

Middle Grades Education BSEd with Mathematics and Science Concentration

Overview

Offered by the the Department of Teaching and Learning, the **Bachelor of Science in Education in Middle Grades Education** prepares undergraduate students for middle level teaching (fourth to eighth grades). Middle grades teachers, particularly in math and science education, are increasingly sought out and in high-demand in Pennsylvania as well as across the country.

The College of Education and Human Development's program in Middle Grades Education is designed to ensure not only that there are certified teachers to fill the growing vacancies, but that our students graduate highly knowledgeable about learning and teaching as well as committed to pre/adolescent learners from diverse ethnic, economic and geographic backgrounds. To that end, our program focuses on building deep content-specific pedagogical knowledge aligned to the breadth of academic standards and the wide-ranging developmental needs of middle grades students. To develop a strong link between learning theories and actual pedagogical practice, we also require that our students engage in early, often and strategic field/clinical education experiences in middle grades settings.

Our program stands out as cutting-edge because we prepare undergraduate students to teach in both the upper elementary and middle grades classrooms.

Middle Grades Education students **must select one of the following concentrations**:

- Language Arts
- Mathematics
- Mathematics and Language Arts
- Mathematics and Science
- Science
- Science and Language Arts
- Social Studies

In addition to becoming certified to teach all elementary subjects in 4-6th grades, all students in the **BSEd in Middle Grades Education with a Concentration in Mathematics and Science** will pursue dual certification for 7-8th grades in the areas of math and science.

Campus Location: Main

Program Code: ED-MGRE-BSED

GPA Requirements

In order to maintain good standing in Middle Grades Education, students must maintain a 3.0 cumulative grade point average and a 2.0 grade point average in the course work in their concentration area.

Accreditation

The program is approved as a teacher preparation program by the Pennsylvania Department of Education.

Licensure/Certification

Upon successful completion of the program requirements, candidates may apply for a Pennsylvania Instructional I Teaching Certificate. Please note, Pennsylvania requires assessment of candidates in General Knowledge, Professional Knowledge and/or Subject Area Knowledge prior to issuance of a certificate. Please refer to the PDE web site for testing requirements.

Contact Information

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Learn more about the Bachelor of Science in Education in Middle Grades Education.

These requirements are for students who matriculated in academic year 2024-2025. Students who matriculated prior to fall 2024 should refer to the Archives to view the requirements for their Bulletin year.

Summary of Requirements

University Requirements

All students are required to complete the university's General Education (GenEd) curriculum.

All students must take a minimum of two writing-intensive (WI) courses at Temple University. Writing intensive course numbers end in 96, 97 and 98.

College Requirements

Students receive a Bachelor of Science in Education degree with a recommendation for Pennsylvania teacher certification upon the successful completion of their program requirements with a **minimum cumulative GPA of 3.0 or must meet the Pennsylvania Department of Education's qualifying Praxis score standards.**

The required total minimum credit hours for the Middle Grades Education concentration in Mathematics and Science is 120. These credit hours are satisfied by taking courses in four categories:

1. University General Education requirements (General Education)
2. Education courses
3. Teacher Education Certification Courses (i.e. methods and student teaching)
4. Concentration courses

All students seeking to graduate with the recommendation for Instructional I Certification from Pennsylvania must also meet the requirements for Candidacy.

Major Requirements

Code	Title	Credit Hours
EDUC 2103	Socio-cultural Foundations of Education in the United States ¹	3
EDUC 2109	Adolescent Development for Educators ¹	3
SPED 2231	Introduction to Special Education ¹	3
SPED 3187	Integrated Literacy and Special Education Practicum	3
SPED 3211	Effective Instructional Strategies for Students with Disabilities	3
MGSE 3196	Teaching and Learning Literacy in the Middle Grades	3
MGSE 3404	Teaching and Learning Math in the Middle Grades	3
MGSE 3405	Teaching and Learning Science in the Middle Grades	3
TESL 3631	Principles and Practice for Teaching English Learners	3
SPED 4103	Classroom Management and Positive Behavior Support	3
MGSE 4296	Cultures, Communities, and Families	3
MGSE 4801	Senior Seminar and Performance Assessment in Grades 4-12 Education	3
MGSE 4888	Student Teaching in Grades 4-12	9
Total Credit Hours		45

