Professional Educator Licensing and Standards Board

Proposed Permanent Rules Relating to Licensing and Academic Standards

8710.0200  FEES.

Each application for the issuance or renewal of a license to teach shall be accompanied by a processing fee in compliance with the fee authorized by the legislature. The fees shall be paid to the commissioner of education who shall deposit them with the commissioner of management and budget the fees in the general revenue fund, as provided by law, and report each month to the commissioner of management and budget the amount of fees collected.

The fee shall be nonrefundable for applicants not qualifying for a license, except the fee is refundable when the applicant for a license already holds the license for which application is made and that license does not expire in the year the application is submitted.

8710.0310  DEFINITIONS AND GENERAL RULES FOR TEACHING LICENSES.

Subpart 1.  Definitions.

A. For the purposes of parts 8710.0310 to 8710.0330, the terms in this subpart have the meanings given them.

B. "Assignment" means the course or courses taught in a school for which students are granted credit.

C. "Board" means the Professional Educator Licensing and Standards Board.

D. "Cultural competency training" means a training program that promotes self-reflection and discussion including but not limited to all of the following topics: racial, cultural, and socioeconomic groups; American Indian and Alaskan native students; religion; systemic racism; gender identity, including transgender students; sexual orientation; language diversity; and individuals with disabilities and mental health concerns. Training programs must be designed to deepen teachers' understanding of their own frames of reference, the
potential bias in these frames, and their impact on expectations for and relationships with students, students' families, and the school communities, consistent with part 8710.2000, subpart 4, and Minnesota Statutes, section 120B.30, subdivision 1, paragraph (q).

E. "District" means a school district or a charter school.

F. "Field-specific methods" means differentiated instructional strategies targeting content and pedagogy for a singular licensure area to enable student learning.

G. "Good cause" means:

   (1) the applicant is unable to meet the requirements of a higher licensure tier due to a lack of a board-approved teacher preparation program in the licensure area;

   (2) the position is a full-time equivalency of 0.1 or less; or

   (3) the applicant demonstrates to the board barriers to reaching a higher licensure tier. Barriers may include but are not limited to financial burdens to obtaining a higher tiered license, inability to pass licensure exams, or lack of geographic proximity to teacher preparation.

H. "Innovative program" means a school within a district that is either a state-approved area learning center or an alternative learning program or provides a school board resolution designating the school as an innovative program, including the reason for the designation.

I. "Licensure area" or "licensure field" means the content taught for which standards have been adopted in Minnesota Rules.

J. "Mentorship program" means a program that meets the following criteria:

   (1) a yearlong collaborative relationship with an experienced Tier 3 or 4 mentor teacher who is not currently on an improvement plan and voluntarily agrees to mentor the mentee teacher;
(2) the mentor has access to resources or training, develops common expectations for the mentorship experience, and encourages the mentee to select areas for growth over the course of the year;

(3) consists of sessions no less than once per month that focus on building a collaborative relationship with a focus on the exchange of knowledge, skills, and experiences, including the needs and questions of the mentee; and

(4) the sessions include discussion of:

(a) effective strategies to engage students;

(b) classroom management strategies that reflect an understanding of the stages of child development;

(c) the educational rights of students and their diverse needs and experiences;

(d) school policies and practices, including appropriate boundaries and data privacy; and

(e) how student learning data can be used to improve classroom planning and instruction.

K. "Professional license from another state" means a professional teaching license issued by the responsible state agency of another state and required by the law of that state for an individual to teach in a public school, but does not include an emergency, temporary, or substitute teaching license.

L. "Related services professional" means a teacher who holds a license issued by the board consistent with Minnesota Statutes, section 122A.06, subdivision 2, and who meets the requirements for a license issued pursuant to parts 8710.6000 to 8710.6400.
M. "Student teaching" means a minimum of 12 weeks full time, or the equivalent, when an individual enrolled in a teacher preparation program assumes teacher responsibilities while working with a cooperating teacher who holds a Tier 3 or 4 license or a professional license from another state in the subject area and a provider supervisor to practice and demonstrate the necessary development of the individual's knowledge, skills, and dispositions to become a teacher. A student teaching experience includes observation, feedback, and evaluation from the cooperating teacher and provider supervisor.

N. "Substitute teacher" means an individual who replaces a teacher of record during an approved leave of absence pursuant to part 8710.0327.

N. O. "Teacher of record" means an individual who is responsible for the planning, instruction, and assessment of students in a classroom, aligned to the scope of the license, and authorized to grant students credit for meeting standards attributed to the content taught, or is part of a co-teaching assignment and has shared responsibility for planning, instruction, and assessment of students in a classroom.

O. P. "Teacher preparation program" means a program approved by the board or the state where the program resides that trains candidates in educational pedagogy and content-specific pedagogy for any subset of the scope of licensure for students from birth to 21 years of age.

P. Q. "Teaching license" or "teacher license" means a license that permits an individual to be a teacher of record. This includes Tier 1, Tier 2, Tier 3, and Tier 4 licenses issued under parts 8710.0311 to 8710.0314.

Subp. 2. **Teaching licenses, in general.**

A. Teaching licenses must be granted by the board to applicants who meet all requirements of applicable statutes and rules.
B. An applicant must qualify separately for each licensure area for which an
application is made.

C. A license becomes valid on the date issued by the board and expires on June
30 of the expiration year. A Tier 1 or Tier 2 license, out-of-field permission, or innovative
program permission, or temporary military license can be used until September 1 after the
date of expiration if the placement is in a summer school program at the district aligned to
the license or is part of a year-round school at the district aligned to the licensure area.

D. The board must request a criminal history background check be performed by
the Bureau of Criminal Apprehension consistent with Minnesota Statutes, section 122A.18,
subdivision 8, upon an individual applying for a teaching license or substitute license for
the first time. Upon renewal of a teaching license or substitute license, the board must
perform a new background check on the license holder that includes a review for national
arrests, charges, and convictions if a background check has not been completed on the
license holder within the last five years.

E. All applicants for licensure and license renewals are subject to a conduct review
performed by the board. The board may refuse to issue a license or deny a license renewal
based on the results of the conduct review. An applicant who is denied a license or license
renewal as a result of the conduct review may appeal the board's decision pursuant to subpart
6.

Subp. 3. [See repealer.]

Subp. 4. Movement between tiers. Teachers may apply to obtain a license in a higher
licensure tier at any time after the requirements for the higher tier have been met. The teacher
must be granted the license under a higher tier upon review and approval by the board
pursuant to the rules established for the license sought.
Subp. 5. **Multiple expiration dates.** If a license holder has completed and verified the renewal requirements for a currently held Tier 3 or 4 license issued under parts 8710.0313 and 8710.0314, the license holder may renew a currently held Tier 3 or 4 license up to one year before the expiration date for the purpose of consolidating multiple expiration dates of any Tier 3 or 4 licenses held into one expiration date. The consolidation of multiple expiration dates must be consolidated within a single tier.

Subp. 6. **Appeal.** An applicant who is denied a teaching license by the board or who is issued a license under a different licensure tier than what was sought may appeal the board's decision under part 8710.0900 and Minnesota Statutes, chapter 14, and section 122A.188.

Subp. 7. **Licenses issued in error.** A license issued in error to a person who does not qualify for the license must be corrected without charge to the license holder, and the corrections must be made without a hearing under part 8710.0900 and Minnesota Statutes, chapter 14. A license issued in error is not valid.

Subp. 8. **Report.** The board must issue an annual report by September 1 that summarizes the previous fiscal year's Tier 1, 2, 3, and 4 licenses and out-of-field and innovative program permissions, organized by licensure field, race and ethnicity, and district.

8710.0311 **TIER 1 LICENSE.**

Subpart 1. **Purpose.** If a district is unable to fill an open position with a teacher holding a Tier 2, 3, or 4 license, a Tier 1 license must be issued, consistent with this part, to an applicant who does not hold a Tier 2, 3, or 4 license on behalf of a district request except as provided in part 8710.0310, subpart 4. A Tier 1 license authorizes the license holder to teach within the requesting district and the specific licensure field in the application.
Subp. 2. **Requirements.** The board must issue a Tier 1 license to an applicant upon request by the designated administrator of the hiring district. The applicant must initiate the application process and meet the requirements of this subpart.

A. The applicant must:

1. hold the minimum of a bachelor's degree from a college or university located in the United States that is regionally accredited by the Higher Learning Commission or by the regional association for accreditation of colleges and secondary schools, as verified by a college transcript;

2. hold a credential from outside the United States that is equivalent to a bachelor's degree, as verified by a credential evaluation completed by a credential evaluator approved by the National Association of Credential Evaluation Services or other board-approved credential evaluation service; or

3. for applicants in career and technical education fields and career pathway courses of study, have one of the following:
   a. five years of relevant work experience aligned to the assignment;
   b. an associate's degree aligned to the assignment; or
   c. a professional certification aligned to the assignment from an approved certifying organization.

B. The hiring district must show:

1. the position was posted for at least 15 days on the board-approved statewide job board; and

2. a Tier 1 license for this applicant is warranted for this assignment because one of the following:
(a) no individual who holds a Tier 2, 3, or 4 license for the assignment applied for the position;

(b) no individual who holds a Tier 2, 3, or 4 license for the assignment accepted the position; or

(c) for each individual who holds a Tier 2, 3, or 4 license that may have accepted the assignment, the individual was unacceptable for the assignment because one or more of the following:

i. the individual was not fluent in the language required for the assignment;

ii. the individual was unwilling to abide by or unable to apply the pedagogical model of the district or school;

iii. the individual had disciplinary action with the board or final disciplinary action in a district;

iv. the individual was unwilling to abide by culturally responsive teaching principles; or

v. the individual had references that indicated an unwillingness or ineligibility to rehire the individual, including in the applying district.

C. The hiring district must affirm the applicant:

(1) will participate in a mentorship program;

(2) will participate in an evaluation aligned to the district's teacher development and evaluation model under Minnesota Statutes, section 122A.40, subdivision 8, or 122A.41, subdivision 5, or if the statutory models are not practicable, to another identified district-aligned evaluation; and
(3) has the necessary skills and knowledge to teach in the content field aligned to the assignment.

D. A committee of board staff designated by the board must review applications that meet board criteria to fill an emergency position under this subpart. An emergency position is any position opened due to exigent circumstances, including but not limited to an unexpected resignation, leave of absence, or death of a position holder, in which the position starts within five days of the emergency request; the district has no reasonable alternative to fill the position; the applicant meets the professional qualifications for a Tier 1 license pursuant to Minnesota Statutes, section 122A.181, subdivision 2; and the district has completed a background check pursuant to Minnesota Statutes, section 123B.03, subdivision 1. If all criteria for an emergency position are met, the committee must issue an interim permission within three business days of receipt of the request that expires upon any of the following, whichever occurs first:

(1) the district hires a Tier 2, 3, or 4 licensed teacher;

(2) the applicant is issued a short-call substitute license;

(3) the district submits a completed Tier 1 application that is denied or accepted by the board; or

(4) 30 days after issuance.

Subp. 3. Duration. A Tier 1 license is valid for up to one year and expires on June 30 of the expiration year. A Tier 1 license may be used until September 1 after the date of expiration if the placement is in a summer school program at the district aligned to the license or is part of a year-round school at the district aligned to the licensure area.

Subp. 4. First renewal. To renew a Tier 1 license for the first time, the applicant must initiate the renewal application process, and the hiring district must meet the requirements of this subpart.
A. The hiring district must show that the position was posted for at least 60 days on the board-approved statewide job board. If an applicant accepts the position but later turns it down, the hiring district must repost the position for 15 days.

B. The hiring district must show one of the following:

(1) no individual who holds a Tier 2, 3, or 4 license for the assignment applied for the position;

(2) no individual who holds a Tier 2, 3, or 4 license for the assignment accepted the position; or

(3) for each individual who holds a Tier 2, 3, or 4 license that may have accepted the assignment, the individual was unacceptable for the assignment because one or more of the following:

(a) the individual was not fluent in the language required for the assignment;

(b) the individual was unwilling to abide by or unable to apply the pedagogical model of the district or school;

(c) the individual had disciplinary action with the board or final disciplinary action in a district;

(d) the individual was unwilling to abide by culturally responsive teaching principles; or

(e) the individual had references that indicated an unwillingness or ineligibility to rehire the individual, including in the applying district.

C. The applicant must show the applicant attempted the board-approved content examination aligned to the assignment, if applicable, during the academic year in which the
applicant held a Tier 1 license. Any licensure area that does not have a board-approved content examination is exempt from this requirement.

D. The hiring district must show the applicant participated in:

(1) cultural competency training;

(2) a mentorship program; and

(3) an evaluation aligned to the district's teacher development and evaluation model under Minnesota Statutes, section 122A.40, subdivision 8, or 122A.41, subdivision 5, or if the statutory models are not practicable, to another identified district-aligned evaluation.

E. A committee of board staff designated by the board must review applications that meet board criteria to fill an emergency position under this subpart. An emergency position is any position opened due to exigent circumstances, including but not limited to an unexpected resignation, leave of absence, or death of a position holder, in which the position starts within five days of the emergency request; the district has no reasonable alternative to fill the position; the applicant meets the professional qualifications for a Tier 1 license pursuant to Minnesota Statutes, section 122A.181, subdivision 2; and the district has completed a background check pursuant to Minnesota Statutes, section 123B.03, subdivision 1. If all criteria for an emergency position are met, the committee must issue an interim permission within three business days of receipt of the request that expires upon any of the following, whichever occurs first:

(1) the district hires a Tier 2, 3, or 4 licensed teacher;

(2) the applicant is issued a short-call substitute license;

(3) the district submits a completed Tier 1 application that is denied or accepted by the board; or
Subp. 5. **Second and third renewals.** To renew a Tier 1 license for the second or third time, the applicant must initiate the renewal application process, and the hiring district must meet the requirements of this subpart.

A. The hiring district must show that the position was posted for at least 60 days on the board-approved statewide job board. If an applicant accepts the position but later turns it down, the hiring district must repost the position for 15 days.

B. The hiring district must show one of the following:

1. no individual who holds a Tier 2, 3, or 4 license for the assignment applied for the position;
2. no individual who holds a Tier 2, 3, or 4 license for the assignment accepted the position; or
3. for each individual who holds a Tier 2, 3, or 4 license that may have accepted the assignment, the individual was unacceptable for the assignment because one or more of the following:
   a. the individual was not fluent in the language required for the assignment;
   b. the individual was unwilling to abide by or unable to apply the pedagogical model of the district or school;
   c. the individual had disciplinary action with the board or final disciplinary action in a district;
   d. the individual was unwilling to abide by culturally responsive teaching principles; or
(e) the individual had references that indicated an unwillingness or ineligibility to rehire the individual, including in the applying district.

C. The hiring district must show the applicant participated in:

(1) a mentorship program; and

(2) an evaluation aligned to the district's teacher development and evaluation model under Minnesota Statutes, section 122A.40, subdivision 8, or 122A.41, subdivision 5, or if the statutory models are not practicable, to another identified district-aligned evaluation.

D. A committee of board staff designated by the board must review applications that meet board criteria to fill an emergency position under this subpart. An emergency position is any position opened due to exigent circumstances, including but not limited to an unexpected resignation, leave of absence, or death of a position holder, in which the position starts within five days of the emergency request; the district has no reasonable alternative to fill the position; the applicant meets the professional qualifications for a Tier 1 license pursuant to Minnesota Statutes, section 122A.181, subdivision 2; and the district has completed a background check pursuant to Minnesota Statutes, section 123B.03, subdivision 1. If all criteria for an emergency position are met, the committee must issue an interim permission within three business days of receipt of the request that expires upon any of the following, whichever occurs first:

(1) the district hires a Tier 2, 3, or 4 licensed teacher;

(2) the applicant is issued a short-call substitute license;

(3) the district submits a completed Tier 1 application that is denied or accepted by the board; or

(4) 30 days after issuance.
Subp. 6. **Additional renewals.** To renew a Tier 1 license more than three times, the applicant must initiate the renewal application process, and the hiring district must meet the requirements of this subpart.

A. The hiring district must show that the position was posted for at least 60 days on the board-approved statewide job board. If an applicant accepts the position but later turns it down, the hiring district must repost the position for 15 days.

B. The hiring district must show one of the following:

(1) no individual who holds a Tier 2, 3, or 4 license for the assignment applied for the position;

(2) no individual who holds a Tier 2, 3, or 4 license for the assignment accepted the position; or

(3) for each individual who holds a Tier 2, 3, or 4 license that may have accepted the assignment, the individual was unacceptable for the assignment because one or more of the following:

   (a) the individual was not fluent in the language required for the assignment;

   (b) the individual was unwilling to abide by or unable to apply the pedagogical model of the district or school;

   (c) the individual had disciplinary action with the board or final disciplinary action in a district;

   (d) the individual was unwilling to abide by culturally responsive teaching principles; or

   (e) the individual had references that indicated an unwillingness or ineligibility to rehire the individual, including in the applying district.
C. The hiring district must show one of the following:

(1) the Tier 1 teacher is teaching in a career and technical education field or career pathway course of study; or

(2) the Tier 1 teacher is teaching in a licensure area, including licensure field shortages, economic development region shortages, and regions where there is a shortage of licensed teachers who reflect the racial or ethnic diversity of students in the region as identified in the biennial supply and demand report under Minnesota Statutes, section 127A.05, subdivision 6.

If the hiring district cannot meet the requirements of item C, the district must provide within the renewal application good cause justification for why the applicant should receive additional Tier 1 renewals pursuant to part 8710.0310, subpart 1, item G. The renewal application is reviewed pursuant to Minnesota Statutes, section 122A.181, subdivision 3. The board must issue or deny the renewal no later than 60 days after receiving the renewal application.

D. The hiring district must show the applicant participated in:

(1) a mentorship program; and

(2) an evaluation aligned to the district's teacher development and evaluation model under Minnesota Statutes, section 122A.40, subdivision 8, or 122A.41, subdivision 5, or if the statutory models are not practicable, to another identified district-aligned evaluation.

E. A committee of board staff designated by the board must review applications that meet the board criteria to fill an emergency position under this subpart. An emergency position is any position opened due to exigent circumstances, including but not limited to an unexpected resignation, leave of absence, or death of a position holder, in which the position starts within five days of the emergency request; the district has no reasonable
alternative to fill the position; the applicant meets the professional qualifications for a Tier
1 license pursuant to Minnesota Statutes, section 122A.181, subdivision 2; and the district
has completed a background check pursuant to Minnesota Statutes, section 123B.03,
subdivision 1. If all criteria for an emergency position are met, the committee must issue
an interim permission within three business days of receipt of the request that expires upon
any of the following, whichever occurs first:

(1) the district hires a Tier 2, 3, or 4 licensed teacher;
(2) the applicant is issued a short-call substitute license;
(3) the district submits a completed Tier 1 application that is denied or
accepted by the board; or
(4) 30 days after issuance.

Subp. 7. Position change. If a Tier 1 license holder moves to another licensure area
within a district or to another district, prior to the expiration of the Tier 1 license, the license
holder must initiate a new application, including paying the application fee, and the hiring
district must meet the requirements under subpart 2 for the new position. The applicant is
not required to complete a new background check by the board. The Tier 1 license issued
by the board under this subpart is considered a new license, not a renewal under subparts
4 to 6.

8710.0313 TIER 3 LICENSE.

Subpart 1. Purpose. A Tier 3 license must be issued to an applicant, consistent with
this part, aligned to the scope and field of the applicant's training and experience. A Tier 3
license authorizes the license holder to teach within the specific licensure field for which
board rules exist.

Subp. 2. Requirements. The board must issue a Tier 3 license if the applicant meets
all of the requirements of this subpart.
A. The applicant must:

(1) hold the minimum of a bachelor's degree from a college or university located in the United States that is regionally accredited by the Higher Learning Commission or by the regional association for accreditation of colleges and secondary schools, as verified by a college transcript;

(2) hold a credential from outside the United States that is equivalent to a bachelor's degree, as verified by a credential evaluation completed by a credential evaluator approved by the National Association of Credential Evaluation Services or other board-approved credential evaluation service; or

(3) for applicants in career and technical education fields and career pathway courses of study, have one of the following:

   (a) five years of relevant work experience aligned to the licensure area sought;

   (b) an associate's degree aligned to the licensure area sought; or

   (c) a professional certification aligned to the licensure area sought from an approved certifying organization.

B. The applicant must obtain passing scores on the board-approved pedagogy and content examinations aligned to the licensure area sought. Any licensure area that does not have a board-approved content examination is exempt from the content examination requirement.

C. The applicant must show one of the following:

(1) completion of a board-approved teacher preparation program aligned to the licensure area sought. The board must accept certifications for related services
professionals under parts 8710.6000 to 8710.6400 in lieu of completion of a board-approved teacher preparation program;

(2) completion of a preparation program approved in another state aligned to the licensure area sought that included field-specific student teaching equivalent to field-specific student teaching in Minnesota-approved teacher preparation programs. The applicant is exempt from field-specific student teaching if the applicant has at least two years of field-specific experience teaching as the teacher of record in the licensure area sought;

(3) recommendation for licensure via portfolio application aligned to the licensure area sought;

(4) holds or held a professional license from another state in good standing aligned to the licensure area sought with at least two years of experience teaching as the teacher of record in the state where the license is held aligned to the licensure area sought; or

(5) has at least three years of experience teaching as the teacher of record aligned to the licensure area sought under a Tier 2 license and presents evidence of summative teacher evaluations that did not result in placing or otherwise keeping the teacher on an improvement process aligned to the district's teacher development and evaluation plan.

Subp. 3. **Duration.** A Tier 3 license is valid for up to three years and expires on June 30 of the expiration year.

Subp. 4. **Renewal.** A Tier 3 license may be renewed an unlimited number of times. To renew a Tier 3 license, the applicant must complete:

A. mentorship and evaluation aligned to the district's teacher development and evaluation model under Minnesota Statutes, section 122A.40, subdivision 8, or 122A.41, subdivision 5; and
B. board-approved licensure renewal requirements, including obtaining approval from the applicant's local continuing education/relicensure committee, under parts 8710.7100 and 8710.7200 and Minnesota Statutes, section, 122A.187, subdivision 3.

Subp. 5. **Restrictions.**

A. An applicant whose content training or experience does not align to a currently approved Minnesota license, but for which past rules have been adopted, and who meets all other requirements of subpart 2, must be issued a Tier 3 license restricted to the scope and licensure area of the applicant's content training or experience.

B. Applicants with content training and experience within two grade levels of a currently approved Minnesota licensure scope must be granted the full scope of the Minnesota license.

