

REQUEST TO CO	LLEGE CURRICULUM COMMITTE	E FOR CURRICULAR IMPR	OVEMENTS
	PROPOSED EFFECTIVE SEMESTER:	2016-Fall <b>COLLEGE</b> : CE	HD
	Substantive Course Change New course Pre or Co-requisites Deletion (required by oth Course #, different level Credit hours Enrollment restriction Course-level restriction Prefix Title and descent (attach current & proposed General education (select Not Applicable) Other (explain**)  requirement for a master's degree programment.	Title Description (atta Deletion (not red Course #, same Variable credit Credit/no credit Cross-listing COGE reapproved) Tone)	ch current & proposed) quired by others) elevel
Master of Arts in Tea	Concentration: Secondary	Mathematics Teacher Education	
Existing course prefix and #:  Existing course title:	Proposed course prefix and #: Cre	dit hours:	RECEIVED
Proposed course title:			OCT <b>0 2</b> 2015
Proposed course co-requisite  If there are multiple coreq  Proposed course prerequisite	. <b>(s)</b> quisites, connect with "and" or "or". To remove pre	erequisites, enter "none."	College of Education and Human Development
The default grades are D Major/minor or classification List the Banner 4 charact	for undergraduates and C for graduates.	excluded. e) undergraduates graduates b	ooth
Specifications for University S a. Course title (maximum of 3 b. Multi-topic course:  No c. Repeatable for credit:  No d. Mandatory credit/no credit: e. Type of class and contact h 1.  Lecture 2.  Lab or discussion	0 spaces):	nours as appropriate) 5.	1
CIP Code (Registrar's use onl	у):		
Chair/Director	n 7 Mass		Date 10[2/15
Chair, College Curriculum Com	mittee (as Clede		Date /0/13/15
Dean Mar Fell	Date: 10-16-15 Graduate Dean:		Date
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* Approve Disapprove	Chair, GSC/USC		Date
*	Provost		Date

1. Explain briefly and clearly the proposed improvement.

We are proposing to remove SPED 6360 ("Topical Seminar in Special Education") from the curriculum of the Master in the Art of Teaching (MAT) program in the Department of Teaching, Learning, and Educational Studies, and replace it with SPED 6290 ("Secondary Education Inclusive Practices").

2. Rationale. Give your reason(s) for the proposed improvement. (If your proposal includes prerequisites, justify those, too.)

The Michigan Department of Education requires all teacher candidates to complete a course in special education in order to attain initial teaching certification. The WMU course that currently fulfills this requirement for the MAT program is SPED 6360 ("Topical Seminar in Special Education"). This "special topics" course was adapted to meet the state certification requirement because a more suitable master's level course did not exist when the MAT program was being developed. Since that time, the Department of Special Education and Literacy Studies has developed SPED 6290 ("Secondary Education Inclusive Practices"), which is a more appropriate course for meeting the state certification requirement.

3. Effect on other colleges, departments or programs. If consultation with others is required, attach evidence of consultation and support. If objections have been raised, document the resolution. Demonstrate that the program you propose is not a duplication of an existing one.

This change, which was suggested by the Department of Special Education and Literacy Studies, will have no effect on other colleges, departments, or programs (see attached e-mail communication).

4. Effect on your department's programs. Show how the proposed change fits with other departmental offerings.

#### No effect.

5. Effects on enrolled students: Are program conflicts avoided? Will your proposal make it easier or harder for students to meet graduation requirements? Can students complete the program in a reasonable time? Show that you have considered scheduling needs and demands on students' time. If a required course will be offered during summer only, provide a rationale.

#### No effect.

6. Student or external market demand. What is your anticipated student audience? What evidence of student or market demand or need exists? What is the estimated enrollment? What other factors make your proposal beneficial to students?

