

Chapter PI 4

TEACHER EDUCATION PROGRAM APPROVAL, PROGRAM APPROVAL RULES AND APPEAL PROCEDURE

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Note: Chapter PI 4 as it existed on April 30, 1986, was repealed and a new chapter PI 4 was created effective May 1, 1986.

Subchapter I — Definitions

PI 4.01 Definitions. In this chapter:

(1) "Clinical program" means supervised experiences in a school setting which provide practical experience for the teacher education student including prestudent teaching and student teaching.

(2) "Concentration" means a field of study in which a student completes at least 12 semester credits and may receive certification.

(3) "Cooperating teacher" means a departmentally licensed teacher in a private or public nursery, elementary, middle, junior high, or high school who supervises student teachers in cooperation with the college or

university supervising teacher and who meets criteria described in s. PI 3.26.

(4) "Department" means the Wisconsin department of public instruction.

(5) "General education program" means that component of the institution's baccalaureate degree program, in addition to course work taken in the major, minor, concentration, and the professional education sequence, which emphasizes the study of the behavioral and social sciences, fine arts, humanities, natural sciences, and mathematics.

(6) "Institution" means a private or public college or university engaged in the preparation of professional school personnel in Wisconsin.

(7) "Major" means a field of study in which a student completes at least 34 semester credits and may receive certification.

(8) "Minor" means a field of study in which a student completes at least 22 semester credits and may receive certification.

(9) "Professional education sequence" means the educational foundations, the teaching materials and methodology course work, and the prestudent teaching and student teaching experiences designed for students enrolled in a teacher education program.

(10) "Professional education program" means the sequence of courses included in the baccalaureate degree for preparing professional school personnel for certification in the state of Wisconsin.

(11) "SCDE" means a school, college, or department of education in a private or public college or university engaged in the preparation of professional school personnel in Wisconsin.

(12) "State superintendent" means the superintendent of public instruction for the state of Wisconsin.

(13) "Student teacher" means a college or university student preparing for the teaching profession assigned to classroom practice through observation, participation, and actual teaching under the direction of a supervisor of student teachers and a cooperating teacher as a part of the professional education program offered by an institution.

(14) "Study of" means course work in a topic or discipline which may be accommodated by one or more units, modules, or courses.

(15) "Supervisor of student teacher" means a person employed by the institution who works with the cooperating teacher in the direction and supervision of student teaching experiences.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

Subchapter II — Teacher Education Program Approval, Appeals, and Review of Rules

PI 4.02 Teacher education program approval. (1) SCOPE AND PURPOSE. The statutory authority for adoption of the program approval plan for the certification of professional school personnel is provided in ss. 115.28 (7) and 118.19 (3), Stats. Section PI 3.02 directs the state superintendent to complete a site review of all programs for the certification of pro-
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fessional school personnel on each campus in Wisconsin at least once every 5 years. Section PI 3.02 requires that new programs and changes in previously approved programs must be submitted to the department for approval. To administer the mandated program approval responsibilities, the state superintendent has adopted, in addition to the certification rules contained in ch. PI 3, the program approval rules contained in ch. PI 4.

(2) **STATE SUPERINTENDENT RESPONSIBILITY.** The state superintendent shall approve professional education programs which lead to certification at both private and public institutions of higher education in Wisconsin.

(3) **IMPLEMENTATION.** (a) Upon the effective date of this chapter, the state superintendent shall utilize the requirements of this chapter in all reviews of professional education programs leading to certification.

(b) By January 1, 1987, all institutions and SCDEs which offer professional education programs leading to certification in Wisconsin shall submit to the department, for departmental approval, written evidence that their program complies with the requirements of this chapter, or a plan and timetable, subject to departmental approval, which ensures that students who enroll at the institution after July 1, 1987, and graduate after August 30, 1990, shall be able to complete each requirement of this chapter.

(c) Institutions and SCDEs may permit students who have been admitted into a professional education program leading to certification prior to July 1, 1987, to complete the program based upon the standards which were in effect at the time of the student's admission into the program.

(4) **NONCOMPLIANCE WITH RULES.** (a) After reviewing teacher education programs, the state superintendent shall either grant approval or conditional approval in accordance with s. PI 4.04, or deny approval to each program in writing. In granting conditional approval to a program, the state superintendent shall cite the action needed and time period to accomplish compliance with ch. PI 3 or 4. Failure to comply with the provisions of ch. PI 3 or 4 shall lead the state superintendent to deny or withdraw approval of the program leading to certification. In denying approval to a program, the state superintendent shall cite the rules in ch. PI 3 or 4 with which the institution or the SCDE is in noncompliance.

(b) If approval of the program leading to certification is denied by the state superintendent, the SCDE shall either commence an appeal in accordance with s. PI 4.03 or shall provide notice to prospective and currently enrolled students of nonapproval of the program leading to certification.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.025 Approval of experimental and innovative programs. (1) An institution may petition the state superintendent to offer an experimental or innovative program which is not in compliance with rules contained in this chapter. The institution shall present a plan for the program to the state superintendent who shall hold a public hearing and approve it prior to implementation. Experimental and innovative programs may include the following:

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(a) Programs designed to develop new approaches, new arrangements, or new contexts for the preparation of school personnel.

(b) Programs designed to meet the special needs of particular segments of society such as minority, disadvantaged, or nontraditional students.

(c) Programs designed to prepare school personnel for new types of positions that are emerging in the elementary or secondary schools.

(2) The state superintendent may specify the number of years for the program to operate and shall require a plan of evaluation.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.03 Appeal procedure. (1) An institution aggrieved by a departmental decision that it is not in compliance with a program approval rule under ch. PI 4 or a certification rule under ch. PI 3, or by a departmental decision as to the time period within which compliance must be shown, may appeal such decision only upon the following grounds:

(a) The department's decision was based on material errors of facts; or

(b) The department's decision was arbitrary or capricious.

(2) An institution shall commence an appeal by sending a written notice of appeal to the state superintendent by certified mail within 30 days after the institution received formal notice of the department's decision. The notice of appeal shall set forth the reasons for the appeal and the grounds upon which the appeal is based and shall be signed by the institution's chief administrator.

(3) The state superintendent shall appoint an impartial hearing panel to hear appeals and make recommendations to the state superintendent. The hearing shall be held within 60 days after the appeal is received. No employee of the appealing institution, departmental employee or other person who was involved in making the departmental decision which is the subject of the appeal may serve on the hearing panel. The state superintendent shall periodically solicit, from both institutions of higher education and elementary and secondary education, names of persons to serve on hearing panels.

(4) Evidence of program or institutional changes implemented after the evaluation team's decision shall not be admissible at the hearing.

(5) Based on the evidence presented at the hearing and the recommendation of the hearing panel, the state superintendent or designee shall either affirm, modify, or reverse the decision which is the subject of the appeal. If the decision is affirmed, the state superintendent may require the appellant either to agree in writing to meet the conditions established by the state superintendent to comply with chs. PI 3 and 4, or the state superintendent shall deny or withdraw approval of the program leading to certification and the SCDE shall provide notice to prospective and currently enrolled students of nonapproval of the program leading to certification.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.04 Conditional approval of noncomplying programs. The department may not approve any teacher preparation program which is not in compliance with the requirements of this chapter. The state superintendent Register, April, 1986, No. 364

may grant conditional approval to a program under the following conditions:

(1) The institution which sponsors the program submits to the department a program of remedial measures including a timetable for completion of such measures which will bring the teacher preparation program into compliance with all the requirements of this chapter; and

(2) The department is satisfied that such remedial measures will be implemented in a timely manner so that graduates of such a program shall have completed all work required by this chapter for approved teacher preparation programs.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.05 Review and modification of rules. Each section of this chapter shall be reviewed at least once every 5 years. The state superintendent shall appoint committees composed of representatives from institutions of higher education including administrators, academic faculty and education faculty, and representatives from local school districts including teachers, administrators, principals and school board members to review the standards contained in this chapter and to recommend modifications of the standards to the state superintendent. The review process shall begin upon publication of this chapter.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

Subchapter III — Organization and Administration of Teacher Education

PI 4.06 Organization and administration of teacher education. (1) **PURPOSES AND GOALS.** The institution shall include a statement of the purposes and goals of all professional education programs in printed materials used to describe those programs.

