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# *What Can I Do with a Major in* **Biology**

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## **How to use this guide**

DePaul's [Career Roadmap](#) was designed to help students and alumni navigate the career development process by describing the Career Center's services and resources as they relate to four steps: Know Yourself, Explore and Choose Options, Gain Knowledge and Experience, and Putting it all Together. This major guide uses the same four steps to help you explore and consider the possibility of pursuing a degree in biology:

**Step 1** *Know Yourself*: Helps you explore whether this field suits your interests, skills, and values.

**Step 2** *Explore and Choose Options*: Provides you with information about the major and occupations related to it.

**Step 3** *Gain Knowledge and Experience*: Teaches you how to gain relevant knowledge and experience for your occupational interest.

**Step 4** *Putting It All Together*: Helps you embark on your job search process.

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## Step 1: Know Yourself

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Think about what has attracted you to biology and why it might be the right major for you. Take some time to consider your interests, skills, and values, and compare them with the information below. Keep in mind that you may not identify with everything noted below, but be conscious of whether the listed interests, skills, and values complement or run contrary to how you identify.

### Interests, Skills and Values:

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People who major in biology often have:

Interests	Skills	Values
<ul style="list-style-type: none"><li>• Science</li><li>• Working with ideas</li><li>• Solving problems</li><li>• Research and Experiments</li><li>• Working with practical hands-on problems and solutions</li><li>• Learning about living organisms</li></ul>	<ul style="list-style-type: none"><li>• Reading Comprehension</li><li>• Time Management</li><li>• Judgment and Decision Making</li><li>• Critical Thinking</li><li>• Active Listening</li><li>• Speaking</li><li>• Complex Problem Solving</li><li>• Active Learning</li><li>• Patience</li></ul>	<ul style="list-style-type: none"><li>• Ability utilization</li><li>• Achievement</li><li>• Advancement and Recognition</li><li>• Creativity,</li><li>• Responsibility</li><li>• Autonomy</li><li>• Curiosity</li><li>• Concern for the environment, people, and/or animals</li><li>• Intellectual growth</li><li>•</li></ul>

If what is listed above matches, or is related in a way to your own interests, skills and values, a degree in biology may be for you. Continue to explore this resource to learn more.

### Another Look at Interests:

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#### John Holland's Occupational Themes

Learning about your interests will help you identify opportunities to pursue and the topics you are most naturally drawn to. John Holland developed a theory of occupational interests that described six major interest areas (learn about all six interest areas [here](#)). Of those six interest areas, biology students often identify with interests in the following categories:

*Investigative:* People with Investigative interests have a strong scientific, inquiring orientation.

Learn more: [http://careercenter.depaul.edu/documents/hexagon\\_investigative.pdf](http://careercenter.depaul.edu/documents/hexagon_investigative.pdf)

*Realistic:* People with realistic interest value tradition, physical skills, practicality, and learning by doing.

Learn more: [http://careercenter.depaul.edu/documents/hexagon\\_realistic.pdf](http://careercenter.depaul.edu/documents/hexagon_realistic.pdf)

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#### Learn more about "Step 1: Knowing Yourself"...Check out these Career Center Workshops

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- Myers-Briggs Type Indicator (MBTI)
- Work Values
- Skills and Accomplishments
- Strong Interest Explorer

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## **Step 2: Explore and Choose Options**

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*Whether you have already chosen biology as a major or are still considering it among other possibilities, it is important to explore the career and academic options this major will open up for you.*

### **Concentrations:**

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DePaul's department of biology offers the following concentrations within the major:

<b>Standard</b>	This concentration is for those who want a broad degree in Biology without a specific concentration. Additionally, this concentration can provide a means by which students can design their own areas of specialization.
<b>Pre-Health</b>	This concentration's curriculum includes core classes that will prepare students for application to health profession training after graduation from DePaul. It will expose students to the breadth of fields within biology, while allowing them to select from courses with a human biology focus.
<b>Neurosciences</b>	This concentration prepares students for a career or future that studies and explores the nervous system.
<b>Ecology-Evolution</b>	This concentration focuses on understanding the relationships between organisms and the natural environment, as well as how those relationships change or have changed over time.
<b>Cell and Molecular Biology</b>	This concentration is for students who wish to focus on the structure and function of living organisms at the cellular and molecular level.
<b>Biotechnology</b>	This concentration may be particularly suited for students whose interests include areas such as microbiology, bioethics, agriculture, environmental biology, forensic sciences, health, and medical research.
<b>Science Education</b>	The School of Education offers a program that prepares students for a career in teaching biology at the secondary school level that culminates in certification by the State of Illinois.

