

Middle Grades Education / Science Concentration

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

The Bachelor of Science in Education in Middle Grades Education prepares undergraduate students for middle level teaching (fourth to eighth grades). Middle grades teachers are increasingly sought out and in high-demand in Pennsylvania as well as across the country.

The College of Education and Human Development 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.

In addition to becoming certified to teach all elementary subjects in 4-6th grades, all Middle Grades Education: Science Concentration students will pursue certification for 7-8th grades in the area of Science.

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.

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**. All students seeking to graduate with the recommendation for certification must also meet the requirements for Candidacy.

The required total minimum credit hours for the Middle Grades Education concentration in Science is 125. 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

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
MGSE 2111	Applications of Teaching and Learning Theories to Classroom Practice (grades 4-12)	3
SPED 2231	Introduction to Special Education ¹	3
EDUC 2296	Effective Teaching: Theory and Practice	3
EDUC 2306	Assessment and Evaluation	3
SPED 3187	Integrated Literacy and Special Education Practicum	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 3211	Effective Instructional Strategies for Students with Disabilities	3
SPED 4103	Classroom Management and Positive Behavior Support	3
MGSE 3196	Teaching and Learning Literacy in the Middle Grades	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 **54**

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 Middle Grades Education with Concentration in Science

Code	Title	Credit Hours
Select one of the following:		3-4
PHYS 1004	Introduction to Astronomy	
EES 1001	Introductory Geology	
BIOL 1011	General Biology I	4
BIOL 1012	General Biology II	4
MATH 1015	Introduction to Numbers & Figures ¹	4
CHEM 1021 & CHEM 1023	Introduction to Chemistry I and Introduction to Chemistry Laboratory I	4
MATH 1021	College Algebra ¹	4
PHYS 1021	Introduction to General Physics I	4
CHEM 1022 & CHEM 1024	Introduction to Chemistry II and Introduction to Chemistry Laboratory II	4
MATH 1022	Precalculus ¹	4
HIST 1101 or HIST 1102	U.S. History to 1877 U.S. History since 1877	3
EES 2001	Physical Geology	4
EES 2096	Climate Change: Oceans To Atmosphere	4
ENG 2501 or ENG 2502 or ENG 2503	Introduction to British Writing ¹ Introduction to American Writing Introduction to Global Writing	3
Total Credit Hours		49-50

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

B.S.ED. in Middle Grades Education: Science Concentration

Requirements for New Students starting in the 2022-2023 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		Credit Hours
Fall		
ENG 0802, 0812, or 0902	Analytical Reading and Writing [GW] ⁴	4
GenEd Breadth Course ⁵		3
MATH 1021	College Algebra ^{3,4}	4
Select one of the following: ¹		4
BIOL 1011	General Biology I	
CHEM 1021 & CHEM 1023	Introduction to Chemistry I	
Term Credit Hours		15
Spring		
IH 0851 or 0951	Intellectual Heritage I: The Good Life [GY] ⁴	3
GenEd Breadth Course ⁵		3
GenEd Breadth Course ⁵		3
MATH 1022	Precalculus ^{3,4}	4
Select one of the following: ¹		4
BIOL 1011	General Biology I	
CHEM 1021 & CHEM 1023	Introduction to Chemistry I	
Term Credit Hours		17
Year 2		
Fall		
IH 0852 or 0952	Intellectual Heritage II: The Common Good [GZ] ⁴	3
MATH 1015	Introduction to Numbers & Figures ^{3,4}	4
EDUC 2103	Socio-cultural Foundations of Education in the United States ⁴	3
Select one of the following: ¹		4
BIOL 1012	General Biology II	
CHEM 1022 & CHEM 1024	Introduction to Chemistry II	
Term Credit Hours		14
Spring		
EDUC 2109	Adolescent Development for Educators ^{2,4}	3
SPED 2231	Introduction to Special Education ^{2,4}	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: ¹		4
BIOL 1012	General Biology II	
CHEM 1022 & CHEM 1024	Introduction to Chemistry II	
Select one of the following: ⁴		3
ENG 2501	Introduction to British Writing	
ENG 2502	Introduction to American Writing	
ENG 2503	Introduction to Global Writing	
Term Credit Hours		16
Year 3		
Fall		
TESL 3631	Principles and Practice for Teaching English Learners ²	3
PHYS 1021	Introduction to General Physics I ¹	4
EDUC 2296	Effective Teaching: Theory and Practice [WI]	3
MGSE 2111	Applications of Teaching and Learning Theories to Classroom Practice (grades 4-12)	3
Select one of the following: ¹		3-4
PHYS 1004	Introduction to Astronomy	

EES 1001	Introductory Geology	
Term Credit Hours		16-17
Spring		
EES 2096	Climate Change: Oceans To Atmosphere [WI]	4
MGSE 3404	Teaching and Learning Math in the Middle Grades ³	3
MGSE 3196	Teaching and Learning Literacy in the Middle Grades [WI]	3
MGSE 3405	Teaching and Learning Science in the Middle Grades	3
SPED 3187	Integrated Literacy and Special Education Practicum	3
Term Credit Hours		16
Year 4		
Fall		
MGSE 4296	Cultures, Communities, and Families [WI]	3
SPED 3211	Effective Instructional Strategies for Students with Disabilities	3
EDUC 2306	Assessment and Evaluation	3
EES 2001	Physical Geology	4
GenEd Breadth Course ⁵		3
Term Credit Hours		16
Spring		
MGSE 4888	Student Teaching in Grades 4-12	9
MGSE 4801	Senior Seminar and Performance Assessment in Grades 4-12 Education	3
SPED 4103	Classroom Management and Positive Behavior Support	3
Term Credit Hours		15
Total Credit Hours:		125-126

¹ The sequence of either 1) BIOL 1011 and BIOL 1012 or 2) CHEM 1021 + CHEM 1023 and CHEM 1022 + CHEM 1024 constitutes the waiver for both of the 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 successfully 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 1) MATH 1015, 2) MATH 1021, 3) MATH 1022, and 4) MGSE 3404 constitutes a waiver for the GenEd Quantitative Literacy (GQ) category if the courses are 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.