INTEGRATED MATHEMATICS EDUCATION (GRADES 7-12)

KEY POINTS ABOUT THE MAJOR

- **Prepares students for a career teaching high school mathematics.**
- **Major leads to licensure.**
- **Students learn to communicate mathematical ideas in written and oral forms.**
- **Problem-solving skills are used in a variety of situations.**

"Increasingly, today's mathematician needs to be a good communicator, to understand how to mathematically model various real-life situations and to have a broader educational background as they respond to career challenges in today's changing job market. Majoring in mathematics grounded in the liberal arts tradition gives students the preparation to meet these challenges."

—Shannon C. Markiewicz, Ph.D., Assistant Professor of Mathematics

OHIO DOMINICAN UNIVERSITY™

Sample Four-Year Plan

The course plan below is a sample plan for your major. It does not and should not replace meeting with your Academic Advisor to map the best course plans that suit your individual academic needs and placement upon initial registration. Classes listed may not necessarily be offered during a particular term.

First Year (Freshman)

Fall Semester		Spring Semester	
ENG 110 College Writing I	3	ENG III College Writing II	3
Freshman Core Seminar 179	3	MTH 241 Calculus II	4
MTH 240 Calculus I	4	Social and Behavioral Science Elective	3
CIS 150 Programming in C/C++	3	Theology or Philosophy Elective*	3
Elective*	3	EDU 112 Introduction to Teaching: AYA	3

Second Year (Sophomore)

Fall Semester		Spring Semester	
MTH 242 Multivariable Calculus (odd years)	4 or 3	MTH 350 Linear Algebra	3
or MTH 270 Mathematical Statistics (even years)		EDU 314 Content Area Reading	3
MTH 300 Foundations in Mathematics	3	Arts and Ideas Requirement	3
Sophomore Core Seminar 279	3	Language Requirement	3
PHY 219 General Physics I	4	Elective*	3
EDU 220 Educational Psychology	3		

Third Year (Junior)

Fall Semester		Spring Semester	
MTH 242 Multivariable Calculus (odd years)	4 or 3	Social and Behavioral Science Requirement	3
or MTH 270 Mathematical Statistics (even years)		MTH 460 Geometry	3
EDU 379A Junior Core Seminar: Principles of Education	3	Elective*	3
Theology or Philosophy Requirement**	3	Theology Elective*	3
Arts and Ideas Requirement**	3	Philosophy Elective*	3
Elective*	3		

Fourth Year (Senior)

Fall Semester		Spring Semester	
EDU 346 AYA and Multi-Age Methods	3	EDU 488 Teaching Seminar: AYA	1
MTH 450 Abstract Algebra	3	EDU 487 Supervised Teaching: AYA	12
Arts and Ideas Requirement	3		
MTH/CIS 479 Senior Core Seminar	3		
MTH 352 Mathematics Teaching Methods	3		

**At least one Theology and one Philosophy course must be at the 200 level or higher.*

***Diversity requirement will be fulfilled with this course.*

For More Information

Full descriptions for all ODU courses are available on the ODU website. Core curriculum and four-year course blueprint are based on the 2012-2013 edition of the ODU Course Catalog.

For more information, contact your Admission Counselor or Academic Advisor at 614.251.4500 or at admissions@ohiodominican.edu.

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COURSES WITHIN THE MAJOR

- **Calculus I and II**
- **Linear Algebra**
- **Geometry**
- **Foundations of Mathematics**
- **Educational Psychology**
- **Physics**
- **Programming in C/C++**
- **Mathematics Teaching Methods**
- **Principles of Education**

"Ohio Dominican University is blessed with an outstanding Math department. Our Math faculty are not only highly skilled but highly effective in transferring their skills to their students. Our Math faculty are very approachable and make themselves available to help students in the learning process. Math classes are a more intimate size than found in large state schools, which allows for more individualized help."

— Ken George, ODU Graduate 2009

Program Overview

Students majoring in Integrated Mathematics receive a solid foundation in mathematics with courses ranging from the calculus sequence to mathematical statistics and abstract algebra. Advanced courses in linear algebra and geometry as well as a mathematics teaching methods course fill out the mathematics requirement. Students also will take a variety of education courses covering education psychology, content area, and student teaching and principles of education. This major prepares students for a teaching career at the secondary school level and leads to licensure.

Why ODU?

- By preparing students to teach Mathematics at the secondary school level, the program is designed to aid students in discovering mathematical problems.
- Students go through a comprehensive 76 credit hour extensive Mathematics and Education curriculum.
- Stilled Academic Advisors in Mathematics and Education provide personal attention and guidance.

Field Experience and Research

Students complete hands-on clinical and field-based experiences before they begin student teaching.

ODU Education students complete their field experience and student teaching in a diverse group of settings, preparing them to teach in both public and private high schools.

Career Possibilities

Students benefit from the annual Education Interview Day job fair event where area school districts are invited to campus to interview potential teachers. This degree prepares students for licensure in teaching Mathematics at the secondary school level.

The flexibility of a liberal arts degree ensures students in this major will have strong communication skills. When combined with the solid mathematics background, students who choose this major may find employment opportunities in a wide range of areas, including banking, insurance, health care, marketing, government and nonprofit organizations.

On-Campus Opportunities

ODU students majoring in Integrated Mathematics are active in Kappa Delta Pi and Math Club, which are campus and national student organizations. Through these organizations, students are active in the community and in their academic area of interest, allowing them to gain marketable experience. Majors can also participate in tutoring in the Math Lab and collaborate with faculty on projects.

For More Information About the Integrated Mathematics Education Program

Contact Dr. Theresa Holleran, Chair of the Division of Mathematics, Computer and Natural Sciences, at hollerat@ohiodominican.edu to learn more about the Integrated Mathematics program and/or any of the other programs in this division such as Mathematics, Biology, Chemistry, Environmental Science and Computer Information Systems.