#### **Learn more:**

DePaul: <http://sr.depaul.edu/catalog/catalogfiles/Current/College%20of%20Science%20and%20Health%20Undergraduate%20Studies/pg14.html>

### **Curriculum:**

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Please follow this link to review the curriculum for a degree in biology. Also, note the classes you will need to take.

<http://sr.depaul.edu/catalog/catalogfiles/Current/College%20of%20Science%20and%20Health%20Undergraduate%20Studies/pg16.html>

Learn more about these classes:

<http://sr.depaul.edu/catalog/catalogfiles/Current/Undergraduate%20Course%20Descriptions/pg19.html>

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## ***Occupations:***

The following list, organized by suggested concentration, offers a **sampling** of career paths that might appeal to biology students. It is not meant to be all inclusive or limiting, but rather is **intended to provide you with a starting point for considering the possibilities.**

<b>Standard</b>	Because of the broad nature of this concentration, as well as students' opportunity to customize their own area of specialization, the occupations available may encompass those listed below. Research is one example of one career area a biology degree may afford you.
<b>Pre-Health</b>	Physician Assistant*, Medical Assistant*, Physical Therapist Aides*, Sports Medicine Assistant*, Doctor*, Ophthalmologist*, Dentist*, Occupational Therapist Assistants*, Psychiatric Technicians,* Pharmaceutical Sales Representative
<b>Neurosciences</b>	Medical Assistant, Neurologists*, Neuroscience Clinical Advisor*, Neuropharmacologist*
<b>Ecology-Evolution</b>	Environmental Technician, Laboratory Specialist, Environmental Health Specialist, Sanitarian Specialist, Environmental Restoration Planner, Foresters, Industrial Ecologists*, Wildlife Biologist
<b>Cell and Molecular Biology</b>	Molecular and Cellular Biologist*, Geneticist*, Pathologist*, Medical and Clinical Laboratory Technologist, Fuel Cell Technician, Nanosystems Engineer*
<b>Biotechnology</b>	Bioinformatics Technician, Biological Technician, Bioinformatics Scientist*, Laboratory Technician
<b>Science Education</b>	Environmental Science Teacher*, Health Educators*, Biology Teacher*

\* More advanced careers in this field will require additional training, certification and/or a graduate or doctoral degree. Speak with a Career Advisor to learn more.

Learn more: Source detailed descriptions of these and other occupations, including job responsibilities, educational requirements, associated interests and values, job outlook, salary data, and more using the following resources:

**O\*NET:** <http://online.onetcenter.org/>

**Occupational Outlook Handbook**

<http://www.bls.gov/search/?cx=011405714443654768953%3Aabtqx18qv780&cof=FORID%3A10%3BNB%3A1&ie=ISO-8859-1&query=biology&filter=0&sa=Search#976>

## ***Alumni Sharing Knowledge (ASK):***

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Learn from DePaul alumni about how they have used their biology degree. ASK is a great way to begin building your network by connecting with these mentors. Below is a *sample* of job titles reported by alumni with biology degrees:

Associate Attorney	Forensic Scientist	Physician
Clinical Research Assistant	Graduate Student	Product Manager
Clinical Studies Manager	Lab Assistant	Research Technician
Product Development Chemist	Manager of Health and Welfare	Medical Student
Director of HR and Organization Development	Resident Physician OB/GYN	Teacher

Learn more about how to connect with alumni: <http://ask.depaul.edu/>

## ***Online Resources:***

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Research more about biology:

