



Job Search for Biomedical Science Majors

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What Can I do With a Biomedical Science Major?

This is a question that counselors in the Marquette Career Services Center often hear. The biomedical science major in the College of Health Science is unique to Marquette University, with few other schools offering this program. As students know, they have completed challenging course work in **biochemistry, histology, human microbiology, nutrition, human anatomy, pathology, pharmacology and human physiology**. These courses can serve as a basis for future degrees or serve as an interest index as to where a student with a bachelor's degree wishes to begin their career. Following are many options and ideas on how to decide on a career path. Students are always welcome to make an appointment with a career counselor at 288-3577.

I. Professional School

The biomedical science major serves as an excellent background for many of the health related professional degrees:

Chiropractic
Law
Nurse Practitioner
Optometry
Pharmacy
Physician Assistant
Veterinary

Dentistry
Medicine
Occupational Therapy
Osteopathic
Physical Therapy
Podiatry

II. Graduate School

Many students use the biomed major to advance to graduate program in areas such as:

Biology
Chemistry
Counseling
Exercise Physiology
Genetic Counseling
Health Care Administration
Public Health
Zoology

Biomedical Engineering
Community Medicine
Environmental Management
Forensic Science
Health Behavior
Nutrition
Teaching

III. Research areas

Students may develop interest in a following area that they can pursue:

General Biomedical Science
Cellular and Molecular Biology Neuroscience,
Vascular Biology
Comparative Biomedical Sciences
Medical Biology
General Biomedical Science
Biophysics Pathology

Biological Anthropology
Bioethics
Environmental Health Sciences Endocrinology-
Reproductive
Physiology
Biomolecular Chemistry

What Can Undecided Biomedical Majors Do to Focus Their Career Paths?

If students have not planned advanced study or have had such plans thwarted for any reason, then the bachelor's, biomedical science graduates are often confused and unsure of what career path they want to take or, as they often ask, "what is available."

I. Interests

Undecided biomedical majors should first examine their particular interests:

- ◇ Do your interests lie within the **biomedical or health fields**?
 - What courses became your favorites?
 - What courses were you very excited about to the point of wanting to continue in that field?
 - What courses went particularly well with excellent grades?
 - Would you like to do research?
 - Would you enjoy working in a lab?
- ◇ Are you more interested in **doing "related" biomed activities** as working in pharmaceutical sales, health care administration or public health?
- ◇ Are you **not particularly interested in using your major at all** but rather finding a job and building a career in a newly developed area of interest, i.e. you always had an interest in investments, think you're good at it and would like to start working in the finance field and work your way up. Perhaps an MBA down the road; or you're very interested in the environment and would like to get an entry-level position working in administration for a national park.

II. Skills

The second thing the undecided biomedical major have to understand are the skills and strengths that they have to offer to an employer. Every college graduate supposedly has 2000 skills! Therefore, you should be able to pick out 10 skills or strengths that you realize that you **really** possess.

To assess your skills, write down tasks that you've have to do for classroom projects, labs, or part-time employment. Then underneath each task, list the skills that you use to complete that task, i.e. **Task:** Set up a database for lab projects; **Skills:** Know **Access** Program well enough to set up database; be able to **communicate** with classroom instructor as to what information is needed in the database. Complete database design in a two week period (**time management skills**); show necessary **organization**.

Skills are divided into three areas:

- **"Job-Content" Skills**
Abilities learned from majoring in a particular area (biomedical sciences teaches scientific research skills), AND/OR skills gained through an internship, volunteer or part-time experience.
- **Transferable Skills**
Skills coming out of an arts and science based education: ability to write and speak well, research, analyze, critique, problem solve. (biomedical sciences teach you to be able to work as part of a team)
- **Personal Characteristics**
Individual traits such as: reliability, energy, leadership, work ethic. (biomedical sciences requires traits like: patience, accuracy, determination, dedication, motivation, curiosity, attention to detail)

III. Values

After you have determined your **interests and skills**, also consider your **values**.