(2) **ORGANIZATION AND GOVERNANCE.** (a) The institution shall have written evidence that its governing body recognizes and fulfills its responsibility to the SCDE.

(b) The institution shall have an organizational chart of its administrative structure including the position and relationships of the SCDE within that structure.

(c) The institution shall have written policies pertaining to professional development for teacher education faculty; teacher education faculty teaching load; and teacher education faculty service in professional development on a local, state, regional, and national basis. Copies of the policies shall be made available to the teacher education faculty and administrators.

(d) The SCDE shall have primary responsibility for the design, development, implementation, and evaluation of professional education sequences.

(e) The SCDE shall be administered by one faculty member who has assigned time for that responsibility.

(f) The SCDE shall have published policies and procedures of operation that insure SCDE faculty participation in planning, implementing,

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and evaluating the teaching majors, minors, concentrations, professional education sequences, and general education programs.

(g) The SCDE shall have written evidence that students, graduates, and local school district personnel including teachers, principals, administrators, and school board members have been involved in program planning, development, and evaluation.

(h) The SCDE shall have written evidence that it has designed and implemented a systematic process for evaluating the clinical program in cooperation with school district personnel including teachers, principals, administrators and school board members from cooperating school districts.

(i) The SCDE shall have written evidence that an advisory council composed of students; graduates; lay citizens including parents of students attending elementary and secondary schools; members of professional education organizations; and local school district personnel including teachers, principals, administrators and school board members have been consulted in program development and evaluation.

(3) FACULTY. (a) The institution shall have written evidence that each teaching major, minor, concentration, and each professional sequence is administered by a faculty member holding a minimum of a master's degree or its equivalent. This faculty member's primary responsibility shall be to the major, minor, concentration, or professional education sequence headed, and the master's degree or equivalent shall be in the principal discipline of that program or sequence.

(b) The institution shall have written evidence that faculty members who teach in a teaching major, minor, concentration, or in a professional sequence have preparation related specifically to their assignments.

(c) The institution shall have written evidence that faculty members who teach courses in each professional sequence are knowledgeable about current elementary and secondary school curricula, practices and requirements.

(d) The institution shall have policies for the selection, retention, and promotion of teacher education personnel which will contribute to the employment and retention of competent teacher education faculty members.

(e) The institution shall establish faculty exchange programs, clinical or adjunct professorships, or other opportunities to actively involve elementary and secondary school teachers, principals and administrators in preservice teacher preparation programs and to actively involve teacher educators in elementary and secondary school programs.

(f) The institution shall provide that the total service load shall be interpreted to include regular instruction on campus, extension teaching, committee assignments, extracurricular activities, and supervisory responsibilities in connection with thesis advisement. The total service load shall also include assignments to clinical programs; independent study; advisory and consultative services; testing, psychological, and guidance services; research and writing; student advisory duties; and recruitment, selection, and admission of students.

(4) **FACILITIES, INSTRUCTIONAL MATERIALS, AND EQUIPMENT.** (a) The institution shall provide a library as the primary materials resource center of the institution. The library shall adequately support the instruction, research, and services pertinent to the needs of professional education programs. Materials shall be organized and indexed in such a way that faculty and students can easily locate and gain access to materials housed at the institution and to materials housed elsewhere through an interlibrary loan procedure.

(b) The institution shall provide professionally staffed libraries and instructional materials centers to meet the stated professional education purposes and goals.

(c) The institution shall maintain a materials laboratory or centers, either as a part of the library or as one or more separate units, which shall house a collection of printed and audiovisual materials, teaching aids, courses of study, and materials for the evaluation of learning. The laboratory or centers shall be directed by professionally qualified staff with expertise in the instructional materials and media used in elementary and secondary schools.

(d) The institution shall make available instructional teaching and learning materials and equipment to students and faculty as well as provide instruction in production, utilization, organization, and preservation of such materials and equipment.

(e) The institution shall make available to its students knowledge of current educational technology and experience in its use.

(f) The institution shall provide laboratories, laboratory supplies, and specialized furniture and equipment needed for the professional education programs. Space and equipment shall be adequate for conducting and recording actual and simulated instructional activities.

(5) **STUDENT SERVICES.** (a) The institution shall provide students with written information describing its student services including career guidance and placement and the procedures for using these services, and information on employment opportunities in Wisconsin and the United States for graduates of education programs.

(b) The institution shall maintain a cumulative record on each of its students which includes a transcript and written evaluations of field experiences.

(c) The SCDE shall provide each student, upon admission to the professional education program, with an advisor and written information describing the professional education programs leading to certification.

(6) **STUDENT ADMISSION, RETENTION, COMPLETION, AND FOLLOW-UP.** (a) The SCDE shall establish standards for admission to professional education programs leading to certification which shall include the following:

1. A cumulative grade point average of not less than 2.5 on a 4.0 scale computed on at least 40 semester credits of collegiate level course work; or standing in the upper 50% of the class as determined by written institutional policy. Exceptions to the established minimum grade point average or the class standing requirement may be granted to no more than 10% of the total number of students admitted to the preparation pro-

gram for each admission period. The SCDE shall adopt written policies and procedures pertaining to exercising exceptions to the established minimum grade point average and the class standing requirement. The written policies and procedures pertaining to exercising exceptions shall include a student appeal process.

2. Demonstrated proficiency in speaking and listening as determined by the institution.

3. A passing score on a standardized examination in mathematics, in reading, and in writing. The standardized examination and the passing score shall be determined by the state superintendent. The standardized examination may not be taken more than 3 times.

(b) The institution shall obtain and maintain information relative to candidates applying for admission to the professional education program. The information maintained shall include high school transcript, rank in high school graduating class, high school grade point average, scores on standardized tests such as the ACT and the SAT, and the grade point average and class rank at admission to the professional education program.

(c) The SCDE shall establish standards to recommend students for certification which shall include but not be limited to the following:

1. a. A minimum grade point average of 2.75 on a 4.0 scale based on course work in the major, minor, and concentration, and in professional education course work except student teaching; or standing in the upper 50% of the class as determined by written institutional policy.

b. A written policy adopted by the institution and approved by the department after a public hearing which assures that those recommended are in the upper 50% of all students receiving baccalaureate degrees in Wisconsin in each graduation period. The policy shall include both comprehensive evaluation procedures and substantive, written evidence of both subjective information and objective measures.

c. Exceptions to subpar. a. or b. may be granted to no more than 10% of the total number of students completing certification programs in each graduation period. The SCDE shall adopt written policies and procedures pertaining to exercising exceptions which shall include a student appeal process.

2. Successful completion of the SCDE student teaching requirement.

3. A passing score on a standardized examination in each certification major, minor and concentration. The standardized examination will be administered by the department and the passing score shall be determined by the state superintendent. The standardized examinations may not be taken more than 3 times. The state superintendent may exempt specific programs from the requirements of this subdivision or may modify the administration and format of the examination if valid and reliable examinations are not commercially available or if the number of licensures in a specific area does not justify the development of a valid, reliable examination.

(d) The institution shall have a written plan and program for the recruitment of students from a diversity of ethnic and racial backgrounds

into teacher education programs and for the retention and completion of minority students in these programs.

(e) The SCDE shall have a written plan for evaluating the performance of its graduates. The evaluation plan shall be designed to provide information which may be used to improve teacher preparation programs and to improve practices pertaining to admission, retention, and completion. The evaluation plan shall be designed to gain information from graduates and from school personnel in the schools in which the graduates have been employed.

(f) The SCDE shall have written evaluation procedures and evidence to assess the knowledge, skills and competency of its students when they complete professional education programs and apply for recommendation for certification. Students shall be informed of these evaluation procedures.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

Subchapter IV — General and Professional Education Rules

PI 4.07 General education. All professional education programs leading to certification shall meet the following general education requirements:

(1) The general education component shall constitute at least one-third of the semester hours in collegiate level course work required for the institution's baccalaureate degree. Course work included in the professional sequence and major, minor, or concentration may not be included in the general education component.

(2) The institution shall provide evidence of a process for coordinating the planning, development, implementation, and evaluation of the general education program among those departments offering courses in the general education program and the SCDE to assure that the goals of general education for teacher education programs are achieved.

