Applied Mathematics for Life and Social Sciences, BS

Do you enjoy math and both the life and social sciences? Would you like to solve real-world problems? You can combine all your interests and be part of a new scientific movement that revolutionizes the ways we manage natural resources, respond to epidemics and educate the next generation of scientists.

Program Description

The BS in applied mathematics for the life and social sciences offers a challenging and exciting curriculum that investigates and integrates complex areas of the physical, life and social sciences while preparing a new generation skilled in the use of theories and techniques such as mathematical modeling and computational methods to solve practical real-world problems.

The program focuses on the development of critical-thinking skills and purposeful competencies in mathematics. It instills an appreciation for the contributions of mathematics to the fields of sciences, engineering, business, government and economics. Coursework is directed toward an understanding of mathematical theory and its relation to other fields of studies. Emphasis is placed on precision of definition, reasoning to accurate conclusions, and analyzing and developing solutions to problems using mathematical principles.

At a Glance

- **College/School:** The College of Liberal Arts and Sciences
- **Location:** Tempe campus

- **Additional Program Fee:** Yes
- **Second Language Requirement:** No
- **First Required Math Course:** MAT 270 - Calculus w/Analytic Geometry I
- **Math Intensity:** Substantial
Required Courses (Major Map)

2019 - 2020 Major Map
Major Map (Archives)

Admission Requirements

General University Admission Requirements:

All students are required to meet general university admission requirements.

Freshman | Transfer | International | Readmission

Change of Major Requirements

A current ASU student has no additional requirements for changing majors.

Students should refer to https://changingmajors.asu.edu/request for information about how to change a major to this program.

Transfer Options

ASU is committed to helping students thrive by offering tools that allow personalization of the transfer path to ASU. Students may use the Transfer Map search to outline a list of recommended courses to take prior to transfer.

ASU has transfer partnerships in Arizona and across the country to create a simplified transfer experience for students. These pathway programs include exclusive benefits, tools and resources, and help students save time and money in their college journey. Students may learn more about these programs by visiting the admission site: https://admission.asu.edu/transfer/pathway-programs.

Global Opportunities

Global Experience
With over 250 programs in more than 65 countries (ranging from one week to one year), study abroad is possible for all ASU students wishing to gain global skills and knowledge in preparation for a 21st-century career. Students earn ASU credit for completed courses, while staying on track for graduation, and may apply financial aid and scholarships toward program costs. [https://mystudyabroad.asu.edu/](https://mystudyabroad.asu.edu/)

The College of Liberal Arts and Sciences recommends the following study abroad programs for students majoring in applied mathematics for life and social science: [http://links.asu.edu/SAO.applied-mathematics](http://links.asu.edu/SAO.applied-mathematics).

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**Career Opportunities**

The bachelor's degree program in applied mathematics for the life and social sciences prepares students to enter the environmental, life, health, mathematical and social science fields. Graduates of the program possess the quantitative, scientific and analytical skills that are critical for professionals working in these areas.

The need for scientists and professionals quantitatively trained in the life and social sciences is strong in Arizona and the nation. This degree's applied use of mathematics, modeling, statistics and simulation methodologies are in high demand and provide excellent training for future academics and professionals in industries including:

- astrophysics
- biostatistics
- chemical engineering
- communications
- computational biology
- computer animation
- data mining
- demography
- digital and medical imaging
- e-commerce
- education
- forensics
- genomics
- informatics and complex systems research
- materials science
- neuroscience
- pharmaceutical engineering
- political science
• public health
• risk management
• security and military
• social network analysis

Career examples include but are not limited to those shown in the following list. Advanced degrees or certifications may be required for academic or clinical positions.

<table>
<thead>
<tr>
<th>Career</th>
<th>*Growth</th>
<th>*Median Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actuary (Financial Risk Analyst)</td>
<td>22.5%</td>
<td>$101,560</td>
</tr>
<tr>
<td>Clinical Trial Manager</td>
<td>9.9%</td>
<td>$118,970</td>
</tr>
<tr>
<td>Health Sciences Manager</td>
<td>9.9%</td>
<td>$118,970</td>
</tr>
<tr>
<td>High School Teacher</td>
<td>7.5%</td>
<td>$59,170</td>
</tr>
<tr>
<td>Mathematical Science Assistant</td>
<td>11.0%</td>
<td>not available</td>
</tr>
<tr>
<td>Mathematical Technician</td>
<td>7.8%</td>
<td>not available</td>
</tr>
<tr>
<td>Mathematician</td>
<td>29.7%</td>
<td>$103,010</td>
</tr>
<tr>
<td>Mathematics Professor</td>
<td>9.2%</td>
<td>$70,910</td>
</tr>
<tr>
<td>Statistician</td>
<td>33.8%</td>
<td>$84,060</td>
</tr>
</tbody>
</table>

* Data obtained from the Occupational Information Network (O*NET) under sponsorship of the U.S. Department of Labor/Employment and Training Administration (USDOL/ETA).

☀ Bright Outlook  🌿 Green Occupation

**Contact Information**

Schedule an advisor appointment  
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