Values have to do with:

- how much money you want to earn
- how much time you want to put into a job
- what geographic location you want to live in
- what quality of life you have set for yourself

Below is a list of transferable skills honed from an Arts and Science Degree

Arts and Science skills are transferable, functional skills that are required in many different work situations. They are built into your liberal arts education and are valued by employers. A bit of reflection will allow you to see that your courses, research projects, college work experience, extracurricular activities, internships and field study experiences have all been instrumental in providing you with skills that employers value. If asked in a job interview how your education has prepared you for a specific job, you can be ready with some good answers if you think about it beforehand. Take a look at the list below and determine which of these transferable skills you have developed.

Planning and Organizational Skills

- Meet deadlines and manage time effectively
- Work under time and environmental pressures
- Successfully juggle multiple demands (school and work)
- Identify and prioritize things to be accomplished
- Assess needs
- Develop goals for self and/or an organization
- Work effectively with organization members
- Follow up with others to evaluate progress of tasks
- Stick to a difficult endeavor and see it through to completion (4 years of college)

Critical Thinking Skills

- Quickly and accurately identify the key issues when making a decision or solving a problem
- Identify general principles that explain data or human behavior
- Examine assumptions underlying analyses or conclusions
- Recognize interrelationships in information obtained from diverse sources
- Use facts to judge validity of theories
- Create innovative solutions to complex problems
- Critically evaluate theories and research and apply the results to solve problems

Human Relations and Interpersonal Skills

- Maintain group cooperation and support
- Keep a group on track when working towards a goal
- Interact and work effectively with peers, superiors and subordinates
- Interact with and appreciate people from diverse cultural, social, ethnic and religious backgrounds
- Communicate effectively and sensitively in both individual and group situations
- Teach a skill, concept or principle to others
- Leadership skills
- Demonstrate effective social behavior in a variety of settings and circumstances
- Effectively collaborate with others to complete projects or reach goals
- Delegate tasks and responsibilities
- Ability to work on a team on diverse assignments

Oral and Written Communication Skills

- Organize and present ideas effectively for formal and spontaneous speeches
- Effectively participate in group discussions and brainstorm ideas
- Debate issues while respecting the opinions of others
- Read and condense large amounts of material
- Write reports clearly, grammatically, concisely, objectively, convincingly and in appropriate format
- Write and speak effectively in a foreign language
- Delivered verbal presentations clearly and persuasively
- Express and defend ideas in a clear, objective, non-dogmatic manner
- Effectively utilize campus resources for public relations
- Use various media to present ideas effectively and/or imaginatively
- Possess courteous telephone skills

Research and Investigation Skills

- Use a variety of sources of information to research problems or answers to questions
- Conduct literature searches on _____.
- Develop a new research question(s)
- Apply a variety of research methods to test the validity of data
- Design an experiment, plan or model that systematically defines a problem
- Construct, administer and interpret questionnaires or surveys
- Ethically recruit and treat research subjects
- Select appropriate statistical tests for the analysis of research
- Analyze and interpret statistical data
- Interpret qualitative and quantitative data
- Use computers or laboratory equipment to assist with research
- Select, administer, score, and interpret various psychological tests or assessments
- Deal effectively with financial, temporal, and personnel constraints on research

Computer Skills

- Use computer software to prepare reports, graphs, brochures, etc and to conduct research
- Internet research and e-mail skills
- Computer programming skills
- Web page and web site design skills

Personal Skills

- Define and explain ethical behavior and practice it in difficult situations
- Take initiative in job related duties
- Tolerance for stress and ambiguity
- Demonstrate flexibility and ability to handle change
- Recognize the value of life long learning and seek professional development opportunities
- Identify personal values and apply them when making decision
- Ability & motivation to develop knowledge and skills in expanding job responsibilities

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How Do I Find Out About Jobs and Organizations?

Start to research areas that may satisfy your interest and skills.

Students think that upon graduation that their research ends. However, finding a job may be the biggest research project of your life!

Some people are lucky, see an advertised job, interview and get the position. But most people have to decide in which direction they would like to go and then **research, research, research, network, network, network!**

Most jobs are procured through being PROACTIVE.