(3) The program shall require study of the following unless the student's major, minor, or concentration includes the same course work:

- (a) Written and oral communication.
- (b) Mathematics.
- (c) Fine arts.
- (d) Social studies including national, state, and local government.
- (e) Biological and physical sciences.
- (f) Humanities including literature.
- (g) Western and non-Western history or contemporary culture.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.08 Professional education rules: common rules. All professional education programs leading to certification shall meet the following standards:

(1) The program shall require study of the historical, philosophical, and social foundations underlying the development and purpose of edu-

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cation and current trends, issues, and various approaches in the specific professional education program in the United States and in Wisconsin.

(2) The program shall require study of the legal, political, and economic aspects and the governance of education and the organization, operation, policy making, and administration of schools and educational programs in the United States and Wisconsin.

(3) The program shall require study to develop an understanding of the diverse family, cultural, and socioeconomic backgrounds of pupils.

(4) The program shall require study and experience specifically designed to develop the competencies needed to teach critical thinking.

(5) The program shall require study of issues relating to children at risk including the pertinent law concerning child abuse and neglect; suicide; alcohol and other drug abuse; school age parents; delinquency and truancy; developmental disabilities; and the child welfare system including the children's code, juvenile justice, public health, and social services.

(6) The program shall require study of pupil services programs and their relationship to other aspects of the total school program.

(7) The program shall require study of educational psychology including principles and theories of learning.

(8) The program shall require study of methods of identifying and evaluating the social, emotional, psychological, and physical behaviors of pupils as these behaviors may affect learning.

(9) The program shall require study to develop knowledge and skills in methods of creating a positive physical, psychological, and social teaching and learning environment.

(10) The program shall require study of educational research and practice related to classroom management and classroom organization.

(11) The program shall require study of methods and materials needed to evaluate and to report pupil progress including the development, administration, scoring, interpretation and validation of teacher developed and standardized tests.

(12) The program shall require study of the use of the library and other instructional resources.

(13) The program shall require study of school instructional media programs, experience in evaluating and using instructional materials and equipment including computers, and experience in creating graphic and audiovisual materials designed to meet specific learning objectives.

(14) The program shall require study of the profession including the roles and responsibilities of the school board, the school superintendent, principals and teachers, and professional associations, organizations and learned societies.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.09 Early childhood and kindergarten education: specific rules. All professional education programs leading to certification in early childhood and kindergarten education shall meet the following standards:

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(1) The program shall require study of the principles and theories of child growth and development including a background in biological, cognitive, psychomotor, emotional, and social development and their relationship to learning.

(2) The program shall require study and experience in methods of child study.

(3) The program shall require study designed to develop knowledge and skills for identifying and teaching children with exceptional educational needs and talents.

(4) The program shall require study of curriculum planning and evaluation based upon developmental approaches to the function and guidance of play.

(5) The program shall require study of curriculum development, implementation, and evaluation based upon child developmental approaches and educational research and practice in the areas of children's literature; creative arts; environmental education; language arts including reading, writing, speaking, and listening; mathematics; motor development; physical and mental health; science; and social studies.

(6) The program shall require study and experiences designed to develop skills in working with other personnel in the early childhood and kindergarten education program and skills in promoting family and community involvement in the early childhood and kindergarten program.

(7) The program shall require study of the administration and organization of early childhood education programs; program and staff development, supervision, and evaluation; financial management; accreditation and licensing; relationships with parents, advisory groups and community agencies; and the use of community resources. Compliance with this subsection is not required for certification as a kindergarten teacher.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.10 Early childhood exceptional educational needs: specific rules. All professional education programs leading to certification in early childhood exceptional educational needs shall meet the following standards:

(1) The program shall require study of the principles and theories of child growth and development including cognitive, emotional, psychological, psychomotor, and social development and their relationship to learning.

(2) The program shall require study of methods of teaching in regular early childhood educational programs.

(3) The program shall require study to develop the ability to assist in the development, implementation, and evaluation of screening procedures for the purpose of identifying young children with exceptional educational needs.

(4) The program shall require study to develop the ability to assist in the assessment of children's cognitive, emotional, language, motor, self-help, and social development for the purpose of providing appropriate educational services.

(5) The program shall require study to develop the ability to plan, develop, implement, and evaluate curricular strategies and individual and group instructional activities designed to achieve habilitation and rehabilitation objectives in all developmental areas.

(6) The program shall require study to develop the ability to plan, develop, implement, and evaluate activities for the involvement of parents and others responsible for the primary care of young children with exceptional educational needs.

(7) The program shall require study and experiences to develop skills in working with other persons in the early childhood exceptional educational needs setting including both volunteer and paid teacher aides.

(8) The program shall require study to develop the ability to locate and secure the cooperation of other agencies, groups, and individuals in the provision of educational services for young exceptional children and those persons responsible for their care.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.11 Elementary education: specific rules. All professional education programs leading to certification in elementary education shall meet the following standards:

(1) The program shall require completion of a certification minor or other minor of at least 22 semester credits approved by the state superintendent.

(2) The program shall require study of the principles and theories of child growth and development including cognitive, emotional, physiological, and social development and their relationship to learning.

(3) The program shall require study to develop knowledge and skills for identifying and teaching children with exceptional educational needs and talents.

(4) The program shall require study of the content of subjects taught in elementary schools including art; children's literature; environmental education; health education; language arts including reading, writing, speaking, and listening; mathematics; music; physical education; science; and social studies.

(5) The program shall require study of the teaching methods, instructional materials, and evaluation techniques in each of the subjects taught in elementary schools including art; children's literature; environmental education; health education; language arts including reading, writing, speaking, and listening; mathematics; music; physical education; science; and social studies.

(6) The program shall require study of educational research and practice related to curriculum development, implementation, and evaluation in art; children's literature; environmental education; health education; guidance; language arts including reading, writing, speaking, and listening; mathematics; music; physical education; science; and social studies.

(7) The program shall require study of program, curriculum, and instructional approaches which contribute to the preparation of pupils for work including career exploration, practical application of the basic Register, April, 1986, No. 364

skills, economics and American economic institutions, and employability skills and attitudes.

(8) The program shall provide study and experiences designed to develop skills in working with other school personnel and skills in promoting family and community involvement in the elementary school program.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.12 Secondary education: specific rules. All professional education programs leading to certification in secondary education shall meet the following standards:

(1) The program shall require study of the principles and theories of preadolescent and adolescent psychology including cognitive, emotional, psychological, and social development and their relationship to learning.

(2) The program shall require study to develop knowledge and skills for identifying and teaching children and youth with exceptional educational needs and talents.

(3) The program shall require study of teaching methods, instructional materials, and evaluation techniques in each of the specializations in which the student will seek certification.

(4) The program shall require study of the teaching of reading.

(5) The program shall require study of educational research and practice related to curriculum development, implementation, and evaluation.

(6) The program shall require study of program, curriculum, and instructional approaches which contribute to the preparation of pupils for work including career exploration and planning; practical application of the basic skills; employability skills and attitudes; knowledge of economics and American economic institutions including business operations, agriculture, and labor; entrepreneurship; and the development of specific occupational skills.

(7) The program shall require study and experiences to develop skills in working with other school personnel and in promoting family and community involvement in the secondary school program.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.13 Prestudent teaching and student teaching clinical experience programs. The SCDE shall arrange for prestudent teaching, student teaching and other supervised clinical experiences in elementary and secondary school settings. The agreements and working relationships between the schools and the institution shall depend principally upon school policy and negotiated agreements. The agreements established regarding the clinical experience programs shall be mutually developed by personnel from participating schools and from the SCDE.

(1) **PRESTUDENT TEACHING CLINICAL EXPERIENCE PROGRAMS.** The prestudent teaching clinical experience program shall meet the following requirements:

(a) The program shall require prestudent teaching clinical experiences which are developmental in scope and sequence and which occur in a

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variety of school settings. These experiences shall begin no later than entry into the professional education program and shall be completed prior to beginning student teaching.

(b) The SCDE shall develop written policies and procedures describing the prestudent teaching clinical program and communicate these policies and procedures to students in professional education programs, faculty involved in teacher education, and participating school personnel including cooperating teachers. The policies and procedures shall include but not be limited to the following:

1. Criteria for admission to the prestudent teaching clinical program.
2. Objectives to be fulfilled by each participating student in the prestudent teaching clinical program.
3. Criteria for evaluation and retention of students enrolled in the prestudent teaching clinical program.

