Middle Level Science Dual Major - Teaching B.A.

Middle Level Science Dual - Teaching Major

The B.A. Middle Level Science Duale - Teaching major requires a minimum of 120 total hours to graduate. This total includes UNIFI/ General Education requirements, the Professional Experiences requirements, Educator Essentials requirements, and the following specified major requirements, to complete the minimum of 120 hours.

Students who complete this major must also complete the Middle Level Education Dual Major – Teaching. This major is for students who wish to teach at the middle school level. Students will complete subject area concentrations in science and up to three other subject area concentrations including Language Arts, Mathematics, and/or Social Studies. This major fulfills the following endorsements: Basic Science (5-12), Middle School Science (5-8) and one other Middle School subject (5-8) including Language Arts, Mathematics, or Social Studies.

The Middle-Level Science Teaching (Dual) major is waived from the 10-hour upper level requirement.

Biology:		
BIOL 2051	General Biology: Organismal Diversity	4
BIOL 2052	General Biology: Cell Structure and Function	4
Chemistry and Biochemistry:		
CHEM 1110	General Chemistry I	4
CHEM 1120	General Chemistry II *	4
Earth Science:		
EARTHSCI 1200	Elements of Weather	3
EARTHSCI 1210	Elements of Weather Laboratory	1
EARTHSCI 1300	Introduction to Geology	4
Physics:		
PHYSICS 1511	General Physics I	4
PHYSICS 1512	General Physics II	4
Total Hours		**32**

* Students with excellent preparation in chemistry may substitute CHEM 1130 plus 3 hours of additional credit hours in chemistry electives for CHEM 1110 and CHEM 1120.

For completion of this major the grade point average in each of the four science disciplines must be a minimum of 2.00, with a 2.50 GPA in the major as a whole.

Notes:

The mathematics prerequisite for one or more of the above courses is a working knowledge of algebra and trigonometry or MATH 1130 or MATH 1140 .

Professional Experiences

Required:		
EDUC 2385	Teaching Methods l: Secondary Science *, **	3
EDUC 2485	Teaching Internship l: Secondary Science	3
EDUC 3585/5585	Teaching Methods ll: Secondary Science *	3
EDUC 3685/5685	Teaching Internship ll: Secondary Science	3
EDUC 4137	Middle School/Junior High Teaching	12
Total Hours		**24**

* A grade of C (2.00) or higher is required for all Methods courses.
** Middle Level Science Teaching (Dual) majors can count EDUC 2385 Teaching Methods l: Secondary Science for category 5 of Educator Essentials.

Educator Essentials

Required: *		
Select one of the following in each category:		
Category 1: The Learner		**3**
EDPSYCH 1500	Reflections on Learning	
EDPSYCH 2068	Development and Learning in Sociocultural Contexts	
EDPSYCH 2100	Creativity and Higher Order Thinking in the Classroom	
SOCFOUND 2243	Rethinking the Learning Society: Education and Its Future(s)	
Category 2: Social Contexts of Learning		**3**
SOCFOUND 2119	Social & Cultural Foundations of Education	
SOCFOUND 2134	A Modern History of Education in the United States	
SOCFOUND 2334	Education Policy and Politics of Education	
TESOL 2015	Language Today	
Category 3: Education for All		**3**
KINES 4152	Adapted Physical Education	
SOCFOUND 3334	Education, Power, and Change	
SOCFOUND 3434	Social Movements and Education	

SPIE 3140	Interdisciplinary and Intersectional Study of Education for All	
SPIE 3150	Meeting the Needs of Diverse Learners in Classrooms	
TESOL 3710	Content Area Strategies for English Language Learners	
Category 4: The Classroom Environment		**3**
EDPSYCH 3200	Deeper Motivation and the Highly Engaged Classroom	
EDPSYCH 3300	Level Up: Gamified Learning Environments	
ECIE 4151	Early Childhood Curriculum Development and Organization	
RTNL 3360	Playful Learning and Project-Based Experiences: Techniques for Ed and Recreational Environments	
SOCFOUND 3219	Critical Perspectives on Technology and Education	
Category 5: Effective Pedagogy		**3**
ARTED 4600	Expressive Learning Assessment	
LRNTECH 3600	Technology, Pedagogy, and Learning in the Digital Age	
MEASRES 3510	Assessment for Learning	
TEACHING 3500	Effective Teaching through Differentiation, Technology and Assessment	
Category 6: The Professional Educator		**3**
ECIE 3149	Child, Family, School and Community Relationships	
SOCFOUND 3519	Teacher Leadership & Educational Change	
TEACHING 3177	Collaborative Partnerships for Educators	
Total Hours		**18**

* A grade of C (2.00) or higher is required in each Educator Essentials course.