C. Applicants who meet the requirements of subpart 2, items A and B, from a Montessori Accreditation Council for Teacher Education accredited training center must be issued a Tier 3 license restricted to a Montessori setting and aligned to the scope of training.

Subp. 6. **Addition to Tier 3 license.** When a licensure area is added to a Tier 3 license issued under this part, the expiration date is the date previously established for the Tier 3 license in effect.

8710.0314 **TIER 4 LICENSE.**

Subpart 1. **Purpose.** A Tier 4 license authorizes the license holder, consistent with this part, to teach in the field and scope aligned to the license holder's preparation. A Tier 4 license indicates the license holder has had at least three years of experience in Minnesota within the field and scope of licensure and completed the professional development requirements mandated by statute.
Subp. 2. **Requirements.** The board must issue a Tier 4 license if the applicant meets all of the requirements of this subpart.

A. The applicant must:

1. hold the minimum of a bachelor's degree from a college or university located in the United States that is regionally accredited by the Higher Learning Commission or by the regional association for accreditation of colleges and secondary schools, as verified by a college transcript;

2. hold a credential from outside the United States that is equivalent to a bachelor's degree, as verified by a credential evaluation completed by a credential evaluator approved by the National Association of Credential Evaluation Services or other board-approved credential evaluation service; or

3. for applicants in career and technical education fields and career pathway courses of study, have one of the following:

   a. five years of relevant work experience aligned to the licensure area sought;

   b. an associate's degree aligned to the licensure area sought; or

   c. a professional certification aligned to the licensure area sought from an approved certifying organization.

B. The applicant must have completed one of the following:

1. a board-approved teacher preparation program aligned to the licensure area sought. The board must accept certifications for related services professionals under parts 8710.6000 to 8710.6400 in lieu of completion of a board-approved teacher preparation program; or
(2) a preparation program approved in another state aligned to the licensure area sought that included field-specific student teaching equivalent to field-specific student teaching in Minnesota-approved teacher preparation programs. The applicant is exempt from field-specific student teaching if the applicant has at least two years of field-specific experience teaching as the teacher of record.

C. The applicant must obtain passing scores on the board-approved skills, pedagogy, and content examinations aligned to the licensure area sought. Any licensure area that does not have a board-approved content examination is exempt from the content examination requirement.

D. The applicant must have at least three years of experience teaching in Minnesota as the teacher of record.

E. The applicant's most recent summative evaluation must not have resulted in placing or otherwise keeping the teacher in an improvement process aligned to the district's teacher development and evaluation plan.

F. The applicant must have participated in mentorship and evaluation aligned to the district's teacher development and evaluation model under Minnesota Statutes, section 122A.40, subdivision 8, or 122A.41, subdivision 5, or if the statutory models are not practicable, to another identified district-aligned evaluation.

Subp. 3. **Adding a Tier 4 license.** To add an additional Tier 4 license, the applicant must show evidence of meeting the requirements of subpart 2, item C, and part 8710.0313, subpart 2, item C, subitem (1), (2), or (3), in the licensure area sought. An applicant may add a teachers of science endorsement by meeting the requirements of part 8710.4770.

When a licensure area is added to a Tier 4 license issued under this part, the expiration date is the date previously established for the Tier 4 license in effect.
Subp. 4. **Duration.** A Tier 4 license is valid for up to five years and expires on June
30 of the expiration year.

Subp. 5. **Renewal.** A Tier 4 license may be renewed an unlimited number of times.

To renew a Tier 4 license, the applicant must complete:

A. mentorship and evaluation aligned to the district's teacher development and
evaluation model under Minnesota Statutes, section 122A.40, subdivision 8, or 122A.41,
subdivision 5; and

B. board-approved licensure renewal requirements, including obtaining approval
from the applicant's local continuing education/relicensure committee, under parts 8710.7100
and 8710.7200 and Minnesota Statutes, section 122A.187, subdivision 3.

Subp. 6. **Restrictions.**

A. An applicant whose content training or experience does not align to a currently
approved Minnesota license, but for which past rules have been adopted, and who meets
all other requirements of this part must be issued a Tier 4 license restricted to the scope and
licensure area of the applicant's content training or experience.

B. Applicants with content training and experience within two grade levels of a
currently approved Minnesota licensure scope must be granted the full scope of the Minnesota
license.

Subp. 7. **Moving from Tier 3 to Tier 4 license.** An applicant who holds a Tier 3
license and is seeking a Tier 4 license after three years of teaching experience in Minnesota,
and who has passed the board-approved skills exam, must meet the renewal clock hour
requirements in part 8710.7200, subpart 2, and the professional development requirements
in part 8710.7200, subpart 2a.
23.1 8710.0320 OUT-OF-FIELD PERMISSION.

Subpart 1. Purpose. An out-of-field permission authorizes a teacher holding a Tier 2, 3, or 4 license, consistent with this part, to teach in a field not aligned with the license held.

Subp. 2. Requirements.

A. The board must issue an out-of-field permission upon request by the designated administrator of the hiring district. The applicant must initiate the application process, and the hiring district must show:

(1) the applicant holds a valid Tier 2, 3, or 4 license;

(2) the applicant holds a license other than for a related services professional under parts 8710.6000 to 8710.6400;

(3) the applicant holds a bachelor's degree to receive an out-of-field permission for any license under parts 8710.3000 to 8710.5850 if required by statute or rule to teach the field for which the out-of-field permission is sought;

(4) the applicant approves the request; and

(5) (a) the applicant is an internal hire with one or more years of employment within the district; or

(b) the position was posted for at least 15 days on the board-approved statewide job board.

B. The district must show one of the following:

(1) the licensed applicant is an internal hire with one or more years of employment within the district;

(2) the applicant has additional qualifications that align with the requirements of the position; or
(3) one of the following:

(a) no teachers who hold a Tier 2, 3, or 4 license in the assignment applied for the position;

(b) no teachers who hold a Tier 2, 3, or 4 license in the assignment accepted the position; or

(c) for each teacher who holds a Tier 2, 3, or 4 license in the assignment that may have accepted the position, one of the following:

i. the applicant is not fluent in the language required for the position;

ii. the applicant was unwilling to abide by or unable to apply the pedagogical model of the district or school;

iii. the applicant had a disciplinary action with the board or final disciplinary action in a district;

iv. the applicant was unwilling to abide by culturally responsive teaching principles; or

v. the applicant had references that indicated an unwillingness or ineligibility to rehire the applicant, including in the applying district.

C. An applicant who holds a Tier 2, 3, or 4 license in career and technical education or career pathways fields without a baccalaureate degree may obtain an out-of-field permission for another career and technical education or career pathways field.

D. A committee of board staff designated by the board must review applications that meet board criteria to fill an emergency position under this subpart. An emergency position is any position opened due to exigent circumstances, including but not limited to an unexpected resignation, leave of absence, or death of a position holder, in which the position starts within five days of the emergency request; the district has no reasonable
alternative to fill the position; the applicant meets the professional qualifications for a Tier 1 license pursuant to Minnesota Statutes, section 122A.181, subdivision 2; and the district has completed a background check pursuant to Minnesota Statutes, section 123B.03, subdivision 1. If all criteria for an emergency position are met, the committee must issue an interim permission within three business days of receipt of the request that expires upon any of the following, whichever occurs first:

1. the district hires a Tier 2, 3, or 4 licensed teacher;
2. the applicant is issued a short-call substitute license;
3. the district submits a completed Tier 1 application that is denied or accepted by the board; or
4. 30 days after issuance.

Subp. 3. **Duration.** An out-of-field permission is valid for up to one school year and expires on June 30 of the expiration year, unless otherwise indicated under item A or B at the time the permission is granted.

An out-of-field permission can be used until September 1 after the date of expiration if the placement is aligned to the permission and is:

A. in a summer school program at the district; or
B. part of the year-round school.

Subp. 4. **Renewal.** An out-of-field permission may be renewed four times. To renew an out-of-field permission, the applicant must initiate the application process, and the hiring district must show:

A. the applicant approves the request;
B. (1) the applicant is an internal hire with one or more years of employment within the district; or
26.1 (2) the position was posted for at least 60 calendar days on the board-approved
26.2 statewide job board. If an applicant accepts the position but later turns it down, the hiring
26.3 district must repost the position for 15 calendar days; and
26.4
26.5 C. one of the following:
26.6
26.7 (1) the licensed applicant is an internal hire with one or more years of
26.8 employment within the district;
26.9
26.10 (2) the applicant has additional qualifications that align with the requirements
26.11 of the position; or
26.12
26.13 (3) one of the following:
26.14
26.15 (a) no teachers who hold a Tier 2, 3, or 4 license in the assignment applied
26.16 for the position;
26.17
26.18 (b) no teachers who hold a Tier 2, 3, or 4 license in the assignment
26.19 accepted the position; or
26.20
26.21 (c) for each teacher who holds a Tier 2, 3, or 4 license in the assignment
26.22 that may have accepted the position, one of the following:
26.23
26.24 i. the applicant is not fluent in the language required for the position;
26.25
26.26 ii. the applicant was unwilling to abide by or unable to apply the
26.27 pedagogical model of the district or school;
26.28
26.29 iii. the applicant had a disciplinary action with the board or final
26.30 disciplinary action in a district;
26.31
26.32 iv. the applicant was unwilling to abide by culturally responsive
26.33 teaching principles; or
v. the applicant had references that indicated an unwillingness or ineligibility to rehire the applicant, including in the applying district.

D. A committee of board staff designated by the board must review applications that meet board criteria to fill an emergency position under this subpart. An emergency position is any position opened due to exigent circumstances, including but not limited to an unexpected resignation, leave of absence, or death of a position holder, in which the position starts within five days of the emergency request; the district has no reasonable alternative to fill the position; the applicant meets the professional qualifications for a Tier 1 license pursuant to Minnesota Statutes, section 122A.181, subdivision 2; and the district has completed a background check pursuant to Minnesota Statutes, section 123B.03, subdivision 1. If all criteria for an emergency position are met, the committee must issue an interim permission within three business days of receipt of the request that expires upon any of the following, whichever occurs first:

   (1) the district hires a Tier 2, 3, or 4 licensed teacher;

   (2) the applicant is issued a short-call substitute license;

   (3) the district submits a completed Tier 1 application that is denied or accepted by the board; or

   (4) 30 days after issuance.

Subp. 5. Additional renewals. To renew an out-of-field permission more than four times, the hiring district must provide within the renewal application good cause justification for why the applicant should receive additional out-of-field permission renewals pursuant to part 8710.0310, subpart 1, item G. The renewal application is reviewed pursuant to Minnesota Statutes, section 122A.181, subdivision 3. The board must issue or deny the renewal no later than 60 days after receiving the renewal application.
28.1 Subp. 6. **Limitations and exceptions.**

28.2 A. An individual cannot hold an out-of-field permission to work in a related services position.

28.4 B. An out-of-field permission is limited to the licensure area and the district for which it was granted.

28.6 C. An out-of-field permission granted for a summer school only position may be renewed an unlimited number of times.

28.8 **8710.0321 INNOVATIVE PROGRAM PERMISSION.**

28.9 Subpart 1. **Purpose.** An innovative program permission authorizes a licensed teacher, consistent with this part, to teach multiple fields within an established innovative program.

28.11 Subp. 2. **Requirements.** The board must issue an innovative program permission upon request by the designated administrator of the hiring district. The applicant must initiate the application process, and the hiring district must show:

28.14 A. the applicant holds a bachelor's degree and a Tier 3 or 4 license other than for a related services professional; and

28.16 B. the teaching assignment is within an innovative program.

28.17 Subp. 3. **Duration.** An innovative program permission is valid for up to one school year and expires on June 30 of the expiration year, unless otherwise indicated under 3A or 3B at the time the permission is granted.

28.20 An innovative program permission can be used until September 1 after the date of expiration if the placement is aligned to the permission and is:
Subp. 4. Renewal. An innovative program permission may be renewed an unlimited number of times.

8710.0325 SHORT-CALL SUBSTITUTE LICENSE.

Subpart 1. Purpose. A short-call substitute license authorizes the license holder to replace the same teacher of record for no more than 15 consecutive school days.

Subp. 2. Requirements. The board must issue a short-call substitute license to an applicant who meets the requirements of this subpart. The applicant must:

A. hold the minimum of a bachelor's degree from a college or university located in the United States that is regionally accredited by the Higher Learning Commission or by the regional association for accreditation of colleges and secondary schools, as verified by a college transcript;

B. hold a credential from outside the United States that is equivalent to a bachelor's degree, as verified by a credential evaluation completed by a credential evaluator approved by the National Association of Credential Evaluation Services or other board-approved credential evaluation service;

C. for applicants in career and technical education fields and career pathway courses of study, have one of the following:

(1) five years of relevant work experience aligned to the assignment;

(2) an associate's degree aligned to the assignment; or

(3) a professional certification aligned to the assignment from an approved certifying organization; or
D. be enrolled in and making meaningful progress, as defined by the provider, in a board-approved state-approved teacher preparation program and have successfully completed student teaching to be employed as a short-call substitute teacher.

Subp. 3. Duration. A short-call substitute license is valid for up to three years and expires on June 30 of the expiration year.

Subp. 4. Renewal. An applicant must reapply for a short-call substitute license upon its expiration.

8710.0327 SUBSTITUTE TEACHING.

Subpart 1. Short-call substitute teaching. An individual is authorized to replace the same teacher of record for no more than 15 consecutive school days when:

A. the individual holds a valid Tier 1, Tier 2, Tier 3, or Tier 4 license pursuant to this chapter;

B. the individual holds a short-call substitute license pursuant to part 8710.0325;

or

C. the individual holds a lifetime substitute license pursuant to part 8710.0326.

Subp. 2. Limitations. An individual acting as a short-call substitute is not considered a teacher of record.

Subp. 3. Long-term substitute teaching. An individual is authorized to replace the same teacher of record for more than 15 consecutive school days when:

A. the individual holds a Tier 1, Tier 2, Tier 3, or Tier 4 license aligned to the assignment; or

B. the individual holds a lifetime substitute license pursuant to part 8710.0326 and held a Tier 3 or Tier 4 license, Minnesota five-year standard license or its equivalent, or a professional license from another state aligned to the assignment.
Subp. 4. Emergency extensions.

A. An individual authorized to short-call substitute teach pursuant to subpart 1 may continue replacing the same teacher of record for more than 15 consecutive school days when:

(1) the individual meets the requirements for long-term substitute teaching pursuant to subpart 3;

(2) the individual receives an out-of-field permission pursuant to part 8710.0320; or

(3) the individual receives a Tier 1 license for the assignment pursuant to part 8710.0311.

B. An out-of-field permission must be sought for:

(1) an individual holding a Tier 2, Tier 3, or Tier 4 license that is not aligned to the assignment; and

(2) an individual holding a lifetime substitute license that is not aligned to the assignment.

C. A Tier 1 license for the assignment must be sought by an individual holding a short-call substitute license pursuant to part 8710.0325.

8710.0330 Teacher licensure via portfolio application.

Subpart 1. Purpose. An applicant who has not completed teacher preparation or is unable to obtain a Tier 3 license through other requirements may apply for an initial Tier 3 license by submitting a pedagogy portfolio, content portfolio, and, if applicable, a core skills portfolio to the board to demonstrate the applicant has met the standards aligned to the licensure area sought. An applicant who has completed teacher preparation in one or more additional licensure areas may apply to add licensure areas to a current Tier 3 or 4 license.
by submitting a content portfolio and, if applicable, a core skills portfolio to the board to demonstrate the applicant has met the standards aligned to the additional licensure areas sought.

**Subp. 2. Portfolio review process.**

A. The applicant must initiate the application process by submitting a portfolio aligned to board-adopted submission guidelines.

B. Applications for an initial Tier 3 license must include content, pedagogy, and core skills portfolios as follows:

1. a content portfolio that shows the content standards aligned to the licensure area sought is required for licenses sought under parts 8710.3000 to 8710.4950, 8710.5050 to 8710.5850, and 8710.8010 to 8710.8080;

2. a core skills in special education portfolio that shows the standards aligned to part 8710.5000 is required for licenses sought under parts 8710.5050 to 8710.5850;

3. a core skills in career and technical education portfolio that shows the standards aligned to part 8710.8000 is required for licenses sought under parts 8710.8010 to 8710.8080; and

4. a pedagogy portfolio that shows the applicant meets the standards of effective practice under part 8710.2000 is required for all licenses sought. A board-adopted passing score on a board-adopted teacher performance assessment aligned to the standards of effective practice under part 8710.2000 may be submitted in lieu of a pedagogy portfolio.

Evidence that provides the necessary information required under this item includes:

a. a transcript, syllabi of college coursework, or both;

b. subject-specific, high-quality professional development, as defined under the Every Student Succeeds Act;
(c) professional contributions to the field, including presentations given to local and national education organizations, minutes of attendance in education-related task forces or state or national committees, articles published by local or national education publications, or other activities that demonstrate the applicant has met the standards of effective practice and content requirements;

(d) a resume and letters of recommendation illustrating relevant work experience aligned to the licensure area sought;

(e) classroom performance as determined by student growth on criterion-referenced assessments;

(f) a rating of effective or higher on a teacher performance evaluation;

(g) teacher performance assessment scores;

(h) unedited video recordings of classroom instruction; or

(i) observation and evaluation feedback through mentorship, teacher evaluation, student teaching, or other supervised classroom teaching experiences.

C. Applications to add a licensure area to a current Tier 3 or 4 license must include a content portfolio that shows the applicant meets the content standards aligned to the licensure area sought under parts 8710.3000 to 8710.5850 and 8710.8000.

D. A pedagogy portfolio must be reviewed by a panel of educators within 90 days of receiving a complete pedagogy portfolio and required fees. An applicant may present the contents of a submitted pedagogy portfolio in person to the panel on the set review date. An applicant may choose not to present the contents of the submitted pedagogy portfolio to the panel on the review date and thereby waives the right to defend the pedagogy portfolio material in person. To indicate knowledge of effective teaching dispositions under the Minnesota Code of Ethics for Teachers, the applicant must submit a completed evaluation
by the individual responsible for the mentorship or supervision of the applicant for review by the panel of educators after completing one of the following:

(1) a yearlong mentorship program aligned to board-adopted criteria; or

(2) two years of experience teaching as the teacher of record in the licensure area sought.

E. If the panel of educators under item D does not recommend an applicant for licensure via the pedagogy portfolio, the panel must provide specific information to the applicant on how to successfully demonstrate meeting any standard the panel determined was not met. If the applicant submits the revised pedagogy portfolio, which within one year from the date the portfolio is not approved, one member of the panel of educators must review the revised portfolio and recommend it for approval or disapproval by one member of the panel of educators within 60 days of receiving the revised submission. If the applicant resubmits a revised portfolio after one year from the date the portfolio is not approved, the portfolio will be considered a new submission.

F. Each content portfolio must be reviewed by two reviewers who meet board-adopted qualifications within 90 days of receiving the completed portfolio and required fees.

G. If the content reviewers under item F do not recommend the applicant for licensure via the content portfolio, the reviewers must provide specific information to the applicant on how to successfully demonstrate meeting any standard the reviewers determined was not met. If the applicant submits the revised content portfolio, which within one year from the date the portfolio is not approved, one of the content reviewers must review the revised portfolio and recommend it for approval or disapproval by one of the content reviewers within 60 days of receiving the revised submission. If the applicant resubmits a revised portfolio after one year from the date the portfolio is not approved, the portfolio will be considered a new submission.
H. An applicant who is recommended for licensure via portfolio review under this subpart must submit an application for licensure to the board that meets the requirements under subpart 3. The applicant must also pay an application fee.

Subp. 3. **Application requirements.** An applicant who is recommended for licensure via portfolio review under subpart 2 must submit an application for licensure to the board that meets the requirements of this subpart.

A. The applicant must:

1. hold the minimum of a bachelor's degree from a college or university located in the United States that is regionally accredited by the Higher Learning Commission or by the regional association for accreditation of colleges and secondary schools, as verified by a college transcript;

2. hold a credential from outside the United States that is equivalent to a bachelor's degree, as verified by a credential evaluation completed by a credential evaluator approved by the National Association of Credential Evaluation Services or other board-approved credential evaluation service; or

3. for applicants in career and technical education fields or career pathway courses of study, have one of the following:

   a. five years of relevant work experience aligned to the licensure area sought;

   b. an associate's degree aligned to the licensure area sought; or

   c. a professional certification aligned to the licensure area sought from an approved certifying organization.
B. The applicant must submit board-adopted passing scores on board-adopted content and pedagogy exams. Any licensure area that does not have a board-approved content examination is exempt from the content examination requirement.

C. An applicant recommended for an initial Tier 3 license by the panel of educators under subpart 2, item D, and content reviewers under subpart 2, item F, must pass a criminal background check.

D. An applicant recommended for the addition of a licensure area to a current Tier 3 or 4 license by the content reviewers under subpart 2, item F, must pass a criminal background check, if applicable.

Subp. 4. CTE exceptions portfolios. An applicant for any career and technical education field under parts 8710.8010 to 8710.8080 is exempt from the criteria in subpart 3 and may apply for an initial Tier 3 license under part 8710.0313 through portfolio review under Minnesota Statutes, section 122A.18, subdivision 10, if the applicant completed parts 8710.2000 and 8710.8000, and meets one of the following requirements:

A. demonstrate competency in the standards of effective practice set forth in part 8710.2000;

B. demonstrate competency in the CTE core skills set forth in part 8710.8000;

and

C. demonstrate competency in the applicable licensure standards set forth in parts 8710.8010 to 8710.8080. Competency in the licensure standards can be demonstrated through one of the following criteria:

A. (1) has five years of relevant work experience aligned to the licensure area sought;

B. (2) holds an associate's degree aligned to the licensure area sought; or
C. (3) holds a professional certification aligned to the licensure area sought from an approved certifying organization.

Subp. 5. Submission timelines.

A. An applicant must submit a letter of intent to the board at least 30 days prior to submission of a portfolio application.

B. A portfolio application prepared according to published guidelines must be submitted between 30 days and one year after the letter of intent is received by the board.

Subp. 6. Appeal. An applicant who is denied an initial Tier 3 license or an addition to a current Tier 3 or 4 license by the board under this part may appeal the board's decision under part 8710.0900 and Minnesota Statutes, chapter 14.

8710.0331 TEMPORARY MILITARY LICENSE.

Subpart 1. Issuance. In compliance with Minnesota Statutes, sections 122A.18 and 197.4552, the board must issue temporary military licenses for teaching to eligible applicants for up to a one-year period. A temporary military license expires on June 30 of the expiration year. A temporary military license may be extended until September 1 of the expiration year if the applicant or license holder is providing instruction in a summer school program or is part of a year-round school.