- [American Medical Association](#)
- [American Medical Women's Association](#)
- [American Association of Colleges of Osteopathic Medicine](#)
- [American Academy of Optometry](#)
- [American Optometric Association](#)
- [American Podiatric Medical Association](#)
- [American Veterinary Medical Association](#)
- [American Dental Association](#)
- [American Board of Genetic Counseling](#)
- [Biotechnology Industry Association](#)
- [Pharmaceutical Research and Manufacturers of America](#)
- [Society for Conservation Biology](#)
- [Association of Medical Illustrators](#)
- [American Academy of Forensic Science](#)
- [Forensic Science Society](#)
- [National Association of Biology Teachers](#)
- [American Physical Therapy Association](#)
- [American Association of Physician Assistants](#)
- [American Association of Medical Assistants](#)
- [American Occupational Therapy Association](#)

***Learn more about “Step 2: Explore and Choose Options”...Check out these Career Center Workshops***

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- LinkedIn & Other Social Media
- Networking Skills

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### **Step 3: Gain Knowledge and Experience**

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*Complementing your coursework in biology with internship, volunteer, work, and organization experiences is one of the smartest moves you can make in relation to your career development. By doing so, you will have the opportunity to apply and build upon the knowledge you are gaining in the classroom, while also developing content for your resume in preparation for future opportunities.*

#### ***Internships:***

Here is a **sample** list of internships you might consider while pursuing a degree in biology. Please note, any mentioned internship below is not restricted to its respective concentration.

<b>Standard</b>	Because of the broad nature of this concentration, as well as students' opportunity to customize their own area of specialization, the internships available may encompass those listed below.
<b>Pre-Health</b>	Typical internships or apprenticeship may reside within a hospital or a medical association (e.g. American Red Cross, American Heart Association, Centers for Disease Control and Prevention, and etc.). Seek out opportunities to assist professors with research. Becoming certified and working as an EMT can also offer valuable experience.
<b>Neurosciences</b>	Internships may be found within a neuroscience research facility. Some facilities may reside within a university (e.g. Center for Neuropharmacology & Neuroscience at Albany Medical College, Boston University, Harvard University, and etc.).
<b>Ecology-Evolution</b>	Internships may be found with environmental organizations (e.g. Environmental Protection Agency), museums, zoos and aquariums (e.g. Lincoln Park Zoo, John G. Shedd Aquarium, American Museum of Natural History, etc.), and protection agency and observatories (e.g. Alaska Bird Observatory, Environmental Protection Agency).
<b>Cell and Molecular Biology</b>	Research internships and fellowships with facilities and laboratories (e.g. American Society for Microbiology, Cancer Research Center of Hawaii, Fred Hutchinson Cancer Research Center, and etc.).
<b>Biotechnology</b>	Research programs and internships such as Research Program in Genomics, Bioinformatics Scholarships, and internships with institutes and facilities (e.g. Genentech, Hamner Institutes for Health Sciences, J. Craig Venter Institute, and etc.).
<b>Science Education</b>	It may be more appropriate to pursue teaching and mentoring opportunities, and eventually a student teaching position.

Search and apply for internships listed by employers specifically seeking DePaul candidates at:  
<http://depaul.experience.com>

## ***Find Internships:***

Visit these sites to search and apply for more internships:

### **DePaul Resources:**

- Career Center's DePaul.Experience website: <http://depaul.experience.com>

### **Biology Specific Resources:**

- **Biology Jobs.Com:** <http://www.biologyjobs.com/>
- **Society for Integrative and Comparative Biology:** <http://www.sicb.org/careers/>
- **American Institute of Biological Sciences:** <http://www.aibs.org/careers/>

### **Additional Resources:**

- **Indeed.com:** <http://www.indeed.com>
- **HigherEdJobs.com:** <http://www.higheredjobs.com>
- **Collegegrad.com:** <http://www.collegegrad.com>
- **CollegeRecruiter.com:** <http://www.collegerecruiter.com>
- **Careeronestop.org:** <http://www.careeronestop.org>
- **Careerbuilder.com:** <http://careerbuilder.com>

## ***Student Organizations and Professional Organizations:***

To gain more knowledge and experience, as well as to network and build your resume, consider joining student and professional organizations related to biology.

