

CHAPTER 13
ISSUANCE OF TEACHER LICENSES AND ENDORSEMENTS

[Prior to 1/14/09, see Educational Examiners Board[282] Ch 14]

282—13.1(272) All applicants desiring Iowa licensure.

13.1(1) Licenses, authorizations, certificates, and statements of professional recognition. Licenses, authorizations, certificates, and statements of professional recognition are issued upon application filed on a form provided by the board of educational examiners and upon completion of the following:

a. National criminal history background check. An initial applicant will be required to submit a completed fingerprint packet that accompanies the application to facilitate a national criminal history background check. The fee for the evaluation of the fingerprint packet will be assessed to the applicant.

b. Iowa division of criminal investigation background check. An Iowa division of criminal investigation (DCI) background check will be conducted on initial applicants. The fee for the evaluation of the DCI background check will be assessed to the applicant.

c. Registries and records check. A check of the following registries and records will be conducted on initial applicants: the sex offender registry under Iowa Code section 692A.121, the central registry for child abuse information established under Iowa Code chapter 235A, the central registry for dependent adult abuse information maintained under Iowa Code chapter 235B, and the information in the Iowa court information system available to the general public. The fee for checks of these registries and records will be assessed to the applicant.

13.1(2) Temporary permits. The executive director may issue a temporary permit to an applicant for any type of license, certification, or authorization issued by the board, after receipt of a fully completed application; determination that the applicant meets all applicable prerequisites for issuance of the license, certification, or authorization; and satisfactory evaluation of the Iowa criminal history background check. The temporary permit shall serve as evidence of the applicant's authorization to hold a position in Iowa schools, pending the satisfactory completion of the national criminal history background check. The temporary permit shall expire upon issuance of the requested license, certification, or authorization or 90 days from the date of issuance of the permit, whichever occurs first, unless the temporary permit is extended upon a finding of good cause by the executive director.

[ARC 0563C, IAB 1/23/13, effective 1/1/13; ARC 2230C, IAB 11/11/15, effective 12/16/15]

282—13.2(272) Applicants from recognized Iowa institutions. Rescinded ARC 2016C, IAB 6/10/15, effective 7/15/15.

282—13.3(272) Applicants from non-Iowa institutions. Rescinded ARC 2016C, IAB 6/10/15, effective 7/15/15.

282—13.4(272) Applicants from foreign institutions. Rescinded ARC 2016C, IAB 6/10/15, effective 7/15/15.

282—13.5(272) Teacher licenses. A license may be issued to applicants who fulfill the general requirements set out in subrule 13.5(1) and the specific requirements set out for each license.

13.5(1) General requirements. The applicant shall:

a. Have a baccalaureate degree from a regionally accredited institution.

b. Have completed a state-approved teacher education program.

c. Have completed the teacher preparation coursework set forth in 281—subrules 79.15(2) to 79.15(5).

d. Have completed student teaching in the subject area and grade level endorsement desired.

e. Have completed the requirements for one of the basic teaching endorsements.

f. Provide a recommendation for the specific license and endorsement(s) from the designated recommending official at the recognized institution where the preparation was completed.

13.5(2) Applicants from non-Iowa institutions.

a. Definitions.

“*Nontraditional*” means any method of teacher preparation that falls outside the traditional method of preparing teachers, that provides at least a one- or two-year sequenced program of instruction taught at regionally accredited and state-approved colleges or universities, that includes commonly recognized pedagogy classes being taught for course credit, and that requires a student teaching component.

“*Proficiency*,” for the purposes of paragraph 13.5(2) “*e*,” means that an applicant has passed all parts of the standard.

“*Recognized non-Iowa teacher preparation institution*” means an institution that is state-approved and is accredited by the regional accrediting agency for the territory in which the institution is located.

b. In addition to the requirements set forth in subrule 13.5(1), applicants from non-Iowa institutions:

(1) Shall submit a copy of a valid or expired regular teaching certificate or license exclusive of a temporary, emergency or substitute license or certificate.

(2) Shall provide verification of successfully passing the Iowa-mandated assessment(s) by meeting the minimum score set by the Iowa department of education if the teacher preparation program was completed on or after January 1, 2013. If the teacher preparation program was completed prior to January 1, 2013, the applicant must provide verification of successfully passing the mandated assessment(s) in the state in which the applicant is currently licensed (or verify highly qualified status) or must provide verification of successfully passing the Iowa-mandated assessment(s) by meeting the minimum score set by the Iowa department of education.

(3) Shall provide an official institutional transcript(s) to be analyzed for the requirements necessary for Iowa licensure. An applicant must have completed at least 75 percent of the coursework as outlined in 281—subrules 79.15(2) to 79.15(5) and an endorsement requirement through a two- or four-year institution in order for the endorsement to be included on the license. An applicant who has not completed at least 75 percent of the coursework for at least one of the basic Iowa teaching endorsements completed will not be issued a license.

(4) Shall demonstrate recency of experience by providing verification of either one year of teaching experience or six semester hours of college credit during the five-year period immediately preceding the date of application.

(5) Shall not be subject to any pending disciplinary proceedings in any state or country.

(6) Shall comply with all requirements with regard to application processes and payment of licensure fees.

c. If through a transcript analysis, the teacher preparation coursework as outlined in 281—subrules 79.15(2) to 79.15(5) or one of the basic teaching endorsement requirements for Iowa is not met, the applicant may be eligible for the equivalent Iowa endorsement areas, as designated by the Iowa board of educational examiners, based on current and valid National Board Certification.

d. If the teacher preparation program was considered nontraditional, candidates will be asked to verify the following:

(1) That the program was for secondary education;

(2) A cumulative grade point average of 2.50 on a 4.0 scale from a regionally accredited institution; and

(3) The completion of a student teaching or internship experience or three years of teaching experience.

e. If the teacher preparation coursework as outlined in 281—subrules 79.15(2) to 79.15(5) cannot be reviewed through a traditional transcript evaluation, a portfolio review and evaluation process may be utilized.

(1) An applicant must demonstrate proficiency in a minimum of at least 75 percent of the teacher preparation coursework as outlined in 281—subrules 79.15(2) to 79.15(5).

(2) An applicant must meet with the board of educational examiners to answer any of the board’s questions concerning the portfolio.

13.5(3) Applicants from foreign institutions. An applicant for initial licensure whose preparation was completed in a foreign institution must obtain a course-by-course credential evaluation report completed by one of the board-approved credential evaluation services and then file this report with the Iowa board

of educational examiners for a determination of eligibility for licensure. After receiving the notification of eligibility by the Iowa board of educational examiners, the applicant must provide verification of successfully passing the Iowa-mandated assessment(s) by meeting the minimum score set by the Iowa department of education.

[ARC 2016C, IAB 6/10/15, effective 7/15/15]

282—13.6(272) Specific requirements for an initial license. An initial license valid for two years may be issued to an applicant who meets the general requirements set forth in rule 282—13.5(272).

[ARC 2016C, IAB 6/10/15, effective 7/15/15]

282—13.7(272) Specific requirements for a standard license. A standard license valid for five years may be issued to an applicant who:

1. Meets the general requirements set forth in rule 282—13.5(272), and
2. Shows evidence of successful completion of a state-approved mentoring and induction program by meeting the Iowa teaching standards as determined by a comprehensive evaluation and two years' successful teaching experience. In lieu of completion of an Iowa state-approved mentoring and induction program, the applicant must provide evidence of three years' successful teaching experience in an Iowa nonpublic school or three years' successful teaching experience in an out-of-state K-12 educational setting.

[ARC 2016C, IAB 6/10/15, effective 7/15/15]

282—13.8(272) Specific requirements for a master educator's license. A master educator's license is valid for five years and may be issued to an applicant who:

1. Is the holder of or is eligible for a standard license as set out in rule 282—13.7(272), and
2. Verifies five years of successful teaching experience, and
3. Completes one of the following options:
 - Master's degree from a regionally accredited college or university in a recognized endorsement area, or
 - Master's degree from a regionally accredited college or university in curriculum, effective teaching, or a similar degree program which has a focus on school curriculum or instruction.

[ARC 1168C, IAB 11/13/13, effective 12/18/13]

282—13.9(272) Teacher intern license.

13.9(1) Authorization. The teacher intern is authorized to teach in grades 7 to 12.

13.9(2) Term. The term of the teacher intern license will be one school year. This license is nonrenewable.

13.9(3) Teacher intern requirements. A teacher intern license may be issued to an applicant who has been recommended by an institution with a state-approved intern program and who has met the background check requirements set forth in rule 282—13.1(272).

13.9(4) Requirements to convert the teacher intern license to the initial license. An initial license shall be issued upon application provided that the teacher intern has met the requirements as verified by the recommendation from the state-approved program.

13.9(5) Requirements to extend the teacher intern license if the teacher intern does not complete all of the education coursework during the term of the teacher intern license.

a. A one-year extension of the teacher intern license may be issued upon application provided that the teacher intern has met both of the following requirements:

- (1) Successful completion of one year of teaching experience during the teacher internship.
- (2) Verification by the recommending official at the approved teacher intern program that the teacher intern has not completed all of the coursework required for the initial license.

b. Only one year of teaching experience during the term of the teacher intern license or the extension of a teacher intern license may be used to convert the teacher intern license to a standard teaching license.

[ARC 8688B, IAB 4/7/10, effective 5/12/10; ARC 9925B, IAB 12/14/11, effective 1/18/12; ARC 0698C, IAB 5/1/13, effective 6/5/13; ARC 0865C, IAB 7/24/13, effective 8/28/13; ARC 1374C, IAB 3/19/14, effective 4/23/14; ARC 2016C, IAB 6/10/15, effective 7/15/15]

282—13.10(272) Specific requirements for a Class A extension license. A nonrenewable Class A extension license valid for one year may be issued to an individual under one of the following conditions:

13.10(1) *Based on an expired Iowa certificate or license, exclusive of a Class A extension or Class B license.*

a. The holder of an expired license, exclusive of a Class A extension or Class B license, shall be eligible to receive a Class A extension license upon application. This license shall be endorsed for the type of service authorized by the expired license on which it is based.

b. The holder of an expired license who is currently under contract with an Iowa educational unit (area education agency/local education agency/local school district) and who does not meet the renewal requirements for the license held shall be required to secure the signature of the superintendent or designee before the license will be issued.

13.10(2) *Based on a mentoring and induction program.* An applicant may be eligible for a Class A extension license if the school district, after conducting a comprehensive evaluation, recommends and verifies that the applicant shall participate in the mentoring program for a third year. No further extensions are available for this type of Class A extension license.

[ARC 7987B, IAB 7/29/09, effective 9/2/09; ARC 8134B, IAB 9/9/09, effective 10/14/09; ARC 8957B, IAB 7/28/10, effective 9/1/10; ARC 2016C, IAB 6/10/15, effective 7/15/15]

282—13.11(272) Specific requirements for a Class B license. A Class B license, which is valid for two years and which is nonrenewable, may be issued to an individual under the following conditions:

13.11(1) *Endorsement in progress.* The individual has a valid initial, standard, master educator, permanent professional, Class A extension, exchange, or professional service license and one or more endorsements but is seeking to obtain some other endorsement. A Class B license may be issued if requested by an employer and if the individual seeking to obtain some other endorsement has completed at least two-thirds of the requirements, or one-half of the content requirements in a state-designated shortage area, leading to completion of all requirements for the endorsement. A Class B license may not be issued for the driver's education endorsement.

13.11(2) *Program of study for special education endorsement.* The college or university must outline the program of study necessary to meet the special education endorsement requirements. This program of study must be attached to the application.

13.11(3) *Request for executive director decision.* If the minimum content requirements have not been met for the Class B license, a one-year executive director decision license may be issued if requested by the school district and if the school district can demonstrate that a candidate with the proper endorsement was not found after a diligent search. The executive director decision license may not be renewed and will expire on June 30 of the fiscal year in which it was issued.

13.11(4) *Expiration.* The Class B license will expire on June 30 of the fiscal year in which it was issued plus one year.

