# STRATEGIES

**Basic**
- Bachelor's degree in biochemistry, biology, or chemistry qualifies one for laboratory technician or research assistant positions.
- Choose courses with laboratory work.
- Get on the job experience in a laboratory and/or complete a senior research project.
- Complete a certificate training program, usually one year, to learn specialized laboratory techniques.
- Take a course in grant writing.
- Earn master's degree in biochemistry for better positions, advancement opportunities, more responsibility and higher pay.
- Obtain Ph.D. to direct research projects and lead research teams.

**Applied**

**Medical**

**Grant Writing**

**Administration**

**University laboratories**
- Federal government laboratories/agencies including:
  - National Science Foundation
  - National Institutes of Health
  - Food and Drug Administration
  - Environmental Protection Agency
  - Department of Agriculture
  - Armed Services
- State and local government laboratories/agencies
- Public health departments
- Hospital laboratories
- Commercial medical laboratories
- Private testing laboratories including forensics
- Independent research foundations
- Industry laboratories:
  - Pharmaceutical companies
  - Biotechnology firms
  - Food processors
  - Cosmetic manufacturers
  - Chemical and petroleum industries
  - Agricultural industry

**ELEMENTS**

**Elementary**

**Secondary**

**Post-secondary**

**TEACHING**
- Public and private elementary, middle, and high schools
- Two-year community colleges/technical institutes
- Four-year institutions
- Medical schools

- Complete an accredited teacher preparation program for certification/licensure in biology and/or chemistry.
- Ph.D. required for college or university teaching.
- Some teaching positions in two-year institutions may be available for those with a master's degree.
- Prepare to attend graduate school by maintaining a high grade point average and securing strong faculty recommendations.
- Serve as a tutor for high school or college students.
- Learn to communicate effectively.
### Employers

<table>
<thead>
<tr>
<th>Areas</th>
<th>Employers</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Healthcare</strong></td>
<td>Hospitals</td>
<td>Plan on attending medical school or other related graduate program.</td>
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<tr>
<td>Medicine</td>
<td>Medical centers</td>
<td>Maintain an outstanding grade point average, particularly in the sciences.</td>
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<tr>
<td>Dentistry</td>
<td>Nursing homes</td>
<td>Secure strong faculty recommendations.</td>
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<tr>
<td>Optometry</td>
<td>Private practice</td>
<td>Meet with a pre-health advisor periodically.</td>
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<tr>
<td>Podiatry</td>
<td></td>
<td>Join related student organizations. Demonstrate leadership abilities.</td>
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<tr>
<td>Veterinary Medicine</td>
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<td>Volunteer to work in a hospital or healthcare setting.</td>
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<tr>
<td>Pharmacy</td>
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<td>Find a summer job or internship in a hospital.</td>
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<td>Allied Health</td>
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<td>Develop a back up plan in case medical/graduate school admission is denied.</td>
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<td>Occupational Therapy</td>
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<td>Consider alternative but related careers such as physician assistants.</td>
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<tr>
<td>Physical Therapy</td>
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<td>Research all of the various fields within medicine to determine a particular career goal.</td>
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### Other Professional Opportunities

<table>
<thead>
<tr>
<th>Areas</th>
<th>Biotechnology industry</th>
<th>Strategies</th>
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</thead>
<tbody>
<tr>
<td>Sales/Marketing</td>
<td>Pharmaceutical and chemical companies</td>
<td>For sales positions, gain sales experience through internships, part-time work, or summer jobs.</td>
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<tr>
<td>Technical Writing</td>
<td>Publishers:</td>
<td>Take business and/or computer classes.</td>
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<tr>
<td>Scientific Journalism</td>
<td>textbook, magazine, newspaper, book</td>
<td>Become familiar with desktop publishing and other software packages.</td>
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<td>Scientific Illustration</td>
<td>Software firms</td>
<td>Develop strong written and oral communication skills.</td>
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<tr>
<td>Regulatory Affairs</td>
<td>Regulatory agencies</td>
<td>Get experience writing for a school or local newspaper.</td>
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<tr>
<td>Administration/Management</td>
<td>Search firms</td>
<td>Obtain an MBA or Ph.D. to reach high levels of administration.</td>
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<tr>
<td>Scientific/Technical Recruiting</td>
<td>Law firms</td>
<td>Plan on attending law school if interested in law.</td>
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<tr>
<td>Intellectual Property/Patent Law</td>
<td>Legal departments of corporations</td>
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</table>
GENERAL INFORMATION

- As an undergraduate, seek laboratory experiences such as research projects, volunteering with professors, summer jobs, or internships.
- Participate in research programs sponsored by organizations like the National Science Foundation and the National Institutes of Health.
- Consider a certificate program or specialized master's program to qualify for research technician positions.
- Earn master's degree for greater variety and autonomy on the job.
- Earn a Ph.D. to work on high-level research projects, to direct research programs, to enter high levels of administration, and to teach at four-year post-secondary institutions. Postdoctoral fellowships may also be required.
- Learn to work independently and as part of a team.
- Develop the ability to communicate clearly.
- Gain competencies in computers and mathematics.
- Read scientific journals and join related professional organizations.
- Combine an undergraduate degree in biochemistry with a degree in law, computer programming, business, education, information science, or other discipline to expand career opportunities.