: November 1, 1987
Proposal publication date: August 14, 1987
For further information, please call
(512) 450-3765.



State Board of Insurance Exempt Filings

State Board of Insurance Notification Pursuant to the Insurance Code, Chapter 5, Subchapter L

(Editor's note: As required by the Insurance Code, Article 5.96 and Article 5.97, the Register publishes notices of actions taken by the State Board of Insurance pursuant to Chapter 5, Subchapter L, of the Code. Board action taken under these articles is not subject to the Administrative Procedure and Texas Register Act, and the final actions printed in this section have not been previously published as proposals.

These actions become effective 15 days after the date of publication or on a later specified date.

The text of the material being adopted will not be published, but may be examined in the offices of the State Board of Insurance, 1110 San Jacinto Street, Austin.)

The State Board of Insurance has adopted a filing by the Office of the Secretary of State, Statutory Documents Division, of a bond form for Credit Services Organizations.

A text of the proposed filing has been filed in the office of the Chief Clerk of the State Board of Insurance since July 24, 1987. The proposed filing has been available for public inspection for 15 days and a public hearing was not requested by any party.

The Texas Legislature, 70th Session, passed House Bill 742 which added Chapter 18 to Title 2, Business and Commerce Code. Chapter 18 regulates the operation of Credit Services Organizations and allows these organizations to post a bond conditioned on performance of duties in accordance with the act. The bond penalty is \$10,000 and the board has adopted the rate of \$20 per thousand proposed by the Surety Association of America.

This filing was approved to become effective 15 days after publication of this notification in the *Texas Register*. Upon the effective date of this approval, this approval supersedes an earlier emergency approval. This filing has been effective on an emergency basis since September 1, 1987. Notification of the emergency approval appeared in the September 4, 1987, issue of the *Texas Register* (12 TexReg 3046).

This notification is made pursuant to the Insurance Code, Article 5.97, which exempts it from the requirements of the Administrative Procedure and Texas Register Act.

Issued in Austin, Texas, on September 18, 1987.

TRD-8708100

Nicholas Murphy
Chief Clerk
State Board of Insurance

Effective date: October 15, 1987
For further information, please call
(512) 463-6327.



Open Meetings

Agencies with statewide jurisdiction must give at least seven days notice before an impending meeting. Institutions of higher education or political subdivisions covering a part of four or more counties (regional agencies) must post notice at least 72 hours prior to a scheduled meeting time. Some notices may be received too late to be published before the meeting is held, but all notices are published in the *Register*.

Emergency meetings and agendas. Any of the governmental entities named above must have notice of an emergency meeting, an emergency revision to an agenda, and the reason for such emergency posted for at least two hours before the meeting is convened. Emergency meeting notices filed by all governmental agencies will be published.

Posting of open meeting notices. All notices are posted on the bulletin board outside the Office of the Secretary of State on the first floor of the East Wing in the State Capitol, Austin. These notices may contain more detailed agendas than what is published in the *Register*.

Texas Commission on Alcohol and Drug Abuse

Tuesday, October 1, 1987, 1:30 p.m. The Texas Commission on Alcohol and Drug Abuse will meet in the Conference Room, 1705 Guadalupe, Austin. According to the agenda, the commission will approve minutes of the August 1, 1987, meeting; hear remarks by Representative Al Price regarding local program and public comments; consider committee appointments, action on Advisory Council nominee for Region 16, and act on commissioners travel policy; approve agency signatures for state comptroller's office; consider action on revised use of Public Law 99-570 funds and act on implementation of Rider 14, 1988-1989 appropriations; review and consider action on fiscal year 1988 agency budget; consider action on licensure rules, quarterly update on funded programs, Oversight Committee plan; hear reports on revision of funding processes, utilization of space, committee report on counselor certification, hear the chairman's report, and executive director's report.

Contact: Becky Davis, 1705 Guadalupe, Austin, Texas 78701, (512) 463-5510.

Filed: September 23, 1987, 3:22 p.m.
TRD-8708195



Texas Employment Commission

Wednesday, September 30, 1987, 8 a.m. The Texas Employment Commission will meet in Room 644, TEC Building, 101 East 15th Street, Austin. According to the agenda, the commission will consider prior meeting notes; internal procedures of commission appeals; consider and act on higher level appeals in unemployment compensation cases on Commission Docket 39; and set the next meeting date.

Contact: Courtenay Browning, 101 East 15th Street, Austin, Texas 78778, (512) 463-2226.

Filed: September 22, 1987, 1:40 p.m.
TRD-8708152

State Department of Highways and Public Transportation

Tuesday-Wednesday, September 29-30, 1987, 10 a.m. and 9 a.m., respectively. The State Highway and Public Transportation Commission of the State Department of Highways and Public Transportation will meet in emergency session in Room 101 and Room 101-A, Auditorium, Dewitt C. Greer Highway Building, 11th and Brazos Streets, Austin. According to the agenda summary, the commission will consider Fort Bend County and discuss Grand Parkway and Department of Corrections property. The emergency status is necessary because commission action is not necessary this month for item 16 on page 5 and to advise the public that deleted item 16 would not be considered.

Contact: Lois Jean Turner, 11th and Brazos Street, Room 203, Austin, Texas 78701, (512) 463-8616.

Filed: September 23, 1987, 3:14 p.m.
TRD-8708197



Texas Housing Agency

Wednesday, September 23, 1987. The Texas Housing Agency met for an emergency agenda revision in Suite 300, Conference Room, Texas Housing Agency, 811 Barton Springs Road, Austin. Times, committees, and agendas follow.

9 a.m. The Finance and Audit Committee considered and acted on an election to issue mortgage credit certificates in lieu of issuing single family mortgage revenue bonds pursuant to a reservation under the 1987 State Private Activity Bond Ceiling. The emergency status was necessary because the new item is needed to provide decent, safe, sanitary housing for Texans of low and moderate income.

Contact: Dan A. McNeil, P.O. Box 13941, Capital Station, Austin, Texas 78711, (512) 474-2974.

Filed: September 22, 1987, 4:09 p.m.
TRD-8708159

1 p.m. The Board of Directors considered and acted on a bond resolution authorizing and approving the issuance, sale, and delivery of \$1,400,000 Texas Housing Agency South Texas Rental Housing Revenue Bonds, 1987 series; considered and acted on an election to issue mortgage credit certificates in lieu of issuing single family mortgage revenue bonds pursuant to a reservation under the 1987 State Private Activity Bond Ceiling; considered and acted on a financing proposal and authorized the issuance, sale, and delivery of the Texas Housing Agency's Residential Single Family Mortgage Revenue Bonds, 1987A series. The emergency status was necessary because the new items are needed to provide decent, safe, sanitary housing for Texans of low and moderate income.

Contact: Dan A. McNeil, P.O. Box 13941, Capital Station, Austin, Texas 78711, (512) 474-2974.

Filed: September 22, 1987, 4:09 p.m.
TRD-8708158



Texas Department of Human Services

Wednesday, October 7, 1987, 9 a.m. The Income Assistance Advisory Council for the Texas Department of Human Services will meet on the Third Floor, Conference Room 3W, West Tower, 701 West 51st Street, Austin. According to the agenda, the council will hold a round table discussion to consider IAS issues and the ways the council can participate in their resolution; business section; hear comments and questions regarding October board items; review and discuss amendments to by-laws; hear the status report on fiscal year 1987 council objectives; define the process for electing officers, establishing objectives, scheduling meetings, and forms of communication; and hold twenty-minute sessions with branch staff to discuss the prevailing issues and major organizational focus of each functional area.

Contact: Pat Anderson, P.O. Box 2960, Austin, Texas 78752, (512) 450-3398.

Filed: September 23, 1987, 9:03 a.m.
TRD-8708175



State Board of Insurance

Friday, September 25, 1987, 2 p.m. The State Board of Insurance met for an emergency agenda revision in Room 414, State Insurance Building, 1110 San Jacinto Boulevard, Austin. According to the agenda, the board considered (by permission of the State Board of Insurance) a submittal by the board staff for bidding the production of 1987 annual statement blanks. The emergency status was necessary to provide forms for timely reporting by regulated entities of data necessary for effective regulation of the business of insurance and related matters in this state.

Contact: Pat Wagner, 1110 San Jacinto Boulevard, Austin, Texas 78701-1998, (512) 463-6328.

Filed: September 22, 1987, 11:42 a.m.
TRD-8708142



Texas Department of Mental Health and Mental Retardation

Thursday, October 1, 1987, 10 a.m. The Texas Board of Mental Health and Mental Retardation of the Texas Department of Mental Health and Mental Retardation will meet at the Y.O Ranch Hilton, 2033 Sidney Baker, Kerrville. According to the agenda, the board will approve minutes of the September 18, 1987, meeting; and consider duties of the commissioner, litigation: RAJ v. Miller, Lelsz v. Kavanaugh, Griffith v. Bynum, and potential litigation.

Contact: Gary E. Miller, P.O. Box 12668, Capitol Station, Austin, Texas 78711, (512) 465-4588.

Filed: September 22, 1987, 1:36 p.m.
TRD-8708151



Texas Lay Midwifery Board

Friday, September 25, 1987, 10 a.m. The Texas Lay Midwifery Board met in emergency session in Room T-604, Texas Department of Health, 1100 West 49th Street, Austin. According to the agenda, the board made several changes to the agenda with minutes of the last meeting; discussed courses and examinations concerning sites, past and future; consider exam failure rate; discussed law, changes concerning legislation and out of legislation-eye prophylaxis; considered pediatrician replacement, lay midwifery in Brownsville, and proposals for 1989 legislation concerns with present law and the

lack of enforcement on practice and complaints on practice; and discussed the next meeting date. The emergency status was necessary as a reasonably unforeseeable situation required immediate action by the board in order to implement legislation effective September 1, 1987.