(c) The SCDE shall require that each student, under the supervision of professional school personnel, complete a prestudent teaching clinical program consisting of a minimum of 100 clock hours of experience working directly with children and youth within a school or other instructional setting.

(d) The SCDE shall require during the prestudent teaching clinical program experience at least 2 written evaluations of each student based upon observations by the cooperating teacher or by the SCDE supervisor.

(e) The institutional shall ensure that at least one member of the SCDE has assigned time to function as the designated administrator and coordinator of all prestudent teaching and clinical experiences.

(2) **STUDENT TEACHING PROGRAM.** The student teaching program shall meet the following requirements:

(a) The SCDE shall require student teaching experiences which are developmental in scope and sequence and which occur in school settings.

(b) The SCDE shall develop written policies and procedures describing the student teaching program and communicate these policies and procedures to students in professional education programs, to faculty involved in these programs, and to participating school personnel including cooperating teachers. These policies and procedures shall include but not be limited to the following:

1. Criteria for admission to student teaching including competence in the area of academic specialization, competence in the professional sequence, and competence in the prestudent teaching clinical experience as determined by professional personnel who directly supervised the student during that experience.
2. Objectives to be fulfilled by each participating student teacher including various activities usually performed by a teacher in a school setting including but not limited to instruction, supervision, pupil evaluation, conferences with parents, and faculty meetings.
3. Criteria for evaluation and retention of students enrolled in the student teaching program.

(c) The SCDE shall require that faculty teaching the methods courses have direct involvement each year in elementary and secondary school classrooms in the area of their professional responsibilities which may include participation in the supervision of student teachers.

(d) The SCDE shall require that student teaching be a full day, full semester experience following the daily schedule and semester calendar of the cooperating school. Exceptions may be granted when the midyear calendars of the cooperating school and the institution are in conflict and would prohibit students from attending classes in accord with the mid-year calendar of the institution.

(e) The SCDE shall provide that at least one member of the SCDE has assigned time to function as the designated administrator and coordinator of the student teaching clinical experiences.

(f) The SCDE shall assign a primary supervisor to each student teacher and shall ensure that each primary supervisor has had at least three years of successful teaching experience in elementary or secondary schools.

(g) The institution shall provide assistance to student teachers by supervisors with experience and expertise in the specialty subject matter areas and at the grade level of pupils being taught by the student teacher.

(h) The SCDE shall require that cooperating teachers participating in the student teaching experience be selected by personnel from the cooperating schools and from the SCDE. Personnel from the cooperating schools shall include teachers.

(i) The SCDE shall require that a minimum of 4 classroom supervisory visits of at least one hour in length are made to each student teacher by the SCDE primary supervisor. Supervisors with experience and expertise in the specialty subject matter areas and at the grade level of pupils being taught by the student teacher shall participate in the classroom supervision.

(j) The SCDE shall require during the student teaching experience at least 4 written evaluations of each student based upon classroom observations by the cooperating teacher and by the SCDE supervisor. Evaluation procedures shall include at least 2 conferences involving the student teacher, the cooperating teacher, and the SCDE supervisors. The cooperating teacher's evaluation of the student teacher shall become part of the student's permanent record. Other evaluations by elementary and secondary professional school personnel which attest to the competency of the student as a prospective teacher may also be included in the permanent record. The student teacher shall determine the evaluations which may be available to prospective employers.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.14 Human relations. All professional education programs leading to certification shall provide study and experiences in human relations. The program shall meet the following requirements:

(1) The institution shall have written evidence that members of various racial, cultural, and economic groups including at least 3 of the following designated minority groups: African-Americans, American Indi-

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ans, Asian-Americans, Hispanic-Americans, and Pacific Islander-Americans; foreign born persons, disabled persons, and majority and minority low income persons and representatives of both sexes have participated in the development of the human relations program for professional school personnel.

(2) The program shall require study in the theory and application of human relations practices including skill building activities in identifying and constructively responding to expressions or acts which devalue other persons.

(3) The program shall require study of the history, culture, customs, social institutions' values, lifestyles, and contributions of women and various racial, cultural, and economic groups, including African-Americans, American Indians, Asian-Americans, Hispanic-Americans, and Pacific Islander-Americans in the United States.

(4) The program shall require study of the psychological and social implications of the forces of discrimination, especially racism and sexism, and their broader impact on relationships among members of various groups in American society.

(5) The program shall require study in the philosophical and psychological bases of the development and change of attitudes.

(6) The program shall require experiences for students to systematically evaluate the impact of the forces of discrimination, especially racism and sexism, on language, instructional materials, learning activities, learning styles, interaction between staff and students, tests and measurement, and school environments.

(7) The program shall require experiences in assessing a curriculum and in making modifications, if necessary, to assure multicultural and nonsexist content.

(8) The program shall require a minimum of 50 documented clock hours of direct involvement with adult and pupil members of a group whose background the student does not share including at least one of the following designated minority groups: African-Americans, American Indians, Asian-Americans, Hispanic-Americans, and Pacific Islander-Americans; and with foreign born persons, disabled persons and with various socioeconomic groups including low income. That part of the required 50 clock hours of direct involvement which is with pupils may be accommodated as a part of prestudent teaching and student teaching requirements.

(9) The institution shall provide that the evaluation of student teachers addresses their competence in human relations skills, knowledge, and attitudes.

(10) The institution shall have a written evaluation plan of the effectiveness of its implementation of the human relations program in the areas of administration, program development, community input, and ongoing monitoring responsibilities.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

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Subchapter V — Specialty Area Rules

PI 4.15 Applicability. Sections PI 4.16 through 4.50 contain the specific standards for certification programs in areas in which professional education students may complete a major, minor, or a concentration. Chapter PI 3 contains the specific certification requirements for each type of certification.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.16 Anthropology. A professional education program leading to certification in anthropology shall meet the following standards:

(1) The program shall require study in each of the major subdivisions recognized in American anthropology as follows:

(a) Cultural or social anthropology including examples of social structural, political, economic, and ideological analyses; a survey of the principal culture areas of the world with a sampling of representative societies from each, and principles of cultural ecology with knowledge of societal roles in the conservation of natural and cultural resources.

(b) Archaeology and prehistory including a survey of world prehistory; general cultural evolution including relevance of early hominid cultural patterns to the shaping of modern societies.

(c) Physical or biological anthropology including primate and human evolution and hominid fossils, human genetics and populations, the human skeleton, and ecological factors including nutrition and disease vectors that affect human individual and societal development and health.

(d) Linguistics including communication among infrahuman primates and other social animals, language and cognition, and sociolinguistics.

(e) Applied anthropology including examples of the application of anthropological principles and theories to problems of modern societies, urban anthropology, anthropology of education, and exercises in anthropological analyses of one's own experiences.

(2) The program shall require study of the history and context of the discipline of anthropology including:

(a) Theories of sociocultural change as proposed by major anthropological theorists of the nineteenth and twentieth centuries, the historical relationship between the development of anthropology and Western colonialist nations including the United States; and the United States' conquest and management of American Indians; with the effect of these phenomena upon American anthropological studies and theories.

(b) Philosophical bases of anthropological theories and philosophy and history of science and their relevance to anthropology.

(3) The program shall require study of the history and cultures of Wisconsin Indians.

(4) The program shall require study designed to develop an appreciation of the dynamic nature of science including anthropology, and of the importance of keeping informed of new data and theories.

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(5) The program shall require experience in the practical application of the methodology appropriate to the discipline of anthropology.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.17 Art. A professional education program leading to certification in art shall meet the following standards:

(1) The program shall provide a study to develop knowledge and skills pertaining to the content of the visual arts disciplines and the following:

(a) Basic concepts and skills of studio art foundations involving a balanced program of both two-dimensional and three-dimensional creative problem solving areas including drawing, design, painting, sculpture, printmaking, graphic communication, film and photography, ceramics, art metals, fibers, and related media and processes.

(b) Basic knowledge and understanding of art history, aesthetic theory, and art criticism, involving study of the development of past and contemporary art forms, contending theories of art, and critical methodologies of art.