¹ These courses must be completed with a C- or better to be eligible for Candidacy approval. Pre-Candidacy coursework includes a variety of courses, including a minimum of 1) two college-level math courses totaling at least six credits, 2) one college-level writing/composition course with a minimum of three credits (GenEd Analytical Reading and Writing), and 3) one literature course with a minimum of three credits: Intellectual Heritage I: The Good Life, Intellectual Heritage II: The Common Good, or an ENG 2000 level course, as specified; no 0700 or pre-college level courses can count toward these requirements.

Program Requirements for Concentration in Mathematics and Science

Code	Title	Credit Hours
Select one of the following:		3-4
EES 1001	Introductory Geology	
PHYS 1004	Introduction to Astronomy	
BIOL 1011	General Biology I	4

BIOL 1012	General Biology II	4
CHEM 1021	Introduction to Chemistry I	3
CHEM 1022	Introduction to Chemistry II	3
CHEM 1023	Introduction to Chemistry Laboratory I	1
CHEM 1024	Introduction to Chemistry Laboratory II	1
MATH 1013	Elements of Statistics	3
or MATH 2031	Probability and Statistics	
or MATH 2021	Functions and Modeling	
MATH 1015	Introduction to Numbers & Figures	4
MATH 1022	Precalculus ¹	4
MATH 1041	Calculus I ¹	4
MATH 1042	Calculus II ¹	4
MATH 2061	Euclidean Geometry	3
PHYS 1021	Introduction to General Physics I	4
HIST 1101	U.S. History to 1877	3
or HIST 1102	U.S. History since 1877	
ENG 2501	Survey of British Literature ¹	3
or ENG 2502	Survey of American Literature	
or ENG 2503	Survey of Global Literature	
Total Credit Hours		51-52

¹ These courses must be completed with a C- or better to be eligible for Candidacy approval. Pre-Candidacy coursework includes a variety of courses, including a minimum of 1) two college-level math courses totaling at least six credits, 2) one college-level writing/composition course with a minimum of three credits (GenEd Analytical Reading and Writing), and 3) one literature course with a minimum of three credits: Intellectual Heritage I: The Good Life, Intellectual Heritage II: The Common Good, or an ENG 2000 level course, as specified; no 0700 or pre-college level courses can count toward these requirements.

Suggested Academic Plan

Bachelor of Science in Education in Middle Grades Education with Mathematics and Science Concentration

Suggested Plan for New Students Starting in the 2024-2025 Academic Year

To best prepare students in this major for the Praxis II exams, we strongly encourage taking the suggested GenEds listed.

(Certain courses require that a student secure clearances as per the College of Education and Human Development policy; students should check the current list of courses that require clearances on the College of Education and Human Development web site.)

Year 1		
Fall		Credit Hours
BIOL 1011	General Biology I (includes a lab) ¹	4
MATH 1022	Precalculus ⁴	4
ENG 0802	Analytical Reading and Writing [GW] ⁴	4
or ENG 0812	or Analytical Reading and Writing: ESL [GW]	
or ENG 0902	or Honors Analytical Reading and Writing [GW]	
GenEd Breadth Course ⁵		3
Credit Hours		15
Spring		
MATH 1041	Calculus I ^{3,4}	4
Select one of the following: ¹		3-4
EES 1001	Introductory Geology	
PHYS 1004	Introduction to Astronomy	
IH 0851	Intellectual Heritage I: The Good Life [GY] ⁴	3
or IH 0951	or Honors Intellectual Heritage I: The Good Life [GY]	
GenEd Breadth Course ⁵		3