Contact: Joceline Alexander, 1100 West 49th Street, Austin, Texas 78756, (512) 458-7700.

Filed: September 22, 1987, 4:13 p.m.
TRD-8708160



Pan American University

Tuesday, October 6, 1987. The Board of Regents of Pan American University will meet in the Boardroom, Administration Building, Pan American University, Edinburg. Times and agendas follow.

10 a.m. The Buildings and Grounds Committee will consider the purchase of air conditioner for coastal studies lab, bid for doors for the handicapped, solicitation of architects for development of campus master plan, and informational items.

Contact: Miguel A. Nevarez, Pan American University, Edinburg, Texas 78539, (512) 381-2100.

Filed: September 24, 1987, 9:01 a.m.
TRD-8708214

10:15 a.m. The Finance Committee will consider higher education assistance funds (general allocations), expenditure of travel funds for information associates training, solicitation of consultant for fiscal/student management project, budget changes, and informational items.

Contact: Miguel A. Nevarez, Pan American University, Edinburg, Texas 78539, (512) 381-2100.

Filed: September 24, 1987, 9:02 a.m.
TRD-8708215

10:30 a.m. The Development Committee will consider approval of alumni association service contract (records maintenance); acceptance of gifts from Houston Endowment, Central Power and Light Company, Tenneco, Rockwell Fund, and Fish Foundation; and informational items.

Contact: Miguel A. Nevarez, Pan American University, Edinburg, Texas 78539, (512) 381-2100.

Filed: September 24, 1987, 9:02 a.m.
TRD-8708216

10:45 a.m. The Brownsville Committee will consider president's informational items.

Contact: Miguel A. Nevarez, Pan American University, Edinburg, Texas 78539, (512) 381-2100.

Filed: September 24, 1987, 9:03 a.m.
TRD-8708217

11 a.m. The Academic Affairs Committee will consider approval of philosophy degree and informational items. The committee will also meet in executive session to consider personnel matters (Texas Civil Statutes, Article 6252-17, §2(g)), employment of faculty (new hires), appointment of acting associate vice president for academic affairs, appointment of acting dean for PAU-B, employment of development officer for PAU-B, and leave of absence for PAU-B.

Contact: Miguel A. Nevarez, Pan American University, Edinburg, Texas 78539, (512) 381-2100.

Filed: September 24, 1987, 9:03 a.m.
TRD-8708218

11:15 a.m. The board will hear reports from the Building and Grounds Committee, Finance Committee, Development Committee, Brownsville Committee, Academic Affairs Committee, and Committee of the Whole; approve the executive session agenda of September 8, 1987, meeting; discuss consider and act on appointment of Board Study Committee to review policy and procedures manual §11.1.5, concerning delegation policy, requirements for Open Meetings Act, proposed student publications handbook, proposed changes to organizational charts, and rescission of policy and procedures manual §10.4, concerning athletics events/athletic events card policy; consider president's informational items; and set date for next meeting.

Contact: Miguel A. Nevarez, Pan American University, Edinburg, Texas 78539, (512) 381-2100.

Filed: September 24, 1987, 9:03 a.m.
TRD-8708219



Texas Parks and Wildlife Department

Tuesday, October 6, 1987, 10 a.m. The Operation Game Thief Committee of the Texas Parks and Wildlife Department will meet at 4200 Smith School Road, Austin. According to the agenda, the committee will approve minutes of the April 7, 1987, meeting; hear the financial report; consider six year overview; discuss and possibly adopt emergency amendment to rules relating to the operation game thief program; and consider date of next meeting.

Contact: M. Stanley Brooks, 4200 Smith School Road, Austin, Texas 78744, (512) 389-4596.

Filed: September 23, 1987, 1:42 p.m.
TRD-8708192



Texas State Board of Public Accountancy

Thursday-Friday, September 24-25, 1987, 9 a.m. A full board meeting of the Texas State Board of Public Accountancy met for an emergency agenda revision in Suite 340, 1033 La Posada, Austin. According to the agenda, the board discussed board fees; adopted substantive rules: 501.2, Definitions; 501.3, Applicability; 501.11, Independence; 501.12, Integrity and Objectivity; 501.13, Payment of Commissions; 501.14, Receipt of Other Commissions; 501.21, Competence; 501.22, [Professional Auditing Standard and Accounting Principles] Auditing Standards; 501.23, Other Professional Standards; 501.25, Mandatory Continuing Education; 501.31, Confidential Client [Information] Communications; 501.32, Records; 501.41, Discreditable Acts; 501.42, Acting Through Others; 501.43, Advertising; 501.45, Competitive Bidding; 501.46, Form of Practice; 501.47, Firm Names; 501.48, Responses; 501.50, Contract and 501.44, Soliciting; 523.71, Application as a Sponsor; and 523.72, Renewal Application; 523.73, Obligations of the Sponsor; 523.74, National Registry of CPE Sponsors. The emergency status was necessary because immediate implementation of these rules of professional conduct is necessary in order to notify licensees of changes with 1988 license renewal. Fees must be established at this time in order for renewal of annual registration to be conducted.

Contact: Bob E. Bradley, 1033 La Posada, Suite 340, Austin, Texas 78752-3892, (512) 451-0241.

Filed: September 23, 1987, 8:47 a.m.
TRD-8708170



Texas Public Finance Authority

Wednesday, September 30, 1987, 9 a.m. The Texas Public Finance Authority will meet in Room 907, Sam Houston Building, 201 East 14th Street, Austin. According to the agenda, the authority will approve minutes of the September 18, 1987, meeting; consider selection of interim financial advisor; consider selection of bond counsel; discuss request for proposal for permanent financial advisor; discuss a request for proposal for insurance; decide on action to be taken in anticipation of bond issues; and set the date and time of next meeting.

Contact: Ann Moriarty, 907 Sam Houston Building, 201 East 14th Street, Austin, Texas 78701, (512) 463-5544.

Filed: September 22, 1987, 2:49 p.m.
TRD-8708157



Public Utility Commission of Texas

The Public Utility Commission of Texas will meet in Suite 450N, 7800 Shoal Creek Boulevard, Austin. Dates, times, and agendas follow.

Friday, October 9, 1987, 10 a.m. The Hearings Division will consider Docket 7720—Application of Central Power and Light Company for approval of a tariff to provide service to Occidental Chemical Corporation.

Contact: Phillip A. Holder, 7800 Shoal Creek Boulevard, Austin, Texas 78757, (512) 458-0100.

Filed: September 23, 1987, 1:43 p.m.
TRD-8708193

November 9, 1987, 10 a.m. The Hearings Division will consider Docket 7665—Complaint of Frederick K. Kay against Southwestern Bell Telephone Company.

Contact: Phillip A. Holder, 7800 Shoal Creek Boulevard, Austin, Texas 78757, (512) 458-0100.

Filed: September 23, 1987, 1:44 p.m.
TRD-8708194



Texas Water Commission

The Texas Water Commission will meet in the Stephen F. Austin Building, 1700 North Congress Avenue, Austin. Dates, times, rooms, and agendas follow.

Tuesday, November 10, 1987, 10 a.m. The commission will meet in Room 118, to consider Certificate of Adjudication 02-4879; North Montague County Water Supply District seeks to amend Certificate of Adjudication 02-4879 pursuant to the Texas Water Code, §11.122, and 31 TAC §295.1, et seq.; applicant seeks to authorize an increase in the diversion of water to 1260 acre-feet per annum, for recreational purposes and for municipal purposes, all being more fully set out in the application, Red River Basin, Montague County.

Contact: Karen A. Phillips, P.O. Box 13087, Austin, Texas 78711, (512) 463-7898.

Filed: September 22, 1987, 11:26 a.m.
TRD-8708139

Tuesday, November 10, 1987, 10 a.m. The commission will meet in Room 118, to consider hearing on Brookhaven Country Club Inc. 08-2367, seeking to amend Certificate of Adjudication 08-2367 pursuant to Texas Water Code, §11.122, and 31 TAC §295.1, et seq.; all being more fully set out in the notice, Trinity River Basin, Dallas County.

Contact: Karen A. Phillips, P.O. Box 13087, Austin, Texas 78711, (512) 463-7898.

Filed: September 22, 1987, 11:26 a.m.
TRD-8708140

Regional Agencies

Meetings Filed September 22

The Brazos River Authority, Board of Directors, met at the Hyatt Regency Ho DFW Airport, Irving, on September 1987, at 10 a.m. Information may be obtained from Mike Bukala, P.O. Box 7555, Waco, Texas 76714-7555, (817) 776-1441.

The Central Texas Mental Health and Mental Retardation Center, Board of Trustees, met at 408 Mulberry Drive, Brownwood, on September 28, 1987, at 4:30 p.m. Information may be obtained from Don Jones, P.O. Box 250, Brownwood, Texas 76804, (915) 646-9574, ext. 102.

The Leon County Central Appraisal District, Board of Directors, met in the Leon County Central Appraisal District Office, Centerville, on September 28, 1987, at 7:30 p.m. Information may be obtained from Robert Winn, P.O. Box 536, Centerville, Texas 75833, (214) 536-2252.

TRD-8708153



Meetings Filed September 23

The Golden Crescent Regional Planning Commission, Board of Directors, will meet in the GCRPC Boardroom, Regional Airport, Building 102, Victoria, on September 30, 1987, at 5 p.m. Information may be obtained from Patrick J. Kennedy, P.O. Box 2028, Victoria, Texas 77902, (512) 578-1587.

