# PHYSICAL SCIENCE, INSTRUCTIONAL CERTIFICATION: TEACHER CERTIFICATION IN PHYSICAL SCIENCE (PRESCHOOL-GRADE 12) - GRADUATE

## Program Requirements

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<th>Title</th>
<th>Credits</th>
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### Teaching Field Requirements

#### Required Courses

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<th>Code</th>
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- General Physics: 8
- Mechanics: 4
- Electricity: 4
- Optics: 4
- Modern Physics: 4
- Electives in Physics: 13
- General Chemistry: 8
- Organic Chemistry: 8
- Analytical Chemistry of Biochemistry: 3
- Mathematics: 16

### Teaching Methods

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- CHEM 501: Teaching Chemistry in the Secondary School: 3

Total Credits: 75

1 Over 2 years including at least 12 credits of Calculus.

### Additional Requirements for State Certification

#### Speech

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- CMST 101: Fundamentals of Speech: Communication Requirement 1: 3

#### Physiology and Hygiene

Pass the MSU Health Knowledge Test available through the Center of Pedagogy or have the Undergraduate equivalent course approved by advisor.

#### Educational Psychology

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- EDFD 582: Learning Theories: 3
- or PSYC 560: Advanced Educational Psychology

### Graduate Professional Sequence

#### Introductory Sequence

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- EDFD 505: Teaching, Democracy, and Schooling: 3
- or SASE 505: Teaching, Democracy, and Schooling
- SASE 518: Technology Integration in the Classroom: 1

#### Diversity and Instructional Sequence

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- EDFD 509: Sociocultural Perspectives on Curriculum and Assessment: 3
- or SASE 509: Sociocultural Perspectives on Curriculum and Assessment

### Pedagogical Sequence I

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- EDFD 516: Meeting the Needs of English Language Learners: 1
- or SASE 516: Meeting the Needs of English Language Learners: 1
- SASE 517: Inclusive Classrooms in Middle and Secondary Schools: 1
- READ 501: Techniques of Reading Improvement in the Secondary School: 3
- EDFD 519: Assessment for Authentic Learning: 3
- or SASE 519: Assessment for Authentic Learning

### Pedagogical Sequence II

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<th>Title</th>
<th>Credits</th>
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- SASE 514: In-Service Graduate Clinical Practice II: 6
- or SASE 529: Clinical Practice II: 3
- SASE 543: Advanced Seminar in Inclusive Pedagogies: 3

Total Credits: 36

1 May be completed by examination.

2 Post-BA students in the Health and Physical Education program are exempt from this course.

3 SASE 514 is for in-service teachers.

### Additional Requirements for State Certification

The following additional requirements must be met prior to student teaching. Upon admission to the program, the student's submitted transcripts are evaluated to determine if any of these requirements have been fulfilled by previous coursework. In such cases, the requirement(s) appears on the degree audit as being waived.

- CMST 101 or Speech Challenge Exam or documented & approved experience
- Physiology & Hygiene - free test at county office of education or BIOL/HLTH course
- Educational Psychology - EDFD 582 or PSYC 560
- Psychology or equivalent undergraduate course work

**Note:** Certification requirements are subject to change.