Subp. 2. Requirements. The board must issue a temporary military license in the content area corresponding to the license the applicant holds if the applicant meets all of the requirements of this subpart. The applicant must submit:

A. evidence of military status as:

   (1) an active duty military member;

   (2) the spouse of an active duty military member; or
38.1 (3) a veteran with an honorable or general discharge who left service in the
38.2 two years preceding the application date;

38.3 B. evidence of a current, valid professional teaching license from another state
38.4 without a history of discipline;

38.5 C. a completed application with evidence that the licensing or certification
38.6 requirements are substantially similar to the licensing or certification requirements of the
38.7 board;

38.8 D. a completed background check, as required by Minnesota Statutes, section
38.9 122A.18, subdivision 8; and

38.10 E. payment of the fees, as required by Minnesota Statutes, section 122A.18,
38.11 subdivision 7c.

Subp. 3. Renewal. A temporary military license is eligible for renewal one time. An
38.12 individual holding a temporary military license must apply for and obtain a teaching license
38.13 pursuant to Minnesota Statutes, sections 122A.181 to 122A.184, in order to continue teaching
38.14 after the renewed temporary military license has expired.

Subp. 4. Pursuing tiered license. At the time the temporary military license is issued
38.16 or denied, the board must provide to the applicant information regarding applying for and
38.17 obtaining a license pursuant to Minnesota Statutes, sections 122A.181 to 122A.184.

8710.0550 ADDITIONAL FIELDS OF LICENSURE.

Subpart 1. In general. A person who holds a life license; a current nonvocational
38.20 entrance, professional, or nonrenewable license; or a current entrance or continuing secondary
38.21 vocational license based on a degree program in agriculture education, business education,
38.22 consumer homemaking and family life education, industrial education, or marketing education
38.23 granted by the Professional Educator Licensing and Standards Board may apply for an
38.24 additional field of licensure upon meeting the rule requirements for the licensure field and
level. A person who holds only a board license as an educational speech-language pathologist, school nurse, school psychologist, school social worker, or school counselor, or a secondary vocational license other than one based on a degree program in agriculture education, business education, consumer homemaking and family life education, industrial education, or marketing education must meet the rule requirements for the licensure field and level and part 8710.2000.

Subp. 2. [See repealer.]

Subp. 3. Kindergarten. Until June 30, 2005, an applicant holding a current entrance or professional elementary teaching license first granted by the Professional Educator Licensing and Standards Board prior to September 1, 2001, shall be granted kindergarten licensure upon submitting evidence of having completed requirements for methods of kindergarten education in a state-approved teacher preparation program at a college or university that is accredited by the regional association for the accreditation of colleges and secondary schools and a recommendation for kindergarten licensure from that college or university.

Subp. 4. [See repealer.]

8710.2010 STANDARDS OF EFFECTIVE PRACTICE.

Subpart 1. Preparation. For each standard in subparts 2 to 6, the preparation must include the ability to apply and transfer the knowledge and skills to different educational models and school settings, as well as address the scope of the standard in application to all students, including those groups historically denied access or underrepresented.

Subp. 2. Student learning. The teacher must:

A. understand how all students construct knowledge, acquire skills, and develop disciplined thinking processes (Standard 1):
B. understand learning theory, human development, and individual differences (Standard 2);

C. understand the cognitive processes associated with various kinds of learning such as critical and creative thinking, problem framing and problem solving, invention, memorization, and recall and how these processes can be stimulated (Standard 3);

D. understand the developmental processes in learning to read and instructional practices to support reading for all students (Standard 4);

E. know about second language acquisition processes and know how to incorporate instructional strategies and resources to support and evaluate language acquisition (Standard 5);

F. be able to identify readiness for learning and understand how development in any one area may affect performance in others (Standard 6);

G. understand the relationship between motivation and engagement and know how to design learning experiences using strategies that build learner self-direction and ownership of learning (Standard 7);

H. understand that alignment of family, school, and community spheres of influence enhances student learning and that discontinuity in these spheres of influence interferes with learning (Standard 8);

I. understand that students bring assets for learning based on their individual experiences, abilities, talents, prior learning, and peer and social group interactions, as well as language, culture, family, and community values (Standard 9);

J. understand the role of language and culture in learning (Standard 10);
K. understand the needs of students with emotional, behavioral, cognitive, and learning disabilities and know how to use strategies and resources to support these needs, including collaboration with special education teachers (Standard 11);

L. understand the needs of students with physical or health disabilities and know how to use strategies and resources to support these needs, including collaboration with special education teachers (Standard 12);

M. recognize mental health symptoms and the impact of mental health disorders on learning, and know how to use strategies and resources to address these symptoms (Standard 13);

N. understand how to support students who have experienced trauma, homelessness, foster care, incarceration, or are medically fragile (Standard 14);

O. understand the diverse impacts of trauma on learning, development, and behavior, and know how to use strategies and resources to address these impacts (Standard 15); and

P. recognize the distinguishing characteristics of reading disabilities, including dyslexia, and understand how to implement appropriate interventions (Standard 16).

Subp. 3. **Instruction.** The teacher must be able to:

A. develop an appropriate sequencing of learning experiences (Standard 17);

B. develop learning experiences that engage students in collaborative and self-directed learning and that extend student interaction with ideas and people locally and globally (Standard 18);

C. create lessons, unit plans, and learning experiences based on Minnesota's academic standards or, if unavailable, national discipline-specific standards (Standard 19);
D. plan learning experiences based on evidence-based and diverse types of instructional strategies that are developmentally appropriate and meet the needs of individual students across all levels and types of exceptionalities, including their cognitive, social, emotional, cultural, and linguistic needs (Standard 20);

E. modify instruction to make language and content comprehensible and instruction relevant, accessible, and challenging (Standard 21);

F. collaborate with colleagues to integrate cross-disciplinary skills and content throughout instruction (Standard 22);

G. use educational theory and educational research to support methods of instruction (Standard 23);

H. effectively lead group discussions that build collective knowledge through using peers as resources (Standard 24);

I. explain and model content, academic practices, and strategies for learning that foster engagement, motivation, and accessibility of the material (Standard 25);

J. implement evidence-based and diverse types of instructional strategies that are developmentally appropriate and meet the needs of individual students across all levels and types of exceptionality, including their cognitive, social, emotional, cultural, and linguistic needs (Standard 26);

K. ask questions to stimulate discussion that serves different purposes such as probing for student understanding, helping students articulate their ideas and thinking processes, stimulating curiosity, and helping students to question (Standard 27);

L. engage all students in developing higher-order questioning skills and metacognitive processes (Standard 28);
M. use a variety of instructional strategies for students across language proficiency levels to learn, practice, and master academic language in their content area in each language modality (Standard 29);

N. use a variety of strategies to elicit individual students' thinking that foster discussion and identify common patterns of thinking (Standard 30);

O. use students' thinking and experiences as a resource in planning and modifying instruction (Standard 31);

P. integrate culturally relevant content to build on students' background knowledge (Standard 32); and

Q. collaborate with students to design and implement relevant learning experiences, identify their strengths, and access family and community resources to develop their areas of interest (Standard 33).

Subp. 4. Environment. The teacher must be able to:

A. collaborate with students to establish and monitor elements of a safe and productive learning environment including norms, expectations, routines, and organizational structures (Standard 34);

B. collaborate with students, families, and colleagues to build a safe, positive learning climate of openness, mutual respect, support, and inquiry (Standard 35);

C. manage the learning environment to actively and equitably engage students by organizing, allocating, and coordinating the resources of time, space, and learners' attention (Standard 36);

D. collaboratively implement norms and routines for classroom discourse and work, including using educational technology and organizational routines that promote
students' positive identity, limit learning disruptions, strengthen relationships, and incorporate
students' lived experiences and cultural frameworks (Standard 37);

E. effectively establish and manage small-group work that fosters collaboration,
semi-independent work, and accountability for learning (Standard 38);

F. facilitate culturally responsive, research-based, student-centered classroom
management and schoolwide positive discipline intervention and prevention strategies that
address the social and mental health needs of the child with the goal of keeping all students
in school and on course toward graduation (Standard 39);

G. navigate classroom and discipline practices with an understanding of the role
of cultural norms in shaping classroom behaviors and its impact on the school and classroom
environment (Standard 40);

H. assist learners as they recognize and process dehumanizing biases,
discrimination, prejudices, and institutional and personal racism and sexism (Standard 41);

I. build respectful relationships with learners that see the whole student and foster
relationships toward engagement of learning (Standard 42); and

J. regularly reflect on the impact of biases and microaggressions on the classroom
and instruction (Standard 43).

Subp. 5. **Assessment.** The teacher must:

A. design assessments that match learning objectives with assessment methods
and minimize sources of bias that can distort assessment results (Standard 44);

B. prepare all learners for the demands of particular assessment formats and make
appropriate accommodations in assessments or testing conditions, including learners with
disabilities and language-learning needs (Standard 45);
45.1 C. know how to engage learners in analyzing their own assessment results and 
45.2 setting goals for their own learning (Standard 46);

45.3 D. regularly assess individual and group performance with formative and
45.4 summative assessments in order to design and modify instruction to meet students' cognitive, 
45.5 linguistic, social, emotional, and physical needs in each area of development and scaffold 
45.6 the next level of development (Standard 47);

45.7 E. independently, and in collaboration with colleagues, use a variety of data to 
45.8 understand patterns and gaps in learning for individuals and groups of students to guide 
45.9 planning and instruction (Standard 48);

45.10 F. provide substantive, constructive, and timely feedback to all learners and 
45.11 families (Standard 49);

45.12 G. engage learners in understanding and identifying quality work and provide 
45.13 them with effective descriptive feedback to guide their progress toward that work (Standard 
45.14 50);

45.15 H. work collaboratively with students and their families to establish mutual 
45.16 expectations and ongoing communication to support student development and achievement 
45.17 (Standard 51); and

45.18 I. know how to access resources to evaluate students' content knowledge in their 
45.19 primary languages (Standard 52).

45.20 Subp. 6. **Professional practices.** The teacher must:

45.21 A. understand how personal identity, frames of reference, and prior experience 
45.22 affect perceptions and expectations, and recognize how they may bias behavior and 
45.23 interactions with others, including through classroom management practices (Standard 53);
B. reflect on the ability for implicit bias to shape discretionary spaces and the role this can play in reproducing or disrupting systems of oppression in schools (Standard 54);

C. be able to access resources to deepen the teacher’s understanding of cultural, ethnic, gender, and learning differences to build stronger relationships and create more relevant learning experiences (Standard 55);

D. understand schools as organizations within a historical, cultural, political, and social context and be able to work with others across the system to support students (Standard 56);

E. understand the historical foundations, laws, and policies that contributed to systemic racism and barriers in Minnesota’s education system, including the impacts on American Indian students and other marginalized students (Standard 57);

F. be able to work with other adults and develop skills in collaborative interaction that support a positive school climate, challenge practices that harm student learning or development, and build on the skills and strengths of all educators (Standard 58);

G. understand the standards of professional conduct in the Code of Ethics for Minnesota Teachers, including the role of social media, privacy, and boundaries in relationships with students (Standard 59);

H. be able to advocate, model, and teach safe, legal, and ethical use of information and technology, including appropriate documentation of sources and respect for others in the use of social media (Standard 60);

I. understand laws related to student rights and teacher responsibilities, such as for educational equity, appropriate education for students with disabilities, confidentiality, privacy, appropriate treatment of students, data practices, and mandatory reporting requirements in situations of known or suspected abuse or neglect (Standard 61);
J. be able to access current research to adapt methods of instruction (Standard 62);

K. be able to build and implement a plan for professional growth directly aligned with the teacher's needs as a growing professional, and understanding the role of National Board Certification as a professional development tool, using feedback from teacher evaluations and observations, and data on student performance (Standard 63);

L. be able to actively seek professional, community, and technological resources, within and outside the school, as supports for analysis, reflection, and problem solving (Standard 64); and

M. be able to seek appropriate leadership roles and opportunities to take responsibility for student learning; to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth; and to advance the profession (Standard 65).

8710.3100 TEACHERS OF PARENT AND FAMILY EDUCATION.

Subpart 1. Scope of practice. A teacher of parent and family education is authorized to instruct parents in an early childhood family education program to design, implement, and evaluate educational experiences for parents of all ages with children birth through grade 12, including but not limited to early childhood family education programs.

Subp. 2. Licensure requirements. The board must issue a license in parent and family education if the applicant meets the requirements of this subpart.

A. A candidate for licensure may apply for a professional license to teach parent and family education in an early childhood family education program who must meet the requirements for a Tier 3 license pursuant to part 8710.0313 and Minnesota Statutes, section 122A.183, or a Tier 4 license pursuant to part 8710.0314 and Minnesota Statutes, section 122A.184.
A. hold a baccalaureate degree from a college or university that is accredited by
the regional association for accreditation of colleges and secondary schools;

B. An applicant seeking an initial license in parent and family education pursuant
to Minnesota Statutes, section 122A.183, subdivision 2, clauses (1) and (3), must:

B. (1) demonstrate the standards for effective practice for licensing of beginning
teachers in part 8710.2000; and

C. (2) show verification of:

(a) completing a Professional Educator Licensing and Standards Board
preparation program approved under chapter 8705 leading to the licensure of teachers of
parent and family education in subpart 3.; or

(b) approval of a content portfolio aligned to the components in subpart
3.

C. An applicant seeking an additional license to teach adult basic education
pursuant to Minnesota Statutes, section 122A.183, subdivision 2, clauses (1) and (3), must
show verification of:

(1) completing a Professional Educator Licensing and Standards Board
preparation program approved under chapter 8705 leading to the licensure of teachers of
parent and family education; or

(2) approval of a content portfolio aligned to components set forth in subpart
3.

Subp. 3. Subject matter standard. A candidate for licensure as a teacher of parent
and family education must complete a preparation program under subpart 2, item C, that
includes the candidate's demonstration of the knowledge and skills in items A
to D.
A. A teacher of parent and family education The candidate must understand families, including:

(1) the parent's role as primary socializer and educator of the family;
(2) theories of family dynamics;
(3) family communication;
(4) family structures;
(5) family strengths from multiple perspectives;
(6) human sexual behavior;
(7) gender roles;
(8) family decision-making and problem-solving processes;
(9) the effects of disabilities on family relationships;
(10) the reciprocal relationships between family and community;
(11) the effects of culture and ethnicity on family relationships;
(12) the interaction of socioeconomic situations and family dynamics;
(13) the influence of public policies on families;
(14) influence of the social and historical climate on families; and
(15) the effects of change and loss on family functioning; and
(16) how to work with parents and families in a variety of settings.

B. A teacher of parent and family education The candidate must understand parent-child relationships:
(1) multidisciplinary descriptions of parenting practices and healthy parent-child relationships;

(2) theories of parent-child interaction;

(3) the reciprocal nature of parent-child relationships;

(4) the impact of parent expectations, practices, and behaviors on the child's development;

(5) the impact of work and other external influences on parental behaviors;

(6) stages of parenting across the life span;

(7) mother-child, father-child, and other primary caregiver-child relationships;

(8) the influence of adult partner relationships on parent-child relationships;

(9) the signs of emotional distress, abuse, and neglect in parent-child relationships;

(10) specific family situations, for example, single parenting, stepparenting, adolescent parenting, adoptive parenting, grandparenting, and the effects of disabilities on parenting; and

(11) the effects of culture and ethnicity on parent-child relationships.

C. A teacher of parent and family education must understand child development:

(1) theories of child development;

(2) social, emotional, psychological, physical, cognitive, language, and moral development;

(3) individual differences among children;
(4) the effects of disabilities on child development;

(5) the influence of culture, community, and experiences on development;

(6) the formation of a child's self-identity and self-esteem;

(7) the role of play in child development;

(8) sexuality development;

(9) developmentally appropriate learning environments, activities, and interactions; and

(10) the effects of physical and mental health and nutrition on child development; and

(11) the effects of childhood adversity and trauma on child development.

D. A teacher of parent and family education The candidate must understand adult development:

(1) that each adult is unique and exhibits individual patterns of development influenced by physical, social, cultural, psychological, and experiential factors;

(2) biological changes in adulthood and developmental aspects of aging and the impact on adult learning;

(3) adult learning and learning styles, adult cognitive development, and use of instructional strategies that promote adult learning and development;

(4) theories of adult development and how to apply theory when making instructional decisions; and

(5) how to apply the standards of effective practice in teaching adult students through a series of formal observations and directed instructional experiences with adults.
participating in early childhood and family education programs totaling at least 100 hours and including at least two written evaluations by faculty supervisors.

Subp. 4. [See repealer.]

Subp. 4a. Field experience.

A. A candidate for initial licensure to teach parent and family education is exempt from the 12-week student teaching requirement in part 8705.1000.

B. A candidate for initial licensure to teach parent and family education must complete at least 150 hours of field experience in teaching adult students through a series of formal observations and directed instructional experiences with adults participating in early childhood and family education programs, which includes at least two written evaluations by supervisors.

Subp. 5. Effective date. The requirements in this part for licensure as a teacher of parent and family education are effective on September 1, 2001, and thereafter.

8710.4000 TEACHERS OF ADULT BASIC EDUCATION.

Subpart 1. Scope of practice. A teacher of adult basic education is authorized to provide to learners, who are 16 years of age or over and are not enrolled in elementary or secondary schools, instruction that is designed to develop mastery of basic education skills including English language skills. This part shall not prohibit a school board from employing a teacher who holds a valid Minnesota classroom professional teaching license but who is not licensed as a teacher of adult basic education to teach adult basic education. A license under this part does not qualify a teacher to provide instruction leading to a high school diploma.

Subp. 2. Licensure requirements. The board must issue a license in adult and basic education if the applicant meets the requirements of this subpart.
A. A candidate for licensure An applicant seeking a professional license to teach adult basic education shall: must meet the requirements for a Tier 3 license pursuant to part 8710.0313 and Minnesota Statutes, section 122A.183, or a Tier 4 license pursuant to part 8710.0314 and Minnesota Statutes, section 122A.184.

A. hold a baccalaureate degree from a college or university that is regionally accredited by the association for the accreditation of colleges and secondary schools;

B. An applicant seeking an initial license to teach adult basic education pursuant to Minnesota Statutes, section 122A.183, subdivision 2, clauses (1) and (3), must:

B. (1) demonstrate the standards for effective practice for licensing of beginning teachers in part 8710.2000; and

B. (2) show verification of:

(a) completing a Professional Educator Licensing and Standards Board preparation program approved under chapter 8705 leading to the licensure of teachers of adult basic education in subpart 3.; or

(b) approval of a content portfolio aligned to components set forth in subpart 3.

C. An applicant seeking an additional license to teach adult basic education pursuant to Minnesota Statutes, section 122A.183, subdivision 2, clauses (1) and (3), must show verification of:

C. (1) completing a Professional Educator Licensing and Standards Board preparation program approved under chapter 8705 leading to the licensure of teachers of adult basic education; or

C. (2) approval of a content portfolio aligned to components set forth in subpart 3.
Subp. 3. **Subject matter standard standards.** A candidate for licensure as a teacher of adult basic education must complete a preparation program under subpart 2, item C, that includes the candidate's demonstration of demonstrate the knowledge and skills in items A to I.

A. **Organizational and systems structure.** A teacher of adult basic education must understand adult basic education organizational and system structure, including:

1. the history and philosophy of adult basic education including its purposes, mission, and populations to be served;
2. federal and state adult basic education legislation, policies, and regulatory agencies including sources of funding and related services; and
3. systems models of delivering adult education programs and services, including eligible providers and distribution of funds;
4. types of programming offered, including English language instruction, high school diploma and equivalency options, career and postsecondary preparation, and other basic skills instruction;
5. accountability measures, including standardized assessments, learner outcome expectations, and data collection requirements; and
6. supports and technical assistance resources available to adult basic education providers.

B. **Adult learning theories and teaching practices.** A teacher of adult education must understand adult learning theories and teaching practices, including:
(1) characteristics common to all adult learners as well as those common to unique populations;

(2) contemporary strategies and models for teaching adults; and formative and summative assessment practices that inform instructional planning and goal setting for students;

(3) formal and informal diagnostic procedures, including self-assessment, for identifying the academic and personal needs of adult learners and how to use this information as the basis for customizing the curriculum so as to meet their needs. application of instructional practices for testing that address the needs of adult learners;

(4) application of instructional strategies and resources for adult learners, including but not limited to those who are incarcerated, survivors of trauma, refugees and immigrants and those with low basic skills, limited formal schooling, and physical or cognitive learning challenges;

(5) instructional planning at the lesson, unit, and course level for basic skills, life skills, academic content (e.g., math, social studies), and career-contextualized instruction; and

(6) disposition and resources to attain the content knowledge and related teaching practices needed to grow professionally as an adult educator.

C. **Content and effective practices.** A teacher of adult education must understand the content and methods effective practices for teaching reading and language literacy, including:

(1) knowledge of reading processes and instruction including:

(a) orthographic knowledge and morphological grapheme-phoneme knowledge and morpheme relationships within words;
(b) the relationship between word recognition and vocabulary knowledge, fluency, and comprehension in understanding text and content materials;

(c) the importance of direct and indirect vocabulary instruction that leads to enhanced general, academic, and domain-specific word knowledge;

(d) the relationships between and among comprehension processes related to print processing abilities, motivation, reader’s interest, background knowledge, cognitive abilities, knowledge of academic discourse, and print and digital text; and

(e) the development of academic language and its impact on learning and school success, career pathways, and civic engagement; and

(2) the ability to use a wide range of instructional practices, approaches, methods, and curriculum print, visual, or digital materials to support reading instruction including:

(a) the appropriate applications of a variety of instructional frameworks that are effective in meeting the needs of readers of varying proficiency levels and linguistic backgrounds in secondary adult education settings;

(b) the ability to scaffold instruction for students who experience comprehension difficulties reading or understanding a variety of texts, as well as an understanding of when and how to gradually remove scaffolds;

(c) selection and implementation of a wide variety of before, during, and after, and repeated reading comprehension strategies that develop reading and metacognitive abilities necessary to access complex text;
(d) the ability to help adult learners develop, deepen, and implement effective vocabulary strategies that help students understand words including broaden their understanding of general, academic, and domain-specific content words;

(e) the ability to develop critical literacy skills by encouraging teaching students to identify and evaluate evidence, make and support inferences, and question texts and analyze texts from multiple viewpoints or perspectives; and

(f) the ability to identify instructional practices, approaches, and methods to match materials, print and digital, to the cognitive levels of all readers, guided by an evidence-based rationale, which support the developmental, cultural, and linguistic differences of readers, features of complexity within a text and associated challenges in order to inform instruction; and

(g) an understanding of the rationale and instructional use of a wide range of texts and text types within instruction, including informational texts;

(3) understanding the content and effective practices for teaching writing, including:

(a) the stages of the writing process;

(b) the connections between reading and writing;

(c) instruction to build adult learners' abilities to communicate ideas clearly and effectively to a variety of audiences in a variety of text types, with increasing control over structures at the discourse, sentence, word, and mechanics levels;

(d) how to teach writing contextually to reflect actual uses using authentic materials and situations that build on adult learners' prior knowledge; and

(e) multiple strategies to assess and provide feedback to student writing; and
(4) understanding the context and effective practices for teaching listening and speaking, including:

(a) the listening process and how to receive, attend to, interpret, and respond appropriately to verbal messages and other cues;

(b) ways of constructing and expressing meaning for participation in formal and informal situations;

(c) how to teach listening and speaking contextually in a variety of work, community, and academic settings using authentic materials and situations that build on adult learners' prior knowledge;

(d) the ability to develop critical learning skills by teaching adult learners to identify and evaluate evidence in texts, make and support inferences, and question and analyze multiple perspectives; and

(e) how to assist multilingual learners to improve English pronunciation and achieve English proficiency.

