

BACHELOR OF SCIENCE IN EDUCATION IN MIDDLE CHILDHOOD EDUCATION (4-9), MATHEMATICS-SCIENCE CONCENTRATION

Program Coordinator

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OVERVIEW

In cooperation with various academic discipline departments in the University, the Department of Teacher Education and Leadership Studies offers a four-year Middle Childhood Education Program (grades 4-9), Math and Science Concentration, approved by the Ohio Department of Education. The Middle Childhood Math and Science License (Grades 4-9), Bachelor of Science in Education degree requires a minimum of 136 semester hours of course work. This teaching field also requires passage of the Ohio Assessments for Educators in order to be eligible to student teach.

EMPLOYMENT OPPORTUNITIES

Graduates of the Middle Childhood Program will be qualified to teach Math and Science in the grades 4-9 Math and/or Science classroom. Additional opportunities may be available in the private sector to tutor students. It is recommended that students in this major consider adding the Middle Childhood Generalist Endorsement to increase marketability.

Professional Dispositions

Teacher candidates are expected to display the following professional dispositions:

- Creating fairness in the classroom
- Providing an inclusive environment that is safe and conducive to learning
- Demonstrating the belief that all students can learn
- Fostering collaborative relationships to support student learning and well-being
- Exhibiting professional skills

FIELD EXPERIENCES AND STUDENT TEACHING

Students complete a number of field experiences to support the learning of content and best practices of teaching. Field experiences offer opportunities to provide varying levels of classroom support (observing, one-on-one tutoring, small group teaching, co-teaching, whole class teaching).

Preclinical Field Experiences

The preclinical experience is conducted in local schools and provides an opportunity for teacher candidates to complete an in-depth field experience prior to student teaching. This field experience requires a substantial time commitment, as teacher candidates spend the entire day in schools during designated weeks. The Middle Childhood preclinical experience is scheduled during the fall semester. Applications for the preclinical experience must be submitted on TaskStream one year in advance by September 1st.

- TEMC 4804 Middle Level Instructional Design and Student Outcomes
- TEMC 4801 The Middle School Learning Community
- TEMC 3704 Teaching Mathematics in the Middle School
- TEMC 3705 The Teaching of Science in the Middle School

Student Teaching

Students complete a 16 week student teaching experience. Students must pass the edTPA performance-based assessment with a minimum score of 39 during this experience.

- TEMC 4803 Student Teaching Seminar for Middle Childhood Education
- TEMC 4802 Student Teaching: Middle Childhood

ADVISEMENT

Advisement is provided by the Academic Advisors in Education. Majors in this program must complete general education requirements, subject area curriculum requirements, reading course requirements, and professional education requirements. Prior to student teaching, all middle childhood majors must complete a preclinical experience.

REQUIRED ASSESSMENTS

The Ohio Assessments for Educators (OAE) assesses the content area and professional (pedagogical) knowledge of candidates who are seeking initial Ohio educator license or adding a new license area. The assessments are aligned with Ohio's New Learning Standards. Teacher candidates must pass these exams prior to student teaching.

030 Middle Grades Mathematics (for those with Mathematics concentration)

029 Middle Grades Science (for those with Science concentration)

090 Foundations of Reading

ENDORSEMENTS

The following endorsements are available to individuals holding this teaching license and may increase marketability: K-12 TESOL Endorsement, K-12 Reading Endorsement, Middle Childhood Generalist Endorsement (enables teaching in content areas not included in current course of study).