#### Not applicable.

7. Effects on resources. Explain how your proposal would affect department and University resources, including faculty, equipment, space, technology, and library holdings. Tell how you will staff additions to the program. If more advising will be needed, how will you provide for it? How often will course(s) be offered? What will be the initial one-time costs and the ongoing base-funding costs for the proposed program? (Attach additional pages, as necessary.)

#### No effect.

8. General education criteria. For a general education course, indicate how this course will meet the criteria for the area or proficiency. (See the General Education Policy for descriptions of each area and proficiency and the criteria. Attach additional pages as necessary. Attach a syllabus if (a) proposing a new course, (b) requesting certification for baccalaureate-level writing, or (c) requesting reapproval of an existing course.)

# Not applicable.

9. List the learning outcomes for the proposed course or the revised or proposed major, minor, or concentration. These are the outcomes that the department will use for future assessments of the course or program.

See attached NSTA and NCTM standards. Candidates will be required through a work sample to demonstrate they have met professional standards for their field(s).

10. Describe how this curriculum change is a response to assessment outcomes that are part of a departmental or college assessment plan or informal assessment activities.

### Not applicable.

11. (Undergraduate proposals only) Describe, in detail, how this curriculum change affects transfer articulation for Michigan community colleges. For course changes, include detail on necessary changes to transfer articulation from Michigan community college courses. For new majors or minors, describe transfer guidelines to be developed with Michigan community colleges. For revisions to majors or minors, describe necessary revisions to Michigan community college guidelines. Department chairs should seek assistance from college advising directors or from the admissions office in completing this section.

Not applicable.

# Re: SPED 6290

From: Elizabeth Whitten <elizabeth.whitten@wmich.edu>

Wed, Sep 09, 2015 05:02 PM

1 attachment

Sender: elizabeth whitten <elizabeth.whitten@wmich.edu>

Subject: Re: SPED 6290

To: James A Muchmore <james.muchmore@wmich.edu>

Hi Jim,

Yes, we are in agreement with the proposed changes.

Sincerely, Liz

On 9/9/15 1:41 PM, James A Muchmore wrote:

Thanks, Liz. We will use SPED 6290 in our Chinese MAT proposal. We will also be putting forward a proposal to remove SPED 6360 (Topical Seminar in Special Education) from the Math/Science MAT and replacing it with SPED 6290. Please let me know if this is okay.

-Jim

James A. Muchmore, Ph.D.
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(269) 387-2889



Elizabeth Whitten, Ph. D
Professor, Special Education and Administration
Coordinator of the Special Education Program &
Special Education Study Abroad Internship
Turnaround School Leaders Program Grant

Western Michigan University 4825 Sangren Hall Kalamazoo, Michigan 49008 Phone: (269) 760-6901 Fax: (269) 387-5703



**Elizabeth Whitten- SignatureJPEG-1.jpg** 28 KB

# 2012 NSTA Preservice Science Standards

# NSTA Standard 1: Content Knowledge

Effective teachers of science understand and articulate the knowledge and practices of contemporary science. They interrelate and interpret important concepts, ideas, and applications in their fields of licensure.

Below are the elements of the standard.

Preservice teachers will:

- 1a) Understand the major concepts, principles, theories, laws, and interrelationships of their fields of licensure and supporting fields as recommended by the National Science Teachers Association.
- 1b) Understand the central concepts of the supporting disciplines and the supporting role of science-specific technology.
- 1c) Show an understanding of state and national curriculum standards and their impact on the content knowledge necessary for teaching P-12 students.

Assessment: This Standard is usually met using Assessments 1- state licensure exam and Assessment 2 - comprehensive content exams or science courses' GPA and content analysis form.

## NSTA Standard 2: Content Pedagogy

Effective teachers of science understand how students learn and develop scientific knowledge. Preservice teachers use scientific inquiry to develop this knowledge for all students.

Below are the elements of the standard.