D. **Mathematics.** A teacher of adult education must understand the content and methods effective practices for teaching mathematics, including:

(1) mathematical concepts and the procedures and connections between them including: adult numeracy and mathematical thinking and strategies adults need in order to participate fully in their communities and to pursue career and postsecondary opportunities;

(a) basic mathematics processes including addition, subtraction, multiplication, and division;

(b) basic mathematics systems of whole numbers, fractions, decimals, and percentages;
(e) estimation of quantities and the evaluation of the reasonableness of estimates;

(d) systems of measurement and their use; and

(e) constructing, reading, interpreting, and making inferences from tables, charts, and graphs;

(2) mathematical problem-solving techniques and strategies; and

characteristics common to adult math learners, including math anxiety, and strategies for instruction that develop learners' skills and confidence;

(3) how to teach mathematics contextually to reflect actual uses using real world materials and situations that build on the adult learner's prior knowledge; the mathematical thinking processes and proficiencies that ensure strong math learning, including problem solving, reasoning and proof, communication, representation, and connections;

(4) instructional practices for adult learners that develop their ability to conduct math common in consumer, household, citizenship, and workplace contexts; and

(5) disposition and resources to attain the content knowledge and related teaching practices needed to teach adult numeracy, including numbers and ratios, and understand operations, algebra and functions, geometry, probability, and statistical measurement.

E. A teacher of adult education must understand the content and methods for teaching listening and speaking:

(1) the listening process and how to receive, attend to, interpret, and respond appropriately to verbal messages and other cues;
ways of constructing meaning for participation in formal and informal speaking situations so students can organize ideas and use different verbal and nonverbal communication styles;

how to teach listening and speaking contextually to reflect actual uses using real-world materials and situations that build on the adult learner's prior knowledge; and

how to adopt appropriate learning materials and adapt teaching strategies to meet the second language needs of adult learners whose first language is not English.

F. A teacher of adult education must understand the content and methods for teaching writing:

the stages of the writing process;

multiple strategies to assess and respond to student writing;

the principles and formats of communicating thoughts, ideas, information, and messages appropriately and effectively in written English; and

how to teach writing contextually so as to reflect actual uses using real world materials and situations that build on the adult learner's prior knowledge.

G. A teacher of adult education must understand the content and methods for teaching application skills:

the higher order thinking skills of thinking critically, solving problems, and making decisions;

effective interpersonal and group participation; and

understanding how to learn.
H. E. Employment and transition skills. A teacher of adult basic education must understand the content and effective practices for teaching academic, career development and transition skills, and employability skills needed to transition to postsecondary education, career training, the workplace, and deeper community involvement, including:

1. the culture of the contemporary workplace and the changing nature of job skills; and

2. the process of accessing information and resources of jobs and training; transition skills, including effective communication, learning strategies, critical thinking, self-management, developing a future pathway, and navigating systems.

3. the career decision-making process; and

4. the skills necessary to find and keep a job.

I. A teacher of adult basic education must understand adult teaching and learning:

1. factors for selecting and techniques for using materials and resources in adult education programming;

2. formal and informal diagnostic procedures for identifying the academic and personal needs of adult learners and how to use this information to develop competency-based instruction for individuals, small groups, and large groups;

3. strategies for learners to assess their own progress; and

4. factors to consider in developing unique curricula for specialized adult populations.

F. Digital literacy. The candidate must understand the content and effective practices for teaching digital literacy skills, including:
(1) development of digital literacy skills needed for adult learners to seek, obtain, and retain employment; successfully complete training and postsecondary education; and

(2) instruction that enables adult learners to perform tasks on computers and online, including computer basics, essential software skills, and basic online skills, including:

(a) using technology to communicate in a variety of contexts, including work, school, and community;

(b) using digital tools to enhance communication and collaborate with others;

(c) thinking critically about digital resources and using multiple online sources to find, evaluate, and test the validity of information;

(d) understanding rules and norms around technology use in different contexts; and

(e) understanding the benefits and risks of online communication in order to act as a responsible digital citizen.

Subp. 3a. Student teaching and field experiences.

A. A candidate for initial licensure to teach adult basic education is exempt from the 12-week student teaching requirement set forth in part 8705.1000.

B. A candidate for initial licensure to teach adult basic education must apply the standards of effective practice in teaching adult students through a series of formal observations and directed instructional experiences with adults participating in adult basic education programs totaling at least 100 hours and including at least two written evaluations by faculty supervisors.

Subp. 4. [See repealer.]
Subp. 5. [Repealed, L 2015 c 21 art 1 s 110]

8710.4100  TEACHERS OF AMERICAN INDIAN LANGUAGE, HISTORY, AND CULTURE.

Subpart 1. Issuance of license authorized. The Professional Educator Licensing and Standards Board shall, under this part and Minnesota Statutes, section 126.49 124D.75, authorize the issuance of a license to teach American Indian language, history, and culture to an applicant who has achieved and demonstrated competence in an American Indian language or knowledge and understanding of American Indian history and culture.

Subp. 2. Scope of practice. A teacher of American Indian language, history, and culture is authorized to teach an American Indian language or an American Indian history and culture to students in kindergarten through grade 12. This part shall not prohibit a school board from employing a person to teach an American Indian language or American Indian history and culture who does not hold a license under this part.

Subp. 3. License requirements. A candidate for licensure to teach American Indian language, history, and culture shall submit an application that:

A. specifies the American Indian language or history and culture to be taught;

B. includes certified copies of two resolutions attesting to the applicant's competence in an American Indian language or the knowledge and understanding of an American Indian history and culture. One of the resolutions must be from the tribal government governing the tribe or community speaking the language or representing the history and culture for which licensure is requested with the second resolution being from one of subitems (1) to (4):

(1) another reservation or business committee serving the tribe or community speaking the language or representing the history and culture for which licensure is requested;
(2) the local Indian education committee serving the tribe or community speaking the language or representing the history and culture for which licensure is requested;

(3) other bodies governing or serving the tribe or community speaking the language or representing the history and culture; or

(4) authorized officials of professional or learned societies, organizations, or institutions who are qualified to assess the applicant's competence in an American Indian language or the knowledge and understanding of the applicant of the American Indian history and culture.

The resolution shall confirm that the applicant has been assessed and is competent in the language to be taught or possesses knowledge and understanding of the American Indian history and culture to be taught.

Subp. 4. Continuing license. A continuing license shall be issued and renewed according to the rules of the Professional Educator Licensing and Standards Board governing continuing licensure.

Subp. 5. Effective date. The requirements in this part for licensure as a teacher of American Indian language, history, and culture are effective on September 1, 2001, and thereafter.

8710.4200 TEACHERS OF BUSINESS.

Subpart 1. Scope of practice. A teacher of business is authorized to provide to students in grades 5 through 12 instruction that is designed to develop understanding of the functional areas of business including management, sales and marketing, finance, accounting, human resources, and information systems; the factors that affect business including economics, international business, business law, and technology; and the personal and work skills of communications and interpersonal relations, data interpretation and management, computation, collaboration and group process, and career development and transitions.
Subp. 2. **Licensure requirements.** A candidate for licensure to teach business to students in grades 5 through 12 shall:

   A. hold a baccalaureate degree from a college or university that is regionally accredited by the association for the accreditation of colleges and secondary schools;

   B. demonstrate the standards for effective practice for licensing of beginning teachers in part 8700.2000 .......; and

   C. show verification of completing a Professional Educator Licensing and Standards Board preparation program approved under chapter 8705 leading to the licensure of teachers of business in subpart 3.

Subp. 3. **Subject matter standard.** A candidate for licensure as a teacher of business must complete a preparation program under subpart 2, item C, that must include the candidate's demonstration of the knowledge and skills in items A to F.

   A. A teacher of business has an integrated understanding of the functional areas of business from the perspective of the consumer, the employee, the business manager, and the entrepreneur. The teacher of business must understand:

       (1) business organization and management, including the functions of management; historical and contemporary management theories; characteristics and the advantages and disadvantages of the major forms of business organizations; organizational structures and principles; the role of ethics in management; the impact and relationship of government regulations and community involvement to business management decisions; and the role of organized labor and its influence on government and business;

       (2) sales and marketing, including roles of marketing and the impact of marketing on the individual, business, and society; the role and application of ethics in marketing; external factors that influence or dictate marketing decisions; product development and forecasting principles and methods for determining sales potential; role of pricing in...
the marketing process and the use of various pricing strategies; distribution processes and methods in developing distribution plans; general forms of promotion and how each contributes to successful marketing; market research development, implementation, and evaluation; marketing variables and strategies in dealing with a diversified marketplace; the components of a comprehensive marketing plan; principles of selling and merchandising; and the function of retailing and wholesaling;

(3) financing, including the influence of internal and external factors, including stock market implications, on corporate financial data and how this data is used to make long-term and short-term management decisions; traditional sources for securing financing; the relationships among price, market share, and profitability; personal financial resource management and how more individual wants and needs can be satisfied by wise consumer decision making; the functions of commercial paper, insurance, secured transactions, and bankruptcy; the role of credit and the impact of long-term and short-term credit; and different types of budget processes;

(4) accounting, including the accounting cycle and the purposes of each component of the cycle, methods for determining the value of assets, liabilities, and owner's equity according to generally accepted accounting principles and when and why they are used; how to prepare, interpret, and analyze financial statements using manual and computerized systems for service, merchandising, and manufacturing businesses; and the use of planning and control principles to evaluate the performance of an organization and apply differential analysis and present value concepts to make decisions;

(5) business information systems, including entry-level career expertise in the use of office technology and can explain the purpose, functions, and common features of contemporary office technology including:

(a) computer technology including fundamentals of contemporary computer architecture and touch keyboarding skills to enter and manipulate text and data
through word processing, database, spreadsheet, desktop publishing, and presentation graphics software;

(b) multimedia and imaging technology;

(c) telecommunications technology; and

(d) the impact of information systems on society; and

(6) human resources, including the activities of human resources management, its importance to the successful operation of an organization, and the role and importance of employment law as related to the conduct of business in the national and international marketplace.

B. A teacher of business has a fundamental and integrated understanding of the factors that affect business from the perspective of the consumer, the employee, the business manager, and the entrepreneur. The teacher of business must understand:

(1) economic fundamentals, including:

(a) the role of competitive markets and the price mechanism in the production, distribution, and allocation of scarce resources, including human, capital, technological, and natural within the United States economy;

(b) how the basic economic concepts of scarcity, opportunity cost, and trade-off influence the production, allocation, and consumption of goods and services in businesses and households, and the formulation of government domestic and international economic policy;

(c) the linkages between gross domestic production, consumption, investment and savings, employment levels, inflation, international trade, and government policy on taxation and spending;
(d) how the Federal Reserve System acts as our nation's central bank to promote a safe, sound money supply and how it initiates and effectuates the monetary system to allow for noninflationary economic growth;

(e) alternative economic systems, and the philosophical assumptions supporting these alternative systems; and

(f) the importance of, and economic interdependencies that exist in the global economy in relation to world trade, investment, and monetary flows;

(2) international business fundamentals, including:

(a) the role of international business and its impact on careers and doing business at the local, state, national, and international levels;

(b) communication strategies and ethics necessary and appropriate for effective and profitable international business relations;

(c) the role, importance, and basic concepts of international finance and risk management, international marketing, and balance of trade concepts; and

(d) the social, cultural, political, legal, and economic factors that shape and impact the international business environment;

(3) business law fundamentals, including:

(a) the relationship between ethics and the law;

(b) the sources of the law, structure of the court system, and different classifications of procedural and substantive law;

(c) the relationships among contract law, law of sales, and consumer law;

(d) the legal rules that apply to personal property and real property;
(e) how advances in computer technology impact property law, contract law, criminal law, and international law; and

(f) the role and importance of agency law and employment law as they relate to the conduct of business in the national and international marketplaces;

(4) technology concepts that are of lasting value rather than mastery of specific hardware or software skills and knowledge, including:

(a) understanding the fundamentals of current and emerging technological concepts including types, transmissions, storage, and display systems; and

(b) the ability to examine the technological issues from a variety of perspectives including appropriate use, privacy, ethics, remaining current, access, and economic advantages and disadvantages.

C. A teacher of business demonstrates the following essential workplace skills and understands how to create learning experiences that make this content meaningful to students. The teacher of business must demonstrate:

(1) communication and interpersonal skills including the ability to:

(a) understand how to approach communication from a systems perspective including cultural, organizational, technological, and interpersonal perspectives and how to use the system perspective to analyze and direct the choice of communication strategies and forms;

(b) communicate in a clear, courteous, concise, and correct manner using oral communication skills, informational reading skills, written communication skills, and effective listening skills; and

(c) apply effective human relations and interpersonal skills;
(2) data interpretation and management skills, including the ability to acquire, evaluate, organize, maintain, and interpret and communicate information using both manual and computer technology;

(3) computational skills, including the ability to:

(a) use mathematical procedures to analyze and solve business problems for areas, including taxation; savings and investments; payroll records; cash management; financial statements; credit management; purchases; inventory records; depreciation, cost-recovery, and depletion; and

(b) construct, read, and interpret and make inferences from tables, charts, and graphs;

(4) collaboration and group process skills, including the ability to understand a holistic perspective, develop and communicate group goals, understand the role of the individual in groups, and interpret and process feedback within groups; and

(5) career development and transition skills, including the ability to understand and apply career development theory, the job procurement process, and all forms of communication used in the successful pursuit of a career.

D. A teacher of business understands occupational clusters within business, marketing, and information management sufficient to:

(1) enable students to develop a perspective of career options in the business fields of management, sales and marketing, accounting and finance, information systems, or office management and administrative support;

(2) gain understanding of the basic purposes, issues, skills, nature of work, and major concepts that undergird employment in one or more occupations centrally associated with applying academic business content;
establish activities that allow students to understand individual work in
the context of broader business goals;

organize instruction that enables students to more effectively learn how
to acquire skills, gain a perspective on a career, and embark on the first job; and

understand the unique characteristics of an entrepreneur and the special
skills of entrepreneurship associated with starting, owning, and managing a business.

A teacher of business must be able to integrate understanding business with
the understanding of pedagogy, students, learning environments, and professional
development. The teacher of business to preadolescent and adolescent students must:

understand and apply educational principles relevant to the physical,
social, emotional, moral, and cognitive development of preadolescents and adolescents;

understand and apply the research base for and the best practices of middle
level and high school education;

know how to develop curriculum goals based on the central concepts of
the business and how to apply instructional strategies and materials for achieving student
understanding of this discipline;

understand the role and alignment of district, school, and department
mission and goals in program planning;

understand key legislation germane to business education and
school-to-work transition programming;

understand fiscal, budgetary, and purchasing practices that focus on how
to organize and equip an effective and efficient classroom including selecting and maintaining
instructional materials, supplies, furniture, and technology that are consistent with the current
program standards;
(7) understand the need for and how to connect student secondary schooling experiences with the workplace or further educational opportunities;

(8) know how to involve representatives of business, industry, and community organizations as active partners in creating educational opportunities;

(9) understand the role and purpose of cocurricular and extracurricular business activities in the teaching and learning process;

(10) know how to access information relevant to the field of business through consumer, business, and professional organizations, publications, and journals;

(11) know strategies for marketing the business education program, including student recruitment and retention techniques and practices; and

(12) know how to develop and apply evaluative criteria for a business curriculum and a plan for continuous improvement.

F. A teacher of business must understand the content and methods for teaching reading including:

(1) knowledge of reading processes and instruction including:

(a) the relationships between and among print and digital content processing abilities, motivation, background, and discourse knowledge, cognitive abilities, and reader's interest and how those relationships impact comprehension; and

(b) the complexities involved in the development of academic language and the impact of that development in school success; and

(2) the ability to use a wide range of instructional practices, approaches, methods, and curriculum materials to support reading and writing instruction including:

(a) selection and implementation of a wide variety of before, during, and after reading comprehension strategies that develop reading and metacognitive abilities;
(b) the ability to identify instructional practices, approaches, and methods and match materials to the cognitive levels of all readers, guided by an evidence-based rationale, which support the developmental, cultural, and linguistic differences of readers;

c) the ability to understand a variety of purposes for reading texts:

process, information, and aesthetic; and

d) the ability to develop and implement effective vocabulary strategies that help students understand words including domain-specific content words.

Subp. 3a. Student teaching and field experiences. A candidate for licensure to teach business education must have a broad range of targeted field-based experiences, of a minimum of 100 hours prior to student teaching, that provide opportunities to apply and demonstrate competency of professional dispositions and the required skills and knowledge under this part and part 8710.2000.

Across the combination of student teaching and other field-based placements, candidates must have experiences teaching the content at both the middle level, grades 5 through 8, and high school level, grades 9 through 12.

For initial teacher licensure, the student teaching period must be a minimum of 12 continuous weeks, full time, face-to-face, in which the candidate is supervised by a cooperating teacher, and evaluated at least twice by qualified faculty supervisors in collaboration with the cooperating teachers.

Subp. 4. Continuing licensure. A continuing license shall be issued and renewed according to the rules of the Professional Educator Licensing and Standards Board governing continuing licensure.

Subp. 5. [Repealed, L 2015 c 21 art 1 s 110]
Subpart 1. **Scope of practice.** A teacher of health is authorized to provide to students in grades 5 through 12 instruction that is designed to develop the knowledge and skills necessary to practice healthy behaviors.

Subp. 2. **Licensure requirements.** The board must issue a license in health if the applicant meets the requirements of this subpart.

A. **A candidate for licensure** must be an applicant seeking a professional license to teach health to students in grades 5 through 12 shall must meet the requirements for a Tier 3 license pursuant to part 8710.0313 and Minnesota Statutes, section 122A.183, or a Tier 4 license pursuant to part 8710.0314 and Minnesota Statutes, section 122A.184.

A. **Hold a baccalaureate degree from a college or university** that is regionally accredited by the association for the accreditation of colleges and secondary schools;

B. **An applicant seeking an initial license in health** pursuant to Minnesota Statutes, section 122A.183, subdivision 2, clauses (1) and (3), must:

(1) demonstrate the standards for effective practice for licensing of beginning teachers in part 8710.2000; and

C. (2) show verification of:

(a) completing a Professional Educator Licensing and Standards Board preparation program approved under chapter 8705 leading to the licensure of teachers of health in subpart 3; and

(b) approval of a content portfolio aligned to the components in subpart 3.

C. **An applicant seeking an additional license to teach health** pursuant to Minnesota Statutes, section 122A.183, subdivision 2, clauses (1) and (3), must show verification of:
(1) completing a Professional Educator Licensing and Standards Board
preparation program approved under chapter 8705 leading to the licensure of teachers of
health; or

(2) approval of a content portfolio aligned to components in subpart 3.

Subp. 3. **Subject matter standard standards.** A candidate for licensure as a teacher
of health must complete a preparation program under subpart 2, item C, that must include
the candidate's demonstration of the knowledge and skills in items A to I F.

A. **Health education topics.** A teacher of health understands behaviors and
factors that The candidate must demonstrate competency in the following health education
topics and must be able to describe applicable state and federal laws and policies that address
these health education topics:

(1) prevent or reduce the risk of accidents, sudden illness, and violent injuries
the use of alcohol, drugs, and tobacco;

(2) prevent or reduce the risk of tobacco use or alcohol and other drug abuse
healthy eating;

(3) prevent or reduce the risk of HIV infection and AIDS, sexually transmitted
diseases, and unintentional pregnancy; and mental and emotional health, including preventing
and managing conflict, emotional stress, and anxiety for oneself and others in healthy ways;

(4) contribute to sufficient physical activity and promote health-enhancing
dietary practices: personal health and wellness;

(5) physical activity;

(6) safety, including recognizing and avoiding risky behavior;

(7) sexual health, including preventing or reducing unintended pregnancy
and sexually transmitted disease (STD); and
B. A teacher of health understands concepts related to health promotion and disease prevention including:

1. the need for and role of a philosophy of health, health education, and health promotion;

2. primary, secondary, and tertiary prevention;

3. components of comprehensive school health programs and interrelationships among components;

4. behaviors that foster and those that hinder well-being; and

5. physical, social, emotional, and intellectual factors that influence health.

C. A teacher of health understands how to access valid health information and health-promoting products and services including:

1. selecting and evaluating the validity of sources of health education information;

2. identifying and accessing appropriate and cost-effective school and community health services;

3. identifying and evaluating appropriate lifestyle assessments and health-risk appraisals;

4. using or developing appropriate data gathering instruments to include national, state, or district level morbidity, mortality, behavioral risk, and needs assessment data; and

5. articulating research and public policy regarding health issues.
D. A teacher of health understands health-enhancing behaviors that reduce health risks including:

- the short-term and long-term consequences of positive and negative health choices;
- the relationship between and among the major health determinants of genetics, environments, health care, and personal behavior;
- the importance of individual responsibility for health; and
- strategies to reduce and prevent stress-related health problems.

E. A teacher of health understands the effects of advertising, media, technology, and social norms on health behaviors.

F. A teacher of health understands how to use interpersonal communication skills to enhance health including:

- models and strategies for teaching communication skills for expressing needs, wants, and feelings; communicating, care, consideration, and respect of self and others; conflict resolution; and refusal skills; and
- strategies for facilitating dialogue related to controversial health issues.

G. A teacher of health understands how to use goal-setting and decision-making skills to enhance health including:

- age-appropriate decision-making and goal-setting models;
- applying decision-making and goal-setting processes to personal health choices;
- the components of and processes for the development and implementation of personal health plans; and
(4) predicting the immediate and long-range impact of health decisions on
the individual, family, and the community.