The Lower Rio Grande Valley Development Council, Board of Directors, will meet in the Harlingen Chamber of Commerce, 311 East Tyler, Harlingen, on September 29, 1987, at 1:30 p.m. Information may be obtained from Kenneth H. Jones, 4900 North 23rd Street, McAllen, Texas 78504, (512) 682-3481.

TRD-8708174



Meetings Filed September 24

The Education Service Center, Region III, Board of Directors, met at 1905 Leary Lane, Victoria, on September 24, 1987, at 3 p.m. Information may be obtained from Dennis Grizzle, 1905 Leary Lane, Victoria, Texas 77901, (512) 575-1471.

The Education Service Center, Region IX, Board of Directors, will meet in the Boardroom, 301 Loop 11, Wichita Falls, on September 29, 1987, at 1:30 p.m. Information may be obtained from Jim O. Rogers, 31 Loop 11, Wichita Falls, Texas 76305, (817) 322-6928.

The Lee County Appraisal District, Board of Directors, will meet at 218 East Richmond Street, Giddings, on September 30, 1987, at 9 a.m. Information may be obtained from Roy L. Holcomb, 218 East Richmond Street, Giddings, Texas 78942, (409) 542-9618.

The Sabine Valley Regional Mental Health and Mental Retardation Center, Board of Trustees, will meet at the Marshall Family

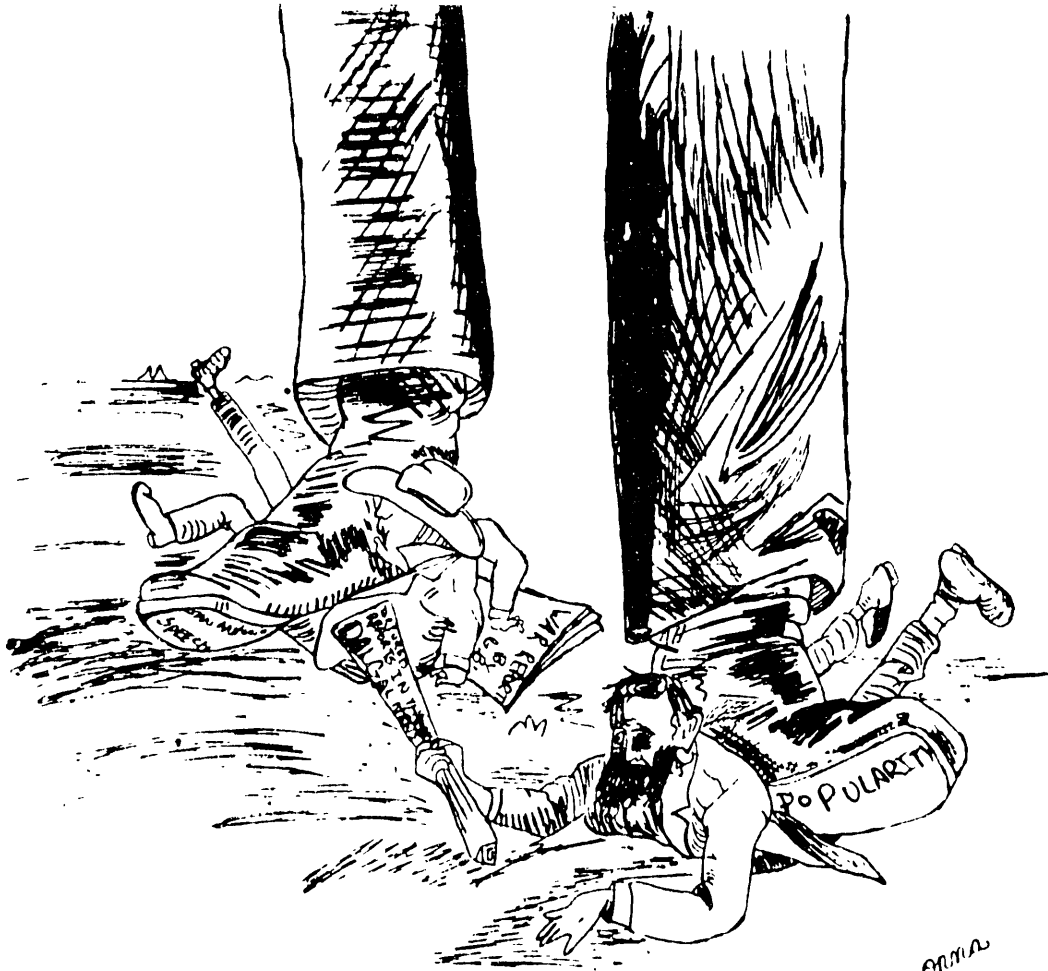
Services, 1500 West Grand Avenue, Marshall, on October 5, 1987, at 7 p.m. Information may be obtained from Ron Cookston, P.O. Box 6800, Longview, Texas 75608, (214) 758-2471.

The Tarrant Appraisal District, Board of Directors, will meet in Suite 505, 1701 River Run, Fort Worth, on September 29, 1987, at 10 a.m. Information may be obtained from Olive Miller, 1701 River Run, Suite

505, Fort Worth, Texas 76107, (817) 332-3151.

The Tyler County Appraisal District, Board of Directors, will meet at 103 Pecan, Woodville, on October 6, 1987, at 4 p.m. Information may be obtained from Mary F. Mann, P.O. Drawer 9, Woodville, Texas 75979, (409) 283-3736.

TRD-8708213



Name: Donna Mata
Grade: 8
School: Burnet Jr. High, Burnet

In Addition

The *Register* is required by statute to publish certain documents, including applications to purchase control of state banks, notices of rate ceilings, changes in interest rate and applications to install remote service units, and consultant proposal requests and awards.

To aid agencies in communicating information quickly and effectively, other information of general interest to the public is published as space allows.

Austin Travis County Mental Health Mental Retardation Bid Announcement

Pursuant to Texas Civil Statutes, Article 5547, §203 and §204; and the Texas Administrative Code, Austin Travis County Mental Health and Mental Retardation invites both private and public service care providers to submit a bid for residential services for 30 mentally retarded clients. All requests for bid packets must be submitted in writing to Ron Manns, ATCMHMR, P.O. Box 3548, Austin, Texas 78764-3548. Closing date for submission of bids is October 9, 1987. All bids will be reviewed by center staff to determine that server eligibility criteria are met, with contracts awarded on November 2, 1987, to those who propose the type of service delivery system which best meets clients' needs and provides the highest quality of care.

Issued in Austin, Texas, on September 16, 1987.

TRD-8708176 Sharon Taylor
Executive Assistant
Austin Travis County Mental Health
Mental Retardation

Filed: September 23, 1987
For further information, please call (512) 447-4141

Bond Review Board Notice of Bonds Exempt from Review

Bonds issued by the following are not subject to review by the Bond Review Board: a junior college district or regional college district created under the Education Code, Chapter 130; a hospital authority created under Texas Civil Statutes, Article 4437e or 4494r; a hospital district created under the Texas Constitution, Article 9, §4; a hospital laundry cooperative association created under Texas Civil Statutes, Article 4437f-1.; a health facilities development corporation created under the Health Facilities Development Act, (Texas Civil Statutes, Article 1528j); a municipal power agency created under Texas Civil Statutes, Article 1435a; a navigation district created under the Water Code, Chapter 60-63; a gas corporation created under Texas Civil Statutes, Article 1435; a river authority created pursuant to the Texas Constitution, Article III, §52, or Article XIV, §59; and a higher education authority created under the Education Code, Chapter 53.

Issued in Austin, Texas, on September 15, 1987.

TRD-8708137 Jerry Sander
Clerk
Bond Review Board

Filed: September 22, 1987
For further information, please call (512) 463-1778.

Texas Department of Commerce Private Activity Bond Report

The Tax Reform Act of 1986 (the Tax Act) imposes a volume ceiling on the aggregate principal amount of private activity bonds that may be issued within the State of Texas during any calendar year. The state ceiling for Texas, imposed by the Tax Act for calendar year 1987 is \$1,227,750,000.

State legislation, 70th Legislature, Senate Bill 1382, was passed, effective June 20, 1987, to establish the allocation process. The Act specifies that one-third of the state ceiling is to be made available to qualified mortgage bonds and of that one-third, one-third is available to the Texas Housing Agency. One-fourth of the state ceiling is available to state-voted issues, and the balance of the state ceiling is available for all other issuers of bonds requiring an allocation.

As a result of Senate Bill 1382, the aggregate amount for qualified mortgage bond subceiling is \$302,376,642, with \$201,584,428 available to the local housing authorities and \$100,792,214 available to the Texas Housing Agency. The aggregate amount for state-voted issues is \$226,782,481 and the amount for all other bonds requiring an allocation is \$377,970,802.

Generally, the state ceiling will be allocated on a first-come, first-served basis within the applicable subceiling, with the Texas Department of Commerce (the department) administering the allocation system.

The information that follows is a summary report of the allocation activity for the period September 14, 1987, through September 18, 1987.

Weekly Report on the 1987 Allocation of the State Ceiling
on Certain Private Activity Bonds as Pursuant to
Senate Bill 1382

Total amount of state ceiling remaining unreserved for the \$302,376,642 subceiling for qualified mortgage bonds under Senate Bill 1382 through September 18, 1987: \$302,376,642.

Total amount of state ceiling remaining unreserved for the \$226,782,481 subceiling for state-voted issues under Senate Bill 1382 from September 14, 1987, through September 18, 1987: \$226,782,481.

Total amount of state ceiling remaining unreserved for the \$377,970,802 subceiling for all other bonds under Senate Bill 1382 from September 14, 1987, through September 18, 1987: \$264,270,802.