[ARC 7987B, IAB 7/29/09, effective 9/2/09; ARC 8133B, IAB 9/9/09, effective 10/14/09; ARC 9207B, IAB 11/3/10, effective 12/8/10; ARC 9573B, IAB 6/29/11, effective 8/3/11; ARC 2016C, IAB 6/10/15, effective 7/15/15]

282—13.12(272) Specific requirements for a Class C license. Rescinded IAB 7/29/09, effective 9/2/09.

282—13.13(272) Specific requirements for a Class D occupational license. Rescinded IAB 7/29/09, effective 9/2/09.

282—13.14(272) Specific requirements for a Class E emergency extension license. A nonrenewable license valid for one year may be issued to an individual as follows:

13.14(1) Expired license. Based on an expired Class A or Class B license, the holder of the expired license shall be eligible to receive a Class E emergency extension license upon application and submission of all required materials.

13.14(2) Application. The application process will require transcripts of coursework completed during the term of the expired license, a program of study indicating the coursework necessary to obtain full licensure, and registration for coursework to be completed during the term of the Class E emergency extension license. The Class E emergency extension license will be denied if the applicant has not completed any coursework during the term of the Class A or Class B license unless extenuating circumstances are verified.

[ARC 7987B, IAB 7/29/09, effective 9/2/09; ARC 2016C, IAB 6/10/15, effective 7/15/15]

282—13.15(272) Specific requirements for a Class G license. A nonrenewable Class G license valid for one year may be issued to an individual who must complete a school counseling practicum or internship in an approved program in preparation for the professional school counselor endorsement. The Class G license may be issued under the following limited conditions:

1. Verification of a baccalaureate degree from a regionally accredited institution.
2. Verification from the institution that the individual is admitted and enrolled in a school counseling program.
3. Verification that the individual has completed the coursework and competencies required prior to the practicum or internship.
4. Written documentation of the requirements listed in “1” to “3” above, provided by the official at the institution where the individual is completing the approved school counseling program and forwarded to the Iowa board of educational examiners with the application form for licensure.

[ARC 1328C, IAB 2/19/14, effective 3/26/14]

282—13.16(272) Specific requirements for a substitute teacher’s license.

13.16(1) Substitute teacher requirements. A substitute teacher’s license may be issued to an individual who provides verification of successfully passing the Iowa-mandated assessment(s) by meeting the minimum score set by the Iowa department of education if the teacher preparation program was completed on or after January 1, 2013, and who:

- a. Has completed a traditional teacher preparation program and been the holder of, or presently holds, or is eligible to hold, a license in Iowa; or
- b. Holds a valid or expired teaching certificate based on a nontraditional teacher preparation program, is able to verify three years of teaching experience, and provides passing scores on tests mandated by the state that issued the certificate. The license issued will contain a disclaimer stating that the holder of this license may not be eligible for full Iowa teaching licensure.

13.16(2) Validity. A substitute license is valid for five years and for not more than 90 days of teaching in one assignment during any one school year. A school district administrator may file a written request with the board for an extension of the 90-day limit in one assignment on the basis of documented need and benefit to the instructional program. The board will review the request and provide a written decision either approving or denying the request.

13.16(3) Authorization. The holder of a substitute license is authorized to substitute teach in any school system in any position in which a regularly licensed teacher is employed except in the driver’s education classroom. In addition to the authority inherent in the initial, standard, master educator, professional administrator, regional exchange, and permanent professional licenses and the endorsement(s) held, the holder of one of these regular licenses may substitute on the same basis as the holder of a substitute license while the regular license is in effect. The executive director may grant permission for a substitute to serve outside of a substitute’s regular authority under unique circumstances.

[ARC 9205B, IAB 11/3/10, effective 12/8/10; ARC 9206B, IAB 11/3/10, effective 12/8/10; ARC 0605C, IAB 2/20/13, effective 3/27/13; ARC 1324C, IAB 2/19/14, effective 3/26/14; ARC 2016C, IAB 6/10/15, effective 7/15/15]

282—13.17(272) Specific requirements for exchange licenses.**13.17(1) Teacher exchange license.**

a. For an applicant applying under 13.5(2), a one-year nonrenewable exchange license may be issued to the applicant under any of the following conditions:

(1) The applicant has met the minimum coursework requirements for licensure but has some coursework deficiencies. Any coursework deficiencies must be completed for college credit through a regionally accredited institution, with the exception of human relations which may be taken for licensure renewal credit through an approved provider.

(2) The applicant submits verification that the applicant has applied for and will receive the applicant's first teaching license and is waiting for the processing or printing of a valid and current out-of-state license. The lack of a valid and current out-of-state license will be listed as a deficiency.

(3) The applicant has not met the requirement for recency set forth in 13.5(2) "b"(4).

b. After the term of the exchange license has expired, the applicant may apply to be fully licensed if the applicant has completed all requirements and is eligible for full licensure.

13.17(2) International teacher exchange license.

a. A nonrenewable international exchange license may be issued to an applicant under the following conditions:

(1) The applicant has completed a teacher education program in another country; and

(2) The applicant is a participant in a teacher exchange program administered through the Iowa department of education, the U.S. Department of Education, or the U.S. Department of State.

b. Each exchange license shall be limited to the area(s) and level(s) of instruction as determined by an analysis of the application and the credential evaluation report.

c. This license shall not exceed one year unless the applicant can verify continued participation in the exchange program beyond one year.

d. After the term of the exchange license has expired, the applicant may apply to be fully licensed if the applicant has completed all requirements and is eligible for full licensure.

13.17(3) Military exchange license.**a. Definitions.**

"Military service" means honorably serving on federal active duty, state active duty, or national guard duty, as defined in Iowa Code section 29A.1; in the military services of other states, as provided in 10 U.S.C. Section 101(c); or in the organized reserves of the United States, as provided in 10 U.S.C. Section 10101.

"Veteran" means an individual who meets the definition of "veteran" in Iowa Code section 35.1(2).

b. *Spouses of active duty military service members applying under 13.5(2).* A three-year nonrenewable military exchange license may be issued to the applicant under the following conditions:

(1) The applicant has completed a traditional teacher preparation program at a regionally accredited and state-approved two- or four-year college.

(2) The applicant is the holder of a valid and current or an expired teaching license from another state.

(3) The applicant provides verification of the applicant's connection to or the applicant's spouse's connection to the military by providing a copy of current military orders with either a marriage license or a copy of a military ID card for the applicant's spouse.

(4) This license may be converted to a one-year regional exchange license upon application and payment of fees.

c. *Veterans or their spouses applying under 13.5(2).* A three-year military exchange license may be issued to an applicant who meets the requirements of 13.17(3) "b"(1) and (2). A veteran must provide a copy of the veteran's DD 214. A spouse must provide a copy of the veteran spouse's DD 214 and the couple's marriage license.

d. *Spouses of active duty military service veterans, or veterans' spouses applying under 13.5(2).* If the applicant has completed a nontraditional teacher preparation program but is not eligible for a teaching license, the applicant will be issued a substitute license, and the initial review for the portfolio review

process will be completed by board staff. An applicant must provide verification of connection to the military outlined in 13.17(3)“b”(3) or 13.17(3)“c.”

e. Military education, training, and service credit. An applicant for the military exchange license may apply for credit for verified military education, training, or service toward any experience or educational requirement for licensure by submitting documentation to the board of educational examiners. The applicant shall identify the experience or educational requirement to which the credit would be applied if granted. The board of educational examiners shall promptly determine whether the verified military education, training, or service will satisfy all or any part of the identified experience or educational requirement for licensure.

f. Fees. Fees for the background check, evaluation and license issued pursuant to 13.17(3) will be limited to the fee outlined in rule 282—12.1(272) for the issuance of a license.

[ARC 8138B, IAB 9/9/09, effective 10/14/09; ARC 8604B, IAB 3/10/10, effective 4/14/10; ARC 9072B, IAB 9/8/10, effective 10/13/10; ARC 9840B, IAB 11/2/11, effective 12/7/11; ARC 0563C, IAB 1/23/13, effective 1/1/13; ARC 0868C, IAB 7/24/13, effective 8/28/13; ARC 1166C, IAB 11/13/13, effective 12/18/13; ARC 1323C, IAB 2/19/14, effective 3/26/14; ARC 1454C, IAB 5/14/14, effective 6/18/14; ARC 1878C, IAB 2/18/15, effective 3/25/15; ARC 2016C, IAB 6/10/15, effective 7/15/15]

282—13.18(272) General requirements for an original teaching subject area endorsement. Rescinded ARC 2016C, IAB 6/10/15, effective 7/15/15.

282—13.19(272) NCATE-accredited programs. Rescinded IAB 6/17/09, effective 7/22/09.

282—13.20 Reserved.

282—13.21(272) Human relations requirements for practitioner licensure. Rescinded ARC 2016C, IAB 6/10/15, effective 7/15/15.

282—13.22(272) Development of human relations components. Rescinded ARC 2016C, IAB 6/10/15, effective 7/15/15.

282—13.23 to 13.25 Reserved.

282—13.26(272) Requirements for elementary endorsements.

13.26(1) Teacher—prekindergarten-kindergarten.

a. Authorization. The holder of this endorsement is authorized to teach at the prekindergarten-kindergarten level.

b. Content.

(1) Human growth and development: infancy and early childhood, unless completed as part of the professional education core.

(2) Curriculum development and methodology for young children.

(3) Child-family-school-community relationships (community agencies).

(4) Guidance of young children three to six years of age.

(5) Organization of prekindergarten-kindergarten programs.

(6) Child and family nutrition.

(7) Language development and learning.

(8) Kindergarten: programs and curriculum development.

13.26(2) Teacher—prekindergarten through grade three.

a. Authorization. The holder of this endorsement is authorized to teach children from birth through grade three.

b. Content.

(1) Child growth and development with emphasis on cognitive, language, physical, social, and emotional development, both typical and atypical, for infants and toddlers, preprimary, and primary school children (grades one through three), unless combined as part of the professional education core.

(2) Historical, philosophical, and social foundations of early childhood education.

(3) Developmentally appropriate curriculum with emphasis on integrated multicultural and nonsexist content including language, mathematics, science, social studies, health, safety, nutrition, visual and expressive arts, social skills, higher-thinking skills, and developmentally appropriate methodology, including adaptations for individual needs, for infants and toddlers, preprimary, and primary school children.

(4) Characteristics of play and creativity, and their contributions to the cognitive, language, physical, social and emotional development and learning of infants and toddlers, preprimary, and primary school children.

(5) Classroom organization and individual interactions to create positive learning environments for infants and toddlers, preprimary, and primary school children based on child development theory emphasizing guidance techniques.

(6) Observation and application of developmentally appropriate assessments for infants and toddlers, preprimary, and primary school children recognizing, referring, and making adaptations for children who are at risk or who have exceptional educational needs and talents.

(7) Home-school-community relationships and interactions designed to promote and support parent, family and community involvement, and interagency collaboration.

(8) Family systems, cultural diversity, and factors which place families at risk.

(9) Child and family health and nutrition.

(10) Advocacy, legislation, and public policy as they affect children and families.

(11) Administration of child care programs to include staff and program development and supervision and evaluation of support staff.

(12) Pre-student teaching field experience with three age levels in infant and toddler, preprimary, and primary programs, with no less than 100 clock hours, and in different settings, such as rural and urban, socioeconomic status, cultural diversity, program types, and program sponsorship.

(13) Student teaching experiences with two different age levels, one before kindergarten and one from kindergarten through grade three.

13.26(3) Teacher—prekindergarten through grade three, including special education.

a. Authorization. The holder of this endorsement is authorized to teach children from birth through grade three.

b. Content.

(1) Child growth and development.

1. Understand the nature of child growth and development for infants and toddlers (birth through age 2), preprimary (age 3 through age 5) and primary school children (age 6 through age 8), both typical and atypical, in areas of cognition, language development, physical motor, social-emotional, aesthetics, and adaptive behavior.

2. Understand individual differences in development and learning including risk factors, developmental variations and developmental patterns of specific disabilities and special abilities.

3. Recognize that children are best understood in the contexts of family, culture and society and that cultural and linguistic diversity influences development and learning.

(2) Developmentally appropriate learning environment and curriculum implementation.

1. Establish learning environments with social support, from the teacher and from other students, for all children to meet their optimal potential, with a climate characterized by mutual respect, encouraging and valuing the efforts of all regardless of proficiency.