GenEd Breadth Course ⁵		3
Credit Hours		16-17
Year 2		
Fall		
CHEM 1021	Introduction to Chemistry I ¹	3
CHEM 1023	Introduction to Chemistry Laboratory I ¹	1
MATH 1042	Calculus II ^{3,4}	4
EDUC 2103	Socio-cultural Foundations of Education in the United States ⁴	3
Select one of the following: ⁴		3
ENG 2501	Survey of British Literature	
ENG 2502	Survey of American Literature	
ENG 2503	Survey of Global Literature	
IH 0852 or IH 0952	Intellectual Heritage II: The Common Good [GZ] ⁴ or Honors Intellectual Heritage II: The Common Good [GZ]	3
Credit Hours		17
Spring		
BIOL 1012	General Biology II ¹	4
CHEM 1022	Introduction to Chemistry II ¹	3
CHEM 1024	Introduction to Chemistry Laboratory II ¹	1
EDUC 2109	Adolescent Development for Educators ^{2,4}	3
SPED 2231	Introduction to Special Education ^{2,4}	3
GenEd Breadth Course ⁵		3
Credit Hours		17
Year 3		
Fall		
MATH 1015	Introduction to Numbers & Figures	4
PHYS 1021	Introduction to General Physics I ¹	4
TESL 3631	Principles and Practice for Teaching English Learners ²	3
Elective		2-1
Credit Hours		13-12
Spring		
MATH 2061	Euclidean Geometry ²	3
MGSE 3196	Teaching and Learning Literacy in the Middle Grades [WI]	3
MGSE 3404	Teaching and Learning Math in the Middle Grades	3
MGSE 3405	Teaching and Learning Science in the Middle Grades	3
SPED 3187	Integrated Literacy and Special Education Practicum	3
Credit Hours		15
Year 4		
Fall		
MGSE 4296	Cultures, Communities, and Families [WI]	3
SPED 3211	Effective Instructional Strategies for Students with Disabilities	3
SPED 4103	Classroom Management and Positive Behavior Support	3
Select one of the following:		3
HIST 1101	U.S. History to 1877	
HIST 1102	U.S. History since 1877	
Select one of the following:		3
MATH 1013	Elements of Statistics	
MATH 2031	Probability and Statistics	
MATH 2021	Functions and Modeling	
Credit Hours		15
Spring		
MGSE 4801	Senior Seminar and Performance Assessment in Grades 4-12 Education	3

MGSE 4888	Student Teaching in Grades 4-12	9
	Credit Hours	12
	Total Credit Hours	120

- ¹ The sequence of either 1) BIOL 1011 and BIOL 1012 or 2) CHEM 1021 + CHEM 1023 and CHEM 1022 + CHEM 1024 constitutes a waiver for the two (2) GenEd Science and Technology (GS) courses required in the GenEd Science and Technology (GS) category if the courses are completed with a C- or better; students must complete all requirements in one sequence or the other. Completion of PHYS 1004 with a C- or better constitutes a waiver for one (1) of the two courses required in the GenEd Science and Technology (GS) category. Completion of PHYS 1021 with a C- or better constitutes a waiver for one (1) of the two courses required in the GenEd Science and Technology (GS) category. Completion of EES 1001 with a C- or better constitutes a waiver for one (1) of the two courses required in the GenEd Science and Technology (GS) category.
- ² Completion of 1) SPED 2231, 2) EDUC 2109 and 3) TESL 3631 constitutes the waiver for the GenEd Human Behavior (GB) category if the courses are completed with a C- or better.
- ³ Completion of either 1) MATH 1041/MATH 1941 or 2) MATH 1042/MATH 1942 constitutes a waiver for the GenEd Quantitative Literacy (GQ) category if the course is completed with a C- or better.
- ⁴ These courses must be completed with a C- or better to be eligible for Candidacy approval. Pre-Candidacy coursework includes a variety of courses, including a minimum of 1) two college-level math courses totaling at least six credits, 2) one college-level writing/composition course with a minimum of three credits (GenEd Analytical Reading and Writing), and 3) one literature course with a minimum of three credits: Intellectual Heritage I: The Good Life, Intellectual Heritage II: The Common Good, or an ENG 2000 level course, as specified; no 0700 or pre-college level courses can count toward these requirements.
- ⁵ Suggested GenEd courses: Global/World Society (GG) = ANTH 0867 or GUS 0867; Race & Diversity (GD) = AAAS 0829, ANTH 0829, GUS 0829, HIST 0829, POLS 0829, SOC 0829 or SOC 0929; U.S. Society (GU) = AMST 0848 or HIST 0848.