Total amount of the \$1,227,750,000 state ceiling remaining unreserved as of September 18, 1987: \$793,429,925.

Carryforward request was filed by the Texas Housing Agency for \$100,000,000 for qualified mortgage bonds (Priority 3).

Comprehensive listing of bond issues which have received a reservation date per Senate Bill 1382 from September 14, 1987, through September 18, 1987, in order of issuer, user, description, and amount: Galveston County Housing Finance Corporation, Friendswood Retirement Living Center, Ltd., qualified residential rental projects, \$8,400,000.

Comprehensive listing of bonds issued and delivered as per Senate Bill 1382 from September 14, 1987, through September 18, 1987, in order of issuer, user, description, and amount: Montgomery County Industrial Development Corporation, Medical Manufacturing Partners: (a) Surgimedics, Inc., (b) Texas Medical Products, Inc., manufacturer of medical supplies; \$4,000,000. Issued in Austin, Texas, on September 21, 1987.

TRD-8708177 J. W. Lauderback
Executive Director
Texas Department of Commerce

Filed September 23, 1987
For further information, please call (512) 472-5059

Request for Proposals

Pursuant to Texas Civil Statutes, Article 6252-11c, the Texas Department of Commerce (the department) invites proposals for consulting services and assistance in conducting an assessment of the impact of the Texas music industry on the state's economy.

The department intends to accept an offer made in response to this solicitation based on its evaluation of cost and other factors described in the following paragraphs; however, the department reserves the right to reject any and all offers, in whole or part, if it determines a rejection to be in the best interests of the state.

Definitions. For the purposes of this solicitation, the term "we" means the Texas Department of Commerce and the term "you" refers to any person who might be interested in responding to this solicitation.

For your information. In May 1987, House Bill 4, 70th Legislature, 1987, combined several state agencies to form the Texas Department of Commerce. Among the agencies whose responsibilities were assumed by the department was the Texas Music Commission (TMC). The principal purpose of the TMC was to promote the development of the Texas music industry. In assuming the responsibilities of the TMC, the department recognizes that there is little information available on the impact of the various segments of the Texas music industry on the state's economy. The department believes that the collection and analysis of such information is a necessary predicate to any reasonably targeted effort to promote the development of the state's music industry.

Any proposal submitted in response to this solicitation should provide for the successful completion of the contemplated services no later than June 30, 1988. At a minimum, we seek the following services: the development of a methodology to collect and analyze data on the economic factors relating to the Texas music industry; the implementation of the data collection effort; the development of a data base using data collected; the analysis and interpretation of the data; the preparation of reports and/or other appropriate vehicles for the dissemination of the results of the study; and assistance in making recommendations to the department for the direction of the department's effort on behalf of the state's music industry.

In order for your offer to be considered, you will have to provide the following information. Describe in detail

your knowledge of the music industry in general and, more specifically, of the Texas music industry. To the extent you have significant experience, affiliations, and/or contacts within the music industry, discuss these as well. Describe your experience in: survey research; data base development; marketing; and economic development and/or economic analysis. Describe the professional background of the individual(s) who will be primarily responsible for providing the contemplated services to the department. Attach resumes of such professionals as appropriate. Submit writing samples that reflect your ability to prepare the desired reports and other vehicles for disseminating the results of the results of the contemplated study. State the amount of your proposed fee for providing the desired services. Provide a breakdown of how this fee will be applied (i.e., professional services, clerical services, postage, and long-distance telephone charges, etc.). In addition to the previous information, you are invited to provide additional relevant information that supports your proposal. Your experience will be an evaluative factor. There is not one mandatory form for use in establishing prior experience. This information should be presented clearly, concisely, and accurately.

Be aware of and understand the potential application of the common law doctrine of sovereign immunity which is applicable to contract and tort claims against the state except to the extent statutorily waived under the Texas Tort Claims Act, Chapter 101, Texas Civil Statutes, Civil Practices and Remedies Code; and the Texas Open Records Act (Texas Civil Statutes, Article 6252-17a) which governs all issues concerning public disclosure of state agency contract documents; we adhere to the requirements of this law?

Your response must be received no later than 5 p.m., November 9, 1987. We anticipate entering into the resulting contract on or about November 16, 1987.

The state assumes no responsibility for expenses incurred in preparing responses to this solicitation. Address your responses to Dana Shelton, Texas Department of Commerce, P.O. Box 12728, Austin, Texas 78711, (512) 469-9111.

Issued in Austin, Texas, on September 21 1987

TRD 8708173 J W Lauderback
Executive Director
Texas Department of Commerce

Filed September 23, 1987
For further information, please call (512) 469-9111

Employees Retirement System of Texas Requests for Proposals

In accordance with the Insurance Code, Article 3.50-2, §4, the Employees Retirement System of Texas (ERS) invites proposals to conduct the annual audit of the insurance carrier's operations under the Texas Employees Uniform Group Insurance Program. Such audit shall include, but not be limited to, claims administration, contract compliance, gross and net costs, administration costs, benefits, utilization of benefits, and the annual accounting specified under the Insurance Code, Article 3.50-2, §9. It will not entail an audit of the insurance carrier's financial records.

Firms wishing to respond to the request should have superior recognized expertise and specialization in the

accounting and audit principles which deal with the review of employee benefit programs, State of Texas policies and procedures, group insurance contract administration, and insurance administration.

Instructions which detail information regarding the project are available upon request from ERS.

The deadline for receipt of the proposals in response to this request will be 5 p.m. on November 6, 1987.

ERS reserves the right to accept or reject any or all proposals submitted. ERS is under no legal requirement to execute a resulting contract on the basis of this advertisement.

ERS intends to use responses as a basis for further negotiations of specific project details. ERS will base its choice on cost, demonstrated competence, superior qualifications, and evidence of conformance with the RFP criteria; however, since this is a continuation of a service previously performed, it is the intent of ERS to award the contract for the consulting services to the firm that previously performed the services unless a clearly superior proposal is received.

The request for proposals (RFP) does not commit ERS to pay any costs incurred prior to execution of a contract. Issuance of this material in no way obligates ERS to award a contract or to pay any costs incurred in the preparation of a response. ERS specifically reserves the right to vary all provisions set forth at any time prior to execution of a contract where ERS deems it to be in the best interest of the State of Texas.

For further information regarding this notice or to obtain copies of the RFP instructions, contact James W. Sarver, Director, Group Insurance Division, Employees Retirement System of Texas, 18th and Brazos, P.O. Box 13207, Austin, Texas 78711-3207, (512) 476-6431, ext. 217.

Issued in Austin, Texas, on September 22, 1987.

TRD-8708162 Clayton T. Garrison
Executive Director
Employees Retirement System of Texas

Filed: September 23, 1987
For further information, please call (512) 476-6431, ext. 178.



Texas Department of Health Intent to Revoke Certificates of Registration

The Texas Department of Health, Bureau of Radiation Control, filed complaints against the following registrants, pursuant to *Texas Regulations for Control of Radiation* (TRCR) 13.8. The agency intends to revoke the certificates of registration, order the registrants to cease and desist use of radiation machine(s), and order the registrants to divest themselves of such equipment, presenting evidence satisfactory to the Bureau of Radiation Control that they have complied with the order and the provisions of Texas Civil Statutes, Article 4590f. If the fee is paid within 30 days of the date of each complaint, no order will be issued. The complaints are as shown following this notice.

This notice affords the opportunity for a hearing to show cause why the certificates of registration should not be revoked. A written request for a hearing must be received within 30 days from the date of service of the complaint to be valid. Such written request must be filed with David

K. Lacker, Chief, Bureau of Radiation Control, (Director, Radiation Control Program), 1100 West 49th Street, Austin, Texas 78756-3189. Should no request for a public hearing be timely filed or if the fee is not paid, the certificates of registration will be revoked at the end of the 30-day period of notice.

A copy of all relevant material is available for public inspection at the Bureau of Radiation Control, 1212 East Anderson Lane, Austin, Monday-Friday, 8 a.m.-5 p.m. (except holidays).

The Texas Department of Health, Bureau of Radiation Control, Division of Compliance and Inspection (the agency), through its division director, makes the following complaint against Harold Cohen, D.D.S., 1701 West Berry, Fort Worth, Texas 76110 (the registrant), holder of Certificate of Registration Number 5-08957.

Texas Regulations for Control of Radiation (TRCR) 12.11(b) requires payment of an annual fee for each certificate of registration for radiation machines, in the amount indicated for the appropriate category in TRCR, Schedule 12.31. The fee shall be received each year on or before the last day of the expiration month of the certificate of registration. On February 21, 1985, the registrant was billed \$63 for fees due on Certificate of Registration Number 5-08957, covering the period from April, 1984-July, 1985. On July 30, 1985, the registrant remitted \$40 leaving a balance due of \$23. On June 26, 1986, the agency informed the registrant of the delinquency of payment, giving the registrant opportunity to show compliance with all requirements of the law for retention of the certificate of registration. Payment of fees has not been received.

On December 4, 1985, the registrant was billed \$40 for fees due on Certificate of Registration Number 5-08957, covering the period from July, 1985-June, 1986. Payment of fees has not been received.

On August 11, 1986, the registrant was billed \$61 for fees due on Certificate of Registration Number 5-08957, covering the period from July, 1986-June, 1987. Payment of fees has not been received.

On July 3, 1987, the registrant was billed \$82 for fees due on Certificate of Registration Number 5-08957, covering the period from July, 1987-June, 1988. Payment of fees has not been received.