Research includes:

- Learning about certain industries and organizations in print or on the internet.
- Talking to people who work in that industry and finding out the layout of a department and where you might fit in with your background and skills. (Informational Interviewing)
- Starting a network by talking to even more people in the industry and passing around your resume and letting them know your intentions.
- Finding job vacancy resources for that area—on-line and in print. Pay attention to the qualifications and the wording used so that you might translate that onto your resume or into the interview.
- Sending out resumes and cover letters to names you have learned through your research and networking asking that you can talk to them “about future positions” if none are presently open.

Below is a list of many job fields, job titles, research areas and professions in health science, chemistry and biology.

Some of the following areas require degrees, some master's and some bachelor's. Your task is to look into those that seem interesting as there are always entry level jobs in all fields. Your goal should be to get your foot in the door. You may like what you find and build a career, or say, wow, this is not what I thought, certainly not for me. However, you will be moving toward what you do want to do and not waiting for a job to "come along"—any job!!!!

Also check out the following website: **What Can I Do with a Biological Sciences Major**
In addition to listing various fields, it gives some good strategies for pursuing different areas.

<http://career.utk.edu/mike/students/majors/information/biological.pdf>

Job Titles

Air-pollution analyst	Cytotechnologist	Medical librarian	Podiatrist
Analytic chemist	Dentist	Medical technologist	Pollution controller
Anatomist	Dietitian	Methods development chemist	Process development chemist
Animal ecologist	Dietitian/researcher	Microbiologist	Production chemist
Animal scientist	Editor (scientific and	Medical illustrator	Product tester
Anatomical pathology tech	technical publications)	Medical lab scientific officer	Pulp and paper chemist
Aerosol development manager	Entomologist	Medical librarian	Psychologist
Assayer	Environmental analyst	Medical technologist	Public health educator
Associate chemist	Environmental scientist	Medical lab assistant	Quality assurance chemist
Biochemist	Exercise therapist	Medical legal assistant	Quality control chemist
Biological photographer	Food and drug analyst	Microbiologist	Research assistant
Biologist	Food-and-drugs inspector	Molecular geneticist	Safety inspector
Biomedical engineer	Forensic scientist	Museum tech	Safety manager
Biophysicist	Forensic lab analyst	Mycologist	Sales rep. (chemicals and
Botanist	Forensic pathologist	Nematologist	drugs)
Case manager	Geneticist	Nuclear medical technologist	Sanitarian
Chemical analyst	Geriatric rehabilitator	Occupational health and safety	Scientist in hemostasis and
Chemical information specialist	Health administrator	inspector	thrombosis
Chemical safety officer	Health care lobbyist	Occupational hygienist	Social service counseling
Chemical technologist	Health policy researcher	Oceanographer	Social worker
Chemist	Hematologist	Optometrist	Soil scientist
Chiropractor	Histopathologist	Organic mass spectrometrist	Soil tester
Clinic manager	Hospital administrator	Osteopath	Taxidermist
Clinical Biochemist	Hydrologist	Paint formulation chemist	Teacher/college
Clinical embryologist	Industrial hygienist	Paper product developer	Teacher/high school
Clinical cytogeneticist	Information analyst	Parasitologist	Technical writer
Clinical immunologist	Information scientist	Pathologist	Technical sales representa-
Clinical microbiologist	Insurance case reviewer	Perfumer	tive
Clinical scientist in histocom-	Insurance claims adjustor	Pest control tech	Textile chemist
patibility and immunogenetics	Laboratory assistant	Pharmaceutical detailer	Tissue and transplant
Clinical tech	Laboratory analyst	Pharmaceutical salesperson	coordinator
Consumer protection specialist	Lab coordinator	Pharmacologist	Veterinarian/Lab animal care
Curator	Laboratory tech	Phlebotomist	Water quality analyst/
Curator/medical museum	Lawyer	Physical therapist	technician
Curator/ zoological museum	Long term care administrator	Physician	Writer/scientific, technical
Cytologist	Marine biologist	Plant pathologist	Zoologist
Cytoscreener	Medical illustrator	Plant physiologist	