2. Appropriately use informal and formal assessment to monitor development of children and to plan and evaluate curriculum and teaching practices to meet individual needs of children and families.

3. Plan, implement, and continuously evaluate developmentally and individually appropriate curriculum goals, content, and teaching practices for infants, toddlers, preprimary and primary children based on the needs and interests of individual children, their families and community.

4. Use both child-initiated and teacher-directed instructional methods, including strategies such as small and large group projects, unstructured and structured play, systematic instruction, group discussion and cooperative decision making.

5. Develop and implement integrated learning experiences for home-, center- and school-based environments for infants, toddlers, preprimary and primary children.

6. Develop and implement integrated learning experiences that facilitate cognition, communication, social and physical development of infants and toddlers within the context of parent-child and caregiver-child relationships.

7. Develop and implement learning experiences for preprimary and primary children with focus on multicultural and nonsexist content that includes development of responsibility, aesthetic and artistic development, physical development and well-being, cognitive development, and emotional and social development.

8. Develop and implement learning experiences for infants, toddlers, preprimary, and primary children with a focus on language, mathematics, science, social studies, visual and expressive arts, social skills, higher-thinking skills, and developmentally appropriate methodology.

9. Develop adaptations and accommodations for infants, toddlers, preprimary, and primary children to meet their individual needs.

10. Adapt materials, equipment, the environment, programs and use of human resources to meet social, cognitive, physical motor, communication, and medical needs of children and diverse learning needs.

(3) Health, safety and nutrition.

1. Design and implement physically and psychologically safe and healthy indoor and outdoor environments to promote development and learning.

2. Promote nutritional practices that support cognitive, social, cultural and physical development of young children.

3. Implement appropriate appraisal and management of health concerns of young children including procedures for children with special health care needs.

4. Recognize signs of emotional distress, physical and mental abuse and neglect in young children and understand mandatory reporting procedures.

5. Demonstrate proficiency in infant-child cardiopulmonary resuscitation, emergency procedures and first aid.

(4) Family and community collaboration.

1. Apply theories and knowledge of dynamic roles and relationships within and between families, schools, and communities.

2. Assist families in identifying resources, priorities, and concerns in relation to the child's development.

3. Link families, based on identified needs, priorities and concerns, with a variety of resources.

4. Use communication, problem-solving and help-giving skills in collaboration with families and other professionals to support the development, learning and well-being of young children.

5. Participate as an effective member of a team with other professionals and families to develop and implement learning plans and environments for young children.

(5) Professionalism.

1. Understand legislation and public policy that affect all young children, with and without disabilities, and their families.

2. Understand legal aspects, historical, philosophical, and social foundations of early childhood education and special education.

3. Understand principles of administration, organization and operation of programs for children from birth to age 8 and their families, including staff and program development, supervision and evaluation of staff, and continuing improvement of programs and services.

4. Identify current trends and issues of the profession to inform and improve practices and advocate for quality programs for young children and their families.

5. Adhere to professional and ethical codes.

6. Engage in reflective inquiry and demonstration of professional self-knowledge.

(6) Pre-student teaching field experiences. Complete 100 clock hours of pre-student teaching field experience with three age levels in infant and toddler, preprimary, and primary programs and in different

settings, such as rural and urban, encompassing differing socioeconomic status, ability levels, cultural and linguistic diversity and program types and sponsorship.

(7) Student teaching. Complete a supervised student teaching experience of a total of at least 12 weeks in at least two different classrooms which include children with and without disabilities in two of three age levels: infant and toddler, preprimary, and primary.

13.26(4) Teacher—elementary classroom. These requirements will sunset on August 31, 2015.

a. *Authorization.* The holder of this endorsement is authorized to teach in kindergarten and grades one through six.

b. *Content.*

(1) Child growth and development with emphasis on the emotional, physical and mental characteristics of elementary age children, unless completed as part of the professional education core.

(2) Methods and materials of teaching elementary language arts.

(3) Methods and materials of teaching elementary reading.

(4) Elementary curriculum (methods and materials).

(5) Methods and materials of teaching elementary mathematics.

(6) Methods and materials of teaching elementary science.

(7) Children's literature.

(8) Methods and materials of teaching elementary social studies.

(9) Methods and materials in two of the following areas:

1. Methods and materials of teaching elementary health.

2. Methods and materials of teaching elementary physical education.

3. Methods and materials of teaching elementary art.

4. Methods and materials of teaching elementary music.

(10) Pre-student teaching field experience in at least two different grades.

(11) A field of specialization in a single discipline or a formal interdisciplinary program of at least 12 semester hours.

13.26(5) Teacher—elementary classroom. Effective September 1, 2015, the following requirements apply to persons who wish to teach in the elementary classroom:

a. *Authorization.* The holder of this endorsement is authorized to teach in kindergarten and grades one through six.

b. *Content.*

(1) Child growth and development with emphasis on the emotional, physical and mental characteristics of elementary age children, unless completed as part of the professional education core.

(2) At least 9 semester hours in literacy which must include:

1. Content:

● Children's literature;

● Oral and written communication skills for the twenty-first century.

2. Methods:

● Assessment, diagnosis and evaluation of student learning in literacy;

● Integration of the language arts (to include reading, writing, speaking, viewing, and listening);

● Integration of technology in teaching and student learning in literacy;

● Current best-practice, research-based approaches of literacy instruction;

● Classroom management as it applies to literacy methods;

● Pre-student teaching clinical experience in teaching literacy.

(3) At least 9 semester hours in mathematics which must include:

1. Content:

● Numbers and operations;

● Algebra/number patterns;

● Geometry;

● Measurement;

● Data analysis/probability.

2. Methods:

- Assessment, diagnosis and evaluation of student learning in mathematics;
 - Current best-practice, research-based instructional methods in mathematical processes (to include problem solving; reasoning; communication; the ability to recognize, make and apply connections; integration of manipulatives; the ability to construct and to apply multiple connected representations; and the application of content to real world experiences);
 - Integration of technology in teaching and student learning in mathematics;
 - Classroom management as it applies to mathematics methods;
 - Pre-student teaching clinical experience in teaching mathematics.
- (4) At least 9 semester hours in social sciences which must include:
1. Content:
 - History;
 - Geography;
 - Political science/civic literacy;
 - Economics;
 - Behavioral sciences.
 2. Methods:
 - Current best-practice, research-based approaches to the teaching and learning of social sciences;
 - Integration of technology in teaching and student learning in social sciences;
 - Classroom management as it applies to social science methods.
- (5) At least 9 semester hours in science which must include:
1. Content:
 - Physical science;
 - Earth/space science;
 - Life science.
 2. Methods:
 - Current best-practice, research-based methods of inquiry-based teaching and learning of science;
 - Integration of technology in teaching and student learning in science;
 - Classroom management as it applies to science methods.
- (6) At least 3 semester hours to include all of the following:
1. Methods of teaching elementary physical education, health, and wellness;
 2. Methods of teaching visual arts for the elementary classroom;
 3. Methods of teaching performance arts for the elementary classroom.
- (7) Pre-student teaching field experience in at least two different grade levels to include one primary and one intermediate placement.
- (8) A field of specialization in a single discipline or a formal interdisciplinary program of at least 12 semester hours.

[ARC 8400B, IAB 12/16/09, effective 1/20/10; ARC 8401B, IAB 12/16/09, effective 1/20/10; ARC 8402B, IAB 12/16/09, effective 1/20/10; ARC 8607B, IAB 3/10/10, effective 4/14/10; ARC 0446C, IAB 11/14/12, effective 12/19/12; ARC 2016C, IAB 6/10/15, effective 7/15/15]

282—13.27(272) Requirements for middle school endorsements.

13.27(1) Authorization. The holder of this endorsement is authorized to teach in the two concentration areas in which the specific requirements have been completed as well as in other subject areas in grades five through eight which are not the core content areas. The holder is not authorized to teach art, industrial arts, music, reading, physical education, talented and gifted, English as a second language, and special education.

13.27(2) Program requirements.

- a. Be the holder of a currently valid Iowa teacher's license with either the general elementary endorsement or one of the subject matter secondary level endorsements set out in rule 282—13.28(272).
- b. A minimum of 9 semester hours of required coursework in the following:

(1) Coursework in the growth and development of the middle school age child, specifically addressing the social, emotional, physical and cognitive characteristics and needs of middle school age children in addition to related studies completed as part of the professional education core.

(2) Coursework in middle school design, curriculum, instruction, and assessment including, but not limited to, interdisciplinary instruction, teaming, and differentiated instruction in addition to related studies completed as part of the professional education core.

(3) Coursework to prepare middle school teachers in literacy (reading, writing, listening and speaking) strategies for students in grades five through eight and in methods to include these strategies throughout the curriculum.

c. Thirty hours of middle school field experiences included in the coursework requirements listed in 13.27(2)“b”(1) to (3).

13.27(3) Concentration areas. To obtain this endorsement, the applicant must complete the coursework requirements in two of the following content areas:

a. *Social studies concentration.* The social studies concentration requires 12 semester hours of coursework in social studies to include coursework in United States history, world history, government and geography.

b. *Mathematics concentration.* The mathematics concentration requires 12 semester hours in mathematics to include coursework in algebra.

c. *Science concentration.* The science concentration requires 12 semester hours in science to include coursework in life science, earth science, and physical science.

d. *Language arts concentration.* The language arts concentration requires 12 semester hours in language arts to include coursework in composition, language usage, speech, young adult literature, and literature across cultures.

[ARC 2016C, IAB 6/10/15, effective 7/15/15]

282—13.28(272) Minimum content requirements for teaching endorsements.

13.28(1) Agriculture. 5-12. Completion of 24 semester credit hours in agriculture and agriculture education to include:

a. Foundations of vocational and career education.

b. Planning and implementing courses and curriculum.

c. Methods and techniques of instruction to include evaluation of programs and students.

d. Coordination of cooperative education programs.

e. Coursework in each of the following areas and at least three semester credit hours in five of the following areas:

(1) Agribusiness systems.

(2) Power, structural, and technical systems.

(3) Plant systems.

(4) Animal systems.

(5) Natural resources systems.

(6) Environmental service systems.

(7) Food products and processing systems.

13.28(2) Art. K-8 or 5-12. Completion of 24 semester hours in art to include coursework in art history, studio art, and two- and three-dimensional art.

13.28(3) Business—all. 5-12. Completion of 30 semester hours in business to include 6 semester hours in accounting, 3 semester hours in business law to include contract law, 3 semester hours in computer and technical applications in business, 6 semester hours in marketing to include consumer studies, 3 semester hours in management, 6 semester hours in economics, and 3 semester hours in business communications to include formatting, language usage, and oral presentation. Coursework in entrepreneurship and in financial literacy may be a part of, or in addition to, the coursework listed above.

13.28(4) Driver education. 5-12. Completion of 9 semester hours in driver education to include coursework in accident prevention that includes drug and alcohol abuse; vehicle safety; and behind-the-wheel driving.

13.28(5) English/language arts.

a. K-8. Completion of 24 semester hours in English and language arts to include coursework in oral communication, written communication, language development, reading, children's literature, creative drama or oral interpretation of literature, and American literature.

b. 5-12. Completion of 24 semester hours in English to include coursework in oral communication, written communication, language development, reading, American literature, English literature and adolescent literature.

13.28(6) Language arts. 5-12. Completion of 40 semester hours in language arts to include coursework in the following areas:

a. Written communication.

(1) Develops a wide range of strategies and appropriately uses writing process elements (e.g., brainstorming, free-writing, first draft, group response, continued drafting, editing, and self-reflection) to communicate with different audiences for a variety of purposes.

(2) Develops knowledge of language structure (e.g., grammar), language conventions (e.g., spelling and punctuation), media techniques, figurative language and genre to create, critique, and discuss print and nonprint texts.

b. Oral communication.

(1) Understands oral language, listening, and nonverbal communication skills; knows how to analyze communication interactions; and applies related knowledge and skills to teach students to become competent communicators in varied contexts.

(2) Understands the communication process and related theories, knows the purpose and function of communication and understands how to apply this knowledge to teach students to make appropriate and effective choices as senders and receivers of messages in varied contexts.

c. Language development.

