

# TEACHING, WITH TEACHER CERTIFICATION IN PHYSICAL SCIENCE (PRESCHOOL- GRADE 12) AND TEACHER OF STUDENTS WITH DISABILITIES (M.A.T.)

## Program Requirements

Code	Title	Credits
<b>Additional Requirements for State Certification</b>		
<i>Speech</i>		
CMST 101	Fundamentals of Speech: Communication Requirement	3
<i>Physiology and Hygiene</i>		
Pass the MSU Health Knowledge Test available through the Center of Pedagogy or have the Undergraduate equivalent course approved by advisor		
<i>Additional Requirement</i>		
Select one of the following:		3
EDFD 582	Learning Theories	
FSDH 515	Child Development II: Adolescence	
PSYC 560	Advanced Educational Psychology	
<b>Program Requirements</b>		
<i>Required Courses</i>		
SASE 680	Selected Topics in Curriculum and Teaching	1
SASE 509	Sociocultural Perspectives on Curriculum and Assessment	3
SPED 579	Special Education for Students with Disabilities	3
SPED 586	Educational Planning for Adolescents with Disabilities	3
SPED 566	Creating Curricular Access for Adolescents with Disabilities	3
SPED 568	Teaching Methods for Inclusive Education	3
SPED 588	Positive Behavior Supports for Diverse Learners	3
<i>Graduate Professional Sequence I</i>		
SASE 526	Seminar in Inclusive Pedagogy	3
SASE 527	Clinical Practice I	3
SPED 584	Assessment in Special Education and Classroom Practice	3
<i>Graduate Professional Sequence II</i>		
SASE 543	Advanced Seminar in Inclusive Pedagogy	3
SASE 529	Clinical Practice II	6
SPED 680	Selected Topics in Special Education	1
<i>Comprehensive Exam</i>		
In the term that you will sit for exam, register for the section which matched your major & advisor. Successfully pass exam.		
GRAD CMP	Comprehensive Examination	0
Total Credits		44

## Teaching Field Requirements

Code	Title	Credits
General Physics		8
Mechanics		4
Electricity		4
Optics		4
Modern Physics		4
Electives in Physics		13
General Chemistry		8
Organic Chemistry		8
Analytical Chemistry or Biochemistry		3
Mathematics <sup>1</sup>		16
<i>Content Area Courses (Physical Sciences)</i>		
Select one of the following:		3
CHEM 501	Teaching Chemistry in the Secondary School	
CHEM 510	Hazardous Materials Management	
CHEM 520	Advanced Inorganic Chemistry	
CHEM 525	Bioinorganic Chemistry	
CHEM 530	Advanced Organic Chemistry	
CHEM 532	Organic Synthesis	
CHEM 533	Biosynthesis of Natural Products	
CHEM 534	Separation and Analysis	
CHEM 536	Nuclear Magnetic Resonance: Theory and Practice	
CHEM 538	Drug Design in Medicinal Chemistry	
CHEM 540	Advanced Physical Chemistry	
CHEM 542	Quantum Chemistry and Spectroscopy	
CHEM 544	Chemical Thermodynamics and Electrochemistry	
CHEM 546	Chemical Spectroscopy	
CHEM 548	Chemical Kinetics	
CHEM 550	Organometallic Chemistry	
CHEM 560	Advanced Analytical Chemistry	
CHEM 570	Advanced Biochemistry	
CHEM 574	Protein Structure	
CHEM 575	Enzyme Kinetics and Mechanisms	
CHEM 576	Lipid Biochemistry	
CHEM 577	Nucleic Acid Biochemistry	
CHEM 578	Biochemistry Laboratory Techniques	
CHEM 579	Biomolecular Assay Development	
CHEM 582	Biochemical Pharmacology	
CHEM 590	Selected Topics-Advanced Chemistry	
CHEM 595	Graduate Research	
CHEM 598	Graduate Literature Search	
CHEM 599	Graduate Seminar	
PHYS 519	Special Topics in Physics	
<i>Methods Course</i>		
BIOL 503	Teaching Science in Secondary Schools	4
Total Credits		79

<sup>1</sup> Complete over 2 years including at least 12 credits of Calculus.