H. A teacher of health demonstrates an understanding of the teaching of health
that integrates understanding of health with the understanding of pedagogy, students, learning,
classroom management, and professional development. The teacher of health to preadolescent
and adolescent students must:

(1) understand and apply educational principles relevant to the physical,
social, emotional, moral, and cognitive development of preadolescents and adolescents;

(2) understand and apply the research base for and the best practices of middle
and high school education;

(3) develop curriculum goals and purposes based on the central concepts of
health and know how to apply instructional strategies and materials for achieving student
understanding of this discipline;

(4) understand the role and alignment of district, school, and department
mission and goals in program planning;

(5) understand the need for and how to connect students' schooling experiences
with everyday life, the workplace, and further educational opportunities;

(6) know how to involve representatives of business, industry, and community
organizations as active partners in creating educational opportunities; and

(7) understand the role and purpose of cocurricular and extracurricular
activities in the teaching and learning process.

B. Foundational skills. The candidate must describe and apply each of the
following skills using at least two of the health education topics described in item A:
analyze the influence of family, peers, culture, media, technology, and
other factors on health behaviors (INF);

demonstrate the ability to access valid information, products, and services
to enhance health (AI);

demonstrate the ability to use interpersonal communication skills to
enhance health and avoid or reduce health risks (IC);

demonstrate the ability to use decision-making skills to enhance short-term
and long-term health (DM);

demonstrate the ability to use goal-setting skills to enhance health (GS);

demonstrate the ability to practice health-enhancing behaviors and avoid
health risks (SM); and

demonstrate the ability to advocate for personal, family, and community
health (AV).

Planning and instruction. A candidate for licensure as a teacher of health
must demonstrate competency in planning and instruction. The candidate must:

design and apply developmentally appropriate short- and long-term plans
that are aligned with state academic standards, including plans for assessments;

design and apply individualized instruction for diverse student needs,
adding specific accommodations or modifications for all students;

design and apply scaffolded sequential learning experiences that align
with short- and long-term objectives and that address the diverse needs of all students;
plan for and manage resources to provide active, fair, and equitable
learning experiences;
(5) design developmentally appropriate, engaging instructional strategies and materials that foster a physically and emotionally safe learning environment;

(6) design short- or long-term lessons that use demonstrations, explanations, and instructional cues that are aligned with short- and long-term plan objectives;

(7) design short- or long-term plans that illustrate transitions, routines, and positive behavior management to create and maintain a safe, supportive, and engaging learning environment; and

(8) design short- or long-term plans that include supports for common errors and strategies for feedback.

D. Assessment. A candidate for licensure as a teacher of health must demonstrate competency in assessment. The candidate must:

(1) use assessment data to plan instruction, analyze student learning, and reflect on implementation practices;

(2) provide substantive, constructive, and timely feedback and adjust units and lessons so they meet the diverse learning needs of all students;

(3) select or create formal and informal assessments that measure short- or long-term objectives;

(4) administer formative and summative assessments that monitor student learning; and

(5) complete a reflective cycle to guide decision making based on short- or long-term objectives, student learning, and teacher performance.

E. Professionalism. A candidate for licensure as a teacher of health must demonstrate professional growth. The candidate must:
be able to work collaboratively with a variety of stakeholders to meet the diverse needs of all learners and to enhance school health programs;

engage in continued professional growth and collaboration in schools or professional organizations;

describe strategies for the promotion and advocacy of health education and expanded health education opportunities; and

demonstrate an understanding of the short-term and long-term consequences of positive and negative personal health choices.

I. F. Reading. A candidate for licensure as a teacher of health must understand the content and methods for teaching reading including:

(1) knowledge of reading processes and instruction including:

(a) the relationships between and among print processing abilities and digital content, motivation, background, and discourse knowledge, cognitive abilities, and reader's interest and how those relationships impact comprehension; and

(b) the complexities involved in the development of academic language and the impact of that development in school success; and

(2) the ability to use a wide range of instructional practices, approaches, methods, and curriculum materials to support reading instruction including:

(a) selection and implementation of a wide variety of before, during, and after reading strategies that develop reading and metacognitive abilities;

(b) the ability to develop and implement effective vocabulary strategies that help students understand words including domain-specific content words;

(c) the ability to develop critical literacy skills by encouraging students to question texts and analyze texts from multiple viewpoints or perspectives; and
the ability to identify instructional practices, approaches, and methods
and match materials, both print and digital, to the cognitive levels of all readers, guided by
an evidence-based rationale, which support the developmental, cultural, and linguistic
differences of readers.

Subp. 3a. **Student teaching and field experiences.** A candidate for licensure to teach
health must have a broad range of targeted field-based experiences, of a minimum of 100
150 hours prior to student teaching, that provide opportunities to apply and demonstrate
competency of professional dispositions and the required skills and knowledge under this

Across the combination of student teaching and other field-based placements, candidates
must have experiences teaching the content at both the middle level, grades 5 through 8,
and high school level, grades 9 through 12.

For initial teacher licensure, the student teaching period must be a minimum of 12
continuous weeks, full time, face-to-face, in which the candidate is supervised by a
cooperating teacher, and evaluated at least twice by qualified faculty supervisors in
collaboration with the cooperating teachers.

Subp. 4. [See repealer.]

Subp. 5. [Repealed, L 2015 c 21 art 1 s 110]

**8710.4700 TEACHERS OF PHYSICAL EDUCATION.**

Subpart 1. **Scope of practice.** A teacher of physical education is authorized to provide
to students in kindergarten through grade 12 instruction that is designed to enhance physical
growth and development through learning to move and learning through movement.

Subp. 2. **Licensure requirements.** The board must issue a license in physical education
to teach students in kindergarten through grade 12 if the applicant meets the requirements
of this subpart.
A. A candidate for licensure. An applicant seeking a professional license to teach physical education to students in kindergarten through grade 12 shall: must meet the requirements for a Tier 3 license pursuant to part 8710.0313 and Minnesota Statutes, section 122A.183, or a Tier 4 license pursuant to part 8710.0314 and Minnesota Statutes, section 122A.184.

A. hold a baccalaureate degree from a college or university that is regionally accredited by the association for the accreditation of colleges and secondary schools;

B. An applicant seeking an initial license in physical education pursuant to Minnesota Statutes, section 122A.183, subdivision 2, clauses (1) and (3), must:

(1) demonstrate the standards for effective practice for licensing of beginning teachers in part 8710.2000; and

C. (2) show verification of:

(a) completing a Professional Educator Licensing and Standards Board preparation program approved under chapter 8705 leading to the licensure of teachers of physical education in subpart 3; or

(b) approval of a content portfolio aligned to the components in subpart 3.

C. An applicant seeking an additional license to teach physical education pursuant to Minnesota Statutes, section 122A.183, subdivision 2, clauses (1) and (3), must show verification of:

(1) completing a Professional Educator Licensing and Standards Board preparation program approved under chapter 8705 leading to the licensure of teachers of physical education; or

(2) approval of a content portfolio aligned to components in subpart 3.
Subp. 3. **Subject matter standard standards.** A candidate for licensure as a teacher of physical education must complete a preparation program under subpart 2, item C, that must include the candidate’s demonstration of **demonstrate** the knowledge and skills in items A to D E.

A. **Skills.** A teacher of physical education understands and applies the skills necessary to perform varied physical activities including: The candidate must demonstrate competency in:

1. essential elements and sequencing of basic **fundamental** motor skills,
   including a minimum of at least two skills in each of the following categories: locomotor, nonlocomotor, and manipulative; and

2. individual, dual, and team activities; lifetime fitness activities; fundamental gymnastics; rhythms and dance, for example, singing games and folk, square, ballroom, creative, contemporary, and modern dance; low organization, lead up, and cooperative games; aquatics; aerobics, body mechanics, conditioning exercises, and strength training; a skill representing at least four of the following physical activity categories: games and sports; aquatics; dance and rhythmic activities; fitness activities; outdoor pursuits; and individual-performance activities.

3. appropriate instructional cues and prompts for basic motor skills and physical activity; and

4. how to support and encourage learner expression through movement.

B. **Foundational knowledge.** A teacher of physical education understands disciplinary The candidate must describe and apply content and foundational knowledge of physical activities and well-being, including:

1. the organic, skeletal, and neuromuscular structures of the human body and how these structures adapt and contribute to physical activity, motor performance,
fitness, and wellness common content knowledge for teaching students physical education, including developmentally appropriate motor skills, movement concepts, and movement patterns; situational-specific tactics, strategies, and correct techniques of skill-based performances in a developmentally appropriate manner; and rules and etiquette of activities, games, and sports;

(2) Concepts and strategies related to physical activity and fitness specialized content knowledge for teaching students physical education, including skill cues, identifying critical elements, and predicting common errors; planned and developmentally appropriate task progressions; and observed performance as the basis for adjusting learning tasks;

(3) Disciplinary concepts and principles to skillful movement and physical activity anatomical and physiological concepts related to skillful movement, physical activity, and fitness for students;

(4) Interdisciplinary learning experiences that allow students to integrate knowledge, skills, and methods of inquiry from multiple subject areas motor learning theory and principles related to skillful movement, physical activity, and fitness for students;

(5) Organization and administration of physical education programs motor development theory and principles related to fundamental motor skills, skillful movement, physical activity, and fitness for students;

(6) Etiquette, sportsmanship, and officiating organization and administration of physical education programs, including the role and alignment of district, school, and department missions and goals in program planning and how to develop curriculum goals and purposes based on the central concepts of physical education;

(7) Selection and use of appropriate supplies and equipment components of a quality physical education program;
(8) safety issues to consider when planning and implementing instruction

individualized instruction for diverse student needs, adding specific accommodations or
modifications for all students, including developmental adapted physical education programs;

(9) appropriate emergency procedures; an understanding of how to achieve
a health-enhancing level of fitness; and

(10) safety, CPR, and first aid procedures, and prevention and care of injuries;

training.

(11) the relationship among physical activity, fitness, and health including
developmental adaptive physical education programs;

(12) historical, philosophical, sociological, and psychological factors
associated with varied physical activities; and

(13) health-related concepts, concerns, assumptions, debates, processes of
inquiry, and personal hygiene central to the study of physical activity.

C. Planning and instruction. A teacher of physical education must demonstrate
an understanding of the teaching of physical education that integrates understanding of
physical education with the understanding of pedagogy, students, learning, classroom
management, and professional development. The teacher of physical education to children,
preadolescents, and adolescents The candidate must:

(1) understand and apply educational principles relevant to the physical,
social, emotional, moral, and cognitive development of children, preadolescents, and
adolescents design developmentally appropriate short- or long-term plans that are aligned
with state academic standards, including plans for assessments;

(2) understand and apply the research base for and the best practices of
kindergarten and primary, intermediate, and middle and high school education design
progressive and sequential learning experiences that align with short- or long-term objectives and that address the diverse needs of all students;

(3) understand the benefits and implications of, and how to, promote lifelong physical recreation plan for and manage resources to provide active, fair, and equitable learning experiences;

(4) develop curriculum goals and purposes based on the central concepts of physical education and know how to apply design developmentally appropriate, engaging instructional strategies and materials for achieving student understanding of this discipline that foster a physically and emotionally safe learning environment;

(5) understand the role and alignment of district, school, and department mission and goals in program planning design individualized instruction for diverse student needs, adding specific accommodations or modifications for all students, including developmental adapted physical education programs;

(6) understand the need for and how to connect students' schooling experiences with everyday life, the workplace, and further educational opportunities design short- or long-term lessons that use demonstrations, explanations, and instructional cues that are aligned with short- and long-term plan objectives;

(7) know how to involve representatives of business, industry, and community organizations as active partners in creating educational opportunities design short- or long-term plans that illustrate transitions, routines, and positive behavior management to create and maintain a safe, supportive, and engaging learning environment; and

(8) understand the role and purpose of cocurricular and extracurricular activities in the teaching and learning process design short- or long-term plans that include supports for common errors and strategies for feedback.

D. Assessment and reflection. The candidate must:
create authentic, formal assessments that measure short- or long-term objectives;

administer formative assessments that monitor student learning;

complete a reflective cycle to guide decision making based on short- or long-term objectives, student learning, and teacher performance;

engage in continued professional growth and collaboration in schools or professional organizations; and

describe strategies for the promotion and advocacy of physical education and expanded physical education activity opportunities.

D. E. A teacher of physical education must understand the content and methods for teaching reading including the ability to use a wide range of instructional practices, approaches, methods, and curriculum materials including electronic resources to support reading and writing instruction including:

selection and implementation of a wide variety of before, during, and after reading comprehension strategies that develop reading and metacognitive abilities;

the ability to develop and implement effective vocabulary strategies that help students understand words including domain-specific words; and

the ability to identify instructional practices, approaches, methods, and match materials to the cognitive levels of all readers, guided by an evidence-based rationale, which support the developmental, cultural, and linguistic differences of readers.

Subp. 3a. Student teaching and field experiences. A candidate for licensure to teach physical education must have a broad range of targeted field-based experiences, of a minimum of 400 150 hours prior to student teaching, that provide opportunities to apply
and demonstrate competency of professional dispositions and the required skills and knowledge under this part and part 8710.2000.

Across the combination of student teaching and other field-based placements, candidates must have experiences teaching the content at three levels: kindergarten through grade 6, grades 5 through 8, and grades 9 through 12.

For initial teacher licensure, the student teaching period must be a minimum of 12 continuous weeks, full time, face-to-face, in which the candidate is supervised by a cooperating teacher, and evaluated at least twice by qualified faculty supervisors in collaboration with the cooperating teachers.

Subp. 4. [See repealer.]

Subp. 5. [Repealed, L 2015 c 21 art 1 s 110]

8710.4750 TEACHERS OF SCIENCE.

Subpart 1. Scope of practice. A teacher of chemistry, earth and space science, life science, or physics is authorized to provide instruction in all science disciplines to students in grades 5 through 8 and either chemistry, earth and space science, life science, or physics, and integrated science offerings, to students in grades 9 through 12. The science discipline that the teacher is qualified to teach in grades 9 through 12 shall be identified on the teacher's license.

Subp. 2. Licensure requirements. A candidate for licensure to teach science to students in grades 5 through 12 shall:

A. hold a baccalaureate degree from a college or university that is accredited by the regional association for the accreditation of colleges and secondary schools;

B. demonstrate the standards for effective practice for licensing of beginning teachers in part 8700.2000; and
C. show verification of completing a preparation program approved under chapter 8705 leading to the licensure of teachers of science in grades 5 through 8 in subpart 3 and chemistry, earth and space science, life science, or physics in grades 9 through 12 in subpart 4, 5, 6, or 7.

Subp. 2a. **Exception for candidates with partial science teaching qualification.** The board shall issue a license valid for teaching chemistry, earth and space science, life science, or physics in grades 9 through 12 for candidates who complete the requirements of subpart 2, items A and B; and subpart 4; 5; 6; or 7, but have not completed subpart 3. The board shall issue a license to teach all sciences in grades 5 through 8 to a candidate who has completed the requirements of subparts 2, items A and B, and 3, but has not completed subpart 4, 5, 6, or 7. Licenses issued to teach all sciences in grades 5 through 8 under this exception or as a science specialty under part 8710.3200 are not valid for teaching integrated science offerings above grade 9.

Subp. 3. **Subject matter standards for science in grades 5 through 8.** A candidate for licensure as a teacher of science in grades 5 through 8 must complete a preparation program under subpart 2, item C, that must include the candidate's demonstration of the knowledge and skills in items A to F.

A. A teacher of science must demonstrate science perspectives, including:

   (1) understanding and conducting science inquiry as evidenced by the ability to:

   (a) ask appropriate theoretical or empirical questions about a given system or event that build on current scientific knowledge and can be answered scientifically;

   (b) design and conduct, using appropriate methods, technology, and mathematical tools, a scientific investigation to answer a given question;
(c) develop, using appropriate sources of information, qualitative and quantitative solutions to problems;

(d) communicate clearly and concisely, using words, diagrams, tables, graphs, and mathematical relationships, the methods and procedures, results, and conclusions for a given empirical question or problem;

(e) justify a scientific explanation of a given system or event, compared to alternative explanations, based on the available empirical evidence, current scientific understanding, and logical arguments; and

(f) criticize, using knowledge of common errors of evidence and logic, a given science-related claim or argument; and

(2) understanding the history and nature of scientific knowledge as evidenced by the ability to:

(a) describe the evolution of scientific knowledge in a given historical context in terms of the contributions of male and female individuals from various cultures; the influence of society, culture, and personal beliefs of the scientists involved; and the accumulating empirical evidence and logical arguments used to develop the new knowledge;

(b) explain why scientists disagree on a given contemporary controversy in terms of the different assumptions made by the scientists, the different values the scientists place on a particular piece of evidence, and the limitations of the available data or theories, or both; and

(c) explain, using knowledge of the role of empirical evidence and logical argument in science and the assumption that the universe is a vast single system in which the basic rules are everywhere the same, why a given contemporary or historical belief is nonscience.
B. A teacher of science must have the knowledge and ability to make conceptual connections within and across the domains of science and between science and technology. The teacher of science must understand:

(1) connections across the domains of science as evidenced by the ability to:

(a) describe, using words and diagrams, a given technological, biological, physical, earth, or space system in terms of its components, inputs, outputs, and control or feedback;

(b) describe, using a specific example, the use of a given unifying theme or principle in the physical sciences, life sciences, and earth and space sciences; and

(c) explain, using unifying scientific principles, a given set of seemingly unrelated systems or events, both within a science domain and across science domains;

(2) connections between science and technology as evidenced by the ability to:

(a) describe the similarities and differences between the goals and processes of scientific inquiry and the goals and processes of technological design;

(b) explain how the availability of new technology influenced the development of scientific knowledge in a given contemporary or historical context and how the development of new scientific knowledge led to technological advances in a given contemporary or historical context;

(c) explain and predict the possible unexpected benefits and the negative side effects and unintended consequences of a given technological advance;

(d) explain why the contributions of individuals from different scientific disciplines and of technology were necessary for the success of a given contemporary or historical scientific investigation; and
(e) design a modification or use of a system to meet certain needs or criteria in either chemistry, earth and space science, biology, or physics; and

(3) connections between science and other school subjects as evidenced by the ability to:

(a) communicate clearly and precisely, using words, physical models, computer models, demonstrations, diagrams, flow charts, numbers, tables, graphs, and appropriate mathematical relationships, the observations, methods and procedures, results, and conclusions for a given empirical question or problem; explanations of how or why something happens; predictions of what will happen when a change is made; the design for modifying or using a system; and the evaluation of the design against the needs or criteria it was designed to meet;

(b) interpret a given text, physical or computer model, demonstration, diagram, flow chart, set of numbers, table, graph, and appropriate mathematical relationships;

(c) use computer software or graphing calculators to display and analyze data and to model solutions to a prediction or design problem;

(d) explain how mathematics influenced the development of scientific knowledge in a given contemporary or historical context, and how the development of new scientific knowledge led to new mathematics in a given contemporary or historical context; and

(e) describe the impact on society and culture of a given historical development of scientific ideas.

C. A teacher of science understands how knowledge of concepts and principles of science and technology and knowledge of factors influencing personal and community health, population growth, natural resources, environmental quality, and natural and
human-induced hazards influence decisions about personal and societal issues. The teacher of science must:

(1) predict the scientific, economic, political, and ethical factors that could influence a course of action to address a given personal issue or local, national, or global challenge;

(2) design, using the systematic approaches of science and scientific knowledge, a course of action to address a personal issue or a given local, national, or global challenge; and

(3) justify and defend a given design for a course of action in terms of an assessment of alternatives, risks, costs, and benefits, and consideration of who benefits and who suffers, who pays and gains, and what the risks are and who bears them.