Therefore, the agency, as provided in *Texas Regulations for Control of Radiation* 13.8(b), requests that an order be issued revoking the certificate of registration of the registrant and ordering the registrant to cease and desist use of such machine(s), and further that the registrant, in order to be in compliance with the Texas Radiation Control Act, Texas Civil Statutes, Article 4590f, §13, either disable the machine(s) or divest himself of it, presenting evidence satisfactory to the Bureau of Radiation Control that he has complied with this order and the provisions of Texas Civil Statutes, Article 4590f.

If the fees are paid within 30 days of the date of this complaint, no order will be issued.

The Texas Department of Health, Bureau of Radiation Control, Division of Compliance and Inspection (the agency), through its division director, makes the following complaint against Research Concepts, Inc., 15615 Four Seasons, Houston, Texas 77084 (the registrant), holder of Certificate of Registration Number 11-10147.

Texas Regulations for Control of Radiation (TRCR) 12.11(b) requires payment of an annual fee for each certificate of registration for radiation machine services, in

the amount indicated for the appropriate category in TRCR, Schedule 12.31. The fee shall be received each year on or before the last day of the expiration month of the certificate of registration. On October 11, 1985, the registrant was billed \$100 for fees due on Certificate of Registration Number 11-10147, covering the the period from May, 1985-April, 1986. On May 29, 1986, and June 30, 1986, the agency informed the registrant of the delinquency of payment, giving the registrant opportunity to show compliance with all requirements of the law for termination of the certificate of registration. Payment of fees has not been received.

Therefore, the agency, as provided in *Texas Regulations for Control of Radiation* 13.8(b), requests that an order be issued revoking the certificate of registration of the registrant and ordering the registrant to cease and desist such services, and further that the registrant, in order to be in compliance of the Texas Radiation Control Act, Texas Civil Statutes, Article 4590f, §13, present evidence satisfactory to the Bureau of Radiation Control that it has complied with this order and the provisions of Texas Civil Statutes, Article 4590f.

If the fee is paid within 30 days of the date of this complaint, no order will be issued.

The Texas Department of Health, Bureau of Radiation Control, the Division of Compliance and Inspection (the agency), through its division director, makes the following complaint against Rae Medical Corporation of Texas, 5629 Mitchelldale, P.O. Box 55447, Houston, Texas 77255 (the registrant), holder of Certificate of Registration Number 11-13588.

Texas Regulations for Control of Radiation (TRCR) 12.11(b) requires payment of an annual fee for each certificate of registration for radiation machines, in the amount indicated for the appropriate category in TRCR, Schedule 12.31. The fee shall be received each year on or before the last day of the expiration month of the certificate of registration. On November 1, 1985, the registrant was billed \$100 for fees due on Certificate of Registration Number 11-13588, covering the period from August, 1985-July, 1986. Payment of fees has not been received.

On July 15, 1986, the registrant was billed \$130 for fees due on Certificate of Registration Number 11-13588, covering the period from August, 1986-July, 1987. Payment of fees has not been received.

Therefore, the agency, as provided in *Texas Regulations for Control of Radiation* 13.8(b), requests that an order be issued revoking the certificate of registration of the registrant and ordering the registrant to cease and desist use of such machine(s), and further that the registrant, in order to be in compliance with the Texas Radiation Control Act, Texas Civil Statutes, Article 4590f, §13, either disable the machine(s) or divest itself of it, presenting evidence satisfactory to the Bureau of Radiation Control that it has complied with this order and the provisions of Texas Civil Statutes, Article 4590f.

If the fee is paid within 30 days of the date of this complaint, no order will be issued.

Issued in Austin, Texas, on September 17, 1987.

TRD-8708092 Robert A. MacLean
Deputy Commissioner
Professional Services
Texas Department of Health

Filed: September 21, 1987
For further information, please call (512) 835-7000.

The Texas Department of Health, Bureau of Radiation Control, filed complaints against the following registrants, pursuant to *Texas Regulations for Control of Radiation* (TRCR) 13.8. The agency intends to revoke the certificates of registration, order the registrants to cease and desist use of radiation machine(s), and order the registrants to divest themselves of such equipment, presenting evidence satisfactory to the Bureau of Radiation Control that they have complied with the order and the provisions of Texas Civil Statutes, Article 4590f. The complaints are as shown following this notice.

This notice affords the opportunity for a hearing to show cause why the certificates of registration should not be revoked. A written request for a hearing must be received within 30 days from the date of service of the complaint to be valid. Such written request must be filed with David K. Lacker, Chief, Bureau of Radiation Control, (Director, Radiation Control Program), 1100 West 49th Street, Austin, Texas 78756-3189. Should no request for a public hearing be timely filed, the certificates of registration will be revoked at the end of the 30-day period of notice.

A copy of all relevant material is available for public inspection at the Bureau of Radiation Control, 1212 East Anderson Lane, Austin, Monday-Friday, 8 a.m.-5 p.m. (except holidays).

The Texas Department of Health, Bureau of Radiation Control, Division of Compliance and Inspection (the agency), through its division director, makes the following complaint against Dental Medical Center, 5445 Almeda, Suite 500, Houston, Texas 77004 (the registrant), holder of Certificate of Registration Number 11-12773.

Texas Regulations for Control of Radiation (TRCR) 12.11(b) requires payment of an annual fee for each certificate of registration for radiation machines, in the amount indicated for the appropriate category in TRCR, Schedule 12.31. The fee shall be received each year on or before the last day of the expiration month of the certificate of registration. On November 15, 1985, the registrant was billed \$50 for fees due on Certificate of Registration Number 11-12773, covering the period from October, 1985-September, 1986. On July 31, 1986, the agency informed the registrant of the delinquency of payment, giving the registrant opportunity to show compliance with all requirements of the law for retention of the certificate of registration. Payment of fees has not been received.

On September 15, 1986, the registrant was billed \$82 for fees due on Certificate of Registration Number 11-12773, covering the period from October, 1986-September, 1987. Payment of fees has not been received.

TRCR 42.8 requires that the registrant shall notify the agency in writing within 30 days of any change which would render the information contained in the certificate of registration no longer accurate. On July 25, 1986, the agency received return mail indicating that the registrant had changed address. On July 31, 1986, the agency notified the registrant by certified mail of the requirement. An application for certificate of registration was enclosed with the notice for the registrant's use in meeting the requirement. Receipt of the certified mail was acknowledged on August 4, 1986. Notification of change of address has not been received.

Therefore, the agency, as provided in *Texas Regulations for Control of Radiation* 13.8(b), requests that an order be issued revoking the certificate of registration of the registrant and ordering the registrant to cease and desist use of such machine(s), and further that the registrant, in order to be in compliance with the Texas Radiation Con-

trol Act, Texas Civil Statutes, Article 4590f, §13, either disable the machine(s) or divest himself of it, presenting evidence satisfactory to the Bureau of Radiation Control that he has complied with this order and the provisions of Texas Civil Statutes, Article 4590f.

If the previous items are corrected within 30 days of the date of this complaint, no order will be issued.

The Texas Department of Health, the Bureau of Radiation Control, Division of Compliance and Inspection (the agency), through its division director, makes the following complaint against Susie A. Davis, M.D., Brookhaven Medical Center, P.O. Box 788, Brookshire, Texas 77423 (the registrant), holder of Certificate of Registration Number 11-11777.

Texas Regulations for Control of Radiation (TRCR) 12.11(b) requires payment of an annual fee for each certificate of registration for radiation machines, in the amount indicated for the appropriate category in TRCR, Schedule 12.31. The fee shall be received each year on or before the last day of the expiration month of the certificate of registration. On November 20, 1986, the registrant was billed \$76 for fees due on Certificate of Registration Number 11-11777, covering the period from December, 1986-November, 1987. Payment of fees has not been received.

TRCR 42.8 requires that the registrant shall notify the agency within 30 days of any change which would render the information contained in the certificate of registration no longer accurate. On August 11, 1986, the agency notified the registrant that the information was no longer accurate and of the requirement to notify the agency of change of address. Application for certificate of registration was enclosed with the notice for the registrant's use in meeting the requirement. On October 20, 1986, the agency again notified the registrant of the requirement, by certified mail, and enclosed an application for certificate of registration for the registrant's use. Receipt of the correspondence was acknowledged on October 23, 1986. Notification of change of address has not been received.

Therefore, the agency, as provided *Texas Regulations for Control of Radiation 13.8(b)*, requests that an order be issued revoking the certificate of registration of the registrant and ordering the registrant to cease and desist use of such machine(s), and further that the registrant, in order to be in compliance with the Texas Radiation Control Act, Texas Civil Statutes, Article 4590f, §13, either disable the machine(s) or divest himself of it, presenting evidence satisfactory to the Bureau of Radiation Control that he has complied with this order and the provisions of Texas Civil Statutes, Article 4590f.

If the previous items are corrected within 30 days of the date of this complaint, no order will be issued.

The Texas Department of Health, Bureau of Radiation Control, Division of Compliance and Inspection (the agency), through its division director, and makes the following complaint against Thomas H. Lindsey, D.D.S., 2500 Wilbarger Street, Vernon (the registrant), holder of Certificate of Registration Number 4-09850.

Texas Regulations for Control of Radiation (TRCR) 12.11b requires payment of an annual fee for each certificate of registration for radiation machines, in the amount indicated for the appropriate category in TRCR, Schedule 12.31. The fee shall be received each year on or before the last day of the expiration month of the certificate of registration. On February 18, 1987, the registrant was billed \$61 for fees due on Certificate of Registration

Number 4-09850, covering the period from March, 1987-February, 1988. On June 23, 1987, the agency informed the registrant of the delinquency of payment, giving the registrant opportunity to show compliance with all requirements of the law for retention of the certificate of registration. Payment of fees has not been received.