Related Industries and Places of Employment

Advertising agencies	Environmental consulting firms	Oil companies
Aerospace companies	Fish hatcheries	Petroleum refineries
Aquariums	Food and beverage companies	Pharmaceutical / biotechnology industries
Arboretums	Food processors	Police laboratories
Agricultural companies	Government	Professional chemical societies
Beverage companies	Hazardous waste management corporations	Professional and technical journals
Botanical gardens	Health administration	Publishers
Chemical industries	Health protection branches	Pulp and paper industries
Chemical distributors	Hospitals	Research centers / institutes
Chemical laboratories	Industrial laboratories	Quality control laboratories
Chemical manufacturing plants	Insurance operations	Research and development firms
Chemical testing / analysis companies	Libraries	Science museums
Chemistry consulting firms	Lumber companies	Technical libraries
Clinical research	Medical clinics	Textile manufacturers
Consulting firms	Medical informatics	Utility companies/Waterworks departments
Cosmetic companies	Medical laboratories	Zoological Parks
Distilleries and breweries	Medical supply companies	
Doctors' offices	Mineral and metal industries	
Educational institutions	Museums	
	Nurseries	

Websites

Below is a short list of some of related websites. For a more complete list, go to

The Riley Guide

www.rileyguide.com

Medical Device Links

<http://www.devicelink.com/>

Medzilla

<http://www.medzilla.com/>

biojobs/bionet.jobs.offered Newsgroup Archive

<http://www.bio.net/hypermail/biojobs/>

bio.com

<http://career.bio.com/careercenter/index.jhtml>

Chemistry and Industry

<http://www.chemind.org/CI/index.jsp>

Society of Chemical Industry

<http://www.soci.org/SCI/index.jsp>

Chemindustry.com

<http://www.chemindustry.com/>

Chemistryjobs.com

<http://www.chemistryjobs.com/>

Website of the American Chemical Society

<http://www.chemistry.org/portal/a/c/s/1/home.html>

Chemjobs

<http://cen-chemjobs.org/>

Links for Chemists

<http://www.liv.ac.uk/Chemistry/Links/links.html>

Organic Chemistry Resources Worldwide

<http://www.organicworldwide.net/>

Public Health

<http://www.sph.emory.edu/student-service/Career.html>

Public Health Resources on the Internet

<http://www.lib.berkeley.edu/PUBL/internet.html>

Jobs in the Health Care Field

<http://www.healthcaresource.com/>

Health Care Job Store

<http://www.healthcarejobstore.com/>

Health Web (put in key words such as careers, employment)

<http://healthweb.org/>

Jobscience.com

<http://www.jobscience.com/>

PharmaceuticalJobs-usa.com

<http://www.pharmaceuticaljobs-usa.com/>

"Global hubsite for life sciences."

<http://www.biospace.com/>

Nature—Career Resource for Scientists

<http://www.nature.com/>

Health Professional Organizations

American Academy of Anesthesiologist Assistants
P.O. Box 33876
Decatur, GA 30033

American Academy of Physician Assistants
950 N. Washington Street
Alexandria, VA 22314

American Art Therapy Association, Inc.
1202 Allanson Rd.
Mundelein, IL 60060

American Association of Blood Banks
8101 Glenbrook Rd.
Bethesda, MD 20814

American Association of Colleges of Pharmacy
1426 Prince St.
Alexandria, VA 22314

American Association of Medical Assistants
20 N. Wacker Dr.
Chicago, IL 60606

American Chiropractic Association
1701 Clarendon Blvd.
Arlington, VA 22209

American College of Nurse-Midwives
818 Connecticut Ave, NW
Washington, DC 20006

American Dance Therapy Association, Inc.
2000 Century Plaza
Columbia, MD 21044

American Dietetic Assoc.
216 W. Jackson Blvd. St 800
Chicago, IL 60606

American Health Information Management Association
919 N. Michigan Ave
Chicago, IL 60611

American Institute of Biological Sciences
1444 I St., NW, Ste. 200
Washington, DC 20005

American Occupational Therapy Association
4270 Montgomery Lane
Bethesda, MD 20824

American Optometric Association
243 N. Lindberg Blvd.
St. Louis, MO 63141

American Pharmaceutical Association
2215 Constitution Ave., NW
Washington, DC 20037

American Physical Therapy Association
1111 N. Fairfax St.
Alexandria, VA 22314

American Podiatric Medical Association
9312 Old Georgetown Rd.
Bethesda, MD 20814

American Society of Clinical Laboratory
Sciences
7910 Woodmont Ave.
Bethesda, MD 20814