(c) Advanced knowledge and skill in selected studio areas and in selected art history or theory areas.

(d) Knowledge and appreciation of at least one discipline related to the visual arts including music, drama, dance, or literature.

(2) The program shall provide instruction pertaining to humanistic and behavioral studies including:

(a) Philosophical bases related to the human potential for creative expression through the arts.

(b) Psychological bases involving an understanding of individual development and the manner in which aesthetic experience can affect the development of the human personality including application to gifted students and to handicapped students.

(c) Sociological or anthropological bases of the aesthetic response recorded in various cultures and subcultures.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.18 Bilingual and bicultural education. A professional education program leading to certification in bilingual and bicultural education shall meet the following standards:

(1) The program shall require study and experiences to develop the ability to instruct students both in English and in the language of the target student population with fluency and accuracy and with good pronunciation and intonation.

(2) The program shall require study for elementary education bilingual and bicultural students to develop the ability to instruct students both in English and in the language of the target student population in all basic subject matter content.

(3) The program shall require study for secondary education bilingual and bicultural students to develop the ability to instruct students both in
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English and in the language of the target student population in the teacher's field or fields of specialization.

(4) The program shall require study to develop an understanding of the differences between the sound systems, forms, and structures of the second language and English and study to develop the ability to apply this understanding to teaching in the bilingual and bicultural program.

(5) The program shall require study of the implications of differences in dialect across cultural and social levels.

(6) The program shall require study of sociology and linguistics to develop an understanding of the differences between the language systems and to develop the ability to apply this understanding to bilingual and bicultural teaching.

(7) The program shall require study of the history and culture of the target population as well as the history and culture of the United States.

(8) The program shall require study and experiences to develop the ability to adapt materials to the needs of the bilingual and bicultural program.

(9) The program shall require study and experiences to develop the ability to relate to students, parents, and others within the target cultural group.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.19 Coaching athletics. A professional education program leading to certification for coaching athletics shall meet the following standards:

(1) The program shall require study of the medical aspects of athletic coaching including the duties of team physicians and trainers, protective equipment and supplies, athletic injuries, medical and safety problems, and medical research related to athletics.

(2) The program shall require study of the psychology of sports, principles and problems of athletic coaching including the educational implications of athletics, organization of athletic programs, and ethics of coaching, and personal, professional, and public relationships.

(3) The program shall require study of coaching theory and techniques including teaching fundamental sports skills and strategies, sports rules and regulations, conditioning for specific sports, scouting opponents, organization and management, safety in specific sports, and evaluation of programs and personnel.

(4) The program shall require study of the kinesiological foundations of coaching including human anatomy and the mechanics of movement.

(5) The program shall require study of the physiological foundations of coaching including human physiology and the physiology of exercise.

(6) The program shall require a practicum in athletic coaching.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.20 Computer science. A professional education program leading to certification in computer science shall meet the following standards:

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- (1) The program shall require the study of at least one procedure oriented language.
- (2) The program shall require the study of computer organization or assembly language.
- (3) The program shall require the study of data structures.
- (4) The program shall require the study of the role of computers in society.
- (5) The program shall require the study of the role of computers in education.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.21 Dance. A professional education program leading to certification in dance shall meet the following standards:

- (1) The program shall require study of the structure and function of the human body.
- (2) The program shall require study of and experience in the various types of dance including ballet, ballroom, ethnic, folk, jazz, and modern.
- (3) The program shall require study of dance history and philosophy including geographic and cultural influences.
- (4) The program shall require study of the minimum essentials of stagecraft, dance accompaniment, and music.
- (5) The program shall require study of basic dance writing and notation.
- (6) The program shall require study of technique to acquire mastery of at least one style as well as experience in performing and staging.
- (7) The program shall require experiences in performance in at least one style of dance for an audience.
- (8) The program shall require experiences in improvisation, choreography, and stage production.
- (9) The program shall require experiences in the directing of performing and recreational groups.
- (10) The program shall require study of the relationship of dance to the other arts.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.22 Drama. A professional education program leading to certification in drama shall meet the following standards:

- (1) The program shall require study of theatre as a social and aesthetic experience and as a reflection of culture including a broad view of the history of theatre and acquaintance with representative plays of the past and present.
- (2) The program shall require study and experiences needed to direct a theatrical production with artistic integrity including play selection and analysis, auditions and casting, conducting rehearsals and performances, and all other elements of direction.

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(3) The program shall require study and experiences in the basic acting skills and techniques necessary to promote, stimulate, and guide both individuals and groups in a variety of dramatic contexts including scripted and improvisational forms.

(4) The program shall require study and experiences to develop technical and design skills needed in theatrical productions including effective planning and safety practices and execution of scenery, lights, makeup, sound, properties, costumes, and special effects.

(5) The program shall require study and experiences to develop the ability to evaluate productions or activities, to modify goals and objectives, and to develop appreciation of theatre in school and community audiences.

(6) The program shall require study of the functions of theatre in the school at all grade levels.

(7) The program shall require study and experiences designed to promote creativity in the individual.

(8) The program shall require study and experiences to develop theatre management skills needed to organize an academic or nonacademic production or program within the context of time, facilities, budget, and legal responsibilities including school and community audience services, augmentation of existing facilities and materials, and marketing of an activity or production.

(9) The program shall require study and experiences designed to develop the skills needed to serve as a resource person in the development of facilities, the preparation of classroom projects, assembly programs, or activities in which elements of theatre are found.

(10) The program shall require study and experiences to develop the skills needed to assist in the organization of a comprehensive arts program including experiences in theatre, music, film, literature, visual arts, and dance.

(11) The program shall require study and experiences to develop the skills needed to disseminate accurate information for career expectations, and the skills for educational and vocational counseling in theatre arts and allied fields.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.23 Driver education. A professional education program leading to certification in driver education shall meet the following standards:

(1) The program shall require study of administrative procedures, practices, and policies required to develop, organize, implement, and operate a driver and traffic safety education program.

(2) The program shall require study to develop the ability to assess current issues and trends in driver and traffic safety education.

(3) The program shall require study of methods of providing students with positive attitudes toward safe driving as well as the needed skills.

(4) The program shall provide study of group dynamics and group instructional techniques in formal and informal settings.

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(5) The program shall provide for study of an experience in instruction pertaining to night driving and emergency driving situations.

(6) The program shall require study of how alcohol and other drugs and behavioral factors, sociological and psychological, influence driver behavior.

(7) The program shall require study and experience to develop skills in communicating with the general public, the media, agencies, organizations, and others regarding issues related to driver and traffic safety.

(8) The program shall require student teaching in the classroom, in a simulation laboratory, and behind the wheel.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.24 Economics. A professional education program leading to certification in economics shall meet the following standards:

(1) The program shall require study of the principles of economics including:

(a) Knowledge of basic economic concepts and their application to civic literacy.

(b) Techniques for understanding and analyzing contemporary economic problems and issues.

(c) Skills in institutional economic decision making such as the process and considerations utilized by labor unions, corporations, political parties, and banks.

(d) Knowledge of how an economist organizes information, uses science and vocabulary, and differentiates among economic alternatives.

(2) The program shall require study of the American economic system and institutions, including business, agriculture and labor, and alternative economic systems.

(3) The program shall require study of persistent economic problems such as inflation, recession, unemployment, taxation, and the role of political and value judgments upon resolution of economic problems.

(4) The program shall require experience in the practical application of the methodologies appropriate to the discipline of economics.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.25 English. A professional education program leading to certification in English shall meet the following standards:

(1) The program shall require study of language including the following:

(a) The structure and history of the English language including traditional and modern grammars.

(b) Various personal, social, and communicative purposes of language.

(c) The processes whereby individuals acquire, understand, and use language.

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(d) The interrelatedness of the language arts, recognizing the complementary features of listening, speaking, reading, and writing.

(2) The program shall require study of written communication including the following:

(a) Writing as a process including prewriting, drafting, revising, editing, and publishing.

(b) Classical and contemporary rhetorical theories regarding aims and forms of discourse, cultural and situational contexts, and considerations regarding the reader.

(c) Writing for a variety of purposes including expressive, imaginative, informational, and persuasive; and writing for a variety of readers.

(d) Various approaches to evaluating writing.