(1) Understands inclusive and appropriate language, patterns and dialects across cultures, ethnic groups, geographic regions and social roles.

(2) Develops strategies to improve competency in the English language arts and understanding of content across the curriculum for students whose first language is not English.

d. Young adult literature, American literature, and world literature.

(1) Reads, comprehends, and analyzes a wide range of texts to build an understanding of self as well as the cultures of the United States and the world in order to acquire new information, to respond to the needs and demands of society and the workplace, and for personal fulfillment. Among these texts are fiction and nonfiction, graphic novels, classic and contemporary works, young adult literature, and nonprint texts.

(2) Reads a wide range of literature from many periods in many genres to build an understanding of the many dimensions (e.g., philosophical, ethical, aesthetic) of human experience.

(3) Applies a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. Draws on prior experience, interactions with other readers and writers, knowledge of word meaning and of other texts, word identification strategies, and an understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).

(4) Participates as a knowledgeable, reflective, creative, and critical member of a variety of literacy communities.

e. Creative voice.

(1) Understands the art of oral interpretation and how to provide opportunities for students to develop and apply oral interpretation skills in individual and group performances for a variety of audiences, purposes and occasions.

(2) Understands the basic skills of theatre production including acting, stage movement, and basic stage design.

f. Argumentation/debate.

(1) Understands concepts and principles of classical and contemporary rhetoric and is able to plan, prepare, organize, deliver and evaluate speeches and presentations.

(2) Understands argumentation and debate and how to provide students with opportunities to apply skills and strategies for argumentation and debate in a variety of formats and contexts.

g. Journalism.

(1) Understands ethical standards and major legal issues including First Amendment rights and responsibilities relevant to varied communication content. Utilizes strategies to teach students about the importance of freedom of speech in a democratic society and the rights and responsibilities of communicators.

(2) Understands the writing process as it relates to journalism (e.g., brainstorming, questioning, reporting, gathering and synthesizing information, writing, editing, and evaluating the final media product).

(3) Understands a variety of forms of journalistic writing (e.g., news, sports, features, opinion, Web-based) and the appropriate styles (e.g., Associated Press, multiple sources with attribution, punctuation) and additional forms unique to journalism (e.g., headlines, cutlines, and/or visual presentations).

h. Mass media production.

(1) Understands the role of the media in a democracy and the importance of preserving that role.

(2) Understands how to interpret and analyze various types of mass media messages in order for students to become critical consumers.

(3) Develops the technological skills needed to package media products effectively using various forms of journalistic design with a range of visual and auditory methods.

i. Reading strategies (if not completed as part of the professional education core requirements).

(1) Uses a variety of skills and strategies to comprehend and interpret complex fiction, nonfiction and informational text.

(2) Reads for a variety of purposes and across content areas.

13.28(7) Foreign language. K-8 and 5-12. Completion of 24 semester hours in each foreign language for which endorsement is sought.

13.28(8) Health. K-8 and 5-12. Completion of 24 semester hours in health to include coursework in public or community health, personal wellness, substance abuse, family life education, mental/emotional health, and human nutrition. A current certificate of CPR training is required in addition to the coursework requirements.

For holders of physical education or family and consumer science endorsements, completion of 18 credit hours in health to include coursework in public or community health, personal wellness, substance abuse, family life education, mental/emotional health, and human nutrition. A current certificate of CPR training is required in addition to the coursework requirements.

13.28(9) Family and consumer sciences—general. 5-12. Completion of 24 semester hours in family and consumer sciences to include coursework in lifespan development, parenting and child development education, family studies, consumer resource management, textiles or apparel design and merchandising, housing, foods and nutrition, and foundations of career and technical education as related to family and consumer sciences.

13.28(10) Industrial technology. 5-12. Completion of 24 semester hours in industrial technology to include coursework in manufacturing, construction, energy and power, graphic communications and transportation. The coursework is to include at least 6 semester hours in three different areas.

13.28(11) Journalism. 5-12. Completion of 15 semester hours in journalism to include coursework in writing, editing, production and visual communications.

13.28(12) Mathematics.

a. K-8. Completion of 24 semester hours in mathematics to include coursework in algebra, geometry, number theory, measurement, computer programming, and probability and statistics.

b. 5-12.

(1) Completion of 24 semester hours in mathematics to include a linear algebra or an abstract (modern) algebra course, a geometry course, a two-course sequence in calculus, a computer programming course, a probability and statistics course, and coursework in discrete mathematics.

(2) For holders of the physics 5-12 endorsement, completion of 17 semester hours in mathematics to include a geometry course, a two-course sequence in calculus, a probability and statistics course, and coursework in discrete mathematics.

(3) For holders of the all science 9-12 endorsement, completion of 17 semester hours in mathematics to include a geometry course, a two-course sequence in calculus, a probability and statistics course, and coursework in discrete mathematics.

c. 5-8 algebra for high school credit. For a 5-8 algebra for high school credit endorsement, hold either the K-8 mathematics or middle school mathematics endorsement and complete a college algebra or linear algebra class. This endorsement allows the holder to teach algebra to grades 5-8 for high school credit.

13.28(13) Music.

a. K-8. Completion of 24 semester hours in music to include coursework in music theory (at least two courses), music history, and applied music, and a methods course in each of the following: general, choral, and instrumental music.

b. 5-12. Completion of 24 semester hours in music to include coursework in music theory (at least two courses), music history (at least two courses), applied music, and conducting, and a methods course in each of the following: general, choral, and instrumental music.

13.28(14) Physical education.

a. K-8. Completion of 24 semester hours in physical education to include coursework in human anatomy, human physiology, movement education, adaptive physical education, personal wellness, human growth and development of children related to physical education, and first aid and emergency care. A current certificate of CPR training is required in addition to the coursework requirements.

b. 5-12. Completion of 24 semester hours in physical education to include coursework in human anatomy, kinesiology, human physiology, human growth and development related to maturational and motor learning, adaptive physical education, curriculum and administration of physical education, personal wellness, and first aid and emergency care. A current certificate of CPR training is required in addition to the coursework requirements.

13.28(15) Reading.

a. K-8 requirements. Completion of 24 semester hours in reading to include all of the following requirements:

(1) Foundations of reading. This requirement includes the following competencies:

1. The practitioner demonstrates knowledge of the psychological, sociocultural, and linguistic foundations of reading and writing processes and instruction.

2. The practitioner demonstrates knowledge of a range of research pertaining to reading, writing, and learning, including scientifically based reading research, and knowledge of histories of reading. The range of research encompasses research traditions from the fields of the social sciences and other paradigms appropriate for informing practice.

3. The practitioner demonstrates knowledge of the major components of reading, such as phonemic awareness, word identification, phonics, vocabulary, fluency, and comprehension, and effectively integrates curricular standards with student interests, motivation, and background knowledge.

(2) Reading in the content areas. This requirement includes the following competencies:

1. The practitioner demonstrates knowledge of text structure and the dimensions of content area vocabulary and comprehension, including literal, interpretive, critical, and evaluative.

2. The practitioner provides content area instruction in reading and writing that effectively uses a variety of research-based strategies and practices.

(3) Practicum. This requirement includes the following competencies:

1. The practitioner works with licensed professionals who observe, evaluate, and provide feedback on the practitioner's knowledge, dispositions, and performance of the teaching of reading and writing.

2. The practitioner effectively uses reading and writing strategies, materials, and assessments based upon appropriate reading and writing research and works with colleagues and families in the support of children's reading and writing development.

(4) Language development. This requirement includes the following competency: The practitioner uses knowledge of language development and acquisition of reading skills (birth through sixth grade), and the variations related to cultural and linguistic diversity to provide effective instruction in reading and writing.

(5) Oral communication. This requirement includes the following competencies:

1. The practitioner has knowledge of the unique needs and backgrounds of students with language differences and delays.

2. The practitioner uses effective strategies for facilitating the learning of Standard English by all learners.

(6) Written communication. This requirement includes the following competency: The practitioner uses knowledge of reading-writing-speaking connections; the writing process; the stages of spelling development; the different types of writing, such as narrative, expressive, persuasive, informational and descriptive; and the connections between oral and written language development to effectively teach writing as communication.

(7) Reading assessment, diagnosis and evaluation. This requirement includes the following competencies:

1. The practitioner uses knowledge of a variety of instruments, procedures, and practices that range from individual to group and from formal to informal to alternative for the identification of students' reading proficiencies and needs, for planning and revising instruction for all students, and for communicating the results of ongoing assessments to all stakeholders.

2. The practitioner demonstrates awareness of policies and procedures related to special programs, including Title I.

(8) Children's nonfiction and fiction. This requirement includes the following competency: The practitioner uses knowledge of children's literature for:

1. Modeling the reading and writing of varied genres, including fiction and nonfiction; technology- and media-based information; and nonprint materials;

2. Motivating through the use of texts at multiple levels, representing broad interests, and reflecting varied cultures, linguistic backgrounds, and perspectives; and

3. Matching text complexities to the proficiencies and needs of readers.

(9) Reading instructional strategies. This requirement includes the following competency: The practitioner uses knowledge of a range of research-based strategies and instructional technology for designing and delivering effective instruction across the curriculum, for grouping students, and for selecting materials appropriate for learners at various stages of reading and writing development and from varied cultural and linguistic backgrounds.

b. 5-12 requirements. Completion of 24 semester hours in reading to include all of the following requirements:

(1) Foundations of reading. This requirement includes the following competencies:

1. The practitioner demonstrates knowledge of the psychological, sociocultural, and linguistic foundations of reading and writing processes and instruction.

2. The practitioner demonstrates knowledge of a range of research pertaining to reading, writing, and learning, including scientifically based reading research, and knowledge of histories of reading. The range of research encompasses research traditions from the fields of the social sciences and other paradigms appropriate for informing practice.

3. The practitioner demonstrates knowledge of the major components of reading such as phonemic awareness, word identification, phonics, vocabulary, fluency, and comprehension, and integrates curricular standards with student interests, motivation, and background knowledge.

(2) Reading in the content areas. This requirement includes the following competencies:

1. The practitioner demonstrates knowledge of text structure and the dimensions of content area vocabulary and comprehension, including literal, interpretive, critical, and evaluative.

2. The practitioner provides content area instruction in reading and writing that effectively uses a variety of research-based strategies and practices.

(3) Practicum. This requirement includes the following competencies:

1. The practitioner works with licensed professionals who observe, evaluate, and provide feedback on the practitioner's knowledge, dispositions, and performance of the teaching of reading and writing.

2. The practitioner effectively uses reading and writing strategies, materials, and assessments based upon appropriate reading and writing research, and works with colleagues and families in the support of students' reading and writing development.

(4) Language development. This requirement includes the following competency: The practitioner uses knowledge of the relationship of language acquisition and language development with the acquisition and development of reading skills, and the variations related to cultural and linguistic diversity to provide effective instruction in reading and writing.

(5) Oral communication. This requirement includes the following competency: The practitioner demonstrates knowledge of the unique needs and backgrounds of students with language differences and uses effective strategies for facilitating the learning of Standard English by all learners.

(6) Written communication. This requirement includes the following competency: The practitioner uses knowledge of reading-writing-speaking connections to teach the skills and processes necessary for writing narrative, expressive, persuasive, informational, and descriptive texts, including text structures and mechanics such as grammar, usage, and spelling.

(7) Reading assessment, diagnosis and evaluation. This requirement includes the following competencies:

1. The practitioner uses knowledge of a variety of instruments, procedures, and practices that range from individual to group and from formal to informal to alternative for the identification of students' reading proficiencies and needs, for planning and revising instruction for all students, and for communicating the results of ongoing assessments to all stakeholders.

2. The practitioner demonstrates awareness of policies and procedures related to special programs.

(8) Adolescent or young adult nonfiction and fiction. This requirement includes the following competency: The practitioner uses knowledge of adolescent or young adult literature for:

1. Modeling the reading and writing of varied genres, including fiction and nonfiction; technology and media-based information; and nonprint materials;

2. Motivating through the use of texts at multiple levels, representing broad interests, and reflecting varied cultures, linguistic backgrounds and perspectives; and

3. Matching text complexities to the proficiencies and needs of readers.

(9) Reading instructional strategies. This requirement includes the following competency: The practitioner uses knowledge of a range of research-based strategies and instructional technology for designing and delivering instruction across the curriculum, for grouping students, and for selecting materials appropriate for learners at various stages of reading and writing development and from varied cultural and linguistic backgrounds.