American Society of Cardiovascular Professionals
10500 Wakeman Dr.
Fredericksburg, VA 22407

American Society of Echocardiography
4101 Lake Bone Trail
Raleigh, NC 27607

American Speech-Language Hearing Association
10801 Rockville Pike
Rockville, MD 20852

American Veterinary Medical Association
1931 N. Meacham Rd.
Schaumburg, IL 60173

Association of American Veterinary Colleges
1101 Vermont Ave., NW
Washington, DC 20005

Association of Physician Assistant Programs
950 N. Washington St.
Alexandria, VA 22314

Association of Surgical Technologists
7108-C S. Alton Way
Englewood, CO 80112

Institute of Food Technologist
221 N. La Salle St.
Chicago, IL 60601

American Academy of Orthotists and Prosthetists
717 Pendleton St.
Alexandria, VA 22314

American College of Health Care Administrators
325 S. Patrick St.
Alexandria, VA 22314

American Medical Technologists
710 Higgins Rd.
Park Ridge, IL 60068

American Society of Electroneuro Diagnostic Technologists
204 W. Seventh St.
Carroll, IA 51401

Foundation of Hospice and Home Care
519 C Street NE
Washington, DC 20002

Society of Nuclear Medicine-Technologists
1830 Samuel Morse Dr
Reston, VA 22090

Society of Diagnostic Medical Sonographers
12770 Cott Rd.
Dallas, TX 75251

American Society of Radiologic Technologists
15000 Central Ave., SE
Albuquerque, NM 87123

American Association for Respiratory Care
11030 Ables Ln.
Dallas, TX 75229

Opticians' Association of America
10341 Democracy Ln.
Fairfax, VA 22030

American Association of Nurse Anesthetists
222 S. Prospect Ave.
Park Ridge, IL 60068

National Society of Histotechnology
4201 Northview Dr.
Bowie, MD 20716

Joint Commission on Allied-Health Personnel in Ophthalmology
2025 Woodlane Dr.
St. Paul, MN 55125

National Academy of Opticianry
1011 Martin Luther King Jr. Hwy.
Bowie, MD 20720

American Society of Extra-Corporal Technology
11480 Sunset Hills Rd.
Reston, VA 22090

Job Surfing: The Sciences-Research and Medicine, LaBounty, David and Jim Blau

Peterson's. Job Opportunities: Health and Science.
Career Opportunities in Health Care, Field, Shelly.
Peterson's. Job Opportunities for Health and Science Majors.
Planning Your Career in Alternative Medicine, Lyons, Dianne.
Careers in Health Care, Swanson, Barbara
Real People Working in Health Care, Camenson, Blythe
Ferguson Publish Company, Exploring Health Care Careers.

National Society for Pulmonary Technology
120 Falcon Dr.
Fredericksburg, VA 22408

American Horticultural Therapy Association
362A Christopher Ave.
Gathersburg, MD 20879

National Therapeutic Recreation Society
2775 S. Quincy St.
Arlington, VA 22206

Association for the Advancement of Medical Instrumentation
3330 Washington Blvd.
Arlington, VA 22201

National Athletic Trainers' Association
2952 Stemmons Freeway
Dallas, TX 75247

Child Life Council, Inc.
2910 Woodmont Ave.
Bethesda, MD 20814

Association of Medical Illustrators
1819 Peachtree Rd. NE
Atlanta, GA 30309

Medical Library Association
6 N. Michigan Ave.
Chicago, IL 60602

National Society for Patient Representation of the Americas
840 N. Lake Shore Dr.
Chicago, IL 60611

National Association of Emergency Medical Technicians
102 W. Leake St.
Clinton, MS 39056

National Association for Music Therapy
8455 Colesville Rd.
Silver Spring, MD 20910

Society of Vascular Technologists
4601 Presidents Dr.
Lanham, MD 20706

From Health-Care Careers for the 21st Century, Jist Publishing

Health Care Career Books

Great Jobs for Biology Majors, Camenson, Blythe
Great Jobs for Chemistry Majors, Rowh, Mark
Health-Care Careers for the 21st Century, Wischnitzer, Dr. Saul
and Edith Wischnitzer