(3) The program shall require study of literature including the following:

(a) A representative body of American, English, and world literature including contemporary literature, non-Western literature, adolescent literature, and the literature of minority groups of the United States.

(b) Literary genres including forms of fiction, nonfiction, drama, and poetry.

(c) Representative works of one or more major writers including Shakespeare.

(d) Traditional and contemporary approaches to literary analysis and criticism.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.26 English as a second language. A professional education program leading to certification in English as a second language shall meet the following standards:

(1) The program shall require study designed to develop skill in the use of English including:

(a) Understanding standard American English as spoken by a native at a normal conversational tempo.

(b) Speaking the language with sufficient command of vocabulary, phonology, and syntax to carry on conversations with native speakers of English.

(c) Reading the language with immediate comprehension.

(d) Writing English at a level of clarity and correctness that is acceptable to native speakers.

(2) The program shall require study designed to develop skill in language analysis including:

(a) Analyzing the phonology, morphology, and syntax of English and clarifying the differences and similarities between English and another language.

(b) Using the knowledge derived from applied linguistics in studying English as a second language.

(c) Using knowledge of sociocultural variables in language use and language learning as related to instruction in English as a second language.

(3) The program shall require study designed to provide for the development of the unique abilities necessary to teach English as a second language including:

(a) Devising drills and exercises that develop student knowledge of the structure of English along with the ability to apply knowledge of grammar functionally to the teaching of English language skills.

(b) Guiding students toward conversational use of English in addition to teaching reading and writing skills.

(c) Evaluating the effectiveness of teaching materials, procedures, and curricula.

(d) Applying a knowledge of testing procedures to the assessment of student proficiency and progress.

(4) The program shall require study designed to provide knowledge of culture including:

(a) Understanding the geography, history, social customs, literature art, and music of the United States and of at least one linguistic minority culture.

(b) Understanding culturally determined lifestyles and learning styles and their effect on second language learning.

(5) The program shall require the study of another language including:

(a) Acquiring a knowledge of the structure of another language.

(b) Developing an understanding of the relationship between language and the culture which it reflects.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.27 Foreign languages. A professional education program leading to certification in a foreign language shall meet the following standards:

(1) The program shall require study designed to develop skill in the use of the target language including:

(a) Understanding the target language as spoken by a native at a normal conversational tempo.

(b) Speaking the target language with sufficient command of vocabulary, phonology, and syntax to carry on conversations with native speakers.

(c) Reading the target language with immediate comprehension.

(d) Writing the target language at a level of clarity and correctness that is acceptable to native speakers.

(2) The program shall require study designed to develop skill in language analysis including:

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(a) Analyzing the phonology, morphology, and syntax of the target language and clarifying the differences and similarities between the target language and English.

(b) Using the knowledge derived from applied linguistics in studying the target language.

(3) The program shall require study designed to provide knowledge of the target culture including:

(a) Classifying the principal ways in which the target culture resembles and differs from that of the United States.

(b) Understanding geography, history, social customs, literature, art, and music and their roles in the contemporary civilization of the target culture.

(4) The program shall require study designed to provide for the development of the unique abilities necessary to teach the target language including:

(a) Conducting classroom activities exclusively in the target language.

(b) Devising drills and exercises that develop student awareness of the structure of both the target language and English.

(c) Guiding students toward informal conversation in the target language.

(d) Drawing from personal experience in order to create a variety of learning situations which bring the reality of the target culture closer to the student.

(e) Developing, encouraging, and promoting student participation in activities and events which reflect the contemporary ways of life of the target culture.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.28 Geography. A professional education program leading to certification in geography shall meet the following standards:

(1) The program shall require study of the basic methodologies of geography with an emphasis on their conceptual frameworks and contemporary applications.

(2) The program shall require study of human geography including the basic elements, processes, distributions, and problems associated with human activities, interrelationships with the natural environment, and socio-cultural diversity including population, race, language, religion, political ideologies, and economic systems.

(3) The program shall require study of physical geography including a study of human interrelationships with the atmosphere, landforms, soils, vegetation, water, and all natural resources.

(4) The program shall require study of the basic tools of geography including maps, air photographs, and diagrams with primary emphasis on interpretation of these forms of visual communication and understanding their uses and limitations.

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(5) The program shall require study of world regions including a synthesis of the major social, economic, political, historical, and physical factors that provides a global perspective as well as an understanding of the diversity among the main cultural areas of the world.

(6) The program shall require study of the geography of Wisconsin including familiarity with the social, economic, political, historical, and physical factors that provide diversity in Wisconsin.

(7) The program shall require study of economic geography including emphasis on the world's economy as shaped by economic theory and by the distributions of resources and population.

(8) The program shall require study of urban geography including special consideration of the forces that have shaped the distribution of urban places and the internal characteristics of cities in the United States.

(9) The program shall require experience in the practical application of the methodology appropriate to the discipline of geography.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.29 Health education. A professional education program leading to certification in health education shall meet the following standards:

(1) The program shall require study of the philosophy, aims, and objectives of a comprehensive school health education program.

(2) The program shall require study of biological sciences which primarily deal with a healthy life including the study of human physiology and anatomy, basic body chemistry, genetics, ecology, and a person's interaction within the environment.

(3) The program shall require study in the behavioral and social sciences pertinent to total health with an emphasis on positive human relations, including the study of the importance of balance in the emotional, physical, and social dimensions of human growth and development.

(4) The program shall require study of the following content areas:

(a) Personal health promotion and wellness.

(b) Mental and emotional health.

(c) Prevention and control of disease.

(d) Nutrition and diet.

(e) Substance use and abuse.

(f) Accident prevention and safety.

(g) Community health.

(h) Consumer health.

(i) Environmental health.

(j) Family life education.

(5) The program shall require study to develop teaching competence in planning, promoting, and implementing a school health instruction program at the elementary and secondary level including learning exper-

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iences in needs assessment; program evaluation; curriculum development and coordination; resource identification and assessment; public relations; and the development of cooperative relationships with private business and with voluntary and community health agencies.

(6) The program shall require the study of health promotion programs in the workplace and their potential impact on the health promotion and health education programs in elementary and secondary schools.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.30 History. A professional education program leading to certification in history shall meet the following standards:

(1) The program shall require study to provide a basic conceptual framework for understanding the major themes and theories in historical research.

(2) The program shall require study of ancient, medieval, and modern European history; non-Western history; and United States history.

(3) The program shall require study of historical inquiry, new techniques, theories, and models.

(4) The program shall require study designed to develop a global perspective of the history and current issues of the human race.

(5) The program shall require study designed to develop the ability to examine and become familiar with the major themes and methods of the social sciences and the humanities.

(6) The program shall require study to provide an introduction to historiography and application of the historical method, including basic research skills, analytical skills, multiple causation, the role of bias in interpretation, and inquiry methods that may be employed in subject investigation.

(7) The program shall require experience in the practical application of the methodology appropriate to the discipline of history.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.31 Mathematics. A professional education program leading to certification in mathematics shall meet the following standards:

(1) The program shall require the study of calculus, algebra, geometry, and statistics as well as topics from each of the following: discrete mathematics, probability, number theory, foundations, history of mathematics, applications, and mathematical modeling.

(2) The program shall require experiences in the construction and analysis of algorithms using computers and calculators.

(3) The program shall require study of selection or creation of mathematical models to solve problems, methods of applying mathematics principles to other disciplines, and the relationship of mathematics through technology to social conditions.

(4) The program shall require study of mathematical problem solving, problem solving strategies, and using computers to solve mathematical problems.

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(5) The program shall require study of the philosophical and logical foundations of mathematics including use of mathematical terms and symbols, the construction of mathematical proofs, the historical development of mathematical ideas and methodology, and the inherent limitations of formal deduction.

(6) The program shall require study of the relationship of advanced mathematics to elementary mathematics, mathematical concepts at different levels of abstraction, and selection and use of manipulative devices to illustrate mathematical concepts.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.32 Choral, general, and instrumental music: common rules. A professional education program leading to certification in choral, general, or instrumental music shall meet the following common standards:

(1) The program shall require study to develop performance skills including:

(a) The ability to perform on the keyboard sufficient to employ the instrument as a teaching tool.

(b) The ability to use the singing voice in teaching.