| COURSE | TITLE | S.H. |
|---|--|------|
| FIRST YEAR REQUIREMENT -STUDENT SUCCESS | | |
| YSU 1500 | Success Seminar | 1-2 |
| or SS 1500 | Strong Start Success Seminar | |
| or HONR 1500 | Intro to Honors | |
| General Education Requirements | | |
| ENGL 1550 | Writing 1 (requires a B average) | 3-4 |
| or ENGL 1549 | Writing 1 with Support | |
| ENGL 1551 | Writing 2 (requires a B average) | 3 |
| CMST 1545 | Communication Foundations | 3 |
| MATH 2665 | Foundations of Middle School Mathematics 2 | 4 |
| Some courses are categorized in more than one knowledge domain. Courses can only be used once within the General Education model. Some majors prescribe specific GE courses. If a course has been added to the domains, it is required. | | |
| Arts and Humanities | | 6 |
| Natural Sciences (2 courses, 1 lab) | | 7 |
| PSYC 1560 | General Psychology | 3 |
| Social Science GER | | 3 |
| Social and Personal Awareness | | 6 |
| Major Requirements -Mathematics Concentration | | |
| MATH 1564 | Foundations of Middle School Mathematics 1 | 4 |
| MATH 2665 | Foundations of Middle School Mathematics 2 | 4 |
| MATH 3767 | Algebra/Geometry for Middle School Teachers 1 | 4 |
| MATH 3768 | Algebra/Geometry for Middle School Teachers 2 | 4 |
| MATH 4869 | Functions, Calculus, and Applications for Middle School Teachers | 3 |
| MATH 4870 | Mathematics Seminar for Middle School Teachers | 3 |
| STAT 2601 | Introductory Statistics | 3.0 |
| Science Concentration | | |

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|---|--|----------------|
| BIOL 1505 | Biology and the Modern World | 3 |
| CHEM 1500 | Chemistry in Modern Living | 3 |
| GEOL 1505 & 1505L | Physical Geology and Physical Geology Laboratory | 4 |
| GEOL 2605 | Historical Geology | 4 |
| PHYS 2607 | Physical Science for Middle and Secondary Education | 4 |
| ASTR 1504 | Descriptive Astronomy | 3 |
| ENST 2600 | Foundations of Environmental Studies | 3 |
| ENST 2600L | Foundations of Environmental Studies Laboratory | 1 |
| GEOG 2630 | Weather | 3 |
| TEMC 3707 | Science/Technology/Society ^{1,2} | 3 |
| Professional Education Curriculum | | |
| TCED 1500 | Introduction to Becoming a Teacher First Year Experience Course BCOE | 3 |
| EDFN 1501 | Introduction to Education | 3 |
| PSYC 3709 | Psychology of Education | 3 |
| SPED 2630 | Individuals with Exceptionalities in Society ¹ | 3 |
| EDFN 3708 | Education and Society | 3 |
| TEMC 3702 | Teaching & Learning in Middle Schools ^{1,2} | 3 |
| Reading Course Requirement | | |
| TERG 3701 | Phonics in Reading Instruction | 3 |
| TERG 2610 | Reading Application in Content Areas Middle Years | 3 |
| TERG 3702 | Developmental Reading Instruction ¹ | 3 |
| TERG 3703 | Assessment and Instruction in Reading ² | 3 |
| Preclinical Curriculum | | |
| TEMC 4801 | The Middle School Learning Community ² | 3 |
| TEMC 4804 | Middle Level Instructional Design and Student Outcomes ² | 3 |
| TEMC 3704 | Teaching Mathematics in the Middle School ² | 3 |
| TEMC 3705 | The Teaching of Science in the Middle School ² | 3 |
| Student Teaching Curriculum | | |
| TEMC 4802 | Student Teaching: Middle Childhood ² | 10 |
| TEMC 4803 | Student Teaching Seminar for Middle Childhood Education ² | 2 |
| Total Hours Required for the Degree: 136 s.h. | | |
| Total Semester Hours | | 149-151 |

¹ Prerequisites for preclinical curriculum.
² Upper division course.

General Information

- It is highly recommended that all teacher candidates meet with an academic advisor every semester.
- Neither admission to the University nor declaration of a major related to a teaching field guarantees admission to the TELS Teacher Education Programs or candidacy for a teaching license.
- A grade of "C" or better is required in all courses. Some courses cannot be taken CR/NC. Check with an Advisor. Professional education and preclinical courses may only be repeated one time.

Upper Division

- **Formal Admission to Teacher Education (Upper-Division) is required before teacher candidates are allowed to enroll in certain junior and senior level courses in TELS.**
- Upper division requirements:
 - ____ Completion of 50 SH
 - ____ Minimum 2.75 overall GPA
 - ____ "B" average or better (A-C, B-B) for: ENGL 1550 and ENGL 1551.