Preservice teachers will:

- 2a) Plan multiple lessons using a variety of inquiry approaches that demonstrate their knowledge and understanding of how all students learn science.
- 2b) Include active inquiry lessons where students collect and interpret data in order to develop and communicate concepts and understand scientific processes, relationships and natural patterns from empirical experiences. Applications of science-specific technology are included in the lessons when appropriate.
- 2c) Design instruction and assessment strategies that confront and address naïve concepts/preconceptions.

Assessment: This Standard is usually met using Assessment 3 - Unit Plan.

# **NSTA Standard 3: Learning Environments**

Effective teachers of science are able to plan for engaging all students in science learning by setting appropriate goals that are consistent with knowledge of how students learn science and are aligned with state and national standards. The plans reflect the nature and social context of science, inquiry, and appropriate safety considerations. Candidates design and select learning activities, instructional settings, and resources--including science-specific technology, to achieve those goals; and they plan fair and equitable assessment strategies to evaluate if the learning goals are met.

Below are the elements of the standard.

#### Preservice teachers will:

- 3a) Use a variety of strategies that demonstrate the candidates' knowledge and understanding of how to select the appropriate teaching and learning activities including laboratory or field settings and applicable instruments and/or technology- to allow access so that all students learn. These strategies are inclusive and motivating for all students.
- 3b) Develop lesson plans that include active inquiry lessons where students collect and interpret data using applicable science-specific technology in order to develop concepts, understand scientific processes, relationships and natural patterns from empirical experiences. These plans provide for equitable achievement of science literacy for all students.
- 3c) Plan fair and equitable assessment strategies to analyze student learning and to evaluate if the learning goals are met. Assessment strategies are designed to continuously evaluate preconceptions and ideas that students hold and the understandings that students have formulated.
- 3d) Plan a learning environment and learning experiences for all students that demonstrate chemical safety, safety procedures, and the ethical treatment of living organisms within their licensure area.

Assessment: This Standard is usually met using Assessment 3 - Unit Plan.

# **NSTA Standard 4: Safety**

Effective teachers of science can, in a P-12 classroom setting, demonstrate and maintain chemical safety, safety procedures, and the ethical treatment of living organisms needed in the P-12 science classroom appropriate to their area of licensure.

Below are the elements of the standard.

#### Preservice teachers will:

- 4a) Design activities in a P-12 classroom that demonstrate the safe and proper techniques for the preparation, storage, dispensing, supervision, and disposal of all materials used within their subject area science instruction.
- 4b) Design and demonstrate activities in a P-12 classroom that demonstrate an ability to implement emergency procedures and the maintenance of safety equipment, policies and procedures that comply with established state and/or national guidelines. Candidates ensure safe science activities appropriate for the abilities of all students.
- 4c) Design and demonstrate activities in a P-12 classroom that demonstrate ethical decision-making with respect to the treatment of all living organisms in and out of the classroom. They emphasize safe, humane, and ethical treatment of animals and comply with the legal restrictions on the collection, keeping, and use of living organisms.

**Assessment:** This Standard is usually met using Assessments 3 - Unit Plan and Assessment 4- Student Teaching Observation Form.

NSTA Standard 5: Impact on Student Learning

Effective teachers of science provide evidence to show that P-12 students' understanding of major science concepts, principles, theories, and laws have changed as a result of instruction by the candidate and that student knowledge is at a level of understanding beyond memorization. Candidates provide evidence for the diversity of students they teach.

Below are the elements of the standard.

Preservice teachers will:

- 5a) Collect, organize, analyze, and reflect on diagnostic, formative and summative evidence of a change in mental functioning demonstrating that scientific knowledge is gained and/or corrected.
- 5b) Provide data to show that P-12 students are able to distinguish science from nonscience, understand the evolution and practice of science as a human endeavor, and critically analyze assertions made in the name of science.
- 5c) Engage students in developmentally appropriate inquiries that require them to develop concepts and relationships from their observations, data, and inferences in a scientific manner.