(2) The program shall require study to develop conducting skills including:

(a) The ability to read and interpret musical scores and use terminology for teaching perception of the aesthetic qualities of music.

(b) An understanding of the relationship between the conductor, composer, performer, and audience.

(3) The program shall require study to develop the abilities necessary to analyze music including:

(a) An understanding of the common elements of music and their relationship.

(b) The ability to provide aural and visual analyses of musical scores in order to place them in historical and stylistic perspective.

(c) An understanding of compositional devices and their effect in performance.

(d) An understanding of the development of specific musical forms, styles, notations, and instruments.

(e) The ability to relate historical, social, and artistic developments to music of various periods.

(f) An understanding of the relationship of music to other art forms.

(4) The program shall require study to develop the abilities necessary to organize musical sounds including:

(a) The ability to arrange and adapt music from a variety of sources to meet the needs and ability levels of school music ensembles.

(b) An understanding of the elements of music through original composition and improvisation in a variety of styles.

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(5) The program shall require study to develop the abilities necessary to plan and implement music instruction including:

(a) The ability to state a philosophy of music education and plan instruction consistent with that philosophy.

(b) The ability to describe basic goals and objectives for instrumental, vocal, and general music in the school program.

(c) An understanding of the relationship between learning sequence in music and the psychological and physiological development of students.

(d) The ability to formulate instructional objectives for the various types of teaching and learning environments in school music programs.

(e) A knowledge of the resources available to help in assessing musical aptitude and achievement as well as an understanding of the use of such resources.

(f) The ability to plan music instruction appropriate to the level of student interest, aptitude, and achievement.

(g) Familiarity with a varied repertoire of music for use with student ensembles and groups.

(h) Familiarity with available music materials and equipment as well as their proper selection, care, and use in the classroom.

(i) An understanding of the organizational and administrative aspects of the school music program.

(j) The ability to relate music education to other aspects of the school program and to students' lives in the community.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.33 Choral music. A professional education program leading to certification in choral music shall meet the following standards:

(1) The program shall require study to develop performance skills including:

(a) The skill necessary to perform music from all styles represented in the repertory of solo vocal music.

(b) The technical skills needed for artistic self-expression through vocal music.

(c) The ability to perform vocal music at sight.

(d) The ability to perform vocal music with musical sensitivity and technical proficiency in a solo setting, in small ensembles, and in large ensembles.

(2) The program shall require study to develop conducting skills including:

(a) The ability to use conducting techniques appropriate to the musical forms and styles performed by student choral ensembles.

(b) The ability to analyze performance and, through rehearsal techniques, assist performers in achieving an accurate and artistic interpretation of choral music.

(3) The program shall require study to develop the following abilities in choral music:

(a) An understanding of the physical growth and educational development of the human voice.

(b) The ability to transpose and improvise accompaniments on an accompaniment instrument.

(c) An understanding of the basic techniques of vocal tone production and the ability to demonstrate them in singing.

(d) The application of proper diction in choral performance.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.34 General music. A professional education program leading to certification in general music shall meet the following standards:

(1) The program shall require study to develop performance skills including:

(a) The skill necessary to perform music from all styles represented in repertory of a major instrument or voice.

(b) The technical skills needed for artistic self-expression.

(c) The ability to perform music at sight.

(d) The ability to perform with musical sensitivity and technical proficiency in a solo setting, small ensembles, and large ensembles.

(2) The program shall require study to develop conducting skills including:

(a) The ability to use conducting techniques appropriate to the musical forms and styles performed by student ensembles.

(b) The ability to analyze performance and, through rehearsal techniques, assist performers in achieving an accurate and artistic interpretation of the music.

(3) The program shall require study to develop the following abilities in general music:

(a) The ability to explain the basic acoustical processes used to produce tones on traditional instruments.

(b) The ability to identify and explain compositional devices and performance practices in popular music idioms, art and folk music of non-Western cultures, and music of ethnic groups within the United States.

(c) A functional understanding of current electronic devices for sound generation and modification.

(d) An understanding of the principles of form, design, and style in related art forms.

(e) An understanding of the relationship between musical perception and aesthetic response.

(f) The ability to transpose and improvise instrumental accompaniments.

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(g) The ability to perform on various fretted instruments, folk instruments, and rhythmic and melodic percussion instruments in order to employ those instruments as teaching tools.

(h) The ability to describe the basic techniques of vocal tone production and to demonstrate them in singing.

(i) An understanding of the physical growth and educational development of the human voice.

(j) The understanding necessary to plan instruction with other school staff for classroom general music and interdisciplinary experiences.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.35 Instrumental music. A professional education program leading to certification in instrumental music shall meet the following standards:

(1) The program shall require study to develop performance skills including:

(a) The skill necessary to perform music from all styles represented in the repertory of a major instrument.

(b) The technical skills needed for artistic self-expression in instrumental music.

(c) The ability to perform instrumental music at sight.

(d) The ability to perform instrumental music with musical sensitivity and technical proficiency in a solo setting, in small ensembles, and in large ensembles.

(2) The program shall require study to develop conducting skills including:

(a) The ability to use conducting techniques appropriate to the musical forms and styles performed by student instrumental ensembles.

(b) The ability to analyze performance and, through rehearsal techniques, assist performers in achieving an accurate and artistic interpretation of instrumental music.

(3) The program shall require study to develop the following abilities in instrumental music:

(a) A technical knowledge of and ability to perform on a variety of woodwind, brass, string, and percussion instruments sufficiently well to teach elementary and secondary school students effectively.

(b) A knowledge of the care and maintenance of band and orchestral instruments.

(c) An understanding of the basic acoustical processes of tone production in traditional instruments.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.36 Philosophy. A professional education program leading to certification in philosophy shall meet the following standards:

(1) The program shall require study to provide an introduction to major philosophical perspectives or orientations.

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(2) The program shall require study of the history and social context of the discipline of philosophy.

(3) The program shall require study and experiences designed to develop knowledge and skills necessary to explore and analyze the nature of belief, knowledge, and truth.

(4) The program shall require study of major philosophical issues including relationships between individuals and the state and the concept of justice.

(5) The program shall require study of philosophical inquiry including ethics, logic, philosophy of education, philosophy of religion, and philosophy of politics.

(6) The program shall require study of the methods of philosophical discourse.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.37 Physical education. A professional education program leading to certification in physical education shall meet the following standards:

(1) The program shall require study of the biological sciences pertaining to the structure and function of the human body including the principles of human movement.

(2) The program shall require study designed to develop the skills and the capability to teach students in a wide variety of activities including perceptual motor learning; fundamental motor skills; lifetime and team sports; movement, rhythms, and dance; aquatics; and outdoor recreational activities.

(3) The program shall require study of and experiences in organizing, planning, implementing, administering, and evaluating a total program of physical education including intramural, recreational, and interscholastic activities.

(4) The program shall require study and experience pertaining to selection, purchase, care, and maintenance of facilities, equipment, and supplies.

(5) The program shall require study of injury prevention, safety procedures, first aid, physical training methods, and legal considerations.

(6) The program shall require study of those conditions and handicaps which prevent students from succeeding in regular physical education classes including study of diagnostic methods, prescriptive programming, teaching techniques, and evaluation of students whose needs range from minor program modification to specially designed individual programs.

(7) The program shall require study of the behavioral and social sciences related to physical education.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.38 Political science. A professional education program leading to certification in political science shall meet the following standards:

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(1) The program shall require study of the major themes, theories, and concepts of the discipline of political science including historical perspectives; ethics; nature of different political systems; nature of law; local, state, national, and global political systems; political thought; nature of democratic citizenship; political legitimacy; nature of political decision making; political power; international politics; the nation states; and new global forces.

(2) The program shall require study of the major themes of the discipline of political science including propaganda techniques, risk taking and risk management, political behavior, judging political behavior, political institutions, political decision making, communication as a political act, crisis management, and conflict resolution.

(3) The program shall require study and experience designed to develop knowledge of the major study and research methods of the discipline of political science including competency in using the inquiry skills of observing, communicating, classifying, inferring, predicting, formulating models, measuring, interpreting data, formulating operational definitions, formulating questions and hypotheses, and testing hypotheses.