TRCR 32.7(a)(5) requires that a device be provided to terminate the exposure after a preset time or exposure. An inspection conducted by an agency representative on January 21, 1987, revealed that the Ritter, Serial Number 8D2539, dental radiographic machine failed to meet the requirement. A notice of violation was issued to the registrant on January 21, 1987, requesting a written reply providing steps taken to correct the violation and results achieved, steps taken to avoid recurrence of the violation, and the date full compliance would be achieved. No response was received by the agency. On April 8, 1987, the agency issued a second notice of violation by certified mail, requiring a written notification of corrective actions within 10 days of receipt of the notice. Receipt of the second notice was acknowledged on April 13, 1987. No response was received by the agency. On June 23, 1987, the agency issued a third notice of violation by certified mail, advising the registrant that if notification of corrective actions was not received within 10 days of receipt of the notice, the agency must consider issuing a complaint, requesting an order for revocation of the certificate of registration, requiring that the registrant cease and desist radiographic operations, and that the registrant divest himself of the radiographic equipment. Receipt of the third notice was acknowledged on June 25, 1987. No response has been received by the agency.

Therefore, the agency, as provided in *Texas Regulations for Control of Radiation 13.8(b)*, requests that an order be issued revoking the certificate of registration of the registrant and ordering the registrant to cease and desist use of such machine(s), and further that the registrant, in order to be in compliance with the Texas Radiation Control Act, Texas Civil Statutes, Article 4590f, §13 either disable the machine(s) or divest himself of it, presenting evidence satisfactory to the Bureau of Radiation Control that he has complied with this order and the provisions of Texas Civil Statutes, Article 4590f.

If the previous items are corrected within 30 days of the date of this complaint, no order will be issued.

The Texas Department of Health, Bureau of Radiation Control, Division of Compliance and Inspection (the agency), through its division director, and makes the following complaint against Alfred Marquez, Jr., D.D.S., 5939 B Gateway, Suite 1, El Paso, Texas 79925 (the registrant), holder of Certificate of Registration Number 3-11442.

Texas Regulations for Control of Radiation (TRCR) 12.11(b) requires payment of an annual fee for each certificate of registration for radiation machines, in the amount indicated for the appropriate category in TRCR, Schedule 12.31. The fee shall be received each year on or before the last day of the expiration month of the certificate registration. On June 16, 1986, the registrant was billed \$61 for fees due on Certificate of Registration Number 3-11442, covering the period from July, 1986-June, 1987. On April 13, 1987, the agency informed the registrant of the delinquency of payment, giving the registrant opportunity to show compliance with all requirements of the law for retention of the certificate of registration. Payment of fees has not been received.

TRCR 42.7 requires that the registrant shall file application for renewal of certificate of registration in accordance

with TRCR 42.3. On May 13, 1987, the agency notified the registrant that Certificate of Registration Number 3-11442 was due to expire on July 31, 1987, and of the requirement to submit application for renewal. Application forms were enclosed with the notice for the registrant's use in meeting the requirement. On July 31, 1987, Certificate of Registration Number 3-11442 expired. Application for renewal of the certificate of registration has not been received.

Therefore, the agency, as provided in *Texas Regulations for Control of Radiation* 13.8(b), requests that an order be issued revoking the certificate of registration of the registrant and ordering the registrant to cease and desist use of such machine(s), and further that the registrant, in order to be in compliance with the Texas Radiation Control Act, Texas Civil Statutes, Article 4590f, §13, either disable the machine(s) or divest himself of it, presenting evidence satisfactory to the Bureau of Radiation Control that he has complied with this order and the provisions of Texas Civil Statutes, Article 4590f.

If the previous items are corrected within 30 days of the date of this complaint, no order will be issued.

Issued in Austin, Texas, on September 17, 1987

TRD-8708099 Robert A. MacLean
Deputy Commissioner
Professional Services
Texas Department of Health

Filed September 21, 1987
For further information, please call (512) 835-7000

Intent to Revoke a Radioactive Material License

The Texas Department of Health, Bureau of Radiation Control, filed a complaint against the following licensee, pursuant to *Texas Regulations for Control of Radiation* (TRCR) 13.8. The agency intends to revoke the radioactive material license, order the licensee to cease and desist use of such radioactive materials, and order the licensee to divest himself of the radioactive material, presenting evidence satisfactory to the Bureau of Radiation Control that they have complied with the order and the provisions of Texas Civil Statutes, Article 4590f. If the fee is paid within 30 days of the date of the complaint, no order will be issued. The complaint is as following this notice.

This notice affords the opportunity for a hearing to show cause why the radioactive material license should not be revoked. A written request for a hearing must be received within 30 days from the date of service of the complaint to be valid. Such written request must be filed with David K. Lacker, Chief, Bureau of Radiation Control, (Director, Radiation Control Program), 1100 West 49th Street, Austin, Texas 78756-3189. Should no request for a public hearing be timely filed or if the fee is not paid, the radioactive material license will be revoked at the end of the 30-day period of notice.

A copy of all relevant material is available for public inspection at the Bureau of Radiation Control, 1212 East Anderson Lane, Austin, Monday-Friday, 8 a.m.-5 p.m. (except holidays).

The Texas Department of Health, Bureau of Radiation Control, Division of Compliance and Inspection, (the agency), through its division director, and makes the following complaint against Stor-Tech Well Surveys, 1216

Indiana, South Houston, Texas 77578 (the licensee), holder of Radioactive Material License Number 11-3655.

Texas Regulations for Control of Radiation (TRCR) 12.11(b) requires payment of an annual fee for a radioactive material license in the amount indicated for the appropriate category in TRCR, Schedule 12.21. The fee shall be received each year on or before the last day of the expiration month of the license. On October 18, 1985; May 15, 1986; and May 18, 1987, the licensee was billed \$500, \$862, and \$862 for fees due on Radioactive Material License Number 11-3655, covering the period from June 1985-May 1986, June 1986-May 1987, and June 1987-May 1988, respectively. In correspondence dated June 20, 1986, and July 23, 1987, the agency informed the licensee of the delinquency of payment, giving the licensee opportunity to show compliance with all requirements of the law for retention of the radioactive material license. Payment of fees has not been received.

Therefore, the agency as provided in *Texas Regulations for Control of Radiation* 13.8(b), requests that an order be issued revoking the radioactive material license of the licensee and ordering the licensee to cease and desist use of such radioactive materials, and further that the licensee, in order to be in compliance with the Texas Radiation Control Act, Texas Civil Statutes, Article 4590f, §13, divest himself of the radioactive materials, presenting evidence satisfactory to the Bureau of Radiation Control that he has complied with this order and the provisions of Texas Civil Statutes, Article 4590f.

If fees are paid within 30 days of the date of this complaint, no order will be issued.

Issued in Austin, Texas, on September 17, 1987.

TRD-8708093 Robert A. MacLean, M.D.
Deputy Commissioner
Professional Services
Texas Department of Health

Filed: September 21, 1987
For further information, please call (512) 835-7000.

Licensing Action for Radioactive Materials

The Texas Department of Health has taken actions regarding licenses for the possession and use of radioactive materials as listed in the table below. The subheading labeled "Location" indicates the city in which the radioactive material may be possessed and/or used. The location listing "Throughout Texas" indicates that the radioactive material may be used on a temporary basis at job sites throughout the state.

NEW LICENSES ISSUED:

Location	Name	License #	City	Amend-ment #	Date of Action
Houston	Parkway Imaging and Medical Services	11-4111	Houston	0	09/03/87
Houston	IMAGENTS, Inc	L04107	Houston	0	09/11/87
Throughout Texas	Perf-O-Log	11-3947	Clute	0	08/21/87
Throughout Texas	Geo-Tag	12-4018	Midland	0	08/24/87

AMENDMENTS TO EXISTING LICENSES ISSUED:

Location	Name	License #	City	Amend-ment #	Date of Action
Amherst	South Plains Hospital and Clinic	L03253	Amherst	2	09/04/87

Arlington	The University of Texas at Arlington	L00248	Arlington	21	09-07-87
Austin	Seton Medical Center	L02896	Austin	15	09-11-87
Beaumont	Baptist Hospital of Southeast Texas	10-358	Beaumont	46	08-21-87
Bryan	St. Joseph Hospital and Health Center	L00573	Bryan	28	09-10-87
Crosbyton	Crosbyton Clinic Hospital	2-3240Crosbyton	3	08-20-87	
Dallas	Lafarge Corporation	5-2900	Dallas	2	08-26-87
Dallas	Baylor University Medical Center	5-1290	Dallas	16	09-01-87
Fort Worth	Syncor International Corporation	5-2905	Fort Worth	18	09-02-87
Fort Worth	Michael L. Stoltz, M.D.	L03767	Fort Worth	2	09-05-87
Galveston	Teledyne Pipe	11-2227	Galveston	8	08-25-87
Houston	Baylor College of Medicine	11-587	Houston	19	09-01-87
Houston	Exxon Production Research Company	11-205	Houston	25	08-27-87
Houston	Spring Branch Memorial Hospital	11-2473	Houston	13	08-28-87
Lewisville	Lewisville Memorial Hospital	5-2739	Lewisville	9	08-24-87
Lone Star	Lone Star Steel Company	L01720	Lone Star	17	09-08-87
Lubbock	St. Mary of the Plains Hospital & Rehabilitation Ctr	L01547	Lubbock	31	09-10-87
New Braunfels	APG Lime Corp	L02076	New Braunfels	9	09-01-87
Pasadena	Crown Central Petroleum Corporation	L01344	Houston	11	09-10-87
Richardson	The University of Texas at Dallas	5-2114	Richardson	30	09-01-87
San Antonio	King Laboratories, Inc	9-3368	San Antonio	1	08-21-87
San Antonio	Kaiser Cement Corporation	L02654	San Antonio	4	09-08-87
Throughout Texas	Pro-Technics II, Inc	11-3835	Houston	5	08-20-87
Throughout Texas	Sonic Surveys, Inc	11-2622	Houston	4	08-20-87

