Microbiology (Medical Microbiology), BS

Is medical school or another health-related career your goal? In our medical microbiology program, you'll study bioethics, cell biology and immunology --- all applicable to the changing world of medicine. Develop critical-thinking skills and competencies important in the biomedical sciences and prepare for advanced education in a variety of health careers.

Program Description

The medical microbiology concentration serves students in the BS in microbiology degree program who aim to pursue careers in health professions, medical microbiology or biomedical research.

The curriculum aligns with the scientific competencies recommended for premedical students in a report of the American Medical Colleges and the Howard Hughes Medical Institute Committee and are also reflected in the 2015 changes to the MCAT. Coursework includes many of the courses in the microbiology major, including chemistry, biochemistry, math and physics, with some microbiology courses replaced by cell biology, animal physiology and courses that relate to human biology and society to emphasize core concepts, competencies and critical intellectual skills necessary to succeed in medical school or biomedical research. The concentration includes coursework that students need to prepare for the MCAT or medical school admission.

This program is available as an accelerated degree program. Students can visit this website to learn more about accelerated degree programs: [https://sols.asu.edu/degree-programs/accelerated-bachelor-master-science](https://sols.asu.edu/degree-programs/accelerated-bachelor-master-science).

Due to the high volume of overlap in curriculum, students enrolled in a BS degree in the School of Life Sciences may be restricted from declaring a concurrent degree within the school. Students should speak with their academic advisor for any further questions.

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 251 - Calculus for Life Sciences or MAT 270 Calculus with Analytical Geometry I
• **Math Intensity:** Moderate

**Required Courses (Major Map)**

2020 - 2021 Major Map
Major Map (Archives)

**Accelerated Program Options**

This program allows students to obtain both a bachelor's and master's degree in as little as five years. It is offered as an accelerated bachelor's and master's degree with:

- Biology, MS
- Global Management, MGM
- Microbiology, MS

Acceptance to the graduate program requires a separate application. During their junior year, eligible students will be advised by their academic departments to apply.

**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://changemajor.apps.asu.edu](https://changemajor.apps.asu.edu) 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 MyPath2ASU™ 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
Students enhance their resumes and gain valuable experience through studying abroad. With over 250 programs available, study abroad allows students to tailor their experience to their unique interests and skillsets. Students pursuing a medical microbiology concentration are able to expand their knowledge of how human biology is impacted by a variety of societies and cultures, and challenge themselves to adapt and persevere in a new and exciting culture. https://mystudyabroad.asu.edu/

Career Opportunities

Graduates of the bachelor's degree program in microbiology with a concentration in medical microbiology have fulfilled the majority of prerequisite requirements and mastered many of the competencies valued by graduate programs in medical, dental and optometry fields and by programs which prepare students to be physician assistants or physical therapists. Additionally, graduates of this program have a practical understanding of the process of science, preparing them for a career in research. They have knowledge of foundational concepts in biological sciences, chemistry, physics and statistics as well as the ability to understand and apply core microbiology concepts. They are prepared to enter research in a number of areas including but not limited to cellular biology, immunology, bacteriology and virology.

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>Cytotechnologist</td>
<td>11.5%</td>
<td>not available</td>
</tr>
<tr>
<td>Dentist</td>
<td>19.4%</td>
<td>$151,440</td>
</tr>
<tr>
<td>Histotechnologist and Histologic Technician</td>
<td>11.5%</td>
<td>not available</td>
</tr>
<tr>
<td>Laboratory Technologist</td>
<td>11.5%</td>
<td>not available</td>
</tr>
<tr>
<td>Medical Doctor (MD)</td>
<td>14.6%</td>
<td>$192,930</td>
</tr>
<tr>
<td>Occupation</td>
<td>Growth Rate</td>
<td>Average Salary</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Microbiologist</td>
<td>8.2%</td>
<td>$69,960</td>
</tr>
<tr>
<td>Optometrists</td>
<td>17.9%</td>
<td>$110,300</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>5.6%</td>
<td>$124,170</td>
</tr>
<tr>
<td>Physician Assistant (PA)</td>
<td>37.3%</td>
<td>$104,860</td>
</tr>
<tr>
<td>Surgeon</td>
<td>14.4%</td>
<td>#</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  ⓻ Green Occupation

### Contact Information

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