- If failure to meet "B" average above must also complete:
 - ____ ENGL 2601 grade of "B" or better.
 - **If you receive a "C" or below you will need to retake the course.**
 - ____ "B" average or better (B-B-B, A-B-C) across the following:

____ EDFN 1501 ____ CMST 1545
 ____ SPED 2630 ____ MATH 1564 or BIOL 1505

- After completing a minimum of 50 SH, submit the following:
 - Upper Division application (Portal)
 - Good Moral Character Statement
 - Copy of BCI & FBI clearances
 - Writing prompt (Blackboard)
- Deadlines for submission for upper division status (**late applications may not be accepted**):
 - **September 1**—to register for Upper Division Courses for Spring
 - **February 1**—to register for Upper Division courses for Summer & Fall

Admission to Preclinical and Evaluation for Graduation

- Request must be submitted to TaskStream **one year prior to the intended preclinical semester no later than:**
 - **September 1**—for Fall preclinical (**Late applications may not be accepted**)
 - **February 1**—for Spring preclinical (**Late applications may not be accepted**)
- Content GPA (2.67 minimum), Professional GPA (2.67 minimum), Overall GPA (2.75 minimum).

Student Teaching

- Student teaching application must be submitted following instructions found on the portal.
- **Late applications will likely result in a delay to student teaching by one semester. Application and forms are due to the Office of Student Field Experience:**
 - September 1—to Student Teach the following Spring Semester
 - February 1—to Student Teach the following Fall Semester
- **Prerequisites:**
 - BCOE Upper Division status
 - Overall 2.75 GPA
 - Minimum of 2.67 GPA in subject area curriculum and 2.67 in professional education courses with no grade less than a "C"
 - Passage of OAE test(s) and ACTFL tests for foreign language

Completing a Bachelor of Science in Education with Licensure

- **Successful completion of student teaching (endorsed) with CPAST average score of 2 with no zeros**
- **Minimum score of 39 on edTPA, with the exception of a 34 for Foreign Language**

Completing a Bachelor of Science in Education without Licensure

- A teacher candidate may choose to graduate without licensure. Teacher candidates who wish to graduate without licensure must take TCED 4830 (3 SH) capstone course in place of student teaching.

Year 1

| Fall | | S.H. |
|-----------|--|------|
| YSU 1500 | Success Seminar | 1 |
| ENGL 1550 | Writing 1 | 3 |
| MATH 1564 | Foundations of Middle School Mathematics 1 | 4 |
| PSYC 1560 | General Psychology | 3 |

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|-----------------------|--|-----------|
| GEOL 1505 & 1505L | Physical Geology and Physical Geology Laboratory | 4 |
| TCED 1500 | Introduction to Becoming a Teacher First Year Experience Course BCOE | 3 |
| Semester Hours | | 18 |

Spring

| | | |
|-----------------------|--|-----------|
| ENGL 1551 | Writing 2 | 3 |
| MATH 2665 | Foundations of Middle School Mathematics 2 | 4 |
| SPED 2630 | Individuals with Exceptionalities in Society | 3 |
| CHEM 1500 | Chemistry in Modern Living | 3 |
| EDFN 1501 | Introduction to Education | 3 |
| BIOL 1505 | Biology and the Modern World | 3 |
| Semester Hours | | 19 |

Year 2

Fall

| | | |
|-----------------------|---|-----------|
| MATH 3767 | Algebra/Geometry for Middle School Teachers 1 | 4 |
| ENST 2600 | Foundations of Environmental Studies | 3 |
| ENST 2600L | Foundations of Environmental Studies Laboratory | 1 |
| PSYC 3709 | Psychology of Education | 3 |
| TERG 2610 | Reading Application in Content Areas Middle Years | 3 |
| CMST 1545 | Communication Foundations | 3 |
| Semester Hours | | 17 |

Spring

| | | |
|-------------------------|---|-----------|
| MATH 3768 | Algebra/Geometry for Middle School Teachers 2 | 4 |
| PHYS 2607 | Physical Science for Middle and Secondary Education | 4 |
| GEOG 2630 | Weather | 3 |
| TERG 3701 | Phonics in Reading Instruction | 3 |
| Social Science GER | | 3 |
| Arts and Humanities GER | | 3 |
| Semester Hours | | 20 |

Year 3

Fall

| | | |
|-----------------------------------|--|-----------|
| MATH 4869 | Functions, Calculus, and Applications for Middle School Teachers | 3 |
| STAT 2601 | Introductory Statistics | 3 |
| ASTR 1504 | Descriptive Astronomy | 3 |
| TERG 3702 | Developmental Reading Instruction | 3 |
| Arts and Humanities GER | | 3 |
| Social and Personal Awareness GER | | 3 |
| Semester Hours | | 18 |