AMENDMENTS TO EXISTING LICENSES ISSUED CONTINUED:

Location	Name	License #	City	Amendment #	Date of Action
Throughout Texas	K & N Perforators	8-2300	Victoria	17	08-27-87
Throughout Texas	G & G A Ray, Inc	8-3326	Corpus Christi	10	08-25-87
Throughout Texas	Basin Industrial A Ray, Inc	8-2280	Corpus Christi	18	08-25-87
Throughout Texas	Midwest Inspection Service	1-3120	Perryton	20	08-26-87
Throughout Texas	Northshore A Ray & Testing Company	11-3912	Houston	9	08-26-87
Throughout Texas	Southwestern Laboratories, Inc	11-0299	Houston	52	08-31-87
Throughout Texas	Young Brothers, Inc., Contractors	6-4095	Waco	1	08-31-87
Throughout Texas	State Dept of Highways and Public Transportation	6-197	Austin	49	08-28-87
Throughout Texas	Patterson Truck Line, Inc	99-3148	Morgan City, LA	11	08-28-87
Throughout Texas	Texas Air Control Board	L01715	Austin	21	09-08-87
Throughout Texas	Advanced Well and Wireline Service, Inc	1-03571	Cuddings	4	09-11-87
Throughout Texas	Computer Logging, Inc	L03187	Pleasanton	5	09-08-87
Throughout Texas	Warrington, Inc	L03074	Pflugerville	11	09-09-87
Vinton	Border Steel Rolling Mills, Inc	L03137	El Paso	3	09-04-87
Woodville	S & T Fabricators, Inc	10-3652	Woodville	6	08-26-87

RENEWALS OF EXISTING LICENSES ISSUED:

Location	Name	License #	City	Amendment #	Date of Action
Austin	Ernest L. Howerton, M.D.	6-3318	Austin	2	09/02/87
Dallas	Eye Associates	5-988	Dallas	8	08/26/87
El Paso	Fay E. Millett, M.D.	3-1529	El Paso	6	09/03/87
El Paso	El Paso Cancer Treatment Center	L01847	El Paso	21	09/08/87
Houston	Rice University	11-3050	Houston	3	08/28/87
Houston	Rosewood General Hospital	11-1204	Houston	15	09/03/87
Houston	Herman Hospital	L00650	Houston	32	09/10/87
Irving	Syncor International Corporation	5-2048	Irving	51	09/02/87
Junction	Kimble Hospital	4-3312	Junction	1	09/04/87
McAllen	Arland K. Faust, M.D. and Gilbert O. Dean, Jr., M.D.	8-1280	McAllen	7	09/03/87
Pampa	Cabot Corporation	L03261	Pampa	2	09/11/87
San Antonio	Syncor International Corp	9-2033	San Antonio	36	09/02/87
Throughout Texas	The Dow Chemical Company	11-451	Freeport	41	08/20/87
Throughout Texas	Scientific Measurement Systems, Inc	6-2696	Austin	20	08/24/87
Throughout Texas	OMSCO Industries, Inc	11-2726	Houston	6	08/25/87
Throughout Texas	Exploration Logging of U.S.A. Inc	11-3258	Houston	3	08/25/87
Throughout Texas	City of Waco	6-1453	Waco	10	08/24/87
Throughout Texas	ABC O Industries, Inc	4-3153	Abilene	7	08/26/87
Tyler	East Texas Cancer Center	7-3281	Tyler	5	09/03/87
Victoria	R. A. Stevenson, Jr., M.D.	8-616	Victoria	10	09/08/87

TERMINATIONS OF LICENSES ISSUED:

Location	Name	License #	City	Amendment #	Date of Action
Houston	Travis Medicine Association	11-2711	Houston	5	08/26/87

In issuing new licenses and amending and renewing existing licenses, the Department of Health, Bureau of Radiation Control, has determined that the applicants are qualified by reason of training and experience to use the material in question for the purposes requested in accordance with *Texas Regulations for Control of Radiation* in such a manner as to minimize danger to public health and safety or property and the environment; the applicants' proposed equipment, facilities, and procedures are adequate to minimize danger to public health and safety or property and the environment; the issuance of the license(s) will not be inimical to the health and safety of the public or the environment; and the applicants satisfy any applicable special requirements in the *Texas Regulations for Control of Radiation*.

This notice affords the opportunity for a hearing on written request of a licensee, applicant, or "person affected" within 30 days of the date of publication of this notice. A "person affected" is defined as a person who is resident of a county, or a county adjacent to the county, in which the radioactive materials are or will be located, including any person who is doing business or who has a legal interest in land in the county or adjacent county, and any local government in the county; and who can demonstrate that he has suffered or will suffer actual injury or economic damage due to emissions of radiation. A licensee, applicant, or "person affected" may request a hearing by writing David K. Lacker, Chief, Bureau of Radiation Control (Director, Texas Radiation Control Program), 1100 West 49th Street, Austin, Texas 78756.

Any request for a hearing must contain the name and address of the person who considers himself affected by agency action, identify the subject license, specify the reasons why the person considers himself affected, and state the relief sought. If the person is represented by an agent, the name and address of the agent must be stated.

Copies of these documents and supporting materials are available for inspection and copying at the office of the Bureau of Radiation Control, Texas Department of Health, 1212 East Anderson Lane, Austin, from 8 a.m. to 5 p.m. Monday through Friday (except holidays).

Issued in Austin, Texas, on September 22, 1987

TRD-8708128 Robert A. MacLean
Deputy Commissioner
Texas Department of Health

Filed: September 22, 1987
For further information, please call (512) 465-2640.



Rescission of Orders

Notice is given that the Bureau of Radiation Control, Texas Department of Health, rescinded the following order:

Order of revocation issued July 30, 1987, to Nicholas T. Kouches, P.O. Box 3545, Victoria, Texas 77903, holder of Radioactive Material License Number 8-3886.

A copy of all relevant material is available for public inspection at the Bureau of Radiation Control, 1212 East Anderson Lane, Austin, Monday-Friday, 8 a.m.-5 p.m. (except holidays).

Issued in Austin, Texas, on September 17, 1987

TRD-8708095 Robert A. MacLean
Deputy Commissioner
Professional Services
Texas Department of Health

Filed: September 21, 1987
For further information, please call (512) 835-7000



Notice is given that the Bureau of Radiation Control, Texas Department of Health, rescinded the following order:

Order of revocation issued August 25, 1987, to Luke R. Long, 8630 Easton Commons Drive, Suite 304, Houston, Texas 77095, holder of Certificate of Registration Number 11-01485.

A copy of all relevant material is available for public inspection at the Bureau of Radiation Control, 1212 East Anderson Lane, Austin, Monday-Friday, 8 a.m.-5 p.m. (except holidays).

Issued in Austin, Texas, on September 17, 1987

TRD-8708097 Robert A. MacLean, M.D.
Deputy Commissioner
Professional Services
Texas Department of Health

Filed: September 21, 1987
For further information, please call (512) 835-7000



Revocation of Certificates of Registration

The Texas Department of Health, having duly filed complaints pursuant to *Texas Regulations for Control of Radiation* Part 13.8, has revoked the following certificates of registration. Listed following are registrant, registration number, location, and date of action: Dennis E. Stansbury, D.D.S., 7-05280, Tyler, August 7, 1987; C. E. Newman, D.P.M., 6-11240, Austin, August 7, 1987; Alfred Garza, D.D.S., 11-05545, Houston, August 7, 1987; Oran Lance Troegle, D.D.S., 5-06474, Mesquite, August 7, 1987; Jody L. O'Quinn, D.D.S., 9-07059, San Antonio, August 6, 1987; Jack W. Wilson, D.D.S., 5-05451, Dallas, August 6, 1987; Merlin Kunkel, D.V.M., 7-14186, Texarkana, August 7, 1987; Brian J. Tucker, D.D.S., 1-08565, Amarillo, August 14, 1987; Richmond Industries, 11-08742, Houston, August 14, 1987.

A copy of all relevant material is available for public inspection at the Bureau of Radiation Control, 1212 East Anderson Lane, Austin, Monday-Friday, 8 a.m.-5 p.m. (except holidays).

Issued in Austin, Texas, on September 17, 1987.

TRD-8708094 Robert A. MacLean
Deputy Commissioner
Professional Services
Texas Department of Health

Filed: September 21, 1987
For further information, please call (512) 835-7000.



Revocation of Radioactive Material Licenses

The Texas Department of Health, having duly filed complaints pursuant to *Texas Regulations for Control of Radiation* Part 13.8, has revoked the following radioactive material licenses. Listed following are licensee, license number, location, and date of action: City of Jersey Village, 11-3441, Houston, August 14, 1987; Roy W. Dowdell, M.D., P.A., 11-3810, Baytown, August 14, 1987; Houston Fabricating, Inc., 11-1193, Houston, August 14, 1987; Well-Data Surveys, Inc., 12-3355, Odessa, August 14, 1987; Blackwell Hospital, 4-3223, Gorman, August 14, 1987; Bio-Diagnostics, Inc., 5-3406, Arlington, August 14, 1987.

A copy of all relevant material is available for public inspection at the Bureau of Radiation Control, 1212 East Anderson Lane, Austin, Monday-Friday, 8 a.m.-5 p.m. (except holidays).