13.28(16) Reading specialist. K-12. The applicant must have met the requirements for the standard license and a teaching endorsement, and present evidence of at least one year of experience which included the teaching of reading as a significant part of the responsibility.

a. *Authorization.* The holder of this endorsement is authorized to serve as a reading specialist in kindergarten and grades one through twelve.

b. *Program requirements.* Degree—master's.

c. *Content.* Completion of a sequence of courses and experiences which may have been a part of, or in addition to, the degree requirements. This sequence is to be at least 27 semester hours to include the following:

(1) Educational psychology/human growth and development.

(2) Educational measurement and evaluation.

(3) Foundations of reading.

(4) Diagnosis of reading problems.

(5) Remedial reading.

- (6) Psychology of reading.
- (7) Language learning and reading disabilities.
- (8) Practicum in reading.
- (9) Administration and supervision of reading programs at the elementary and secondary levels.

13.28(17) Science.

a. Science—basic. K-8.

(1) Required coursework. Completion of at least 24 semester hours in science to include 12 hours in physical sciences, 6 hours in biology, and 6 hours in earth/space sciences.

(2) Pedagogy competencies.

1. Understand the nature of scientific inquiry, its central role in science, and how to use the skills and processes of scientific inquiry.

2. Understand the fundamental facts and concepts in major science disciplines.

3. Be able to make conceptual connections within and across science disciplines, as well as to mathematics, technology, and other school subjects.

4. Be able to use scientific understanding when dealing with personal and societal issues.

b. Biological science. 5-12. Completion of 24 semester hours in biological science or 30 semester hours in the broad area of science to include 15 semester hours in biological science.

c. Chemistry. 5-12. Completion of 24 semester hours in chemistry or 30 semester hours in the broad area of science to include 15 semester hours in chemistry.

d. Earth science. 5-12. Completion of 24 semester hours in earth science or 30 semester hours in the broad area of science to include 15 semester hours in earth science.

e. Basic science. 5-12. Completion of 24 semester hours of credit in science to include the following:

(1) Six semester hours of credit in earth and space science to include the following essential concepts and skills:

1. Understand and apply knowledge of energy in the earth system.

2. Understand and apply knowledge of geochemical cycles.

(2) Six semester hours of credit in life science/biological science to include the following essential concepts and skills:

1. Understand and apply knowledge of the cell.

2. Understand and apply knowledge of the molecular basis of heredity.

3. Understand and apply knowledge of the interdependence of organisms.

4. Understand and apply knowledge of matter, energy, and organization in living systems.

5. Understand and apply knowledge of the behavior of organisms.

(3) Six semester hours of credit in physics/physical science to include the following essential concepts and skills:

1. Understand and apply knowledge of the structure of atoms.

2. Understand and apply knowledge of the structure and properties of matter.

3. Understand and apply knowledge of motions and forces.

4. Understand and apply knowledge of interactions of energy and matter.

(4) Six semester hours of credit in chemistry to include the following essential concepts and skills:

1. Understand and apply knowledge of chemical reactions.

2. Be able to design and conduct scientific investigations.

f. Physical science. Rescinded IAB 11/14/12, effective 12/19/12.

g. Physics.

(1) 5-12. Completion of 24 semester hours in physics or 30 semester hours in the broad area of science to include 15 semester hours in physics.

(2) For holders of the mathematics 5-12 endorsement, completion of:

1. 12 credits of physics to include coursework in mechanics, electricity, and magnetism; and

2. A methods class that includes inquiry-based instruction, resource management, and laboratory safety.

(3) For holders of the chemistry 5-12 endorsement, completion of 12 credits of physics to include coursework in mechanics, electricity, and magnetism.

h. All science I. Rescinded IAB 11/14/12, effective 12/19/12.

i. All science. 5-12.

(1) Completion of 36 semester hours of credit in science to include the following:

1. Nine semester hours of credit in earth and space science to include the following essential concepts and skills:

- Understand and apply knowledge of energy in the earth system.
- Understand and apply knowledge of geochemical cycles.
- Understand and apply knowledge of the origin and evolution of the earth system.
- Understand and apply knowledge of the origin and evolution of the universe.

2. Nine semester hours of credit in life science/biological science to include the following essential concepts and skills:

- Understand and apply knowledge of the cell.
- Understand and apply knowledge of the molecular basis of heredity.
- Understand and apply knowledge of the interdependence of organisms.
- Understand and apply knowledge of matter, energy, and organization in living systems.
- Understand and apply knowledge of the behavior of organisms.
- Understand and apply knowledge of biological evolution.

3. Nine semester hours of credit in physics/physical science to include the following essential concepts and skills:

- Understand and apply knowledge of the structure of atoms.
- Understand and apply knowledge of the structure and properties of matter.
- Understand and apply knowledge of motions and forces.
- Understand and apply knowledge of interactions of energy and matter.
- Understand and apply knowledge of conservation of energy and increase in disorder.

4. Nine semester hours of credit in chemistry to include the following essential concepts and skills:

- Understand and apply knowledge of chemical reactions.
- Be able to design and conduct scientific investigations.

(2) Pedagogy competencies.

1. Understand the nature of scientific inquiry, its central role in science, and how to use the skills and processes of scientific inquiry.

2. Understand the fundamental facts and concepts in major science disciplines.

3. Be able to make conceptual connections within and across science disciplines, as well as to mathematics, technology, and other school subjects.

4. Be able to use scientific understanding when dealing with personal and societal issues.

13.28(18) Social sciences.

a. American government. 5-12. Completion of 24 semester hours in American government or 30 semester hours in the broad area of social sciences to include 15 semester hours in American government.

b. American history. 5-12. Completion of 24 semester hours in American history or 30 semester hours in the broad area of social sciences to include 15 semester hours in American history.

c. Anthropology. 5-12. Completion of 24 semester hours in anthropology or 30 semester hours in the broad area of social sciences to include 15 semester hours in anthropology.

d. Economics. 5-12. Completion of 24 semester hours in economics or 30 semester hours in the broad area of social sciences to include 15 semester hours in economics, or 30 semester hours in the broad area of business to include 15 semester hours in economics.

e. Geography. 5-12. Completion of 24 semester hours in geography or 30 semester hours in the broad area of social sciences to include 15 semester hours in geography.

f. History. K-8. Completion of 24 semester hours in history to include at least 9 semester hours in American history and 9 semester hours in world history.

g. Psychology. 5-12. Completion of 24 semester hours in psychology or 30 semester hours in the broad area of social sciences to include 15 semester hours in psychology.

h. Social studies. K-8. Completion of 24 semester hours in social studies, to include coursework from at least three of these areas: history, sociology, economics, American government, psychology and geography.

i. Sociology. 5-12. Completion of 24 semester hours in sociology or 30 semester hours in the broad area of social sciences to include 15 semester hours in sociology.

j. World history. 5-12. Completion of 24 semester hours in world history or 30 semester hours in the broad area of social sciences to include 15 semester hours in world history.

k. All social sciences. 5-12. Completion of 51 semester hours in the social sciences to include 9 semester hours in each of American and world history, 9 semester hours in government, 6 semester hours in sociology, 6 semester hours in psychology other than educational psychology, 6 semester hours in geography, and 6 semester hours in economics.

13.28(19) *Speech communication/theatre.*

a. K-8. Completion of 20 semester hours in speech communication/theatre to include coursework in speech communication, creative drama or theatre, and oral interpretation.

b. 5-12. Completion of 24 semester hours in speech communication/theatre to include coursework in speech communication, oral interpretation, creative drama or theatre, argumentation and debate, and mass media communication.

13.28(20) *English as a second language (ESL).* K-12.

a. Authorization. The holder of this endorsement is authorized to teach English as a second language in kindergarten and grades one through twelve.

b. Content. Completion of 18 semester hours of coursework in English as a second language to include the following:

(1) Knowledge of pedagogy to include the following:

1. Methods and curriculum to include the following:

- Bilingual and ESL methods.
- Literacy in native and second language.
- Methods for subject matter content.
- Adaptation and modification of curriculum.

2. Assessment to include language proficiency and academic content.

(2) Knowledge of linguistics to include the following:

1. Psycholinguistics and sociolinguistics.

2. Language acquisition and proficiency to include the following:

- Knowledge of first and second language proficiency.
- Knowledge of first and second language acquisition.
- Language to include structure and grammar of English.

(3) Knowledge of cultural and linguistic diversity to include the following:

1. History.

2. Theory, models, and research.

3. Policy and legislation.

(4) Current issues with transient populations.

13.28(21) *Elementary school teacher librarian.*

a. Authorization. The holder of this endorsement is authorized to serve as a teacher librarian in prekindergarten through grade eight.

b. Content. Completion of 24 semester hours in school library coursework to include the following:

(1) Literacy and reading. This requirement includes the following competencies:

1. Practitioners collaborate with other teachers to integrate developmentally appropriate literature in multiple formats to support literacy in children.

2. Practitioners demonstrate knowledge of resources and strategies to foster leisure reading and model personal enjoyment of reading among children, based on familiarity with selection tools and current trends in literature for children.

(2) Information and knowledge. This requirement includes the following competencies:

1. Practitioners teach multiple strategies to locate, analyze, evaluate, and ethically use information in the context of inquiry-based learning.
2. Practitioners advocate for flexible and open access to library resources, both physical and virtual.
3. Practitioners uphold and promote the legal and ethical codes of their profession, including privacy, confidentiality, freedom and equity of access to information.
4. Practitioners use skills and knowledge to assess reference sources, services, and tools in order to mediate between information needs and resources to assist learners in determining what they need.
5. Practitioners model and facilitate authentic learning with current and emerging digital tools for locating, analyzing, evaluating and ethically using information resources to support research, learning, creating, and communicating in a digital society.
6. Practitioners demonstrate knowledge of creative and innovative uses of technologies to engage students and facilitate higher-level thinking.
7. Practitioners develop an articulated information literacy curriculum grounded in research related to the information search process.

(3) Program administration and leadership. This requirement includes the following competencies:

1. Practitioners evaluate and select print, nonprint, and digital resources using professional selection tools and evaluation criteria to develop and manage a quality collection designed to meet the diverse curricular, personal, and professional needs of the educational community.
2. Practitioners demonstrate knowledge necessary to organize the library collections according to current standard library cataloging and classification principles.
3. Practitioners develop policies and procedures to support ethical use of information, intellectual freedom, selection and reconsideration of library materials, and the privacy of users.
4. Practitioners develop strategies for working with regular classroom teachers, support services personnel, paraprofessionals, and other individuals involved in the educational program.

(4) Practicum. This requirement includes the following competencies:

1. Practitioners apply knowledge of learning styles, stages of human growth and development, and cultural influences of learning at the elementary level.
2. Practitioners implement the principles of effective teaching and learning that contribute to an active, inquiry-based approach to learning in a digital environment at the elementary level.
3. Practitioners understand the teacher librarian role in curriculum development and the school improvement process at the elementary level.
4. Practitioners collaborate to integrate information literacy and emerging technologies into content area curricula at the elementary level.

13.28(22) *Secondary school teacher librarian.*

a. Authorization. The holder of this endorsement is authorized to serve as a teacher librarian in grades five through twelve.

b. Content. Completion of 24 semester hours in school library coursework to include the following:

(1) Literacy and reading. This requirement includes the following competencies:

1. Practitioners collaborate with other teachers to integrate developmentally appropriate literature in multiple formats to support literacy in young adults.
2. Practitioners demonstrate knowledge of resources and strategies to foster leisure reading and model personal enjoyment of reading among young adults, based on familiarity with selection tools and current trends in literature for young adults.

(2) Information and knowledge. This requirement includes the following competencies:

1. Practitioners teach multiple strategies to locate, analyze, evaluate, and ethically use information in the context of inquiry-based learning.
2. Practitioners advocate for flexible and open access to library resources, both physical and virtual.
3. Practitioners uphold and promote the legal and ethical codes of their profession, including privacy, confidentiality, freedom and equity of access to information.