<b>Professional Organizations</b>	<b>Student Organizations and Other Resources at DePaul</b>
<ul style="list-style-type: none"><li>• <a href="#"><u>American Medical Association</u></a></li><li>• <a href="#"><u>American Medical Women's Association</u></a></li><li>• <a href="#"><u>American Association of Colleges of Osteopathic Medicine</u></a></li><li>• <a href="#"><u>American Academy of Optometry</u></a></li><li>• <a href="#"><u>American Podiatric Medical Association</u></a></li><li>• <a href="#"><u>American Veterinary Medical Association</u></a></li><li>• <a href="#"><u>National Association of Veterinary Technicians in America</u></a></li><li>• <a href="#"><u>American Dental Association</u></a></li><li>• <a href="#"><u>American Board of Genetic Counseling</u></a></li><li>• <a href="#"><u>National Society of Genetic Counselors</u></a></li><li>• <a href="#"><u>Biotechnology Industry Association</u></a></li><li>• <a href="#"><u>Pharmaceutical Research and Manufacturers of America</u></a></li><li>• <a href="#"><u>Institute of Medical Illustrators</u></a></li><li>• <a href="#"><u>American Academy of Forensic Science</u></a></li><li>• <a href="#"><u>National Education Association</u></a></li><li>• <a href="#"><u>American Occupational Therapy Association</u></a></li></ul>	<ul style="list-style-type: none"><li>• DePaul Life Sciences and Pre-Med Club</li><li>• Biotechnology Club</li><li>• The Pre-Dental Club</li><li>• Underrepresented Groups in Medicine</li><li>• Pre-Health Advisory Committee at DePaul University <a href="http://csh.depaul.edu/student-resources/advising-student-services/pre-health-advising/Pages/default.aspx">http://csh.depaul.edu/student-resources/advising-student-services/pre-health-advising/Pages/default.aspx</a></li><li>• The SCI Club (Science Community Involvement) <a href="http://www.freewebs.com/depauloutreach/">http://www.freewebs.com/depauloutreach/</a></li></ul>

### ***Research and Guide Books:***

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Find these and more biology research and guide books at DePaul's libraries.

- *Great Jobs for Biology Majors* by Blyth Camenson
- *Working for Life: Careers in Biology* by Thomas A. Easton
- *Opportunities in Biological Science Careers* by Kathleen M. Belikoff
- *Careers for Nature Lovers and Other Outdoors Types* by Louise Miller

Learn more about the library and how to borrow these books: <http://library.depaul.edu/>

### ***Graduate and Doctoral Programs:***

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Learn more about DePaul's graduate and doctoral biology programs:

<http://csh.depaul.edu/academics/graduate/Pages/default.aspx>

List of other University programs:

<http://www.everythingbio.com/gradschool/>

#### ***Learn more about "Step 3: Gain Knowledge and Experience"...Check out these Career Center Workshops***

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|---|---|
| - How to Prepare for Graduate School              | - Cooperative Education (Co-Op) Orientation |
| - How to Work a Job & Internship Fair             | - iPrep: Find Your Dream Internship         |
| - University Internship Program (UIP) Orientation | - Navigating Student Employment             |



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### **Step 4: Putting it all Together**

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*The job search process can be challenging, but with the right tools, guidance, and persistence, success can be yours. Below are a number of resources that you are invited to take advantage of as a DePaul student and/or alumni.*

#### ***Career Advisors for Liberal Arts and Sciences:***

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If you have not already done so, set an appointment with a Career Advisor to discuss your post-graduation goals and strategies for achieving them. To set an appointment with your advisor, please call the Lincoln Park Career Center at (773) 325-7431.

#### ***Attend Workshops:***

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The Career Center's career development workshops are designed to help you build and strengthen your career-related skills so you can make well-informed decisions and prepare for your job or internship search.

