



Job Search for Biomedical Science Majors

414.288.7423 ■ career.services@marquette.edu ■ www.marquette.edu/csc ■ Holthusen Hall, 1st floor

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 288-7423.

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; **Communicated** with classroom instructor as to what information is needed in the database; Completed database design in a two week period (**time management skills**); Demonstrated 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

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/students/majors/html/biological.htm>

Job Titles

Air-pollution analyst	Biophysicist	Clinical microbiologist
Analytic chemist	Botanist	Clinical scientist in histocompatibility and immunogenetics
Anatomist	Case manager	Clinical tech
Animal ecologist	Chemical analyst	Consumer protection specialist
Animal scientist	Chemical information specialist	Curator
Anatomical pathology tech	Chemical safety officer	Curator/medical museum
Aerosol development manager	Chemical technologist	Curator/ zoological museum
Assayer	Chemist	Cytologist
Associate chemist	Chiropractor	Cytoscreener
Biochemist	Clinic manager	Cytotechnologist
Biological photographer	Clinical Biochemist	Dentist
Biologist	Clinical embryologist	Dietitian
Biomedical engineer	Clinical cytogeneticist	Dietitian/researcher
	Clinical immunologist	

Editor (scientific and technical publications)
 Entomologist
 Environmental analyst
 Environmental scientist
 Exercise therapist
 Food and drug analyst
 Food-and-drugs inspector
 Forensic scientist
 Forensic lab analyst
 Forensic pathologist
 Geneticist
 Geriatric rehabilitator
 Health administrator
 Health care lobbyist
 Health policy researcher
 Hematologist
 Histopathologist
 Hospital administrator
 Hydrologist
 Industrial hygienist
 Information analyst
 Information scientist
 Insurance case reviewer
 Insurance claims adjustor
 Laboratory assistant
 Laboratory analyst
 Lab coordinator
 Laboratory tech
 Lawyer
 Long term care administrator
 Marine biologist
 Medical illustrator
 Medical librarian
 Medical technologist
 Methods development chemist
 Microbiologist
 Medical illustrator
 Medical lab scientific officer
 Medical librarian
 Medical technologist
 Medical lab assistant
 Medical legal assistant
 Microbiologist
 Molecular geneticist
 Museum tech
 Mycologist
 Nematologist
 Nuclear medical technologist
 Occupational health and safety inspector
 Occupational hygienist
 Oceanographer

Optometrist
 Organic mass spectrometrist
 Osteopath
 Paint formulation chemist
 Paper product developer
 Parasitologist
 Pathologist
 Perfumer
 Pest control tech
 Pharmaceutical detailer
 Pharmaceutical salesperson
 Pharmacologist
 Phlebotomist
 Physical therapist
 Physician
 Plant pathologist
 Plant physiologist
 Podiatrist
 Pollution controller
 Process development chemist
 Production chemist
 Product tester
 Pulp and paper chemist
 Psychologist
 Public health educator
 Quality assurance chemist
 Quality control chemist
 Research assistant
 Safety inspector
 Safety manager
 Sales rep. (chemicals and drugs)
 Sanitarian
 Scientist in hemostasis and thrombosis
 Social service counseling
 Social worker
 Soil scientist
 Soil tester
 Taxidermist
 Teacher/college
 Teacher/high school
 Technical writer
 Technical sales representative
 Textile chemist
 Tissue and transplant coordinator
 Veterinarian/Lab animal care
 Water quality analyst/technician
 Writer/scientific, technical
 Zoologist

Related Industries and Places of Employment

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

Research centers / institutes
Quality control laboratories
Research and development firms
Science museums
Technical libraries
Textile manufacturers
Utility companies/Waterworks departments
Zoological Parks

Websites

Below is a short list of some of related websites to get you started.

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
<http://www.anesthetist.org/>

American Academy of Physician Assistants
<http://www.aapa.org/>

American Art Therapy Association, Inc.
<http://www.arttherapy.org/>

American Association of Blood Banks
<http://www.aabb.org/>

American Association of Colleges of Pharmacy
<http://www.aacp.org/>

American Association of Medical Assistants
<http://www.aama-ntl.org/>

American Chiropractic Association
<http://www.amerchiro.org/>

American College of Nurse-Midwives
<http://www.acnm.org/>

American Dance Therapy Association, Inc.
<http://www.adta.org/>

American Dietetic Assoc.
<http://www.eatright.org/>

American Health Information Management Association
<http://www.ahima.org/>

American Institute of Biological Sciences
<http://www.aibs.org/>

American Occupational Therapy Association
<http://www.aota.org/>

American Optometric Association
<http://www.aoa.org/>

American Pharmaceutical Association
<http://www.aphanet.org/>

American Physical Therapy Association http://www.apta.org/	American College of Health Care Administrators http://www.achca.org/	American Society of Extra-Corporal Technology http://www.amsect.org/
American Podiatric Medical Association http://www.apma.org/	American Medical Technologists http://www.amt1.com/	American Horticultural Therapy Association http://www.ahta.org/
American Society of Clinical Laboratory Sciences http://www.ascls.org/	American Society of ElectroneuroDiagnostic Technologists http://www.aset.org/	National Therapeutic Recreation Society http://www.nrpa.org/
Alliance of Cardiovascular Professionals http://www.acp-online.org/	National Association for Home Care & Hospice http://www.nahc.org/	Association for the Advancement of Medical Instrumentation http://www.aami.org/
American Society of Echocardiography http://www.asecho.org/	Society of Nuclear Medicine-Technologists http://www.snm.org/	National Athletic Trainers' Association http://www.nata.org/
American Speech-Language Hearing Association http://www.asha.org/	Society of Diagnostic Medical Sonographers http://www.sdms.org/	Child Life Council, Inc. http://www.childlife.org/
American Veterinary Medical Association http://www.avma.org/	American Society of Radiologic Technologists http://www.asrt.org/	Association of Medical Illustrators https://www.medical-illustrators.org/
Association of American Veterinary Colleges http://www.aavmc.org/	American Association for Respiratory Care http://www.aarc.org/	Medical Library Association http://www.mlanet.org/
Physician Assistant Education Association http://www.paeaonline.org/	Opticians' Association of America http://www.oaa.org/	National Association of Emergency Medical Technicians http://www.naemt.org/
Association of Surgical Technologists http://www.ast.org/	American Association of Nurse Anesthetists http://www.aana.com/	National Association for Music Therapy http://www.musictherapy.org/
Institute of Food Technologist http://www.ift.org/	National Society of Histotechnology http://www.nsh.org/	Society of Vascular Ultrasound http://www.svunet.org/
American Academy of Orthotists and Prosthetists http://www.oandp.org/	Joint Commission on Allied-Health Personnel in Ophthalmology http://www.jcahpo.org/	<i>List from Health-Care Careers for the 21st Century Jist Publishing</i>
	National Academy of Opticianry http://www.nao.org/	

Health Care Career Books

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 Heath Care Careers.
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