Issued in Austin, Texas, on September 17, 1987

TRD-8708096 Robert A. MacLean
Deputy Commissioner
Professional Services
Texas Department of Health

Filed: September 21, 1987
For further information, please call (512) 835-7000



Revocation of in Vitro Testing General License Acknowledgement

The Texas Department of Health, having duly filed a complaint pursuant to *Texas Regulations for Control of Radia-*

tion Part 13.8, has revoked the following general license acknowledgment. Listed following are general licensee, acknowledgement number, location, and date of action: Ann Bhuket, M.D., 05-549, Plano, 8/18/87.

A copy of all relevant material is available for public inspection at the Bureau of Radiation Control, 1212 East Anderson Lane, Austin, Monday-Friday, 8 a.m.-5 p.m. (except holidays).

Issued in Austin, Texas, on September 17, 1987

TRD-8708098 Robert A. MacLean, M.D.
Deputy Commissioner
Professional Services
Texas Department of Health

Filed September 21, 1987
For further information, please call (512) 835-7000.



Railroad Commission of Texas Correction of Error

Adopted sections submitted by the Railroad Commission of Texas contained errors as published in the September 11, 1987, issue of the *Texas Register* (12 TexReg 3157).

In §9.2, the first sentence to the definition of "Public building" should read: "Any building where the public conducts business on the premises which includes all commercial installations such as, but not limited to, forklift, private motor fuel, and cylinder filling installations."

In §9.63(2)(E), the last sentence should read: "The two posts at the ends of any railing which protects a bulkhead, shall be located at 45° angles to the corners of the bulkhead (See Figure 1 and Figure 2 of this section for illustration)."



Public Notice

An application for authority to charge a toll by the Long Island Bridge Company, Inc., John R. Freeland, president, P.O. Box 2587, McAllen, Texas 78502, was filed on July 21, 1987, before the Railroad Commission of Texas in Docket 003620ZZCW pursuant to Texas Civil Statutes, Article 1473. This causeway corporation seeks authority to charge all users of the Long Island Swing Bridge (located over, through, and across the intercoastal canal at the northern tip of Long Island and the City of Port Isabel, Cameron County) as follows: \$1.00 for pedestrian traffic; \$3.50 for passenger motor vehicles, including mobile homes, R.V.'s and motorcycles; and \$4.50 for all trucks in excess of two tons.

All interested persons affected by this toll application that wish to participate in the commission consideration of this application may do so only by filing a written protest, intervention in opposition, or intervention in support, at or before, 10 a.m. on Monday, October 26, 1987, by writing Docket Services, Transportation Division, Railroad Commission of Texas, P.O. Drawer 12967, Austin, Texas 78711-2967.

Please include in the written pleading the Docket (003620ZZCW) in all responses.

Issued in Austin, Texas, on August 26, 1987

TRD-8707598 Walter Earl Lillie
Special Counsel
Railroad Commission of Texas

Filed: September 4, 1987
For further information, please call (512) 463-7149.



Office of the Secretary of State Texas Register Publication Schedule

Following are the deadline dates of the October, November, and December 1987 issues of the *Texas Register*. Unless noted by a ☆, deadline for a Tuesday edition of the *Texas Register* are Wednesday and Thursday of the week preceding publication, and deadlines for a Friday edition are Monday and Tuesday of the week of publication. For further information, please call (512) 463-5561.

FOR ISSUE PUBLISHED ON	ALL COPY EXCEPT NOTICES OF OPEN MEETINGS BY 10 A.M.	ALL NOTICES OF OPEN MEETINGS BY 10 A.M.
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 Thursday, December 17
 Tuesday, December 22

NO ISSUE PUBLISHED

Texas Water Commission
Applications for Waste Disposal
Permits

Notice is given by the Texas Water Commission of public notices of waste disposal permit applications issued during the period of September 14-18, 1987.

No public hearing will be held on these applications unless an affected person has requested a public hearing. Any such request for a public hearing shall be in writing and contain the name, mailing address, and phone number of the person making the request; and a brief description of how the requester, or persons represented by the requester, would be adversely affected by the granting of the application. If the commission determines that the request sets out an issue which is relevant to the waste discharge permit decision, or that a public hearing would serve the public interest, the commission shall conduct a public hearing, after the issuance of proper and timely notice of the hearing. If no sufficient request for hearing is received within 30 days of the date of publication of notice concerning the applications, the permit will be submitted to the commission for final decision on the application.

Information concerning any aspect of these applications may be obtained by contacting the Texas Water Commission, P.O. Box 13087, Austin, Texas 78711, (512) 463-7905.

Listed is the name of the applicant and the city in which each facility is located; type of facility; location of the facility; permit number; and type of application—new permit, amendment, or renewal.

Period of September 14-18, 1987

K & I Associates, Houston; wastewater treatment facilities; at 4014 Pinemont in the City of Houston, Harris County; 12429-01; renewal

Luby's Cafeterias, Inc., Houston; wastewater treatment plant; at 12403 East Freeway, in the City of Houston, Harris County; 12362-01; renewal

City of Houston; wastewater treatment plant; at 10500 South Park Street adjacent to Sims Bayou in the City of Houston in Harris County; 10495-09; renewal

B & B Sewer Company, Spring; wastewater treatment plant; approximately 300 feet west of Goslin Road and approximately 1,500 feet south of Root Road, Harris County; 12303-01; renewal

Clit Mock Company, Conroe; wastewater treatment facilities; approximately 8.7 miles west of the City of Conroe on the south side of FM Road 2854 immediately west of Johnson Road in Montgomery County; 12456-01; renewal

City of Mercedes, wastewater treatment facilities, adjacent and southwest of the intersection of North Mile 8 Road and 1/2 Mile East Road in the City of Mercedes, Hidalgo County; 10347-01, renewal

City of Houston; wastewater treatment facilities, in the southwest corner of Ellington Airport, approximately 1,500 feet east of State Highway 3 in Harris County, 10495-113, renewal

City of Houston, wastewater treatment facilities; at 7961 Hall Road on the east side of State Highway 35 and approximately 1/2 mile north of Clear Creek in Harris County, 10495-20, renewal

City of Big Lake, wastewater treatment facilities; at the intersection of Santa Rita Street and Alabama Avenue in the east side of the City of Big Lake, Reagan County; 10038-01; renewal

Bluewater Maintenance, Inc., Brookshire, wastewater treatment facilities; at the southeast corner of the intersection of FM Road 529 and FM Road 2855, approximately eight miles northeast of the City of Brookshire in Waller county, 12534-01; renewal

Glenn Neans, Austin; wastewater treatment plant; on the south side of State Highway 71, approximately one mile northwest of the intersection of U.S. Highway 290 and State Highway 71 in Travis County, 11320-01; renewal

G & I Tool Company, Baytown; wastewater treatment plant; approximately 3,300 feet west from the bridge where Rothwood Road crosses Spring Creek, in Harris County; 12382-01, renewal

North Belt 25-a joint ownership and North Belt Venture, Houston; wastewater treatment facility; approximately 1,200 feet north of North Belt Drive, approximately 650 feet east of Greendale Drive along the south side of the Harris County Flood Control Ditch No. P-142-00-00, approximately 13 miles north of downtown Houston in Harris County; 12405-01; renewal

Montgomery County Municipal Utility District No. 56, Houston; sewage treatment plant; approximately 4 1/2

miles along FM Road 1314 in a northwesterly direction from the intersection of U.S. Highway 59 and FM Road 1314 in Montgomery County; 12503-01, renewal

Williamson County MUD No. 2, Austin; wastewater treatment plant; approximately two miles west of IH 35 and 2,200 feet north of County Road 1124 (Sam Bass Road), Williamson County; 11866-01; renewal

Town of Ponder; wastewater treatment plant; approximately ½ mile south of the Town of Ponder and 1,200 feet east of State Highway 156, Denton County; 11287-01; renewal

R. M. Williams, Granbury; car wash; adjacent to State Highway 208, approximately one mile north of the intersection of State Highways 208 and 4 in Hood County; 02926; new

Harris County Fresh Water Supply District No. 6, Channelview; wastewater treatment facilities; at the intersection of DeZavalla Road and Elsbeth Road in Channelview, Harris County; 10184-01; renewal

Southwestern Electric Power Company, Cason; steam electric station; approximately two miles northwest of

the Town of Cason, and approximately 1½ miles north of State Highway 11 in Titus County; 01811; renewal

City of Seguin; water treatment plant; 150 feet upstream from the State Highway 123 bridge on the Guadalupe River in the City of Seguin, Guadalupe County; 10277-02; renewal

Weatherford U.S., Inc., Houston; sewage treatment plant; at 11909 Spencer Road (FM Road 529), between State Highway 6 and U.S. Highway 290 in Harris County; 12522-01; renewal

Pioneer Concrete of Texas, Inc., San Antonio; ready-mix concrete plant; at 500 Steves Avenue in the City of San Antonio, Bexar County; 02933; new

Issued in Austin, Texas, on September 18, 1987.

TRD-8708141 Karen A. Phillips
 Chief Clerk
 Texas Water Commission

Filed: September 22, 1987
For further information, please call (512) 463-7898.



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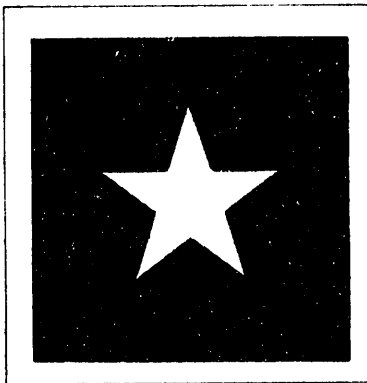


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