Mathematics – BA or BS

**General summary:** Mathematics is a challenging but an engaging discipline because it trains the mind in critical and logical thinking. It challenges the intuition and stretches the imagination. Its mastery is central to the natural sciences and figures prominently in many of the social sciences. Because it trains one to think logically, mathematics provides an excellent preparation for any career field - technical or non-technical.

**Average number of majors graduating per year:** 12

**Percentage of students desiring graduate school accepted within 2 years of graduation:** 100%. In the past five years, we have sent students to masters and Ph.D. degree graduate programs at UMass, Michigan State, North Carolina State, Notre Dame, Johns Hopkins, Vanderbilt, Ohio State, Miami of Ohio, Wesleyan University, and George Washington University.

**Strengths of the department/program:**

1. Our Bachelor of Arts major is unique in that it allows the student to choose one of three “tracks”. The pure math track prepares the student for the abstract thinking necessary for teaching, graduate school, or professional mathematics. The applied math track gives students the skills to solve problems using technology needed for jobs in industry. A student graduating from the statistics track will have the ability to analyze data and the skills for graduate work in statistics or jobs such as an actuary.

2. The mathematics major is housed in a joint department with Computer Science and Statistics, and coursework in these disciplines is required for our major. This allows students to add breadth to their major and provides for cross-disciplinary research opportunities, senior theses, internships, etc.

3. The wide variety of programs we offer means that we are a good addition to many other majors (either as a double major or major/Minor).

4. We provide excellent teacher preparation. In the last 7 years, 100% of our majors passed their PRAXIS certification tests, with 44% scoring in the top quartile.

5. Our department is proud of the close community formed between faculty and majors.

**Associated major/minor programs:** There are 10 programs offered in our department, and all are related. They are:

- Two BS Majors (Mathematics, Computer Science)
- Four BA Majors (Computer Science, three different tracks in Mathematics)
- Four Minors (Mathematics, Statistics, Computational Science, Computer Science).

**Student opportunities to participate in:**

- Internships:
  - There are multiple possibilities for internships with many made possible by our proximity to Wright Patterson Air Force Base and the Nextedge Technology Park.
• Research experience:
  o There are many opportunities for students participate in research projects here and on other campuses. In the last five years, students have conducted mathematical research at Wittenberg, Louisiana State, Trinity University, Mount Holyoke, North Carolina State, Texas A&M, University of Nebraska, and Northern Kentucky University.
  o Our students have presented their research at regional conferences at Ashland University, Kent State University, Bowling Green University, the University of Dayton, the College of Wooster and Oberlin College, and national conferences in Washington D.C., San Francisco, Ohio State, and Pittsburgh.

• Field experience:
  o Students that intend to become high school teachers will spend one semester teaching in the area schools.
  o Students in our statistics track can spend a semester consulting with area businesses.

• Study abroad experience:
  o Within the last five years we have had students spend entire semesters abroad in Germany, Greece, and at a mathematics intensive program in Budapest, Hungary.

• Service learning:
  o Some of our majors intern with the Center for Civic and Urban Engagement, consulting with area non-profits.

What can my child do with a degree in this field? While many departments espouse the wide variety of options that open with their majors, we genuinely feel that no door is ever shut with a math major. Your student may not be doing calculus in their job, but they will be analyzing data, solving problems, and applying their Wittenberg education to many situations. Employers know that a math major is smart, trainable, and dedicated. Here are just a few of the wide variety of jobs that our Wittenberg math alumni currently hold:

- Systems Administrator
- Radiation Safety Officer
- Telecom Manager
- Geologist
- Senior Sales Specialist
- Social Worker
- Financial Analyst
- Marketing
- Budget Counselor
- Field Auditor
- Operations Research Analyst
- Actuary
- Inventory Pricing Specialist
- High School Teacher
- Journalist
- Investment Banking
- Banker
- Professor
- Electrical Engineer
- Housing Economist
- Telecommunications Manager

A math major is also excellent preparation for professional programs. Mathematics majors score higher than any other majors on the LSAT and GMAT, and are among the highest on the MCAT. Multiple studies have also shown that taking more mathematics classes will equate to more income, regardless of your major.

Successful professional outcomes: Please see our department newsletter at http://www4.wittenberg.edu/academics/mathcomp/newsletter/ for a continuously updated list of our alumni. Or contact Adam Parker (aparker@wittenberg.edu) for a copy.