4. Practitioners use skills and knowledge to assess reference sources, services, and tools in order to mediate between information needs and resources to assist learners in determining what they need.

5. Practitioners model and facilitate authentic learning with current and emerging digital tools for locating, analyzing, evaluating and ethically using information resources to support research, learning, creating, and communicating in a digital society.

6. Practitioners demonstrate knowledge of creative and innovative uses of technologies to engage students and facilitate higher-level thinking.

7. Practitioners develop an articulated information literacy curriculum grounded in research related to the information search process.

(3) Program administration and leadership. This requirement includes the following competencies:

1. Practitioners evaluate and select print, nonprint, and digital resources using professional selection tools and evaluation criteria to develop and manage a quality collection designed to meet the diverse curricular, personal, and professional needs of the educational community.

2. Practitioners demonstrate knowledge necessary to organize the library collections according to current standard library cataloging and classification principles.

3. Practitioners develop policies and procedures to support ethical use of information, intellectual freedom, selection and reconsideration of library materials, and the privacy of users.

4. Practitioners develop strategies for working with regular classroom teachers, support services personnel, paraprofessionals, and other individuals involved in the educational program.

(4) Practicum. This requirement includes the following competencies:

1. Practitioners apply knowledge of learning styles, stages of human growth and development, and cultural influences of learning at the secondary level.

2. Practitioners implement the principles of effective teaching and learning that contribute to an active, inquiry-based approach to learning in a digital environment at the secondary level.

3. Practitioners understand the teacher librarian role in curriculum development and the school improvement process at the secondary level.

4. Practitioners collaborate to integrate information literacy and emerging technologies into content area curricula at the secondary level.

13.28(23) School teacher librarian. PK-12.

a. Authorization. The holder of this endorsement is authorized to serve as a teacher librarian in prekindergarten through grade twelve. The applicant must be the holder of or eligible for the initial license.

b. Program requirements. Degree—master's.

c. Content. Completion of a sequence of courses and experiences which may have been part of, or in addition to, the degree requirements. This sequence is to be at least 30 semester hours in school library coursework, to include the following:

(1) Literacy and reading. This requirement includes the following competencies:

1. Practitioners collaborate with other teachers to integrate developmentally appropriate literature in multiple formats to support literacy for youth of all ages.

2. Practitioners demonstrate knowledge of resources and strategies to foster leisure reading and model personal enjoyment of reading, based on familiarity with selection tools and current trends in literature for youth of all ages.

3. Practitioners understand how to develop a collection of reading and informational materials in print and digital formats that supports the diverse developmental, cultural, social and linguistic needs of all learners and their communities.

4. Practitioners model and teach reading comprehension strategies to create meaning from text for youth of all ages.

(2) Information and knowledge. This requirement includes the following competencies:

1. Practitioners teach multiple strategies to locate, analyze, evaluate, and ethically use information in the context of inquiry-based learning.

2. Practitioners advocate for flexible and open access to library resources, both physical and virtual.

3. Practitioners uphold and promote the legal and ethical codes of their profession, including privacy, confidentiality, freedom and equity of access to information.

4. Practitioners use skills and knowledge to assess reference sources, services, and tools in order to mediate between information needs and resources to assist learners in determining what they need.

5. Practitioners model and facilitate authentic learning with current and emerging digital tools for locating, analyzing, evaluating and ethically using information resources to support research, learning, creating, and communicating in a digital society.

6. Practitioners demonstrate knowledge of creative and innovative uses of technologies to engage students and facilitate higher-level thinking.

7. Practitioners develop an articulated information literacy curriculum grounded in research related to the information search process.

8. Practitioners understand the process of collecting, interpreting, and using data to develop new knowledge to improve the school library program.

9. Practitioners employ the methods of research in library and information science.

(3) Program administration and leadership. This requirement includes the following competencies:

1. Practitioners evaluate and select print, nonprint, and digital resources using professional selection tools and evaluation criteria to develop and manage a quality collection designed to meet the diverse curricular, personal, and professional needs of the educational community.

2. Practitioners demonstrate knowledge necessary to organize the library collections according to current standard library cataloging and classification principles.

3. Practitioners develop policies and procedures to support ethical use of information, intellectual freedom, selection and reconsideration of library materials, and the privacy of users of all ages.

4. Practitioners develop strategies for working with regular classroom teachers, support services personnel, paraprofessionals, and other individuals involved in the educational program.

5. Practitioners demonstrate knowledge of best practices related to planning, budgeting (including alternative funding), organizing, and evaluating human and information resources and facilities to ensure equitable access.

6. Practitioners understand strategic planning to ensure that the school library program addresses the needs of diverse communities.

7. Practitioners advocate for school library and information programs, resources, and services among stakeholders.

8. Practitioners promote initiatives and partnerships to further the mission and goals of the school library program.

(4) Practicum. This requirement includes the following competencies:

1. Practitioners apply knowledge of learning styles, stages of human growth and development, and cultural influences of learning at the elementary and secondary levels.

2. Practitioners implement the principles of effective teaching and learning that contribute to an active, inquiry-based approach to learning in a digital environment at the elementary and secondary levels.

3. Practitioners understand the teacher librarian role in curriculum development and the school improvement process at the elementary and secondary levels.

4. Practitioners collaborate to integrate information literacy and emerging technologies into content area curricula.

13.28(24) Talented and gifted teacher.

a. *Authorization.* The holder of this endorsement is authorized to serve as a teacher or a coordinator of programs for the talented and gifted from the prekindergarten level through grade twelve. This authorization does not permit general classroom teaching at any level except that level or area for which the holder is eligible or holds the specific endorsement.

b. *Program requirements—content.* Completion of 12 undergraduate or graduate semester hours of coursework in the area of the talented and gifted to include the following:

(1) Psychology of the gifted.

1. Social needs.

2. Emotional needs.
- (2) Programming for the gifted.
 1. Prekindergarten-12 identification.
 2. Differentiation strategies.
 3. Collaborative teaching skills.
 4. Program goals and performance measures.
 5. Program evaluation.
- (3) Practicum experience in gifted programs.

NOTE: Teachers in specific subject areas will not be required to hold this endorsement if they teach gifted students in their respective endorsement areas.

13.28(25) American Sign Language endorsement.

a. Authorization. The holder of this endorsement is authorized to teach American Sign Language in kindergarten and grades one through twelve.

b. Content. Completion of 18 semester hours of coursework in American Sign Language to include the following:

- (1) Second language acquisition.
- (2) Sociology of the deaf community.
- (3) Linguistic structure of American Sign Language.
- (4) Language teaching methodology specific to American Sign Language.
- (5) Teaching the culture of deaf people.
- (6) Assessment of students in an American Sign Language program.

c. Other. Be the holder of or be eligible for one other teaching endorsement.

13.28(26) Elementary professional school counselor.

a. Authorization. The holder of this endorsement is authorized to serve as a professional school counselor in kindergarten and grades one through eight.

b. Program requirements. Master's degree from an accredited institution of higher education.

c. Content. Completion of a sequence of courses and experiences which may have been a part of, or in addition to, the degree requirements to include the following:

- (1) Nature and needs of individuals at all developmental levels.
 1. Develop strategies for facilitating development through the transition from childhood to adolescence and from adolescence to young adulthood.
 2. Apply knowledge of learning and personality development to assist students in developing their full potential.
- (2) Social and cultural foundations.
 1. Demonstrate awareness of and sensitivity to the unique social, cultural, and economic circumstances of students and their racial/ethnic, gender, age, physical, and learning differences.
 2. Demonstrate sensitivity to the nature and the functioning of the student within the family, school and community contexts.
 3. Demonstrate the counseling and consultation skills needed to facilitate informed and appropriate action in response to the needs of students.
- (3) Fostering of relationships.
 1. Employ effective counseling and consultation skills with students, parents, colleagues, administrators, and others.
 2. Communicate effectively with parents, colleagues, students and administrators.
 3. Counsel students in the areas of personal, social, academic, and career development.
 4. Assist families in helping their children address the personal, social, and emotional concerns and problems that may impede educational progress.
 5. Implement developmentally appropriate counseling interventions with children and adolescents.
 6. Demonstrate the ability to negotiate and move individuals and groups toward consensus or conflict resolution or both.
 7. Refer students for specialized help when appropriate.

8. Value the well-being of the students as paramount in the counseling relationship.
- (4) Group work.
 1. Implement developmentally appropriate interventions involving group dynamics, counseling theories, group counseling methods and skills, and other group work approaches.
 2. Apply knowledge of group counseling in implementing appropriate group processes for elementary, middle school, and secondary students.
- (5) Career development, education, and postsecondary planning.
 1. Assist students in the assessment of their individual strengths, weaknesses, and differences, including those that relate to academic achievement and future plans.
 2. Apply knowledge of career assessment and career choice programs.
 3. Implement occupational and educational placement, follow-up and evaluation.
 4. Develop a counseling network and provide resources for use by students in personalizing the exploration of postsecondary educational opportunities.
- (6) Assessment and evaluation.
 1. Demonstrate individual and group approaches to assessment and evaluation.
 2. Demonstrate an understanding of the proper administration and uses of standardized tests.
 3. Apply knowledge of test administration, scoring, and measurement concerns.
 4. Apply evaluation procedures for monitoring student achievement.
 5. Apply assessment information in program design and program modifications to address students' needs.
 6. Apply knowledge of legal and ethical issues related to assessment and student records.
- (7) Professional orientation.
 1. Apply knowledge of history, roles, organizational structures, ethics, standards, and credentialing.
 2. Maintain a high level of professional knowledge and skills.
 3. Apply knowledge of professional and ethical standards to the practice of school counseling.
 4. Articulate the professional school counselor role to school personnel, parents, community, and students.
- (8) School counseling skills.
 1. Design, implement, and evaluate a comprehensive, developmental school counseling program.
 2. Implement and evaluate specific strategies designed to meet program goals and objectives.
 3. Consult and coordinate efforts with resource persons, specialists, businesses, and agencies outside the school to promote program objectives.
 4. Provide information appropriate to the particular educational transition and assist students in understanding the relationship that their curricular experiences and academic achievements will have on subsequent educational opportunities.
 5. Assist parents and families in order to provide a supportive environment in which students can become effective learners and achieve success in pursuit of appropriate educational goals.
 6. Provide training, orientation, and consultation assistance to faculty, administrators, staff, and school officials to assist them in responding to the social, emotional, and educational development of all students.
 7. Collaborate with teachers, administrators, and other educators in ensuring that appropriate educational experiences are provided that allow all students to achieve success.
 8. Assist in the process of identifying and addressing the needs of the exceptional student.
 9. Apply knowledge of legal and ethical issues related to child abuse and mandatory reporting.
 10. Advocate for the educational needs of students and work to ensure that these needs are addressed at every level of the school experience.
 11. Promote use of school counseling and educational and career planning activities and programs involving the total school community to provide a positive school climate.
- (9) Classroom management.
 1. Apply effective classroom management strategies as demonstrated in delivery of classroom and large group school counseling curriculum.

2. Consult with teachers and parents about effective classroom management and behavior management strategies.

(10) Curriculum.

1. Write classroom lessons including objectives, learning activities, and discussion questions.

2. Utilize various methods of evaluating what students have learned in classroom lessons.

3. Demonstrate competency in conducting classroom and other large group activities, utilizing an effective lesson plan design, engaging students in the learning process, and employing age-appropriate classroom management strategies.

4. Design a classroom unit of developmentally appropriate learning experiences.

5. Demonstrate knowledge in writing standards and benchmarks for curriculum.

(11) Learning theory.

1. Identify and consult with teachers about how to create a positive learning environment utilizing such factors as effective classroom management strategies, building a sense of community in the classroom, and cooperative learning experiences.

2. Identify and consult with teachers regarding teaching strategies designed to motivate students using small group learning activities, experiential learning activities, student mentoring programs, and shared decision-making opportunities.

3. Demonstrate knowledge of child and adolescent development and identify developmentally appropriate teaching and learning strategies.