D. A teacher of science must be able to understand and apply fundamental principles, laws, and concepts of earth and space science, life science, and physical science. The teacher of science must:

(1) know and apply the fundamental principles, laws, and concepts of earth and space science including understanding:

(a) the components and evolution of the Earth system as evidenced by the ability to:

i. describe, using words, diagrams, pictures, and graphs, the physical properties of a given Earth material;

ii. explain, from observation of its composition, texture, and physical state using physical, geological, or biological processes, a plausible way in which a given rock formed through time;
iii. explain, in terms of environmental changes, structural events, plate tectonics, and sedimentary, igneous, metamorphic, and biologic processes, how observed differences within a given rock sequence are related to the various processes that may have formed the rocks;

iv. explain, in terms of environmental changes, structural events, plate tectonics, and sedimentary, igneous, metamorphic, and biologic processes, a plausible way in which a given rock sequence formed through time;

v. explain, in terms of the physical processes that formed it, the origin and development of a given Earth structure;

vi. predict, in terms of known rock sequences, how a given geologic or biologic event might be recorded in a rock sequence; and

vii. explain, using the fossil record and decay rates of radioactive isotopes, how the age of a given rock is determined;

(b) matter and energy in the Earth system as evidenced by the ability to:

i. explain, using convection, conduction, and radiation, how matter is transported and how energy drives the process of transportation of matter within and between given Earth subsystems or structures;

ii. explain, using convection, conduction, radiation, and conservation of energy, how energy is transmitted and transformed within and between given Earth subsystems or structures;

iii. design a simple physical model that mimics the behavior of a given Earth system; and
iv. describe, using words, diagrams, and chemical equations, the processes involved in the movement of chemical elements or compounds among different given chemical reservoirs in the Earth;

(c) the Earth in the solar system and the universe as evidenced by the ability to:

i. explain how the properties and organization of galaxies provide evidence that the universe is continuously changing;

ii. explain qualitatively, using fundamental processes of chemical, physical, and geological change, how processes of change on a given solar system object are different or similar to Earth;

iii. describe, using words, diagrams, and physical models, the motion of objects in our solar system; and

iv. explain qualitatively, using Earth's axial rotation, tilt of its rotational axis, and changing position with respect to the sun, the seasonal variations in the length of a day and sun angle at various latitudes on Earth; and

(d) human interactions with the earth system as evidenced by the ability to:

i. describe, using words, diagrams, pictures, graphs, historic records, and physical models, the scientific basis for predicting the occurrence of a given environmental hazard on a human time frame;

ii. describe, using words, diagrams, pictures, maps, and physical or computer models, the observed changes in a given Earth system that are due directly or indirectly to human activity; and
97.1 iii. predict, using words, diagrams, pictures, maps, and physical or computer models, the probable movement of pollutants in a given Earth system;

97.2 (2) know and apply the fundamental principles, laws, and concepts of life science including understanding:

97.3 (a) structural and functional relationships in living systems and environments as evidenced by the ability to:

97.4 i. perform observations to describe the macroscopic structures of a given common organism;

97.5 ii. describe, using words, pictures, and diagrams, the conditions required to sustain life for a given common organism;

97.6 iii. describe, using words and diagrams, the characteristics of what determines life in a given common organism;

97.7 iv. design a system to support, sustain, and continue the life of a given set of common organisms;

97.8 v. describe, using words, pictures, dioramas, and physical or computer models, the structure and function of the components of a given living system in relation to its overall function;

97.9 vi. explain, in terms of the function of the organs of that system, the structure of a given plant and animal system;

97.10 vii. explain, using structure-function relationships, how and why the structures for a given function are different in different given species;

97.11 viii. describe the origins, transmission, prevention, management, or cure of a given disease; and
ix. explain and predict, in terms of the defense mechanism and the method by which the immunity is established, how a given active or passive immunity functions in a human;

(b) molecular and cellular life processes as evidenced by the ability to:

i. perform observations to describe cellular structures and physiological processes;

ii. describe, using words, pictures, and models, the components of a given cell;

iii. explain, in terms of the structure and function of the cell components, the differences between prokaryotic and eukaryotic cells and between given eukaryotic cells;

iv. describe, using words, pictures, and diagrams, the cellular processes of a given plant or animal cell;

v. explain, using the process of photosynthesis, how plants transform solar energy into cellular energy;

vi. explain, using the process of cellular respiration, how energy stored in food molecules is released;

vii. explain, using the process of DNA replication, how proteins are synthesized in a cell;

viii. explain, using the structure-function relationships between cells, tissues, organs, and systems, how cells function as primary building blocks of an organism;

ix. describe, using words, pictures, and models, the physical changes at each given stage of cellular asexual reproduction;
x. describe, using words, diagrams, and charts, how traits are inherited and sex is determined in a given animal; and

xi. explain, using the relationships between genetic change and expression, how a mutation occurs and predict the effect an environmental change will have on the expression of a trait;

(c) diversity and biological evolution as evidenced by the ability to:

i. describe, using words, pictures, and diagrams, the range of physical and behavioral adaptations that can occur in response to environmental stresses for a given species;

ii. describe, using words, diagrams, charts, and graphs, the range of observable characteristics of a given species in a given environment;

iii. explain the speciation process in a given fossil record; and

iv. design, based only on observable structure, a classification key for a given set of organisms; and

(d) the interdependence among living things as evidenced by the ability to:

i. collect and analyze data to describe the diversity and number of species in a given ecosystem;

ii. describe, using words, pictures, and diagrams, the biotic and abiotic components of a given niche, habitat, ecosystem, or biome;

iii. explain, in terms of environmental adaptations and development, the diversity of a given species;

iv. describe, using words and diagrams, the cycling of matter and the flow of energy within a given system;
v. explain and predict the behavioral responses of an animal to a given set of environmental changes; and

vi. design, using environmental changes, an experiment to elicit a specific behavioral response from a given animal; and

(3) know and apply the fundamental principles, laws, and concepts of the physical sciences including understanding:

(a) one-dimensional and two-dimensional linear motion and forces as evidenced by the ability to:

i. perform measurements and calculations to determine the position, average speed, and direction of motion of a given object;

ii. describe, using words, pictures or diagrams, graphs, vectors, and simple mathematical relationships, the vertical and horizontal components of the motion of a given object;

iii. describe, using words and free body vector diagrams, the forces acting on an object in a given system of interacting objects, and explain qualitatively, using Newton's Second and Third Laws, the relationships between all the forces;

iv. describe, using words, energy diagrams or graphs, and simple mathematical relationships, the change of energy of a system and any transfer of energy into or out of a given system of interacting objects; and

v. explain qualitatively, in terms of balanced and unbalanced forces and the conservation of energy, the observed motion of an object in a given system of interacting objects;

(b) vibrations and wave motion as evidenced by the ability to:
101.1 i. perform measurements and calculations to describe the wavelength, amplitude, period, and frequency of a given oscillating object or wave;

101.2

101.3 ii. describe, using words, diagrams, and graphs, the frequency and amplitude of a given simple pendulum or vibrating object;

101.4

101.5 iii. describe, using words, diagrams, and graphs, the wave motion of a traveling or standing wave in a given medium; and

101.6

101.7 iv. explain qualitatively, in terms of the changes in the frequency amplitude, wavelength, or wave velocity, the observed changes in the pitch or intensity of a sound when given changes are made to the source, the medium through which the sound travels, or the relative motion of the source or detector;

101.8

101.9 (c) the behavior of light as evidenced by the ability to:

101.10 i. explain qualitatively, using the directionality and chromatic composition of light, how we see a given object and its color;

101.11

101.12 ii. explain and predict, using ray diagrams, the observed shadows in a simple geometrical system of objects and point or extended light sources;

101.13

101.14 iii. describe, using words and ray diagrams, the reflection, refraction, transmission, and absorption of light when it encounters an ordinary object, a plain or curved mirror, a prism, and thin concave or convex lenses; and

101.15

101.16 iv. explain qualitatively, using ray diagrams and the laws of reflection and refraction of light, the observed location and magnification of the real or virtual images for a given pinhole system, simple system of mirrors, or simple system of thin lenses;

101.17

101.18 (d) electricity and magnetism as evidenced by the ability to:
i. perform measurements to determine the type of charge of a given charged object, and the north and south poles of an unmarked magnet;

ii. explain qualitatively, in terms of the movement of electrons, observed changes in the charge of an object in a given system of interacting charged and uncharged objects;

iii. describe, using words and diagrams, the magnetic field around a straight current carrying wire and a current-carrying solenoid; and

iv. design a circuit using batteries, bulbs, and switches to meet given criteria for the brightness and control of the bulbs;

(e) the properties and structure of matter as evidenced by the ability to:

i. perform measurements and calculations to describe the mass, volume, density, concentration, melting and boiling temperatures, and solubility limits of a given substance;

ii. describe, using words and diagrams, common substances as pure elements or compounds, solutions, suspensions, or colloids;

iii. perform procedures of distillation, precipitation, extraction, or chromatography to separate the substances in a given mixture;

iv. describe, using words and diagrams, the basic atomic and subatomic constituents of matter;

v. describe, using the kinetic-molecular theory or intermolecular forces, or both, the arrangement and motion of the atoms, ions, or molecules in a given gas, liquid, or solid substance, and explain the characteristic properties of the substance;
vi. explain and predict, using the principles for filling the electron orbital of atoms and the Periodic Table, the periodic trends in electrical conductivity, ionization, and metallic character of a given set of elements;

vii. predict, using the Periodic Table, whether the bonding in a given substance is primarily covalent, metallic, or ionic;

viii. describe, with words and diagrams, the electrical conductivity of a given conductor, insulator, or semiconductor using periodic trends;

ix. describe, in words and diagrams using conservation of mass and energy, the changes in matter and energy that occur in the nuclear processes of radioactive decay, fission, and fusion; and

x. describe, with words, structural and chemical diagrams and formulas, and physical and computer models, the unique structure of carbon, and explain how that structure results in the large variety of organic molecules;

(f) chemical reactions as evidenced by the ability to:

i. describe, using words, diagrams, physical or computer models, and a balanced chemical equation, changes in the energy and arrangement of atoms for a given chemical reaction;

ii. describe, using words, diagrams, and chemical symbols, a given chemical reaction as oxidation-reduction, acid-base, free radical, precipitation, metathesis, or a combination of these; and

iii. explain and predict qualitatively, using solubility rules, the common oxidation states of elements, the activity series of metals and nonmetals, the stability of radicals, and the properties of acids and bases, the most likely type of reaction for a given set of given reactants;
thermodynamics as evidenced by the ability to:

i. describe, using words and pictures or diagrams, the characteristics of an ideal gas;

ii. describe and predict, using words, graphs, and mathematical relationships, changes in pressure, volume, or temperature of a given ideal gas;

iii. describe, using words, diagrams, and energy graphs, the changes in the enthalpy and entropy during a given chemical reaction; and

iv. explain qualitatively, using the First and Second Laws of Thermodynamics energy, changes in a given spontaneous or nonspontaneous reaction; and

(h) chemical kinetics and equilibrium as evidenced by the ability to:

i. explain, using the requirements for effective particle collisions and activation energy, why a given spontaneous reaction is fast or slow, and predict the conditions necessary to make the reaction occur more rapidly;

ii. explain, using the concept of activation energy and the requirements for effective particle collisions, how a given catalyst increases the rate of a given reaction;

iii. explain, using the kinetic-molecular model, how a given change in temperature, concentration, or particle surface area changes the rate of a given chemical reaction;

iv. describe, using words, diagrams, chemical equations, and concentration graphs, the equilibrium of a given reaction;

v. explain, in terms of changes in the number of effective collisions of the molecules in the forward and reverse reaction, why the chemical equilibrium of a given reaction is a dynamic process; and
vi. explain and predict change in the equilibrium of a given chemical
reaction when the temperature changes, the pressure changes, a catalyst is added, or the
concentration of reactants or products changes.

E. A teacher of science must have a broad-based knowledge of teaching science
that integrates knowledge of science with knowledge of pedagogy, students, learning
environments, and professional development. A teacher of science must understand:

(1) curriculum and instruction in science as evidence by the ability to:

(a) select, using local, state, and national science standards, appropriate
science learning goals and content;

(b) plan a coordinated sequence of lessons and instructional strategies
that support the development of students' understanding and nurture a community of science
learners including appropriate inquiry into authentic questions generated from students' 
experiences; strategies for eliciting students' alternative ideas; strategies to help students'
understanding of scientific concepts and theories; and strategies to help students use their
scientific knowledge to describe real-world objects, systems, or events;

(c) plan assessments to monitor and evaluate learning of science concepts
and methods of scientific inquiry; and

(d) justify and defend, using knowledge of student learning, research in
science education, and national science education standards, a given instructional model or
curriculum;

(2) safe environments for learning science as evidenced by the ability to:

(a) use required safety equipment correctly in classroom, field, and
laboratory settings;
(b) describe, using knowledge of ethics and state and national safety guidelines and restrictions, how to make and maintain a given collection of scientific specimens and data;

(c) describe, using knowledge of ethics and state and national safety guidelines and restrictions, how to acquire, care for, handle, and dispose of live organisms;

(d) describe, using state and national guidelines, how to acquire, care for, store, use, and dispose of given chemicals and equipment used to teach science;

(e) implement safe procedures during supervised science learning experiences in the public schools; and

(f) develop a list of materials needed in an elementary science safety kit;

(3) how to apply educational principles relevant to the physical, social, emotional, moral, and cognitive development of preadolescents and adolescents;

(4) how to apply the research base for and the best practices of middle level and high school education;

(5) how to develop curriculum goals and purposes based on the central concepts of science and how to apply instructional strategies and materials for achieving student understanding of the discipline;

(6) the role and alignment of district, school, and department mission and goals in program planning;

(7) the need for and how to connect students' schooling experiences with everyday life, the workplace, and further educational opportunities;

(8) how to involve representatives of business, industry, and community organizations as active partners in creating educational opportunities; and
the role and purpose of cocurricular and extracurricular activities in the
teaching and learning process.

F. A teacher of science must understand the content and methods for teaching
reading including:

(1) knowledge of reading processes and instruction including:

(a) orthographic knowledge and morphological relationships within
words;

(b) the relationship between word recognition and vocabulary knowledge,
fluency, and comprehension in understanding text and content materials;

(c) the importance of direct and indirect vocabulary instruction that leads
to enhanced general and domain-specific word knowledge;

(d) the relationships between and among comprehension processes related
to print processing abilities, motivation, reader's interest, background knowledge, cognitive
abilities, knowledge of academic discourse, and print and digital text; and

(e) the development of academic language and its impact on learning
and school success; and

(2) the ability to use a wide range of instructional practices, approaches,
methods, and curriculum materials to support reading instruction including:

(a) the appropriate applications of a variety of instructional frameworks
that are effective in meeting the needs of readers of varying proficiency levels and linguistic
backgrounds in secondary settings;

(b) the ability to scaffold instruction for students who experience
comprehension difficulties;
(c) selection and implementation of a wide variety of before, during, and after reading comprehension strategies that develop reading and metacognitive abilities;

(d) the ability to develop and implement effective vocabulary strategies that help students understand words including domain-specific content words;

(e) the ability to develop critical literacy skills by encouraging students to question texts and analyze texts from multiple viewpoints or perspectives;

(f) the ability to identify instructional practices, approaches and methods and match materials, print and digital, to the cognitive levels of all readers, guided by an evidence-based rationale, which support the developmental, cultural, and linguistic differences of readers;

(g) the ability to plan instruction and select strategies that help students read and understand science texts, including the ability to:

i. distinguish between facts based on empirical/scientific findings from opinion;

ii. relate what is read to relevant prior knowledge;

iii. use scientific knowledge to draw inferences or conclusions from facts, discern cause and effect relationships, detect fallacies in author's evidence, and support own claims with evidence;

iv. follow instructions to perform laboratory activities step by step in a disciplined fashion;

v. explain diagrams and graphs in terms of scientific content/meaning; and

vi. explain meaning of abbreviations and symbols.
Subp. 3a. **Student teaching and field experiences.** A candidate for licensure to teach science must have a broad range of targeted field-based experiences, of a minimum of 100 hours prior to student teaching, that provide opportunities to apply and demonstrate competency of professional dispositions and the required skills and knowledge under this part and part 8710.2000.

Across the combination of student teaching and other field-based placements, candidates must have experiences teaching the content at both the middle level, grades 5 through 8, and high school level, grades 9 through 12.

For initial teacher licensure, the student teaching period must be a minimum of 12 continuous weeks, full time, face-to-face, in which the candidate is supervised by a cooperating teacher, and evaluated at least twice by qualified faculty supervisors in collaboration with the cooperating teachers.

Subp. 4. **Subject matter standards for teachers of chemistry.** A candidate for licensure as a teacher of chemistry in grades 9 through 12 must complete a preparation program under subpart 2, item C, that must include the candidate's demonstration of the knowledge and skills in items A to C, and subpart 3, items E and F.

A. A teacher of chemistry must demonstrate a conceptual understanding of chemistry. The teacher must:

1. use sources of information to solve unfamiliar quantitative problems and communicate the solution in a logical and organized manner as evidenced by the ability to:
   1. describe, in terms of the known and unknown quantities, a given problem in appropriate pictorial, graphical, or written forms;
   2. describe, in terms of the relevant numerical and algebraic quantities and equations, a given problem mathematically;
(c) plan, using words, diagrams, and mathematical relationships, a solution for a given problem in terms of steps necessary to solve the problem and to verify the solution; and

(d) evaluate, in terms of unit consistency, reasonableness, and completeness of solution, the solution of a given problem;

(2) use computers to display and analyze experimental and theoretical data as evidenced by the ability to:

(a) describe data graphically using a computer; and

(b) design a mathematical model to provide a reasonable fit to a given set of data; and

(3) develop a plan to ensure a safe environment and practices in chemistry learning activities.

B. A teacher of chemistry must demonstrate a knowledge of chemistry concepts.

The teacher must:

(1) understand the properties and structure of matter as evidenced by the ability to:

(a) explain and predict, using the principles for filling the electron orbitals of atoms and the Periodic Table, the periodic trends in electrical conductivity, atomic radii, ionization energy, electronegativity, electron affinity, and metallic character of a given set of elements;

(b) predict, using the Periodic Table and the arrangement and energies of the element's outermost electrons, whether the bonding in a given substance is primarily covalent, metallic, or ionic;
(c) explain and predict, using the periodic trends in the physical and chemical characteristics of the elements and the type of bonds, or intermolecular forces, or both, the relative magnitudes of a given property for a set of elements or compounds;

(d) predict, using existing models including the Valence Shell electron Pair Repulsion theory, the shape of a given molecule; and

(e) describe, with words and diagrams using neutron to proton ratios and binding energies, the changes in matter and energy that occur in the nuclear processes of radioactive decay, fission, fusion, and other common nuclear transformations;

(2) understand chemical reactions as evidenced by the ability to:

(a) perform measurements and calculations to determine the chemical formulas of the products of a given chemical reaction;

(b) explain and predict qualitatively and quantitatively, using the Periodic Table and the concept of chemical stoichiometry, the mass relationships between reactants and products for a given chemical reaction;

(c) predict quantitatively, using the principle of state functions and Hess's Law, the molar heat of a given reaction from known values of molar heats of formation or molar heats of a series of related reactions; and

(d) explain and predict qualitatively and quantitatively, using solubility rules, the common oxidation states of elements, the activity series of metals and nonmetals, stability of radicals, and the properties of acids and bases, the most likely type of reaction for a given set of given reactants;

(3) understand thermodynamics as evidenced by the ability to:

(a) perform measurements and calculations to determine the molar heat energy absorbed or released in a given phase change or chemical reaction;
(b) predict qualitatively and quantitatively, using the Ideal Gas Law,
changes in the pressure, volume, temperature, or quantity of gas in a given thermally isolated
ideal gas system when the gas is heated or cooled, is compressed or expanded adiabatically,
or enters or leaves the system;

(c) describe, using words, diagrams, energy graphs, and mathematical
relationships, the changes in the enthalpy, entropy, and Gibb's free energy during a given
chemical reaction;

(d) explain and predict qualitatively and quantitatively, using the First
and Second Laws of Thermodynamics and the relationship between Gibb's free energy and
the equilibrium constant, changes in the equilibrium and Gibb's free energy for a given
change in the reaction conditions;

(e) design, using Gibb's free energy, a method for changing the direction
of spontaneity of a given reaction; and

(f) explain qualitatively and quantitatively, using Gibb's free energy,
how the electrochemical potential of a given cell depends on given changes in the temperature
or the concentration of ions in solution, or both;

(4) understand chemical kinetics and equilibrium as evidenced by the ability
to:

(a) perform measurements and calculations to determine the rate of a
chemical reaction, the rate expression, half-life of given reaction, the activation energy of
a given reaction, and the equilibrium constant of a given reaction;

(b) describe, using words, energy diagrams, graphs, and mathematical
relationships, the activation energy, enthalpy changes, and reaction rate of a given reaction;
(c) explain and predict qualitatively and quantitatively, using the rate equation for the reaction, changes in the reaction rate for a given change in the concentration of a reactant or product;

(d) predict, using the rate equation and the presence or absence of intermediates, a possible mechanism for a given reaction;

(e) describe, using words, diagrams, chemical equations, concentration and rate graphs, and mathematical relationships, the equilibrium of a given reaction;

(f) explain, in terms of changes in the number of effective collisions of the molecules in the forward and reverse reaction, why the chemical equilibrium of a given reaction is a dynamic process;

(g) explain and predict quantitatively, using the equilibrium constant, the concentration of a reactant or product in a given gas phase or solution chemical reaction;

(h) design, using LeChatelier's principle, a method for achieving a specified change in the equilibrium constant or the position of equilibrium of a given chemical reaction; and

(i) design, using the rate laws and requirements for effective collisions, a method for achieving a specified change in the rate of a given chemical reaction; and

(5) understand organic and biochemical reactions as evidenced by the ability to:

(a) perform measurements and calculations to determine the melting point, boiling point, solubility, or other common physical properties of an organic compound;

(b) describe, using words, structural and chemical formulas, and physical and computer models, the functional groups and polarity of the molecule of a given organic compound;
(c) describe, using words, structural and chemical formulas, and physical
or computer models, a given hydrocarbon compound as aromatic or aliphatic; saturated or
unsaturated; alkanes, alkenes, or alkynes; and branched or straight chains;

(d) explain and predict, using a molecular orbital model of the pi-bond,
the outcomes of reactions of given aromatic, allylic and conjugated alkenes, and other
delocalized electron systems;

(e) explain and predict, using functional groups, structure, and polarity,
the reactivity, solubility, melting point, and boiling point of an organic compound;

(f) predict, using infrared, nuclear magnetic resonance, and mass spectra,
the structure of an organic molecule;

(g) design and carry out a single step synthesis of an organic compound,
purify the compound, and characterize the product;

(h) describe, using words, diagrams, structural and chemical formulas,
and physical and computer models, the origin of optical activity of a given chiral organic
compound;

(i) explain why the reactivity of a chiral compound depends on its stereo
chemistry when acted upon by a living system, and predict whether a particular substrate
enantiomer would or would not react with its enzyme;

(j) describe, using words, structural and chemical formulas, and physical
and computer models, a given set of biomolecules as a carbohydrate, lipid, protein, or nucleic
acid, and explain how biomolecules are made from typical chemical components by chemical
reactions;

(k) perform tests and measurements to determine if a given biological
substance is a carbohydrate, lipid, protein, or nucleic acid;
(l) explain, using the concepts of electrostatic attraction, repulsion, and stereochemistry in the catalytic process, how enzymes facilitate a given biochemical reaction; and

(m) design a method to use organic compounds to demonstrate a given general chemical principle.

C. A teacher of chemistry must demonstrate an advanced conceptual understanding of chemistry and the ability to apply its fundamental principles, laws, and concepts by completing a full research experience. The teacher must:

(1) identify various options for a research experience including independent study projects, participation in research with an academic or industry scientist, directed study, internship, or field study;

(2) select an option and complete a research experience that includes conducting a literature search on a problem;

(3) design and carry out an investigation;

(4) identify modes for presenting the research project; and

(5) present the research project in the selected mode.

Subp. 5. Subject matter standards for teachers of earth and space science. A candidate for licensure as a teacher of earth and space science in grades 9 through 12 must complete a preparation program under subpart 2, item C, that must include the candidate's demonstration of the knowledge and skills in items A to C, and subpart 3, items E and F.

A. A teacher of earth and space science must demonstrate a conceptual understanding of earth science. The teacher must:
(1) use sources of information to solve unfamiliar qualitative and quantitative problems and communicate the solution in a logical and organized manner as evidenced by the ability to:

(a) describe, in terms of the known and unknown quantities, a given problem in appropriate pictorial, graphical, or written forms;

(b) translate a given topographical or geological map into a cross-sectional view;

(c) describe qualitatively in appropriate terms, using words, stratigraphic columns, flow charts, maps, cross-sectional views, graphs, and drawings as necessary, a given problem situation;

(d) plan, using words, diagrams, pictures, and simple mathematical relationships, a solution for a given problem in terms of steps necessary to solve the problem and to verify the solution; and

(e) evaluate, in terms of unit consistency, reasonableness, and completeness of solution, the solution of a given problem;

(2) use computers to display and analyze experimental and theoretical data as evidenced by the ability to:

(a) describe data graphically using a computer; and

(b) design a mathematical model to provide a reasonable fit to a given set of data; and

(3) develop a plan to ensure a safe environment and practices in all earth and space science learning activities.