Assessment: This Standard is usually met using Assessment 5 – Evidence of P-12 student learning.

# Standard 6: Professional Knowledge and Skills

Effective teachers of science strive continuously to improve their knowledge and understanding of the ever changing knowledge base of both content, and science pedagogy, including approaches for addressing inequities and inclusion for all students in science. They identify with and conduct themselves as part of the science education community.

Below are the elements of the standard.

Preservice teachers will:

- 6a) Engage in professional development opportunities in their content field such as talks, symposiums, research opportunities, or projects within their community.
- 6b) Engage in professional development opportunities such as conferences, research opportunities, or projects within their community.

**Assessment**: This Standard is usually met using Assessment 6 – Evidence of Professional Knowledge and Skills.

# NCTM CAEP Standards (2012) – Secondary (Initial Preparation)

# Standard 1: Content Knowledge

Effective teachers of secondary mathematics demonstrate and apply knowledge of major mathematics concepts, algorithms, procedures, connections, and applications within and among mathematical content domains.

#### Preservice teacher candidates:

1a) Demonstrate and apply knowledge of major mathematics concepts, algorithms, procedures, applications in varied contexts, and connections within and among mathematical domains (Number, Algebra, Geometry, Trigonometry, Statistics, Probability, Calculus, and Discrete Mathematics) as outlined in the NCTM CAEP Mathematics Content for Secondary.

# **Standard 2: Mathematical Practices**

Effective teachers of secondary mathematics solve problems, represent mathematical ideas, reason, prove, use mathematical models, attend to precision, identify elements of structure, generalize, engage in mathematical communication, and make connections as essential mathematical practices. They understand that these practices intersect with mathematical content and that understanding relies on the ability to demonstrate these practices within and among mathematical domains and in their teaching.

- 2a) Use problem solving to develop conceptual understanding, make sense of a wide variety of problems and persevere in solving them, apply and adapt a variety of strategies in solving problems confronted within the field of mathematics and other contexts, and formulate and test conjectures in order to frame generalizations.
- 2b) Reason abstractly, reflectively, and quantitatively with attention to units, constructing viable arguments and proofs, and critiquing the reasoning of others; represent and model generalizations using mathematics; recognize structure and express regularity in patterns of mathematical reasoning; use multiple representations to model and describe mathematics; and utilize appropriate mathematical vocabulary and symbols to communicate mathematical ideas to others.
- **2c)** Formulate, represent, analyze, and interpret mathematical models derived from real-world contexts or mathematical problems.
- **2d)** Organize mathematical thinking and use the language of mathematics to express ideas precisely, both orally and in writing to multiple audiences.
- **2e)** Demonstrate the interconnectedness of mathematical ideas and how they build on one another and recognize and apply mathematical connections among mathematical ideas and across various content areas and real-world contexts.
- 2f) Model how the development of mathematical understanding within and among mathematical domains intersects with the mathematical practices of problem solving, reasoning, communicating, connecting, and representing.

# Standard 3: Content Pedagogy

Effective teachers of secondary mathematics apply knowledge of curriculum standards for mathematics and their relationship to student learning within and across mathematical domains. They incorporate research-based mathematical experiences and include multiple instructional strategies and mathematics-specific technological tools in their teaching to develop all students' mathematical understanding and proficiency. They provide students with opportunities to do mathematics – talking about it and connecting it to both theoretical and real-world contexts. They plan, select, implement, interpret, and use formative and summative assessments for monitoring student learning, measuring student mathematical understanding, and informing practice.

