# MATHEMATICS



The Department of Mathematics provides programs of the highest quality leading to bachelor's degrees in mathematics and master's degrees in secondary mathematics education. The department has a strong commitment to excellence in teaching and offers a wide range of courses in pure and applied mathematics, statistics and mathematics education.

# DEGREES/CONCENTRATIONS

#### BACHELOR OF ARTS IN MATHEMATICS (B.A.)

The B.A. degree program in mathematics is a flexible curriculum designed to accommodate the widest possible range of career objectives. It is structured according to the traditional liberal arts approach to college education. The second semester of a foreign language is required.

#### BACHELOR OF SCIENCE (B.S.)

The B.S. degree program differs from the B.A. degree program in that it is more specifically application-oriented, requiring a greater concentration in mathematical analysis and science.

#### BACHELOR OF SCIENCE IN EDUCATION (B.S.E.)

Combine your interests in mathematics and teaching with this four-year program. Pennsylvania's extremely high standards for teacher preparation equip Millersville graduates to be highly successful teachers both regionally and nationally.

# **OPTIONS IN MATHEMATICS**

#### ACTUARIAL SCIENCE

The Actuarial Science option is designed to prepare students for a career as an actuary. Students successfully completing the option will be prepared to take the first examination administered by the Society of Actuaries. Students enrolled in any of the B.A., B.S. or B.S.E. programs may complete the Actuarial Science option.

#### APPLIED MATHEMATICS

The Applied Mathematics option is designed to give students a focus in those areas of mathematics used most often in industry. The program is designed to prepare students for jobs applying mathematics to other fields or for graduate study in mathematics.

#### STATISTICS

The Statistics option is intended to prepare students for work as statisticians as well as for graduate study in statistics. Students enrolled in any of the B.A., B.S. or B.S.E. programs may complete the Statistics option by including additional courses among the courses taken to fulfill their major.

### **COMMON MINORS WITH MATH**

- Computer Science
- FinancePhysics
- EconomicsMeteorology
- Technical Economics
- CAREERS
- Careers in Industry: statistician, operations research, traditional applied math, management, computational and numerical modeling
- Mathematicians in Government Agencies
- Actuarial Profession
- Teaching Mathematics
- Mathematics in Medicine



# Millersville University

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# **FACILITIES**

The Department of Mathematics is housed in Wickersham Hall, which was completely renovated in 2006, designed to meet the needs of our mathematics students. Wickersham represents one-stop shopping for mathematics, with all mathematics classrooms and faculty offices located there. The facility also boasts a large, state-of-the-art computer lab, dedicated mathematics tutoring center and student study areas. Our classrooms are all equipped with the latest in teaching technology.

#### **Mathematics Assistance Center**

The student-staffed Mathematics Assistance Center (MAC) is our tutoring center, providing free drop-in tutoring for mathematics courses, from introductory mathematics and statistics courses through the calculus sequence. The MAC operates during both daytime and evening hours.

# **CLUBS & ACTIVITIES**

#### **Mathematics Department Picnic**

Get to know the faculty in the math department at the annual picnic. This event is held every fall on the Wickersham Green. All students taking math classes are invited to play games such as volleyball and washer toss with professors and other math students.

#### **Math Colloquium**

The math colloquium is co-hosted by Millersville University and Franklin & Marshall College. Most Thursdays there will be a mathematics colloquium talk either at Millersville University or at Franklin & Marshall College. These colloquium talks may be given by visiting speakers or MU/F&M faculty or students, and are open to all interested students and faculty.

#### **Tetrahedral Geometry/Topology**

The Tetrahedral Geometry/Topology Seminar (TGTS) is sponsored jointly by Millersville University, Elizabethtown, Franklin & Marshall, and Lebanon Valley colleges. TGTS typically meets at 4:30 p.m. on the first Friday of each month during the regular semester at Hempfield High School in Landisville, Pa. About half of the speakers are faculty members at one of the four sponsoring institutions.

#### **Mathematics Honors & Awards Banquet**

Every spring the Department of Mathematics holds a banquet to celebrate the winners of the departmental awards, and also to recognize our graduating seniors.

#### **Mathematics Convocation**

Highly regarded as a "must-attend" event by our graduates, the mathematics convocation is a department-sponsored professional gathering held each fall for all mathematics majors. This special event showcases some of our alumni, who come back to share their wisdom and experiences with current students. Following a delicious dinner, our current majors break up into groups based on their specialized interests and actively participate in a Q&A with our guests.

#### **Math Club**

The math club is a student organization planned and coordinated by the mathematics students and faculty. Activities are scheduled according to the level of student interest and supported by members of the mathematics faculty.

#### MEMU (Mathematics Educators at Millersville University) Affiliate

Mathematics Educators at Millersville University (MEMU) was created to foster student interest and participation in teaching mathematics (K-12) as a career option. MEMU meets monthly during the fall and spring semesters to discuss relevant issues in teaching and learning mathematics, to plan and facilitate a math fair for a school, and to coordinate efforts to participate in local and statewide activities related to future mathematics teachers.

## **INTERNSHIP OPPORTUNITIES**

Mathematics majors have opportunities to gain valuable experience applying their skills in "real world" working environments in local businesses or on campus being mentored by a faculty member and a site supervisor. Examples of recent internship placements include Capital Blue Cross in Harrisburg, Contribution Health Inc. in Lancaster and the Millersville University Office of Planning and Assessment. Internship opportunities are available during the summer months as well as during the academic year, when students tailor their class schedules to fit around their internship experience.

### STUDENT RESEARCH OPPORTUNITIES

Many mathematics majors complete independent research projects, working one-on-one with a mathematics professor. These are often completed as part of a student's senior honors thesis for either departmental honors or as part of their University's Honors College requirements. Other students complete research projects because of their interest in the topic and for the experience of conducting independent research. Our students frequently present the results of their research at regional or national conferences and on many occasions have won awards for their work.

# FACULTY

#### A broad range of mathematics experts

Our faculty has diverse interests in pure and applied mathematics, statistics and mathematics education. This is no accident and means that every advanced mathematics course will be taught by an expert in that specific area of mathematics, statistics or mathematics education. While many universities are content to offer advanced mathematics courses taught by faculty who simply have a general knowledge of the field, this is never the case at Millersville.

#### Dedicated, highly qualified faculty

All mathematics courses for our majors are taught by one of our 21 full-time, dedicated mathematics professors, all of whom hold a doctoral degree. While our faculty members are highly engaged in scholarly activities in their field, our first priority is to deliver high-quality instruction to our undergraduates, in every course, every day. In short, our teaching always comes first.



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