B. A teacher must demonstrate knowledge of earth and space science concepts.

The teacher must:
(1) understand the components that make up the Earth system as evidenced by the ability to:

(a) perform measurements and statistical analyses to describe the physical properties of a given Earth material;

(b) explain for a given Earth material, in terms of chemical bond strength and chemical composition, how physical properties are related to basic chemical structure;

(c) describe, using words, pictures, diagrams, maps or globes, and satellite images, the component materials, large scale structures, and dominant physical processes of a given Earth subsystem; and

(d) explain, using seismic evidence, laboratory simulations of Earth-interior conditions, terrestrial and extraterrestrial samples, and models of chemical differentiation, how we know the interior of the Earth is segregated chemically and physically into layers;

(2) understand energy in the Earth system as evidenced by the ability to:

(a) describe, using words, pictures, diagrams, and physical or computer models, the radiant, chemical, nuclear, and gravitational energies of a given Earth subsystem or structure;

(b) describe, using words, pictures, diagrams, and physical or computer models, the flow of energy within and between given Earth subsystems or structures;

(c) describe, using words, pictures, diagrams, mathematical and chemical equations, physical or computer models, and electronic data sets, the transportation of matter within and between given Earth subsystems and structures; and
(d) explain and predict, in terms of conservation of energy, dynamic equilibrium, and geologic or atmospheric models, changes in behavior of an Earth subsystem or structure due to a given change in energy;

(3) understand geochemical cycling as evidenced by the ability to:

(a) explain, in terms of reaction equilibrium and disequilibrium and mass balance, how chemical elements and compounds in a given simple Earth system are distributed;

(b) explain and predict quantitatively and qualitatively, using related experimental data and the principles of mass balance and chemical equilibrium, how the concentration of an element or compound will change in a given reservoir interacting with another given reservoir;

(c) describe, using words, pictures, and diagrams, the concentration and depletion of given elements or compounds in a given reservoir; and

(d) explain, using mass balance, advection, convection, and chemical equilibrium, the process by which a given depletion or concentration of elements or compounds could have occurred in a given reservoir;

(4) understand the origin and evolution of the universe as evidenced by the ability to:

(a) describe, using words, drawings, and graphs, the properties of a given galaxy;

(b) explain, using the observed distribution of structural types, the relationship between astronomical distances and age, and the Big Bang theory, how differences in the composition and types of galaxies and the organization of galaxies into systems lead us to conclude that the universe is continuously changing;
(c) perform measurements to describe the spectral distribution of light from a given star;

(d) explain and predict, using the Hertzsprung-Russell Diagram, distance to the star, and stellar models, the changes in mass, luminosity, and size of a given star as it evolves from birth to death;

(e) explain, using models of stellar evolution, how stars die and become neutron stars and black holes;

(f) explain, using theories for nuclear stabilities and nuclear reactions, how elements can be formed in stars and novae;

(g) describe, using words, pictures, diagrams, and mathematical relationships, the distance over which a given astronomical distance scale is accurate; and

(h) explain, using blackbody radiation and quantization of energy levels, how to determine the temperature and elemental composition of a stellar object from its spectral signature;

(5) understand the Earth in the solar system as evidenced by the ability to:

(a) describe, with words, chemical formulas, drawings, scaled diagrams, and numerical orders of magnitude, the mass, size, and composition for a given solar system object;

(b) explain and predict, using geologic and climatic stability, availability of nutrients, and atmospheric parameters, the suitability for life for a given planetary description;

(c) explain and predict quantitatively and qualitatively, using Newton's laws of motions and gravitation and conservation of momentum, the motion of the bodies of a given solar system;
explain, with words, diagrams, and models using orbital paths and relative sizes of solar system objects, the locationally dependent observation of solar and lunar eclipses and phases of the moon for a given simple solar system;

explain, using Newton's laws of motion and gravitation and relative orbital positions, the origin of oceanic tides on the Earth; and

design a physical solar-planetary model to demonstrate eclipses and lunar phases;

understand the evolution of the Earth as evidenced by the ability to:

perform measurements to describe the physical properties of a given rock sequence;

describe, using words, pictures, and diagrams, the composition, textures, spatial relationships, and fossil content of a given rock sequence;

explain, in terms of type and quantity of fossils, isotopic concentrations, unconformities, rock types, and rock sequences, the connection between a given major biospheric change and the rock and fossil record and a given major lithospheric change and the rock and fossil record;

explain, using the principle of actualism, the relationship between features seen in the rock record and processes observable in the Earth today;

predict, in terms of known rock sequences and the principle of actualism, how a given geologic or biologic event might be recorded in a rock sequence; and

explain, using the fossil record and decay rates of radioactive isotopes, how the age of a given rock is determined; and
121.1 (7) understand human interactions with the Earth system as evidenced by the ability to:

121.3 (a) describe, using words, charts, figures, and maps or globes, the present distribution of a given natural resource;

121.5 (b) explain, using words, charts, figures, illustrations, and maps, how the distribution of a given resource has affected the distribution and history of human society;

121.7 (c) predict, in terms of present trends, possible alternative resources, and changes in technology or social structure, the plausible impacts on human society of future changes in the availability of a given natural resource;

121.10 (d) describe, using words, charts, figures, and maps or globes, a given occurrence of an environmental hazard;

121.12 (e) predict, in terms of direct and indirect, short-term and long-term effects, the probable impacts of a given environmental hazard on human society;

121.14 (f) explain, in terms of chemical changes, physical modifications, and changes in energy, how human activity impacts a given Earth system;

121.16 (g) predict, in terms of direct and indirect, short-term and long-term effects, the probable effects of a given human activity on an Earth system;

121.18 (h) explain, using words, diagrams, graphs, and maps, how it is known that there have been long-term changes in climate and sea level during the course of human existence;

121.21 (i) explain, using words, diagrams, pictures, and maps, how observed changes in climate and sea level may have impacted the history of human development; and
(j) predict, in terms of changes in resource availability, production, population size and distribution, and current social structures, the probable impacts of future changes in climate or sea level on human society.

C. A teacher of earth and space science must demonstrate an advanced conceptual understanding of earth and space science and the ability to apply its fundamental principles, laws, and concepts by completing a full research experience. The teacher must:

1. identify various options for a research experience including independent study projects, participation in research with an academic or industry scientist, directed study, internship, or field study;
2. select an option and complete a research experience that includes conducting a literature search on a problem;
3. design and carry out an investigation;
4. identify modes for presenting the research project; and
5. present the research project in the selected mode.

Subp. 6. **Subject matter standards for teachers of life science.** A candidate for licensure as a teacher of life science in grades 9 through 12 must complete a preparation program under subpart 2, item C, that must include the candidate's demonstration of the knowledge and skills in items A to C, and subpart 3, items E and F.

A. A teacher of life science must demonstrate a conceptual understanding of life science. The teacher must:

1. use sources of information to solve unfamiliar quantitative problems and communicate the solution in a logical and organized manner as evidenced by the ability to:
(a) describe, using appropriate alternative forms including pictorial, graphical, or written descriptions, the known and unknown quantities of a given problem; and

(b) describe, in terms of the relevant numerical and algebraic quantities and equations required to solve the problem, the relevant numerical and algebraic quantities and equations required to solve a given problem mathematically;

(2) use computers to display and analyze experimental and theoretical data as evidenced by the ability to:

(a) describe data graphically using a computer; and

(b) design a mathematical model to provide a reasonable fit to a given set of data;

(3) use mean, standard deviation, chi-squared, linear regression, and correlation to describe and analyze experimental and theoretical data; and

(4) develop a plan to ensure a safe environment and practices in all life science learning activities.

B. A teacher of life science must demonstrate knowledge of biological concepts. The teacher must:

(1) understand structural and functional relationships as evidenced by the ability to:

(a) perform observations to describe the structures of a given common organism;

(b) describe, using words, descriptions of appropriate experimental procedures, and diagrams, the characteristics of what determines life in a given common organism;
(c) predict, using structure-function relationships, the system function from which a given set of plant and animal tissue samples is derived;

(d) describe, using words, diagrams, and pictures, immune system responses that take place in human cells, tissues, organs, and organ systems throughout the progression of a given viral, bacterial, fungal, and parasitic disease; and

(e) design a personal course of action to prevent a given human disease;

(2) understand molecular and cellular life processes as evidenced by the ability to:

(a) perform measurements to describe cellular structures and physiological processes;

(b) describe, using words, chemical formulas and equations, and diagrams, the cellular processes of a given plant or animal cell;

(c) explain, using the structure-function relationship of the chloroplast, conservation of energy, and the fundamental nature of light, how solar energy is transformed during photosynthesis into cellular energy in a given plant cell;

(d) explain, using the structure-function relationship of the mitochondria and molecular energy transformations involving ATP, how energy stored in food molecules is released during cellular respiration in a given cell;

(e) qualitatively predict, using structure-function relationships and relationships between organelles and the cellular environment, the effect of a given natural and applied physical and chemical change in the environment of a cell on photosynthesis and cellular respiration;

(f) design experiments to test the properties of structure-function relationships in photosynthesis or cellular respiration;
(g) explain, using the processes of replication, transcription, and translation, how proteins are synthesized in a cell; and

(h) predict the amino acid sequence of a protein from a given codon sequence;

(3) understand molecular reproduction and heredity as evidenced by the ability to:

(a) perform measurements and statistical analyses to describe the results from a given plant and animal breeding experiment;

(b) describe, using words, pictures, and diagrams, and models, the changes in the visibility, arrangement, and number of chromosomes at each given state of mitosis and meiosis;

(c) explain, using the Laws of Segregation and Independent Assortment, why fertilization and the production of sperm and eggs through meiosis is necessary for species variability;

(d) describe, using words, diagrams, and charts, how a given trait is inherited and expressed;

(e) explain and predict qualitatively and quantitatively, using rules of probability and heredity, the genotype and phenotype of the offspring of parents with given genotypic traits to include dominant-recessive traits, incomplete and co-dominant traits, polygenic traits, and sex-linked and sex-influenced traits;

(f) explain, using the Laws of Segregation and Independent Assortment, how the sex is determined in humans;

(g) describe, using words, diagrams, and charts, how a mutation occurs;
(h) explain and predict, using the relationship between genes and their expression, the effect an environmental change will have on the expression of a given genetic trait;

(i) describe, using words, diagrams, and charts, the process of producing recombinant DNA; and

(j) describe, using words, pictures, and diagrams, how genetic technology is used in treatment of human disease and development of agriculture products;

(4) understand diversity and biological evolution as evidenced by the ability to:

(a) describe in words, pictures, and diagrams the range of physical, behavioral, and biochemical adaptations that can occur in response to environmental stresses for a given species;

(b) explain, using the principles of mutation and natural selection, how a specific adaptation of a given species might have developed in response to environmental stresses;

(c) describe, using words, diagrams, charts, and statistical relationships, the range of phenotypes of a given species in a given environment;

(d) explain and predict, using the principles of mutation, recombination, and natural selection, changes in the range of phenotypes of a species when a given change occurs in the environment of the species;

(e) explain, using the principles of mutation, recombination, and natural selection, why certain species are found in the fossil records relatively unchanged while others are not and others are extinct;
(f) explain and predict, using the evolutionary tree, morphological variations between two or more given species; and

(g) explain the variations in morphological characteristics and DNA composition of two or more given species;

(5) understand the interdependence among living things as evidenced by the ability to:

(a) perform measurements and statistical analyses to describe results of a study investigating the relationship between a given common organism and its environment;

(b) perform measurements and statistical analyses to describe the diversity and number of species in a given ecosystem;

(c) describe, using words, pictures, and diagrams, the cycling of a given substance among living and nonliving components of the biosphere;

(d) describe, using words, pictures, diagrams, and simple mathematical relationships, the cycling of matter and the flow of energy both within a given system, and between the system and the biosphere;

(e) explain, using the relationships between biotic and abiotic components of that system, why the population size and diversity of species is different between two different niches, habitats, ecosystems, or biomes;

(f) explain and predict, using population growth dynamics and interspecific and intraspecific interactions, changes in population size of organisms in an ecosystem for a given change in the biotic and abiotic components of the ecosystem; and

(g) design an experiment to investigate relationships within and among species in a simple ecosystem; and

(6) understand behavior of organisms as evidenced by the ability to:
(a) perform measurements and statistical analyses to describe the physical behavior of animals in a given natural and perturbed situation;

(b) describe, using words, pictures, and diagrams, behaviors of a given animal that allow it to interact with organisms of its own and other species and to respond to environmental changes;

(c) explain and predict, in terms of the principles of animal communication and adaptation, the behavioral responses of an animal to a given set of interactions or environmental changes; and

(d) explain behavioral responses of a given animal in terms of natural selection.

C. A teacher of life science must demonstrate an advanced conceptual understanding of life science and the ability to apply its fundamental principles, laws, and concepts by completing a full research experience. The teacher must:

(1) identify various options for a research experience including independent study projects, participation in research with an academic or industry scientist, directed study, internship, or field study;

(2) select an option and complete a research experience that includes conducting a literature search on a problem;

(3) design and carry out an investigation;

(4) identify modes for presenting the research project; and

(5) present the research project in the selected mode.

Subp. 7. Subject matter standards for teachers of physics. A candidate for licensure as a teacher of physics in grades 9 through 12 must complete a preparation program under
subpart 2, item C, that must include the candidate's demonstration of the knowledge and skills in items A to C, and subpart 3, items E and F.

A. A teacher of physics must demonstrate a conceptual understanding of physics.

The teacher must:

1. use sources of information to solve unfamiliar quantitative problems and communicate the solution in a logical and organized manner as evidenced by the ability to:

   a. describe, in terms of the known and unknown quantities, a given problem in the appropriate pictorial, graphical, or written form;

   b. qualitatively describe, in appropriate physics terms using motion diagrams, vector force diagrams, energy or momentum diagrams, ray diagrams, or field diagrams as necessary, a given problem situation;

   c. mathematically describe, in terms of the relevant numerical, algebraic, and trigonometric quantities and equations, a given problem;

   d. plan, using words, diagrams, and mathematical relationships, a solution for solving a given problem and verify the solution;

   e. implement, using algebra and manipulation and solution of coupled sets of linear equations, quadratic equations, simple differential equations, and simple integrals as necessary, a solution to a given problem; and

   f. evaluate, in terms of unit consistency, reasonableness, and completeness of solution, the solution of a given problem;

2. use computers to display and analyze experimental and theoretical data as evidenced by the ability to:

   a. graphically describe data using a computer;
(b) design a mathematical model to provide a reasonable fit to a given set of data;

(c) compute and evaluate the statistical significance of mean and standard deviation for a distribution of data;

(3) estimate common physical properties as evidenced by the ability to:

(a) describe numerically, using reasonable physical estimates, the physical properties of common objects; and

(b) compute and evaluate the reasonableness of calculated physical parameters of common objects; and

(4) develop a plan to ensure a safe environment and practices in all physics learning activities.

B. A teacher of physics must demonstrate a knowledge of physics concepts. The teacher must:

(1) understand linear and rotational motion as evidenced by the ability to:

(a) perform measurements and calculations to describe the linear and angular position, velocity, and acceleration of a given object; the forces and torques acting on an object; and the energy, momentum, and angular momentum of a system before and after an interaction;

(b) describe, using words, pictures and diagrams, graphs, vectors, and mathematical relationships, the motion of a given object;

(c) describe, using words, free-body vector diagrams, and mathematical relationships, the forces acting on each object in a given system of interacting objects and explain, using Newton's Second and Third Laws, the relationships between all the forces;
(d) describe, using words, energy diagrams or graphs, and mathematical relationships, the change of energy of a system and any transfer of energy into or out of a given system of interacting objects;

(e) describe, using words, vector diagrams, and mathematical relationships, the change of linear or angular momentum of a given system and any transfer of momentum into or out of the system of interacting objects;

(f) explain and predict qualitatively and quantitatively, in terms of Newton's Laws, the conservation of energy, and the conservation of momentum, the motion of objects in a given system of interacting objects; and

(g) design a strategy for making an object move in a given way;

(2) understand simple harmonic and wave motion as evidenced by the ability to:

(a) perform measurements and calculations to describe the wavelength, amplitude, period, frequency, and energy of a traveling wave or an object in simple harmonic motion;

(b) describe, using words, force diagrams, energy diagrams or graphs, motion graphs, and mathematical relationships, simple or damped harmonic motion or resonance of a given oscillating system;

(c) explain and predict qualitatively and quantitatively, using the equation of motion, changes in motion of an oscillator in a given system when the intrinsic characteristics of the oscillator change, when a given external force is applied to the oscillator, and when the oscillator loses energy to its surroundings;

(d) design, using words, diagrams or graphs, and mathematical relationships, a system which oscillates at a given frequency or exhibits damped oscillations;
(e) describe a traveling or standing wave in a given medium;

(f) explain and predict qualitatively and quantitatively, using the wave equation of motion and the superposition principle, changes in wave motion when a given traveling wave interacts with a given object or boundary;

(g) explain and predict qualitatively and quantitatively, using the wave equation of motion and the superposition principle, changes in wave motion when a given traveling wave interacts with a second wave; and

(h) explain and predict qualitatively and quantitatively, using the wave equation of motion and the superposition principle, changes in the wave when the source and detector are moving relative to each other;

(3) understand electricity and magnetism as evidenced by the ability to:

(a) perform measurements and calculations to describe time varying or constant values of current, voltage, and power in electric circuits and in magnetic fields;

(b) describe, using words, circuit diagrams, graphs, and mathematical relationships, the current, voltage, resistance, capacitance, or inductance of a given system of circuit elements;

(c) explain and predict qualitatively and quantitatively, using the conservation of charge and the conservation of energy, the current through or the voltage across each element in a given circuit when changes are made to the circuit;

(d) design a circuit in which the current varies in a given way;

(e) explain and predict qualitatively and quantitatively, in terms of Newton's laws and the Lorentz Force, the motion of charges in given electric and magnetic fields;
(f) predict qualitatively and quantitatively, using Gauss's law or Ampere's law, the electric field around a given simple geometric distribution of charges and the magnetic field around a given simple geometric system of current-carrying wires;

(g) predict qualitatively, using Lenz's law and Faraday's Law, the induced currents from a given changing magnetic flux;

(h) design, using simple materials, a working electric motor and an air-core electromagnet that produces a field strength; and

(i) explain, in terms of the motion of charges and the electromagnetic nature of light, how electromagnetic radiation is generated in a given situation;

(4) understand physical and geometrical optics as evidenced by the ability to:

(a) perform measurements and calculations to describe light intensity and polarization of a given light source, the location of images formed by a simple mirror and lens system, and the focal length and magnification of a curved mirror or thin lens;

(b) describe, using words, ray diagrams, graphs, and mathematical relationships, the reflection, refraction, transmission, and absorption of light when it encounters a given macroscopic object, a plane or curved mirror, a boundary between mediums of different indices of refraction, a linear polarizer, a prism, and thin concave and convex lenses;

(c) explain and predict qualitatively and quantitatively, in terms of ray diagrams and the laws of reflection and refraction of light, the location and magnification of a real or virtual image for a given system of mirrors or lenses;

(d) design a system of lenses and mirrors to produce a real or virtual image of a given magnification;
(e) describe, using words, diagrams, and graphs, the interaction of monochromatic light with a given single or pair of parallel slits and with thin films; and

(f) explain and predict qualitatively and quantitatively, using the behavior of waves and the principle of superposition, the change in the resulting light pattern with given changes in slit width, separation, and the wavelength of the incident light on a system of slits;

(5) understand the kinetic-molecular model of matter and thermodynamics as evidenced by the ability to:

(a) perform measurements and calculations to describe the mass, volume, density, temperature, and heat capacity of a solid, liquid, or gas at constant pressure and the pressure in a gas;

(b) explain qualitatively, using the kinetic-molecular model of matter, a common physical change;

(c) describe, using words, graphs, and mathematical relationships, changes in pressure, volume, or temperature of an ideal gas;

(d) predict, using the First Law of Thermodynamics, the final temperature of a given thermally isolated system of interacting objects and materials;

(e) explain and predict qualitatively and quantitatively, using the First Law of Thermodynamics, the transfer of heat into or out of a given system;

(f) explain, using the First Law of Thermodynamics, the changes of pressure, temperature, and volume for a monatomic ideal gas operating in a Carnot cycle between given states, and describe quantitatively, using words, graphs, and mathematical relationships, the thermal efficiency of the system; and
explain, in terms of the second law of thermodynamics, why energy flows from hot to cold objects; and

(6) understand contemporary physics as evidenced by the ability to:

(a) perform measurements and calculations to detect nuclear radiation in the environment, and determine wavelengths and energy of the emission spectrum of a given gas;

(b) describe, using words, diagrams, and mathematical relationships, the time dilation, length contraction, and momentum and energy of an object of given velocity;

(c) describe, using words, diagrams, and tables, the basic atomic and subatomic constituents of matter;

(d) explain qualitatively, in terms of the standard model, the observed interaction between atomic or subatomic particles in a simple situation;

(e) explain qualitatively, using the quantum nature of light and matter, and the conservation of energy and momentum, the observed interaction between photons and matter in a given situation;

(f) explain, using conservation principles, the observed changes in the matter and energy of a given nuclear process;

(g) predict, using the Heisenberg Uncertainty Principle, the lower limit of size, momentum, energy, or time that could be expected in a given atomic or subatomic measurement or situation; and

(h) describe, in terms of the energy bands and levels in the material, the electrical conductivity of a given conductor, insulator, or semiconductor.
C. A teacher of physics must demonstrate an advanced conceptual understanding of physics and the ability to apply its fundamental principles, laws, and concepts by completing a full research experience. The teacher must:

1. identify various options for a research experience including independent study projects, participation in research with an academic or industry scientist, directed study, internship, or field study;
2. select an option and complete a research experience that includes conducting a literature search on a problem;
3. design and carry out an investigation;
4. identify modes for presenting the research project; and
5. present the research project in the selected mode.

Subp. 8. Continuing license. A continuing license shall be issued and renewed according to the rules of the Professional Educator Licensing and Standards Board governing continuing licensure.