- **3a)** Apply knowledge of curriculum standards for secondary mathematics and their relationship to student learning within and across mathematical domains.
- **3b)** Analyze and consider research in planning for and leading students in rich mathematical learning experiences.
- 3c) Plan lessons and units that incorporate a variety of strategies, differentiated instruction for diverse populations, and mathematics-specific and instructional technologies in building all students' conceptual understanding and procedural proficiency.
- **3d)** Provide students with opportunities to communicate about mathematics and make connections among mathematics, other content areas, everyday life, and the workplace.
- 3e) Implement techniques related to student engagement and communication including selecting high quality tasks, guiding mathematical discussions, identifying key mathematical ideas, identifying and addressing student misconceptions, and employing a range of questioning strategies.
- **3f)** Plan, select, implement, interpret, and use formative and summative assessments to inform instruction by reflecting on mathematical proficiencies essential for all students.
- 3g) Monitor students' progress, make instructional decisions, and measure students' mathematical understanding and ability using formative and summative assessments.

# Standard 4: Mathematical Learning Environment

Effective teachers of secondary mathematics exhibit knowledge of adolescent learning, development, and behavior. They use this knowledge to plan and create sequential learning opportunities grounded in mathematics education research where students are actively engaged in the mathematics they are learning and building from prior knowledge and skills. They demonstrate a positive disposition toward mathematical practices and learning, include culturally relevant perspectives in teaching, and demonstrate equitable and ethical treatment of and high expectations for all students. They use instructional tools such as manipulatives, digital tools, and virtual resources to enhance learning while recognizing the possible limitations of such tools.

- **4a)** Exhibit knowledge of adolescent learning, development, and behavior and demonstrate a positive disposition toward mathematical processes and learning.
- **4b)** Plan and create developmentally appropriate, sequential, and challenging learning opportunities grounded in mathematics education research in which students are actively engaged in building new knowledge from prior knowledge and experiences.
- 4c) Incorporate knowledge of individual differences and the cultural and language diversity that exists within classrooms and include culturally relevant perspectives as a means to motivate and engage students.
- 4d) Demonstrate equitable and ethical treatment of and high expectations for all students.
- 4e) Apply mathematical content and pedagogical knowledge to select and use instructional tools such as manipulatives and physical models, drawings, virtual environments, spreadsheets, presentation tools, and mathematics-specific technologies (e.g., graphing tools, interactive geometry software, computer algebra systems, and statistical packages); and make sound decisions about when such tools enhance teaching and learning, recognizing both the insights to be gained and possible limitations of such tools.

# Standard 5: Impact on Student Learning

Effective teachers of secondary mathematics provide evidence demonstrating that as a result of their instruction, secondary students' conceptual understanding, procedural fluency, strategic competence, adaptive reasoning, and application of major mathematics concepts in varied contexts have increased. These teachers support the continual development of a productive disposition toward mathematics. They show that new student mathematical knowledge has been created as a consequence of their ability to engage students in mathematical experiences that are developmentally appropriate, require active engagement, and include mathematics-specific technology in building new knowledge.

# Preservice teacher candidates:

- 5a) Verify that secondary students demonstrate conceptual understanding; procedural fluency; the ability to formulate, represent, and solve problems; logical reasoning and continuous reflection on that reasoning; productive disposition toward mathematics; and the application of mathematics in a variety of contexts within major mathematical domains.
- **5b)** Engage students in developmentally appropriate mathematical activities and investigations that require active engagement and include mathematics-specific technology in building new knowledge.
- 5c) Collect, organize, analyze, and reflect on diagnostic, formative, and summative assessment evidence and determine the extent to which students' mathematical proficiencies have increased as a result of their instruction.

# Standard 6: Professional Knowledge and Skills

Effective teachers of secondary mathematics are lifelong learners and recognize that learning is often collaborative. They participate in professional development experiences specific to mathematics and mathematics education, draw upon mathematics education research to inform practice, continuously reflect on their practice, and utilize resources from professional mathematics organizations.