(4) The program shall require experience in the practical application of the methodology appropriate to the discipline of political science.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.39 Psychology. A professional education program leading to certification in psychology shall meet the following standards:

(1) The program shall require study of the history of psychology including major schools of thought and viewpoints.

(2) The program shall require study of basic principles of psychology as a science including experimental psychology, statistics, measurement, and laboratory experiences.

(3) The program shall require study of the physiological, affective, cognitive, and social foundations of behavior including the development of behavior, concepts of normality and deviance as well as new and emerging areas of psychology.

(4) The program shall require study of ethical problems and issues in psychology.

(5) The program shall require study of the application of psychology to contemporary life as well as study designed to develop an appreciation of the contributions of psychology to improving the quality of human life.

(6) The program shall provide experience in the practical application of the methodology appropriate to the discipline of psychology.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.40 Reading teacher. A professional education program leading to certification as a reading teacher shall meet the following standards:

(1) The program shall require study of the English language as it relates to the acquisition of reading ability including its development, dialects, and function as a communication system.

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(2) The program shall require study of divergent patterns of human biological, cognitive, emotional, and social development as they relate to the student's transition to the language of instruction and to the acquisition of reading strategies and skills across the life span.

(3) The program shall require study of the nature of reading comprehension processes including experiences to develop the ability to help students acquire them.

(4) The program shall require study of the various procedures for teaching word analysis including experiences to develop the ability to help students acquire them.

(5) The program shall require study of the characteristics, strengths, and weaknesses of formal and informal reading assessment techniques including experiences to develop the ability to select and use these techniques.

(6) The program shall require study of the alternative instructional approaches to reading and related materials including experiences to develop the ability to select and use these instructional approaches and materials.

(7) The program shall provide for the development of the concepts and abilities required for planning and teaching kindergarten through grade 12 developmental and corrective and remedial classes in kindergarten through grade 12.

(8) The program shall require study to develop understanding of the application of reading into content subjects and functional situations including experiences to develop the ability to teach students the importance of reading effectively as a lifetime skill.

(9) The program shall require study to develop the abilities required to plan, equip, staff, and operate facilities designed to aid students with special reading needs.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.41 Reading specialist. A professional education program leading to certification as a reading specialist shall meet the following standards:

(1) The program shall require study and experiences required to plan and establish a reading program that accommodates the needs of individual learners.

(2) The program shall require study and experiences to develop the ability to plan for and establish a comprehensive reading program that integrates reading with other elements of the curriculum.

(3) The program shall require study to develop the ability to work with teachers, administrators, other professionals, and parents to establish and maintain a comprehensive reading program at both the building level and the district level.

(4) The program shall require study to develop the ability to provide leadership related to the effective operation of a comprehensive reading program.

(5) The program shall require study to develop the ability to interpret current research and theory related to reading education.

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(6) The program shall require a field experience which places emphasis on the development, implementation, and evaluation of kindergarten through grade twelve reading programs.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.42 Religious studies. A professional education program leading to certification in religious studies shall meet the following standards:

(1) The program shall require study of the major religious traditions.

(2) The program shall require study of the role of religion in contemporary society.

(3) The program shall require study pertaining to the relationships between religion and other human institutions.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.43 Science: common rules. Professional education programs leading to certification in science shall meet the following common standards:

(1) The program shall require study of the history of science including development of scientific thought and the philosophy of science including assumptions, ethics, and limitations of science.

(2) The program shall require study and experiences designed to develop knowledge and skills in problem solving including data gathering and data analysis and using the results of the analysis to make explanations.

(3) The program shall require study of the interaction of science and society including political, economic, and sociological implications.

(4) The program shall require study and experiences designed to develop knowledge and awareness of environmental issues.

(5) The program shall require laboratory and field experiences in the science areas studied.

(6) The program shall require study designed to develop knowledge and skills in laboratory management and use, laboratory safety procedures and practices, and special science laboratory techniques.

(7) The program shall require study of mathematics as it is applied in the practice of science.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.44 Biology. A professional education program leading to certification in biology shall meet the following standards:

(1) The program shall require a balanced study of protists, plants, and animals including humans.

(2) The program shall require study of classification systems, molecular and cellular biology, complementarity of structure and function, genetic continuity, ecological interactions, and origin and development of living things.

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(3) The program shall require laboratory and field study of living materials.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.45 Chemistry. A professional education program leading to certification in chemistry shall meet the following standards:

(1) The program shall require study of analytical chemistry, atomic and molecular structure of matter, behavior and structure of organic and inorganic compounds, and energy transfer in chemical interaction.

(2) The program shall require laboratory experience involving instrumental analysis.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.46 Earth science. A professional education program leading to certification in earth science shall meet the following standards:

(1) The program shall require study of subsurface structures and dynamics, surface systems including land and water, meteorological and climatological phenomena; astronomical phenomena and cosmological theories; earth materials including rock, minerals, and fossil fuels; and earth history including crustal, atmospheric, and biological changes.

(2) The program shall require field studies designed to develop competency in using the environment as a laboratory.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.47 Physical science. A professional education program leading to certification in physical science shall require study of analytical chemistry, behavior and structure of organic and inorganic compounds, atomic and molecular structure of matter, electromagnetic phenomena, and interrelationships of matter and energy.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.48 Physics. A professional education program leading to certification in physics shall meet the following standards:

(1) The program shall require study of interrelationships of matter and energy, mechanics of static and dynamic systems, electromagnetic phenomena, and atomic and molecular structure of matter.

(2) The program shall require study and experiences designed to develop competence in quantitative laboratory measurement and application of mathematics to solving physical problems.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.49 Sociology. A professional education program leading to certification in sociology shall meet the following standards:

(1) The program shall require study of the nature and history of the discipline of sociology.

(2) The program shall require study of the basic processes involved in the formation of social relationships, the organization of various types of groups, and the organization of society.

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(3) The program shall require study of the various theories of social organization, deviance, and social change.

(4) The program shall require study pertaining to the logic of inquiry as it applies to the study of society and the ethical issues that must be addressed in its application.

(5) The program shall require study pertaining to the relationship between sociology and psychology.

(6) The program shall require study of the culture of various groups in American society and in the world community.

(7) The program shall require study and experiences in the use of various social research methods and their appropriateness in particular situations and shall require work in sociological research to gain familiarity with the process and to further the development of the body of social theory.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.

PI 4.50 Speech. A professional education program leading to certification in speech shall meet the following standards:

(1) The program shall require study of historical and contemporary theories and models of communication and their application to a variety of oral communication processes including:

(a) Function of the individual as both an effective speaker and listener in communication.

(b) Sociolinguistic, psycholinguistic, and nonverbal factors which affect oral communication.

(c) Context variables such as occasion, setting, purpose, culture, audience, gender, and subject and their impact upon oral communication.

(2) The program shall require study of the functions of communication in social, personal, and professional life including:

(a) Emphasis on the intrapersonal, interpersonal, organizational, public, and mass communication levels.

(b) Emphasis on the role of interpersonal communication in relationship development, work relationships, and sociocultural activities.

(c) Emphasis on the uses of oral communication in informative, persuasive, ritualistic, and affective interaction.

(d) Emphasis on the development and delivery of oral communication acts.

(e) Emphasis on the development of effective listening skills.

(3) The program shall require study of the criticism of oral communication including:

(a) Emphasis on the theories of rhetorical, group, and interpersonal criticism.

(b) Emphasis on styles and modes of oral communication criticism.

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(c) Emphasis on the use of criticism as a means of improving oral communication.

(d) Emphasis on the nature of logical, ethical, and emotional appeals.

(e) Emphasis on criticism as an instrument of improving reasoning and decision making processes.

(4) The program shall require study of various electronic media of oral communication including:

(a) The nature and effects of media.

(b) The manner in which different media enable and constrain communication.

(5) The program shall require study of responsible oral communication including:

(a) The ethical responsibilities of oral communication.

(b) The rights and responsibilities associated with free speech in a democratic society.

(6) The program shall require study and experiences with the development, management, and evaluation of curricular, cocurricular and extra-curricular activities including:

(a) Interpersonal communication, public communication, oral interpretation, small group communication, organizational communication, and mass communication.

(b) The directing of student experiences in debate or forensics.

History: Cr. Register, April, 1986, No. 364, eff. 5-1-86.