The Career Center offers free workshops on over 25 topics throughout the year, including resume writing, interviewing skills, effective self-marketing techniques, networking, managing your career path and many more. Workshops facilitators have in-depth knowledge in the topics covered and allow you the opportunity to ask questions throughout each session.

Pre-register for all workshops online through DePaul.Experience.

Learn more: <http://careercenter.depaul.edu/events/workshops.aspx>

### ***Prepare your Resume:***

Depending on the internship or job you are applying to, consider including the following types of information on your resume:

Entry Level Professionals	Experienced Professionals
<ul style="list-style-type: none"><li>• Education</li><li>• Relevant Experience from jobs and internships</li><li>• Relevant Coursework</li><li>• Organizations</li><li>• Research Assistance</li></ul>	<ul style="list-style-type: none"><li>• Relevant Experience</li><li>• Research</li><li>• Professional Affiliation</li><li>• Publications</li><li>• Presentations</li><li>• Research Experiments</li><li>• Education</li><li>• Certification</li></ul>

Note: You may consider using a Curriculum Vitae (CV) instead of a Resume. A CV may be more appropriate for some students applying to a medical programs and laboratory research opportunities. Please meet with a Peer Career Advisor for more information.

To view resume samples and an online resume tutorial, visit:

<http://careercenter.depaul.edu/resumes/default.aspx>

Or meet with a Peer Career Advisor to plan, develop and/or critique your resume. Peer Career Advising is a good place for students and alumni to begin the process of career planning. The Peer Career Advisors are undergraduate and graduate students who have been carefully selected and trained by the Career Center to work with students and alumni in an advisory capacity.

### ***Prepare for Interviews:***

To prepare for an interview for an internship or job, the Career Center offers:

- **Alumni Sharing Knowledge (ASK) Practice Interviews** – Sign up in DePaul.Experience for a practice interview with DePaul alum. This real interview scenario will allow you to gain feedback from your practice interviewer on your interviewing strengths and areas for improvement.
- **Alumni Sharing Knowledge (ASK) Mentors** – ASK mentors are willing to meet with you individually to help you with your interviewing skills. ASK mentors are a good option to consider as they have valuable industry-specific interviewing tips.
- **Peer Career Advisors** – Meet with a Peer Career Advisor on a walk-in basis to go over the interviewing process, as well as running through a mock interview. Peer Career Advisors are a good option to consider if you need quick interviewing help.
- **Career Advisors** – Set up an appointment with your Career Advisor to go over the interviewing process, as well as running through a more advanced mock interview. Career Advisors are a good option to consider if you are seeking more job specific interviewing tips.
- **Career Center Workshops** – Register for such interviewing workshops as “Interviewing Skills” or “Advanced Interviewing Skills” in DePaul.Experience.
- **For other interviewing resources** – Please visit:  
<http://careercenter.depaul.edu/resumes/interviewprep.aspx>

## ***Salary Resources:***

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- **About.com's Psychology Employment Trends:**  
<http://psychology.about.com/od/careersinpsychology/tp/psychology-career-trends.htm>
- **Salary.com:** <http://www.salary.com>
- **Wage web:** <http://www.wageweb.com>
- **NACE Salary Survey 2008:** <http://www.naceweb.org/home.aspx>
- **Indeed.com's Salary Search:** <http://www.indeed.com/salary>
- **HigherEdJobs.com's Salary Surveys for Higher Education:** <http://www.higheredjobs.com/salary/>
- **Monster.com's Salary and Benefits Information:** <http://career-advice.monster.com/salary-benefits/home.aspx>
- **Vault.com's Salaries and Compensation:** <http://www.vault.com/salaries.jsp>
- **Collegegrad.com's Salary Information:** <http://www.collegegrad.com/salaries/index.shtml>
- **Careeronestop.org's Salary Information:**  
<http://www.careeronestop.org/SalariesBenefits/SalariesBenefits.aspx>

### ***Learn more about "Step 4: Putting it all Together"...Check out these Career Center Workshops***

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- How to Build a Portfolio
- Interviewing Skills
- Job Search Strategies in a Challenging Job Market
- Negotiation Skills