- 6a) Take an active role in their professional growth by participating in professional development experiences that directly relate to the learning and teaching of mathematics.
- Engage in continuous and collaborative learning that draws upon research in mathematics education to inform practice; enhance learning opportunities for all students' mathematical knowledge development; involve colleagues, other school professionals, families, and various stakeholders; and advance their development as a reflective practitioner.
- **6c)** Utilize resources from professional mathematics education organizations such as print, digital, and virtual resources/collections.

# Standard 7: Secondary Mathematics Field Experiences and Clinical Practice

Effective teachers of secondary mathematics engage in a planned sequence of field experiences and clinical practice under the supervision of experienced and highly qualified mathematics teachers. They develop a broad experiential base of knowledge, skills, effective approaches to mathematics teaching and learning, and professional behaviors across both middle and high school settings that involve a diverse range and varied groupings of students. Candidates experience a full-time student teaching/internship in secondary mathematics directed by university or college faculty with secondary mathematics teaching experience or equivalent knowledge base.

- Fingage in a sequence of planned field experiences and clinical practice prior to a full-time student teaching/internship experience that include observing and participating in both middle and high school mathematics classrooms and working with a diverse range of students individually, in small groups, and in large class settings under the supervision of experienced and highly qualified mathematics teachers in varied settings that reflect cultural, ethnic, linguistic, gender, and learning differences.
- 7b) Experience full-time student teaching/internship in secondary mathematics that is supervised by a highly qualified mathematics teacher and a university or college supervisor with secondary mathematics teaching experience or equivalent knowledge base.
- 7c) Develop knowledge, skills, and professional behaviors across both middle and high school settings; examine the nature of mathematics, how mathematics should be taught, and how students learn mathematics; and observe and analyze a range of approaches to mathematics teaching and learning, focusing on tasks, discourse, environment, and assessment.

# C

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In this intense program candidates will take a minimum four to five courses

Current Catalog Copy	Proposed Catalog Copy
Master of Arts in Teaching	Master of Arts in Teaching
Concentration: Secondary Science Teacher Education Concentration: Secondary Mathematics Teacher Education	Concentration: Secondary Science Teacher Education Concentration: Secondary Mathematics Teacher Education
Coordinator: vacant	Coordinator: vacant
Contact Person: Tamara Klinger 4121 Sangren 269-387-3465 tammie.klinger@wmich.edu	Contact Person: Tamara Klinger 4121 Sangren 269-387-3465 tammie.klinger@wmich.edu
The Master of Arts in Teaching is a post baccalaureate initial teacher certification program currently limited to the areas of mathematics and science.  This cohorted program requires a bachelor's degree in a science, technology, engineering or mathematics related field.	The Master of Arts in Teaching is a post baccalaureate initial teacher certification program currently limited to the areas of mathematics and science. This cohorted program requires a bachelor's degree in a science, technology, engineering or mathematics related field.
The Master of Arts in Teaching is designed to develop the knowledge and skill of reflective practitioners for a variety of educational settings. It is our belief that teachers ought to be content experts who are effective practitioners, leaders, change agents, intellectuals, researchers, and learners. They should be embrace diversity, actively inquire and reflect upon their own practice. Cohort	The Master of Arts in Teaching is designed to develop the knowledge and skill of reflective practitioners for a variety of educational settings. It is our belief that teachers ought to be content experts who are effective practitioners, leaders, change agents, intellectuals, researchers, and learners. They should be embrace diversity, actively inquire and reflect upon their own practice. Cohort

# Admission Requirements

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Bachelor's degree from an accredited institution in an appropriate

secondary education discipline.

will complete a full time (5day/week) internship January through mid-June a full day of coursework a week on campus during fall semester. Candidates spend three full days in classrooms beginning the first week of September, and depending upon discipline interest across summer I and summer II sessions,

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requirements for certification within 15 months of starting coursework. (depending on district placement). Most candidates will complete all

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Bachelor's degree from an accredited institution in an appropriate secondary education discipline.

Transcript evaluation will determine what additional discipline area coursework will be required.