(12) Teaching and counseling practicum. The school counselor demonstrates competency in conducting classroom sessions with elementary and middle school students. The practicum consisting of a minimum of 500 contact hours provides opportunities for the prospective counselor, under the supervision of a licensed professional school counselor, to engage in a variety of activities in which a regularly employed school counselor would be expected to participate including, but not limited to, individual counseling, group counseling, developmental classroom guidance, and consultation.

13.28(27) Secondary professional school counselor.

a. *Authorization.* The holder of this endorsement is authorized to serve as a professional school counselor in grades five through twelve.

b. *Program requirements.* Master's degree from an accredited institution of higher education.

c. *Content.* Completion of a sequence of courses and experiences which may have been a part of, or in addition to, the degree requirements to include:

(1) The competencies listed in subparagraphs 13.28(26) "c"(1) to (11).

(2) The teaching and counseling practicum. The school counselor demonstrates competency in conducting classroom sessions with middle and secondary school students. The practicum consisting of a minimum of 500 contact hours provides opportunities for the prospective counselor, under the supervision of a licensed professional school counselor, to engage in a variety of activities in which a regularly employed school counselor would be expected to participate including, but not limited to, individual counseling, group work, developmental classroom guidance, and consultation.

13.28(28) School nurse endorsement. The school nurse endorsement does not authorize general classroom teaching, although it does authorize the holder to teach health at all grade levels. Alternatively, a nurse may obtain a statement of professional recognition (SPR) from the board of educational examiners, in accordance with the provisions set out in 282—Chapter 16, Statements of Professional Recognition (SPR).

a. *Authorization.* The holder of this endorsement is authorized to provide service as a school nurse at the prekindergarten and kindergarten levels and in grades one through twelve.

b. *Content.*

(1) Organization and administration of school nurse services including the appraisal of the health needs of children and youth.

(2) School-community relationships and resources/coordination of school and community resources to serve the health needs of children and youth.

(3) Knowledge and understanding of the health needs of exceptional children.

(4) Health education.

c. Other. Hold a license as a registered nurse issued by the Iowa board of nursing.

13.28(29) Athletic coach. K-12. An applicant for the coaching endorsement must hold a teacher's license with one of the teaching endorsements.

a. Authorization. The holder of this endorsement may serve as a head coach or an assistant coach in kindergarten and grades one through twelve.

b. Program requirements.

(1) One semester hour college or university course in the structure and function of the human body in relation to physical activity, and

(2) One semester hour college or university course in human growth and development of children and youth as related to physical activity, and

(3) Two semester hour college or university course in athletic conditioning, care and prevention of injuries and first aid as related to physical activity, and

(4) One semester hour college or university course in the theory of coaching interscholastic athletics, and

(5) Successful completion of the concussion training approved by the Iowa High School Athletic Association or Iowa Girls High School Athletic Union.

13.28(30) Content specialist endorsement. The applicant must have met the requirements for the standard license and a teaching endorsement.

a. Authorization. The holder of this endorsement is authorized to serve as a content specialist in kindergarten and grades one through twelve in the specific content listed on the authorization.

b. Requirements.

(1) Hold a master's degree in the content area or complete 30 semester hours of college course work in the content area.

(2) Complete 15 semester hours of credit in professional development in three or more of the following areas:

1. Using research-based content teaching strategies;

2. Integrating appropriate technology into the learning experiences for the specific content;

3. Engaging the learner in the content through knowledge of learner needs and interests;

4. Using reflective thinking to solve problems in the content area;

5. Making data-driven decisions in the content area;

6. Utilizing project-based learning in the content area;

7. Developing critical thinking skills in the content area;

8. Forming partnerships to collaborate with content experts within the community;

9. Relating content with other content areas;

10. Facilitating content learning in large and small teams;

11. Implementing response to intervention (RTI) to close achievement gaps in the content area.

(3) Complete an internship, externship, or professional experience for a minimum of 90 contact hours in the content area.

13.28(31) Engineering. 5-12.

a. Completion of 24 semester hours in engineering coursework.

b. Methods and strategies of STEM instruction or methods of teaching science or mathematics.

13.28(32) STEM.

a. K-8.

(1) Authorization. The holder of this endorsement is authorized to teach science, mathematics, and integrated STEM courses in kindergarten through grade eight.

(2) Program requirements. Be the holder of the teacher—elementary classroom endorsement.

(3) Content.

1. Completion of a minimum of 12 semester hours of college-level science.

2. Completion of a minimum of 12 semester hours of college-level math (or the completion of Calculus I) to include coursework in computer programming.

3. Completion of a minimum of 3 semester hours of coursework in content or pedagogy of engineering and technological design that includes engineering design processes or programming logic and problem-solving models and that may be met through either of the following:

- Engineering and technological design courses for education majors;
- Technology or engineering content coursework.

4. Completion of a minimum of 6 semester hours of required coursework in STEM curriculum and methods to include the following essential concepts and skills:

- Comparing and contrasting the nature and goals of each of the STEM disciplines;
- Promoting learning through purposeful, authentic, real-world connections;
- Integration of content and context of each of the STEM disciplines;
- Interdisciplinary/transdisciplinary approaches to teaching (including but not limited to problem-based learning and project-based learning);
- Curriculum and standards mapping;
- Engaging subject-matter experts (including but not limited to colleagues, parents, higher education faculty/students, business partners, and informal education agencies) in STEM experiences in and out of the classroom;

- Assessment of integrative learning approaches;
- Information literacy skills in STEM;
- Processes of science and scientific inquiry;
- Mathematical problem-solving models;
- Communicating to a variety of audiences;
- Classroom management in project-based classrooms;
- Instructional strategies for the inclusive classroom;
- Computational thinking;
- Mathematical and technological modeling.

5. Completion of a STEM field experience of a minimum of 30 contact hours that may be met through the following:

- Completing a STEM research experience;
- Participating in a STEM internship at a STEM business or informal education organization; or
- Leading a STEM extracurricular activity.

b. 5-8.

(1) Authorization. The holder of this endorsement is authorized to teach science, mathematics, and integrated STEM courses in grades five through eight.

(2) Program requirements. Be the holder of a 5-12 science, mathematics, or industrial technology endorsement or 5-8 middle school mathematics or science endorsement.

(3) Content.

1. Completion of a minimum of 12 semester hours of college-level science.

2. Completion of a minimum of 12 semester hours of college-level math (or the completion of Calculus I) to include coursework in computer programming.

3. Completion of a minimum of 3 semester hours of coursework in content or pedagogy of engineering and technological design that includes engineering design processes or programming logic and problem-solving models and that may be met through either of the following:

- Engineering and technological design courses for education majors;
- Technology or engineering content coursework.

4. Completion of a minimum of 6 semester hours of required coursework in STEM curriculum and methods to include the following essential concepts and skills:

- Comparing and contrasting the nature and goals of each of the STEM disciplines;
- Promoting learning through purposeful, authentic, real-world connections;
- Integration of content and context of each of the STEM disciplines;
- Interdisciplinary/transdisciplinary approaches to teaching (including but not limited to problem-based learning and project-based learning);
- Curriculum and standards mapping;

- Engaging subject-matter experts (including but not limited to colleagues, parents, higher education faculty/students, business partners, and informal education agencies) in STEM experiences in and out of the classroom;

- Assessment of integrative learning approaches;
- Information literacy skills in STEM;
- Processes of science and scientific inquiry;
- Mathematical problem-solving models;
- Communicating to a variety of audiences;
- Classroom management in project-based classrooms;
- Instructional strategies for the inclusive classroom;
- Computational thinking;
- Mathematical and technological modeling.

5. Completion of a STEM field experience of a minimum of 30 contact hours that may be met through the following:

- Completing a STEM research experience;
- Participating in a STEM internship at a STEM business or informal education organization; or
- Leading a STEM extracurricular activity.

c. *Specialist K-12.*

(1) Authorization. The holder of this endorsement is authorized to serve as a STEM specialist in kindergarten and grades one through twelve.

(2) Program requirements.

1. The applicant must have met the requirements for a standard Iowa teaching license and a teaching endorsement in mathematics, science, engineering, industrial technology, or agriculture.

2. The applicant must hold a master's degree from a regionally accredited institution. The master's degree must be in math, science, engineering or technology or another area with at least 12 hours of college-level science and at least 12 hours of college-level math (or completion of Calculus I) to include coursework in computer programming.

(3) Content.

1. Completion of a minimum of 3 semester hours of coursework in content or pedagogy of engineering and technological design that includes engineering design processes or programming logic and problem-solving models and that may be met through either of the following:

- Engineering and technological design courses for education majors;
- Technology or engineering content coursework.

2. Completion of 9 semester hours in professional development to include the following essential concepts and skills:

- STEM curriculum and methods:
 - Comparing and contrasting the nature and goals of each of the STEM disciplines;
 - Promoting learning through purposeful, authentic, real-world connections;
 - Integration of content and context of each of the STEM disciplines;
 - Interdisciplinary/transdisciplinary approaches to teaching (including but not limited to problem-based learning and project-based learning);
 - Curriculum/standards mapping;
 - Assessment of integrative learning approaches;
 - Information literacy skills in STEM;
 - Processes of science/scientific inquiry;
 - Mathematical problem-solving models;
 - Classroom management in project-based classrooms;
 - Instructional strategies for the inclusive classroom;
 - Computational thinking;
 - Mathematical and technological modeling.
- STEM experiential learning:

- Engaging subject-matter experts (including but not limited to colleagues, parents, higher education faculty/students, business partners, and informal education agencies) in STEM experiences in and out of the classroom;

- STEM research experiences;
- STEM internship at a STEM business or informal education organization;
- STEM extracurricular activity;
- Communicating to a variety of audiences.
 - Leadership in STEM:
 - STEM curriculum development and assessment;
 - Curriculum mapping;
 - Assessment of student engagement;
 - STEM across the curriculum;
 - Research on best practices in STEM;
 - STEM curriculum accessibility for all students.

3. Completion of an internship/externship professional experience or prior professional experience in STEM for a minimum of 90 contact hours.

13.28(33) Multioccupations. Completion of any 5-12 endorsement and, in addition thereto, coursework in foundations of career and technical education, coordination of cooperative programs, and competency-based curriculum development. Four thousand hours of career and technical experience in two or more occupations. The multioccupations endorsement also authorizes the holder to supervise students in cooperative programs, school-to-work programs, and similar programs in which the student is placed in school-sponsored, on-the-job situations.

[ARC 7986B, IAB 7/29/09, effective 9/2/09; ARC 8248B, IAB 11/4/09, effective 10/12/09; ARC 8403B, IAB 12/16/09, effective 1/20/10; ARC 9070B, IAB 9/8/10, effective 10/13/10; ARC 9071B, IAB 9/8/10, effective 10/13/10; ARC 9210B, IAB 11/3/10, effective 12/8/10; ARC 9211B, IAB 11/3/10, effective 12/8/10; ARC 9212B, IAB 11/3/10, effective 12/8/10; ARC 9838B, IAB 11/2/11, effective 12/7/11; ARC 9839B, IAB 11/2/11, effective 12/7/11; ARC 0448C, IAB 11/14/12, effective 12/19/12; ARC 0449C, IAB 11/14/12, effective 12/19/12; ARC 0866C, IAB 7/24/13, effective 8/28/13; ARC 0875C, IAB 7/24/13, effective 8/28/13; ARC 0986C, IAB 9/4/13, effective 10/9/13; ARC 1085C, IAB 10/16/13, effective 11/20/13; ARC 1171C, IAB 11/13/13, effective 12/18/13; ARC 1328C, IAB 2/19/14, effective 3/26/14; ARC 1327C, IAB 2/19/14, effective 3/26/14; ARC 2015C, IAB 6/10/15, effective 7/15/15; ARC 2016C, IAB 6/10/15, effective 7/15/15]

282—13.29(272) Adding, removing or reinstating a teaching endorsement.

13.29(1) Adding an endorsement. After the issuance of a teaching license, an individual may add other endorsements to that license upon proper application, provided current requirements for that endorsement have been met. An updated license with expiration date unchanged from the original or renewed license will be prepared.

a. Options. To add an endorsement, the applicant must follow one of these options:

(1) Option 1. Receive the Iowa teacher education institution's recommendation that the current approved program requirements for the endorsement have been met.