Four-Year Plan

Middle Level Science Teaching (Dual), B.A.

Students who complete this major must also complete the Middle Level Education Dual Major – Teaching.

This is a sample plan of study with a suggested sequencing of classes for the major. University electives may be applied to earn additional academic majors, minors, or certificates. Students should regularly meet with their academic advisor to plan their specific semester schedule to include UNIFI/General Education program and/or university elective hours required.

Course	Title	Hour
Freshman		
Fall		
BIOL 2051	General Biology: Organismal Diversity	4
CHEM 1110	General Chemistry I	4
UNIFI/General Education or University Electives		6
	Hours	**14**
Spring		
BIOL 2052	General Biology: Cell Structure and Function	4
CHEM 1120	General Chemistry II	4
Educator Essentials Course		3
UNIFI/General Education or University Electives		3
	Hours	**14**
Sophomore		
Fall		
PHYSICS 1511	General Physics I	4
EARTHSCI 1200	Elements of Weather	3
EARTHSCI 1210	Elements of Weather Laboratory	1
Educator Essentials Course		3
UNIFI/General Education or University Electives		3
Concentration Course		3
	Hours	**17**
Spring		
PHYSICS 1512	General Physics II	4
EDUC 2385	Teaching Methods l: Secondary Science	3
EDUC 2485	Teaching Internship l: Secondary Science	3
Educator Essentials Course		3
UNIFI/General Education or University Electives		3
	Hours	**16**
Junior		
Fall		
EARTHSCI 1300	Introduction to Geology	4
EDPSYCH 4152/5152	Development of the Middle School Aged Child	3
LITED 4117/5117	Methods of Teaching Content Literacy at the Middle and Secondary Levels	3
Educator Essentials Course		3
Concentration Course		3
	Hours	**16**
Spring		
EDPSYCH 4151/5151	Approaches to Classroom Management for Secondary Students	3
ELEMECML 4152/5152	The Nature of Middle School	3
Concentration Course		3
UNIFI/General Education or University Electives		7
	Hours	**16**
Senior		
Fall		
EDUC 3585/5585	Teaching Methods ll: Secondary Science	3
EDUC 3685/5685	Teaching Internship ll: Secondary Science	3
UNIFI/General Education or University Electives		6
Educator Essentials Course		3
	Hours	**15**

Spring		
EDUC 4137	Middle School/Junior High Teaching	12
	Hours	**12**
	Total Hours	**120**

This major requires students to complete the requirements for an endorsement in a second Middle School Subject (5-8) that may include: 1821-Middle School Language Arts, 1822-Middle School Mathematics, or 1824-Middle School Social Studies (5-8). Required courses for these endorsements include the following with many of the required courses counting toward UNIFI/General Education requirements*:

1821-Middle School Language Arts (5-8)

ENGLISH 1005	College Writing and Research *	3
COMM 1000	Oral Communication *	3
ENGLISH 2520	Multicultural Literature *	3
ENGLISH 3940/5940	Literature for Young Adults	3

1822-Middle School Mathematics (5-8)

Math course options:		12
Any MATH course, including one course from MATH 1100, MATH 1140, MATH 1420, MATH 3211, MATH 4500/5500		
STAT 1772	Introduction to Statistical Methods *	

1824-Middle School Social Studies (5-8)

HIST 1210	Making the Modern World	3
GEOG 1120	Peoples, Cultures, and Environments *	3
HIST 1110	United States History to the Civil War and Emancipation	3
or HIST 1120	United States History since the Civil War and Emancipation	
POLSCI 1014	Power & Politics in the U.S.	3

Learning Outcomes

Middle Level Science Teaching (Dual), B.A.

Goal 1: Demonstrate Knowledge of Science and Scientific Practices

Outcome:

- **1.1.** Students will demonstrate an understanding of science content and scientific practices to advance student learning in a secondary science classroom.

Goal 2: Demonstrate Knowledge and Pedagogical Practices for Teaching Science

Outcomes:

- **2.1.** Students will design instruction that have clear and challenging objectives with assessments in alignment with those objectives that actively engages students in science and science practices as recommended by national and state standards.
- **2.2.** Students will implement effective teaching practices based on research and national and state standards including the use of technology to address the needs and advance learning of all students in a science classroom.

Goal 3: Demonstrate Professional Growth as a Science Teacher

Outcome:

- **3.1.** Engage in relevant activities and reflective practices that lead to professional growth and life-long learning.

Related Programs

- Biology - Teaching Minor
- Middle Level Education Dual Major - Teaching B.A.