Subp. 9. [Repealed, L 2015 c 21 art 1 s 110]

8710.4950 TEACHERS OF WORLD LANGUAGES AND CULTURES.

Subpart 1. Scope of practice. A teacher of world languages and cultures is authorized to provide to students instruction that is designed to develop language fluency and cultural understanding in a language other than spoken English. If teaching in an immersion setting where the entire academic curriculum is taught in a language other than English, the teacher shall hold licensure with the scope of practice appropriate to the subjects to be taught. The specific language or languages which the teacher is qualified to teach must be clearly indicated on the license.
Subp. 2. **Licensure requirements for teachers of world languages and cultures.**

A. A candidate for licensure to teach world languages and cultures to students in kindergarten through grade 8 shall:

(1) hold a baccalaureate degree from a college or university that is regionally accredited by the association for the accreditation of colleges and secondary schools;

(2) hold or apply and qualify for a Minnesota elementary education classroom teaching license; and

(3) show verification of completing a Professional Educator Licensing and Standards Board-approved preparation program leading to the licensure of teachers of world languages and cultures in subpart 3, 4, or 5.

B. A candidate for licensure to teach world languages and cultures to students in kindergarten through grade 12 shall:

(1) hold a baccalaureate degree from a college or university that is regionally accredited by the association for the accreditation of colleges and secondary schools;

(2) demonstrate the standards for effective practice for licensing of beginning teachers in part 8700.2000 .......; and

(3) show verification of completing a Professional Educator Licensing and Standards Board preparation program approved under chapter 8705 leading to the licensure of teachers of world languages and cultures in subparts 3 and 6, 4 and 6, or 5 and 6.

Subp. 3. **Subject matter standard for teachers of modern languages and cultures.** A candidate for licensure as a teacher of modern languages and cultures must complete a preparation program under subpart 2, item A or B, subitem (3), that must include the candidate's demonstration of the knowledge and skills in items A to C.

A. All teachers of modern languages and cultures must:
understand language as a system;

(2) understand first and second language acquisition theory and how this informs practice;

(3) demonstrate intermediate-high level speaking proficiency as defined in the ACTFL Proficiency Guidelines established by the American Council on the Teaching of Foreign Languages;

(4) comprehend, interpret, and evaluate information received in the target language through reading and listening at the level that results from demonstrating the speaking proficiency; and

(5) use familiar topics to write narratives and descriptions of a factual nature or routine correspondence consisting of several paragraphs at a level understandable to a native speaker of the target language.

B. A teacher who is a native speaker of the modern language to be taught must:

(1) demonstrate advanced level speaking proficiency in English and the target language as defined in the ACTFL Proficiency Guidelines;

(2) comprehend, interpret, and evaluate information received in the target language and in English through reading and listening at the level that results from demonstrating the speaking proficiency; and

(3) use familiar topics to write in English and the native language narratives and descriptions of a factual nature or routine correspondence consisting of several paragraphs to a level understandable to a native.

C. A teacher of modern languages and cultures must:

(1) be aware of areas of the world where the target language is spoken and know that life in all these areas may vary widely;
(2) understand the target culture from a variety of perspectives, including historical, geographical, political, and artistic and contemporary viewpoints;

(3) be familiar with culture and literature of children and adolescents in both the United States and target cultures;

(4) understand the history of institutions within the cultures sufficiently for comprehending why current conditions exist;

(5) have a sociolinguistic understanding sufficient for accurately communicating the interrelationships of the language and culture;

(6) understand that both content and process are important and that cultural knowledge and understanding are interdisciplinary;

(7) understand that culture is neither monolithic nor static and that developing insights into the variability of cultural phenomena is a lifelong process;

(8) know that every cultural phenomenon is unique and is affected by age, geographic region, sex, class, and other factors and that multiple perspectives, value systems, and modes of decision-making and behaviors exist;

(9) know about cultural stereotyping and how to address it as a result of developing skills in processing information which include observing, comparing, and inquiring about cultural phenomena; analyzing and hypothesizing about the phenomena; and synthesizing and determining their generalizability;

(10) compare and contrast cultures of people who speak another language with the teacher's own culture; and

(11) have opportunities for first-hand experiences with the target cultures, whether in the United States or abroad, and relate those experiences to the classroom setting.
Subp. 4. **Subject matter standard for teachers of classical languages and cultures/Greek and Latin.** A candidate for licensure as a teacher of classical languages and cultures must complete a preparation program under subpart 2, item A or B, subitem (3), that must include the candidate's demonstration of the knowledge and skills in items A and B.

A. A teacher of classical languages and cultures must:

(1) understand language as a system;

(2) understand first and second language acquisition theory and how this informs practice;

(3) demonstrate competencies in four modalities of reading, speaking, listening, and writing:

(a) the teacher must:

i. read with understanding passages of prose or poetry of the most important Latin and Greek authors, for example, Caesar, Cicero, Vergil, Ovid, Horace, Livy, Plato, Homer, and dramatists;

ii. explain grammatical structures of the sentences and analyze word forms, including case use, mood, and tense; and

iii. infer meanings of unfamiliar words from cognates, derivatives, and context;

(b) the teacher must:

i. pronounce Latin and Greek correctly;

ii. orate prose with expression and correct inflection;

iii. orate poetry according to metrical principles;
iv. greet students, give simple commands, and lead oral exercises;
and

v. orally formulate Latin and Greek questions based on a reading passage;

(c) the teacher must understand main ideas of a connected oral reading;
and

(d) the teacher must:

i. accurately construct grammatical Latin and Greek from a moderately complex English original; and

ii. transform sentences from one grammatical structure to another;

(4) understand Latin's relation to English and other modern languages; identify Latin- and Greek-based English words, understand their etymology, and provide cognates; and identify Latin and Greek terminology commonly used in science, law, medicine, and Latin abbreviations, terms, phrases, and mottos commonly used in English; and

(5) understand the value of extra activities promoting cultural interest.

B. A teacher of classical languages and cultures must:

(1) be aware of areas of the world where the language was spoken and know that life in these areas varied widely;

(2) have a sociolinguistic understanding sufficient for accurately communicating the interrelationships of the language and culture;

(3) understand that both content and process are important and that cultural knowledge and understanding are interdisciplinary;
understand that culture is neither monolithic nor static and that developing insights into the variability of cultural phenomena is a lifelong process;

(5) know that every cultural phenomenon is unique and is affected by age, geographic region, sex, class, and other factors and that multiple perspectives, value systems, and modes of decision-making and behaviors exist;

(6) know about cultural stereotyping and how to address it as a result of developing skills in processing information, including observing, comparing, and inquiring about cultural phenomena; analyzing and hypothesizing about the phenomena; and synthesizing and determining generalizability of the phenomena;

(7) compare and contrast cultures of people who speak another language with the teacher's own culture; and

(8) have opportunities for on-site experiences with chronologically distant cultures and relate those experiences.

Subp. 5. **Subject matter standard for teachers of American sign language and deaf culture.** A candidate for licensure as a teacher of American sign language and deaf culture must complete a preparation program under subpart 2, item A or B, subitem (3), that must include the candidate's demonstration of the knowledge and skills in items A to C.

A. A teacher of American sign language and deaf culture must:

(1) understand language as a system;

(2) understand first and second language acquisition theory and how this informs practice;
(3) demonstrate intermediate-plus level of expressive language proficiency on the Signed Communication Proficiency Interview established by the National Technical Institute for the Deaf;

(4) demonstrate receptive language proficiency in American sign language through comprehending, explaining, and evaluating information received from an individual who signs at the intermediate high level as defined by the Signed Communication Proficiency Interview Guidelines established by the National Technical Institute for the Deaf; and

(5) use familiar topics to narrate and describe factual information or routine communication at a level understandable to a native American sign language user.

B. A teacher whose first language is American sign language must:

(1) comprehend and evaluate information received in English; and

(2) use familiar topics to write in English narratives and descriptions of a factual nature or routine correspondence consisting of several paragraphs to a level understandable to a person whose first language is American sign language.

C. A teacher of American sign language and deaf culture must:

(1) know where American sign language is used;

(2) understand the deaf culture from a variety of perspectives, including historical, geographical, political, and contemporary viewpoints;

(3) be familiar with similarities and differences between deaf and hearing culture in the United States;

(4) understand the history, customs, and practices of deaf culture sufficiently to comprehend why current conditions exist;

(5) have a sociolinguistic understanding sufficient for accurately communicating the interrelationships of the language and culture;
understand that both content and process are important and that cultural knowledge and understanding are interdisciplinary;

(7) understand that culture constantly grows and that developing insights into culture is a lifelong process;

(8) know that every cultural phenomenon is unique and is affected by age, geographic region, sex, class, and other factors and that multiple perspectives, value systems, and modes of decision-making and behaviors exist;

(9) know about cultural stereotyping and how to address it as a result of developing skills in processing information that include observing, comparing, and inquiring about cultural phenomena; analyzing and hypothesizing about the phenomena; and synthesizing and determining generalizability of the phenomena;

(10) compare and contrast cultures of people who use languages other than spoken English with the teacher's own culture; and

(11) have opportunities for first-hand experiences in deaf culture and relate to those experiences.

Subp. 6. Teaching and learning. A candidate for licensure as a teacher of world languages and cultures must complete a preparation program under subpart 2, item B, subitem (3), that must include the candidate's demonstration of an understanding of the teaching of world languages and cultures that integrates understanding of the world language and culture with an understanding of pedagogy, students, learning, classroom management, and professional development. A teacher of world languages and cultures to children, preadolescents, and adolescents in kindergarten through grade 12 shall:

A. understand and apply educational principles relevant to the physical, social, emotional, moral, and cognitive development of children, preadolescents, and adolescents;
B. understand and apply the research base for and the best practices of kindergarten and primary, intermediate, and middle and high school education;

C. develop curriculum goals and purposes based on the central concepts of language and culture and know how to apply instructional strategies and materials for achieving student understanding of the language and culture;

D. understand the role and alignment of district, school, and department mission and goals in program planning;

E. understand the need for and how to connect students' schooling experiences with everyday life, the workplace, and further educational opportunities;

F. know how to involve representatives of business, industry, and community organizations as active partners in creating educational opportunities;

G. understand the role and purpose of cocurricular and extracurricular activities in the teaching and learning process; and

H. understand the impact of reading ability on student achievement in second language studies, recognize the varying reading comprehension and fluency levels represented by students, and possess the strategies to assist students to read world language content more effectively.

Subp. 6a. **Student teaching and field experiences.** A candidate for licensure to teach world languages and cultures must have a broad range of targeted field-based experiences, of a minimum of 100 hours prior to student teaching, that provide opportunities to apply and demonstrate competency of professional dispositions and the required skills and knowledge under this part and part 8710.2000.

Across the combination of student teaching and other field-based placements, candidates must have experiences teaching the content at three levels: kindergarten through grade 6, grades 5 through 8, and grades 9 through 12.
For initial teacher licensure, the student teaching period must be a minimum of 12 continuous weeks, full time, face-to-face, in which the candidate is supervised by a cooperating teacher, and evaluated at least twice by qualified faculty supervisors in collaboration with the cooperating teachers.

Subp. 7. **Continuing license.** A continuing license shall be issued and renewed according to the rules of the Professional Educator Licensing and Standards Board governing continuing licensure.

Subp. 8. **Incorporations by reference.**

A. For the purposes of this part, the ACTFL Proficiency Guidelines published in 1986 by the American Council on the Teaching of Foreign Languages, 6 Executive Plaza, Yonkers, NY 10701-6801, and subsequent editions are incorporated by reference. The guidelines are not subject to frequent change and are available from the State Law Library.

B. For the purposes of this part, the Signed Communication Proficiency Interview Guidelines published in August 1994 by the National Technical Institute for the Deaf, 52 Lomb Memorial Drive, Rochester, NY 14623-5604, and subsequent editions are incorporated by reference. The guidelines are not subject to frequent change and are available from the State Law Library.

Subp. 9. [Repealed, L 2015 c 21 art 1 s 110]

8710.5300 TEACHERS OF SPECIAL EDUCATION: DEVELOPMENTAL ADAPTED PHYSICAL EDUCATION.

Subpart 1. **Scope of practice.** A teacher of special education: developmental adapted physical education (DAPE) is authorized to provide evaluation and specially designed instruction in physical education to eligible students from prekindergarten through age 21 who have needs in the areas of physical fitness and gross motor fitness, fundamental motor skills and patterns, skills in aquatics, dance, individual and group games, and sports. Teachers
must collaborate and consult with families, other classroom and special education teachers, and specialized service providers in designing and implementing individualized physical educational education programming as specified in a child's individualized education program plans (IEP) plan.

Subp. 2. License Licensure requirements. The board must issue a license in developmental adapted physical education if the applicant meets the requirements of this subpart.

A candidate for licensure as a teacher of special education: developmental adapted physical education to teach students from prekindergarten through age 21 who have needs in the areas of physical fitness and gross motor skills shall:

A. hold a baccalaureate degree from a college or university that is regionally accredited by the association for the accreditation of colleges and secondary schools;

B. hold or apply and qualify for a valid Minnesota physical education teaching license;

C. demonstrate core skill requirements in part 8710.5000; and

D. show verification of completing a Professional Educator Licensing and Standards Board preparation program approved under chapter 8705 leading to the licensure of teachers of special education: developmental adapted physical education in subpart 3.

A. An applicant seeking a professional license to teach parent and family education must meet the requirements for a Tier 3 license pursuant to part 8710.0313 and Minnesota Statutes, section 122A.183, or a Tier 4 license pursuant to part 8710.0314 and Minnesota Statutes, section 122A.184.

B. An applicant seeking a license in developmental adapted physical education pursuant to Minnesota Statutes, section 122A.183, subdivision 2, clauses (1) and (3) must:
(1) hold or apply and qualify for a valid Minnesota physical education teaching license; and

(2) show verification of:

(a) completing a Professional Educator Licensing and Standards Board preparation program approved under chapter 8705 leading to the licensure of teachers of developmental adapted physical education in subpart 3; or

(b) approval of a content portfolio aligned to the components in subpart 3.

Subp. 3. Subject matter standard standards. A candidate for licensure as a teacher of special education: developmental adapted physical education must complete a preparation program under subpart 2, item D, that must include the candidate's demonstration of

demonstrate the knowledge and skills in items A to E.

A. Foundational knowledge. Foundational knowledge. A teacher of special education: developmental adapted physical education understands the foundations of special education services for students with disabilities relating to physical and motor fitness on which to base practice. The teacher must demonstrate knowledge of the

The candidate must be able to describe and apply the following:

(1) the historical and philosophical foundations, legal bases, and contemporary issues pertaining to the education of students with identified disabilities as the issues apply to developmental adapted physical and motor fitness education;

(2) educational definitions, issues related to identification, and eligibility criteria pertaining to developmental adapted physical education for students who have disabilities relating to physical and motor fitness;

(3) theoretical foundations and sequences of typical and atypical motor learning, motor development, and motor skills acquisition from birth to adulthood relating
to physical and motor fitness psychomotor, cognitive, and socioemotional characteristics of students in the identified disability categories from birth to adulthood in parts 8710.5000 to 8710.5850;

(4) special physical education, adapted physical education, movement education, and motor development, including skills in aquatics, dance, games, and individual, group, intramural, and lifetime sports;

(5) implications of medical, health, skeletal, and neurological the presence of primary and secondary disability conditions, including cognitive, physical, sensory or neural, social or emotional, and other developmental disorders on motor learning, including typical and atypical development across the life span physical activity participation;

(6) principles of anatomical structure, physiology, and kinesiology across the lifespan, including typical and atypical development;

(7) impact of single, multiple, coexisting conditions or disabilities on motor functioning and motor skill acquisition; and

(8) impact of typical and atypical motor development and function implications of the presence of primary and secondary disability conditions, including cognitive, physical, sensory or neural, social or emotional, and other developmental disorders on the educational, social, and psychological well-being of students; and

(6) accommodations, adaptations, and modifications that lead to competency in at least four of the following physical activities categories: aquatics, dance and rhythm, fielding/striking, health-related physical fitness, games and sports (invasion, net and wall, target, and fielding/striking), individual performance, lifetime, or outdoor pursuit activities.

B. Referral, assessment, evaluation, planning, and programming placement. A teacher of special education: developmental adapted physical education understands and applies principles of prevention and intervening early and procedures for The candidate
must demonstrate competency in referral, assessment, evaluation, individualized education programs (IEPs), individualized planning, programming, and placement considerations specific to teaching students with disabilities relating to physical and motor fitness in developmental adapted physical education. The teacher candidate must be able to:

1. explain the responsibilities in the referral process related to physical education for students with disabilities;

2. analyze physical education screening and referral data for students with disabilities, and explain how to communicate findings to families and educators;

3. understand explain the use, limitations, ethical concerns, administration, and interpretation and administrative considerations of formal and informal assessments for students with identified disabilities that impact physical and motor fitness and how to communicate the results to the students, families, educators, and other professionals used to determine eligibility in developmental adapted physical education;

4. adapt and modify existing assessment tools and methods to accommodate the unique abilities and needs of students with disabilities in physical and motor fitness;

5. apply an understanding of health-related aspects of physical and motor fitness in program planning;

6. support the selection, acquisition, and use of assistive technology for the development of physical and motor fitness, including physical education hardware and software, adapted and adaptive equipment, and supports for participation and communication;

7. be able to utilize part 3525.1352 to differentiate Part B-1 and Part B-2 assessments, administer Part B-1 and Part B-2 assessments, interpret assessment results, and communicate the assessment results within the IEP process;

8. construct the developmental adapted physical education components of the IEP including Present Level of Academic Achievement and Functional Performance;
Annual Goals; Short-Term Objectives; Transition Services; Services and Modifications;
Supplementary Aids and Services; Program Modifications and Supports for School Personnel;
Least Restrictive Environment (LRE) Explanation based on assessment data, student and family priorities, and concerns that incorporate academic and nonacademic goals in physical education;

(6) apply describe how to organize and share evaluation results to assist the IEP team in selection of determining DAPE eligibility, educational environments, and service options deemed appropriate for addressing individual needs in physical education; and

(6) design individualized program plans that integrate evaluation results, student and family priorities, and concerns that incorporate academic and nonacademic goals in physical education.

(7) describe how to incorporate students with disabilities into statewide and districtwide test programs in physical education through the use of accommodations, adaptations, and modifications.

C. Instructional design, teaching, and ongoing evaluation. A teacher of special education: developmental adapted physical education understands how to use The candidate must demonstrate competency in using individualized education program plans to design, implement, monitor, and adjust instruction for students with disabilities relating to physical and motor fitness in developmental adapted physical education. The teacher candidate must be able to:

(1) design, implement, monitor, and adjust a variety of evidence-based instructional resources, strategies, and techniques, including scientifically based research interventions when available, to implement developmental adapted physical education services;
(2) explain how to select, acquire, and adapt equipment used for instruction in physical and motor fitness use assistive technology for student learning in developmental adapted physical education, including physical education hardware and software, adapted and adaptive equipment, and supports for participation and communication;

(3) design and adapt learning environments that support students with disabilities in safely to be safe and actively participating participate in physical and motor fitness developmental adapted physical education;

(4) describe how to communicate with students, using a range of methods and strategies, including students who are nonverbal or have limited verbal expression;

(5) provide students with explain how students with disabilities can use exploration and learning experiences that to support their life-long and healthful participation in physical recreation and leisure activities activity;

(6) explain how to develop students' self-advocacy and life skills relevant to independence, social skills, community and personal living, recreation, leisure, and employment as they relate to physical activity participation; and

(7) explain how to monitor progress, adjust instruction, and evaluate the acquisition of skills related to developmental adapted physical education.; and

(8) explain the process necessary to make a significant change to an individualized education program plan in part 3525.0210, subpart 41.

D. Communication and collaboration. A teacher of special education:

developmental adapted physical education cultivates and maintains positive, collaborative relationships with students, families, other professionals, and the community to support student development and educational progress. The teacher must be able to The candidate must:

8710.5300
(1) collaborate explain collaborative strategies for working with students and their families in making choices, given identified strengths and needs in physical and motor fitness, that impact academic, occupational, and other domains across the life span in developmental adapted physical education based on strengths and needs set forth in the student's IEP:

(2) be able to identify and select services, networks, agencies, and organizations relevant to the field of that can support students and their families as well as the developmental adapted physical education program:

(3) identify and coordinate describe educational roles and responsibilities with of individualized education program plan team members and stakeholders in providing educational services that impact physical and motor fitness developmental adapted physical education;

(4) provide and receive consultation and coordinate describe best practices for consulting with related service providers, including occupational therapists and physical therapists, in delivering developmental adapted physical education services; and

(5) collaborate describe best practices for collaborating with students, families, and other service providers, taking into consideration family culture and values, to locate community and state resources for further participation in leisure and recreational activities; to facilitate lifelong participation in physical activity.

(6) promote collaborative practices that respect the individual's and family's culture and values relative to access to physical education and recreation and leisure options across the life span;

E. Professionalism. The candidate must:
access and evaluate information, research, and emerging practices relevant to the field of developmental adapted physical education through consumer and professional organizations, peer-reviewed journals, and other publications; and

engage in continuing professional development and reflection to increase knowledge and skill, and inform instructional practices, decisions, and interactions with students and their families as a special developmental adapted physical educator and inform instructional practices, decisions, and interactions with students and their families; and

describe strategies for the promotion and advocacy of developmental adapted physical education and expanded physical activity opportunities.

E. F. Clinical experiences. A teacher of special education: developmental adapted physical education applies the standards of effective practice through

The candidate must have a variety of early and ongoing clinical experiences in teaching students who have needs in the areas of physical fitness and gross motor skills in developmental adapted physical education in prekindergarten and primary (prekindergarten through grade 4), middle level (grades 5 through 8), and high school (grades 9 through 12) settings across a range of service delivery models.

Subp. 4. [See repealer.]

Subp. 5. [See repealer.]

REPEALER. Minnesota Rules, parts 8710.0310, subpart 3; 8710.0400; 8710.0550, subparts 2 and 4; 8710.2000; 8710.3100, subpart 4; 8710.3310, subpart 4; 8710.3320, subpart 4; 8710.3330, subpart 4; 8710.3340, subpart 4; 8710.3350, subpart 4; 8710.3360, subpart 4; 8710.4000, subpart 4; 8710.4500, subpart 4; 8710.4525, subpart 4; 8710.4700, subpart 4; 8710.4725, subpart 4; 8710.4770, subpart 3; 8710.4925, subpart 4; 8710.5300, subparts 4 and 5; 8710.5900, subpart 4; 8710.8010, subpart 4; 8710.8020, subpart 4; 8710.8030, subpart 4; 8710.5300.
are repealed.

**EFFECTIVE DATE.** A. Effective January 1, 2021, organizations seeking initial program approval must meet the standards in part 8710.2010. Organizations may choose to meet the standards in part 8710.2010 as soon as they are adopted.

B. A unit must meet the standards in part 8710.2010 for each program seeking continuing approval by the date of the program's first PERCA submission occurring on or after January 1, 2021. A unit may meet the standards in part 8710.2010 for a particular program or programs prior to January 1, 2021.