(2) Option 2. Receive verification from the Iowa teacher education institution that the minimum state requirements for the endorsement have been met in lieu of the institution's approved program.

(3) Option 3. Apply for a review of the transcripts by the board of educational examiners' staff to determine if all Iowa requirements have been met. The applicant must submit documentation that all of the Iowa requirements have been met by filing transcripts and supporting documentation for review. The fee for the transcript evaluation is in 282—Chapter 12. This fee shall be in addition to the fee for adding the endorsement.

b. Additional requirements for adding an endorsement.

(1) In addition to meeting the requirements for Iowa licensure, applicants for endorsements shall have completed a methods class appropriate for teaching the general subject area of the endorsement added.

(2) Practitioners who are adding an elementary or early childhood endorsement and have not student taught on the elementary or early childhood level shall complete a teaching practicum appropriate for teaching at the level of the new endorsement.

(3) Practitioners who are adding a secondary teaching endorsement and have not student taught on the secondary level shall complete a teaching practicum appropriate for teaching at the level of the new endorsement.

(4) Practitioners holding the K-8 endorsement in the content area of the 5-12 endorsement being added may satisfy the requirement for the secondary methods class and the teaching practicum by completing all required coursework and presenting verification of competence. This verification of competence shall be signed by a licensed evaluator who has observed and formally evaluated the performance of the applicant at the secondary level. This verification of competence may be submitted at any time during the term of the Class B license. The practitioner must obtain a Class B license while practicing with the 5-12 endorsement.

13.29(2) Removal of an endorsement; reinstatement of removed endorsement.

a. Removal of an endorsement. A practitioner may remove an endorsement from the practitioner's license as follows:

(1) To remove an endorsement, the practitioner shall meet the following conditions:

1. A practitioner who holds a standard or master educator license is eligible to request removal of an endorsement from the license if the practitioner has not taught in the subject or assignment area of the endorsement in the five years prior to the request for removal of the endorsement, and

2. The practitioner must submit a notarized written application form furnished by the board of educational examiners to remove an endorsement at the time of licensure renewal (licensure renewal is limited to one calendar year prior to the expiration date of the current license), and

3. The application must be signed by the superintendent or designee in the district in which the practitioner is under contract. The superintendent's signature shall serve as notification and acknowledgment of the practitioner's intent to remove an endorsement from the practitioner's license. The absence of the superintendent's or designee's signature does not impede the removal process.

(2) The endorsement shall be removed from the license at the time of application.

(3) If a practitioner is not employed and submits an application, the provisions of 13.29(2) "a"(1)"3" shall not be required.

(4) If a practitioner submits an application that does not meet the criteria listed in 13.29(2) "a"(1)"1" to "3," the application will be rendered void and the practitioner will forfeit the processing fee.

(5) The executive director has the authority to approve or deny the request for removal. Any denial is subject to the appeal process set forth in rule 282—11.35(272).

b. Reinstatement of a removed endorsement.

(1) If the practitioner wants to add the removed endorsement at a future date, all coursework for the endorsement must be completed within the five years preceding the application to add the endorsement.

(2) The practitioner must meet the current endorsement requirements when making application.

[ARC 8248B, IAB 11/4/09, effective 10/12/09; ARC 2016C, IAB 6/10/15, effective 7/15/15]

282—13.30(272) Licenses—issue dates, corrections, duplicates, and fraud.

13.30(1) Issue date on original license. A license is valid only from and after the date of issuance.

13.30(2) Correcting licenses. If a licensee notifies board staff of a typographical or clerical error on the license within 30 days of the date of the board's mailing of a license, a corrected license shall be issued without charge to the licensee. If notification of a typographical or clerical error is made more than 30 days after the date of the board's mailing of a license, a corrected license shall be issued upon receipt of the fee for issuance of a duplicate license. For purposes of this rule, typographical or clerical errors include misspellings, errors in the expiration date of a license, errors in the type of license issued, and the omission or misidentification of the endorsements for which application was made. A licensee requesting the addition of an endorsement not included on the initial application must submit a new application and the appropriate application fee.

13.30(3) Duplicate licenses. Upon application and payment of the fee set out in 282—Chapter 12, a duplicate license shall be issued.

13.30(4) *Fraud in procurement or renewal of licenses.* Fraud in procurement or renewal of a license or falsifying records for licensure purposes will constitute grounds for filing a complaint with the board of educational examiners.

These rules are intended to implement Iowa Code chapter 272 and 2014 Iowa Acts, chapter 1116, division VI.

Filed 12/23/08, Notice 10/8/08—published 1/14/09, effective 2/18/09]

[Filed 12/24/08, Notice 10/22/08—published 1/14/09, effective 2/18/09]

[Filed ARC 7869B (Notice ARC 7600B, IAB 2/25/09), IAB 6/17/09, effective 7/22/09]

[Filed ARC 7987B (Notice ARC 7751B, IAB 5/6/09), IAB 7/29/09, effective 9/2/09]

[Filed ARC 7986B (Notice ARC 7744B, IAB 5/6/09), IAB 7/29/09, effective 9/2/09]

[Filed ARC 8133B (Notice ARC 7778B, IAB 5/20/09), IAB 9/9/09, effective 10/14/09]

[Filed ARC 8134B (Notice ARC 7860B, IAB 6/17/09), IAB 9/9/09, effective 10/14/09]

[Filed ARC 8138B (Notice ARC 7871B, IAB 6/17/09), IAB 9/9/09, effective 10/14/09]

[Filed ARC 8139B (Notice ARC 7872B, IAB 6/17/09), IAB 9/9/09, effective 10/14/09]

[Filed Emergency ARC 8248B, IAB 11/4/09, effective 10/12/09]

[Filed ARC 8400B (Notice ARC 8125B, IAB 9/9/09), IAB 12/16/09, effective 1/20/10]

[Filed ARC 8401B (Notice ARC 8121B, IAB 9/9/09), IAB 12/16/09, effective 1/20/10]

[Filed ARC 8402B (Notice ARC 8126B, IAB 9/9/09), IAB 12/16/09, effective 1/20/10]

[Filed ARC 8403B (Notice ARC 8129B, IAB 9/9/09), IAB 12/16/09, effective 1/20/10]

[Filed ARC 8604B (Notice ARC 8250B, IAB 11/4/09), IAB 3/10/10, effective 4/14/10]

[Filed ARC 8610B (Notice ARC 8249B, IAB 11/4/09), IAB 3/10/10, effective 4/14/10]

[Filed ARC 8607B (Notice ARC 8408B, IAB 12/16/09), IAB 3/10/10, effective 4/14/10]

[Filed ARC 8688B (Notice ARC 8436B, IAB 1/13/10), IAB 4/7/10, effective 5/12/10]

[Filed ARC 8957B (Notice ARC 8686B, IAB 4/7/10), IAB 7/28/10, effective 9/1/10]

[Filed ARC 9072B (Notice ARC 8822B, IAB 6/2/10), IAB 9/8/10, effective 10/13/10]

[Filed ARC 9070B (Notice ARC 8824B, IAB 6/2/10), IAB 9/8/10, effective 10/13/10]

[Filed ARC 9071B (Notice ARC 8825B, IAB 6/2/10), IAB 9/8/10, effective 10/13/10]

[Filed ARC 9207B (Notice ARC 8969B, IAB 7/28/10), IAB 11/3/10, effective 12/8/10]

[Filed ARC 9205B (Notice ARC 8961B, IAB 7/28/10), IAB 11/3/10, effective 12/8/10]

[Filed ARC 9206B (Notice ARC 8968B, IAB 7/28/10), IAB 11/3/10, effective 12/8/10]

[Filed ARC 9210B (Notice ARC 8965B, IAB 7/28/10), IAB 11/3/10, effective 12/8/10]

[Filed ARC 9211B (Notice ARC 8966B, IAB 7/28/10), IAB 11/3/10, effective 12/8/10]

[Filed ARC 9212B (Notice ARC 8967B, IAB 7/28/10), IAB 11/3/10, effective 12/8/10]

[Filed ARC 9573B (Notice ARC 9382B, IAB 2/23/11), IAB 6/29/11, effective 8/3/11]

[Filed ARC 9838B (Notice ARC 9663B, IAB 8/10/11), IAB 11/2/11, effective 12/7/11]

[Filed ARC 9839B (Notice ARC 9662B, IAB 8/10/11), IAB 11/2/11, effective 12/7/11]

[Filed ARC 9840B (Notice ARC 9661B, IAB 8/10/11), IAB 11/2/11, effective 12/7/11]

[Filed ARC 9925B (Notice ARC 9744B, IAB 9/7/11), IAB 12/14/11, effective 1/18/12]

[Filed ARC 0026C (Notice ARC 9924B, IAB 12/14/11), IAB 3/7/12, effective 4/11/12]

[Filed ARC 0446C (Notice ARC 0236C, IAB 7/25/12), IAB 11/14/12, effective 12/19/12]

[Filed ARC 0448C (Notice ARC 0235C, IAB 7/25/12), IAB 11/14/12, effective 12/19/12]

[Filed ARC 0449C (Notice ARC 0312C, IAB 9/5/12), IAB 11/14/12, effective 12/19/12]

[Filed Emergency After Notice ARC 0563C, IAB 1/23/13, effective 1/1/13]

[Filed ARC 0605C (Notice ARC 0509C, IAB 12/12/12), IAB 2/20/13, effective 3/27/13]

[Filed ARC 0698C (Notice ARC 0614C, IAB 2/20/13), IAB 5/1/13, effective 6/5/13]

[Filed ARC 0865C (Notice ARC 0676C, IAB 4/3/13), IAB 7/24/13, effective 8/28/13]

[Filed ARC 0866C (Notice ARC 0696C, IAB 5/1/13), IAB 7/24/13, effective 8/28/13]

[Filed ARC 0867C (Notice ARC 0706C, IAB 5/1/13), IAB 7/24/13, effective 8/28/13]

[Filed ARC 0868C (Notice ARC 0705C, IAB 5/1/13), IAB 7/24/13, effective 8/28/13]

[Filed ARC 0875C (Notice ARC 0700C, IAB 5/1/13), IAB 7/24/13, effective 8/28/13]

[Filed ARC 0986C (Notice ARC 0762C, IAB 5/29/13), IAB 9/4/13, effective 10/9/13]

[Filed ARC 1085C (Notice ARC 0879C, IAB 7/24/13), IAB 10/16/13, effective 11/20/13]

[Filed ARC 1166C (Notice ARC 0880C, IAB 7/24/13), IAB 11/13/13, effective 12/18/13]
[Filed ARC 1168C (Notice ARC 0987C, IAB 9/4/13), IAB 11/13/13, effective 12/18/13]
[Filed ARC 1171C (Notice ARC 0993C, IAB 9/4/13), IAB 11/13/13, effective 12/18/13]
[Filed ARC 1324C (Notice ARC 1182C, IAB 11/13/13), IAB 2/19/14, effective 3/26/14]
[Filed ARC 1323C (Notice ARC 1181C, IAB 11/13/13), IAB 2/19/14, effective 3/26/14]
[Filed ARC 1328C (Notice ARC 1236C, IAB 12/11/13), IAB 2/19/14, effective 3/26/14]
[Filed ARC 1327C (Notice ARC 1235C, IAB 12/11/13), IAB 2/19/14, effective 3/26/14]
[Filed ARC 1374C (Notice ARC 1272C, IAB 1/8/14), IAB 3/19/14, effective 4/23/14]
[Filed ARC 1454C (Notice ARC 1343C, IAB 2/19/14), IAB 5/14/14, effective 6/18/14]
[Filed ARC 1878C (Notice ARC 1723C, IAB 11/12/14), IAB 2/18/15, effective 3/25/15]
[Filed ARC 2015C (Notice ARC 1917C, IAB 3/18/15), IAB 6/10/15, effective 7/15/15]
[Filed ARC 2016C (Notice ARC 1918C, IAB 3/18/15), IAB 6/10/15, effective 7/15/15]
[Filed ARC 2230C (Notice ARC 2130C, IAB 9/2/15), IAB 11/11/15, effective 12/16/15]