Spring

| | | |
|-----------------------------------|--|-----------|
| MATH 4870 | Mathematics Seminar for Middle School Teachers | 3 |
| TEMC 3707 | Science/Technology/Society | 3 |
| GEOL 2605 | Historical Geology | 4 |
| TEMC 3702 | Teaching & Learning in Middle Schools | 3 |
| TERG 3703 | Assessment and Instruction in Reading | 3 |
| Social and Personal Awareness GER | | 3 |
| Semester Hours | | 19 |

Year 4

Fall

| | | |
|-----------|---|---|
| TEMC 4801 | The Middle School Learning Community | 3 |
| TEMC 3704 | Teaching Mathematics in the Middle School | 3 |

| | | |
|-----------------------|--|-----------|
| TEMC 3705 | The Teaching of Science in the Middle School | 3 |
| TEMC 4804 | Middle Level Instructional Design and Student Outcomes | 3 |
| EDFN 3708 | Education and Society | 3 |
| Semester Hours | | 15 |

Spring

| | | |
|-----------------------------|---|------------|
| TEMC 4802 | Student Teaching: Middle Childhood | 10 |
| TEMC 4803 | Student Teaching Seminar for Middle Childhood Education | 2 |
| Semester Hours | | 12 |
| Total Semester Hours | | 138 |

Learning Outcomes

The following learning outcomes are based on The Ohio Standards for the Teaching Profession. These standards were developed for use as a guide for teachers as they continually reflect upon and improve their effectiveness as educators throughout all of the stages of their careers. These standards serve as an important tool for teachers as they consider their growth and development in the profession. These standards in developing and content of our teacher education programs. They are interrelated and connect in teachers' practice.

- Teachers understand student learning and development and respect the diversity of the students they teach.
- Teachers know and understand the content area for which they have instructional responsibility.
- Teachers understand and use varied assessments to inform instruction, evaluate and ensure student learning.
- Teachers plan and deliver effective instruction that advances the learning of each individual student.
- Teachers create learning environments that promote high levels of learning and achievement for all students.
- Teachers assume responsibility for professional growth, performance and involvement as an individual and as a member of a learning community.
- Teachers collaborate and communicate with students, parents, other educators, administrators and the community to support student learning. Teachers assume responsibility for professional growth, performance and involvement as an individual and as a member of a learning community.

The learning outcomes for this program, align with the 5 Standards of the Association for Middle Level Education (AMLE):

- Middle level teacher candidates understand, use, and reflect on the major concepts, principles, theories, and research related to young adolescent development and use that knowledge in their practice. They demonstrate their ability to apply this knowledge when making curricular decisions, planning and implementing instruction, participating in middle level programs and practices, and providing healthy and effective learning environments for all young adolescents.
- Middle level teacher candidates understand and use the central concepts, standards, research, and structures of content to plan and implement curriculum that develops all young adolescents' competence in subject matter. They use their knowledge and available resources to design, implement, and evaluate challenging, developmentally responsive curriculum that results in meaningful learning outcomes. Middle level teacher candidates demonstrate their ability to assist all young adolescents in understanding the interdisciplinary nature of knowledge. They design and teach curriculum that is responsive to all young adolescents' local, national, and international histories, language/dialects, and individual identities (e.g., race, ethnicity, culture, age, appearance, ability, sexual orientation, socioeconomic status, family composition).
- Middle level teacher candidates understand the major concepts, principles, theories, and research underlying the philosophical foundations of

developmentally responsive middle level programs and schools, and they work successfully within middle level organizational components.

- Middle level teacher candidates understand, use, and reflect on the major concepts, principles, theories, and research related to data-informed instruction and assessment. They employ a variety of developmentally appropriate instructional strategies, information literacy skills, and technologies to meet the learning needs of all young adolescents (e.g., race, ethnicity, culture, age, appearance, ability, sexual orientation, socioeconomic status, family composition).
- Middle level teacher candidates understand their complex roles as teachers of young adolescents. They engage in practices and behaviors that develop their competence as middle level professionals. They are informed advocates for young adolescents and middle level education, and work successfully with colleagues, families, community agencies, and community members. Middle level teacher candidates demonstrate positive dispositions and engage in ethical professional behaviors.