2. An overall grade point average of at least 3.0 (4.0 = A) in the last two years of undergraduate work.

Applicants with a GPA of less than 3.0 may be granted a Conditional Admission. This will b converted to a regular admission if students receive a grade of "B" or better in the first two graduate courses (six credit hours) taken.

- A concise written "statement of purpose" (250 words or less)
  indicating the applicant's reasons for seeking admission to the
  program and what the applicant hopes to accomplish during the
  program of study.
- Congruence of applicant's written "statement of purpose" with the parameters of this degree program.
- 5. Acceptable scores on the Michigan Test for Teacher Certification (MTTC) Basic Skills test, and at least one secondary education content area (i.e., biology, chemistry, physics or mathematics).

Applications for this program are accepted June 15 through January 1 of each year with selection and admission determined by April 15. Coursework begins during summer I session.

Upon admission, each student will be assigned an advisor who will assist in the preparation of a program of study. The program of study should be completed during the first semester of enrollment.

Program Requirements

35-45 hours depending on content discipline

Year 1 - Summer Coursework (taken across summer I and summer II)

Candidates will also be participating in additional seminars and workshops during the summer, and should plan to be on campus a minimum of four days a week from mid-May through mid-August.

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SPED 6360 - Topical Seminar in Special Education Credits: 1 to 4 hours 3 hours (Required by the State of Michigan for Professional Certification.) SCI 6205 - Science Content and Pedagogy in the Secondary School Credits: 3 ES 6150 - Education From a Socio-Cultural Perspective Credits: 3 hours ED 6035 - Risk and Resilience in Adolescent Development Credits: 3 hours WMU semester, but when districts close for the summer. Spring Coursework hours And/Or ED 6445 - Secondary School Field Experience Credits: 4 hours LS 6870 - Strategic Learning through Texts for High School Teachers Credits: Fall Coursework ED 6605 - Mathematical Thinking Grades 6-12 Credits: 3 hours hours And/Or LS 5160 - Professional Symposium in Reading Credits: 3 hours ED 6010 - Introduction to Research in Educational Settings Credits: 3 hours Should qualify for certification at conclusion of these courses in early/mid ED 6452 - Secondary School Internship Credits: 6 to 10 hours ED 6455 - Secondary School Internship Seminar Credits: 1 hour ED 6615 - Mathematics Curriculum Grades 6-12 Credits: 3 hours SCI 6305 - Science Teaching and Learning in the Secondary School Credits: 3 ED 6790 - Capstone Research Project Credits: 3 hours Year 2 These courses follow district calendars and do not conclude at the end of the Note SCI 6305 - Science Teaching and Learning in the Secondary School Credits: 3 3 hours (Required by the State of Michigan for Professional Certification.) SCI 6205 - Science Content and Pedagogy in the Secondary School Credits: 3 LS 5160 - Professional Symposium in Reading Credits: 3 hours ED 6010 - Introduction to Research in Educational Settings Credits: 3 hours ED 6790 - Capstone Research Project Credits: 3 hours Year 2 ED 6452 - Secondary School Internship Credits: 6 to 10 hours ED 6455 - Secondary School Internship Seminar Credits: 1 hour WMU semester, but when districts close for the summer These courses follow district calendars and do not conclude at the end of the Spring Coursework ED 6615 - Mathematics Curriculum Grades 6-12 Credits: 3 hours hours And/Or SPED 6290 - Secondary Education Inclusive Practices Credits: 3 hours LS 6870 - Strategic Learning through Texts for High School Teachers Credits: Fall Coursework ED 6605 - Mathematical Thinking Grades 6-12 Credits: 3 hours hours And/Or ES 6150 - Education From a Socio-Cultural Perspective Credits: 3 hours ED 6035 - Risk and Resilience in Adolescent Development Credits: 3 hours Should qualify for certification at conclusion of these courses in early/mid ED 6445 - Secondary School Field Experience Credits: 4 hours