

Careers in the Life Sciences

DEPARTMENT OF BIOLOGY

GATEWAY CAREER CENTER



Life after Lafayette

- What do you want to do with your degree?
- Are you selecting the right courses?
- What other things can you be doing?
- Where have Lafayette alumni gone and what can you expect?

Some Possibilities

- Graduate school
- Health Professions
- Industry, government, education
- Something else?
 - Term of Service
 - Fellowship
 - Growth Year

Life Sciences Alumni (Classes of 2018-2022): First Destinations Data

Major	Employed	Grad School	Health Professions School	Law School	Other
Biochemistry (n=38)	34%	55%	8%	0%	3%
Biology (n=188)	51%	26%	6%	0%	16%
Environmental Science (n=18)	61%	22%	0%	0%	6%
Neuroscience (n=176)	62%	18%	5%	0%	14%

- Data represent First Destinations Survey respondents; respondents still seeking employment opportunities at the time of the survey are not included above.
- Similar data available for all academic majors; connect with your Gateway Counselor if you would like information for a different academic area



Headed to graduate school?

- GPA...study, work hard
- GRE...take practice tests
 - General and Subject
- Research Experience
 - Independent study, honors thesis, Excel (contact Biology, Chemistry, Neuroscience, Psychology or other dept. faculty), LEARN, CURE
 - Teaching Assistant (contact Biology faculty)
 - RUI/REU (elsewhere)...search the web
- Check out *Sigma Xi*

Headed to graduate school?

- Find graduate programs on web and look at required and recommended prerequisites.
 - Begin exploring Gateway Career Center Resources:
<https://gateway.lafayette.edu/channels/prepare-for-graduate-professional-school/>
 - Which programs have faculty conducting research of interest to you?
- Graduate School Advising Liaisons (see [list](#))
- Pick based on both the program AND your advisor – talk to Lafayette faculty for guidance

Sample Grad School Programs: Recent Life Sciences Alumni


- Plant Pathology
- Marine Biology
- Public Health Policy and Management
- Epidemiology
- Pathobiology
- Aquatic Ecology
- Neuroscience
- Forensic & Investigative Sciences Biology
- Coastal Environmental Management
- Pharmacy
- Genetics
- Cell Molecular Biology
- Forestry and Environmental Science
- Applied Behavioral Analysis
- Global Health
- Biomedical Sciences
- Biochemistry
- Biotechnology

Alumni Profiles:



Erin Arevalo  (She/Her) · 2nd
Presales Support Specialist at Thermo Fisher
Scientific & MS candidate in Johns Hopkins
University's Biotechnology program
New York, New York, United States · [Contact info](#)



Andrew Hudak  · 2nd
Immunobiology PhD Student at Yale University
New York City Metropolitan Area · [Contact info](#)

Health Professions?

Here are the fastest growing healthcare careers on the list.

Occupation	2021 employment	Projected 2031 employment	Projected growth
Nurse practitioner	246,700	359,400	45.7%
Medical and health services managers	480,700	616,900	28.3%
Physician assistants	139,100	177,500	27.6%
Physical therapist assistants	96,500	122,100	26.5%
Epidemiologists	8,600	10,900	25.8%
Occupational therapy assistants	43,400	54,500	25.4%
Home health and personal care aides	3,636,900	4,560,900	25.4%
Health specialties teachers, postsecondary	246,700	306,100	24.1%

Health Professions?

- Review Health Professions Program website (<http://healthprofessions.lafayette.edu/>). Director for the Health Professions Program is Mrs. Glaus and the Faculty Health Profession Advisor is Prof. Nancy Waters (Biology)
- Contact Ms. Herschlag, Administrative Coordinator for HP, to sign up for the HP listserve emails and programming notices.
- Engage with HP Advising early and consistently to develop and support your aspirations
- GPA...study, work hard
- Manage multiple academic requirements: GPA, MCAT, DAT, OAT, GRE, research--as well as clinical, volunteering, shadowing and leadership activities to show your passion. Volunteer, shadow, internship, demonstrate leadership
- Research Experience
 - On-Campus (i.e. Independent Research, Honors Thesis, Excel, CURE)
 - Off-Campus (i.e. LEARN (research with Lafayette alums); RUI/REU (elsewhere, federally funded)...search the [NSF website](#) for opportunities)
- Consider the benefits of a growth year...or two...schools seek applicants with lived experience and maturity (and the average age of MS 1 is now 24+!)
- Demonstrate with evidence how you meet the Core Competencies developed by AAMC and now used in some form by every health professions school in the country.
(<https://www.aamc.org/services/admissions-lifecycle/competencies-entering-medical-students>)

Health Professions?

- **Allopathic (MD)** and **Osteopathic (DO)** doctors
- Physician Assistant (PA-C, MSc, MHS), Nursing (BSN, ABSN, MSN, DNP)
- Physical Therapy (PT), Occupational Therapy (OT)
- Podiatry (DPM), Chiropractic (DC)
- Public Health (MPH, PhD)
- **Dentistry (DDS, DMD)**
- **Optometry (OD)**
- **Podiatry (DPM)**
- **Veterinarian (DVM)**

Purple = Managed by HP Advising due to Composite Letter requirements.

Black = managed by Gateway CC

Both HP and GCC support all of our students as we are able!

Courses not offered at Lafayette

- Human Anatomy and Physiology I and II
- Some HP programs will accept substitution of these:
 - Biol 213 – Comparative Vertebrate Anatomy and
 - Biol 251 – Human Physiology.
- Programs vary; do your research on each program's requirements! other requisite outliers: nutrition, public speaking, microbiology, and statistics specifications
- Consider LVAIC courses (*e.g.*, Cedar Crest) or comparable summer offerings near home ONLY as a last resort means to complete core requirements or if unavailable at Lafayette. *require pre-approval IN ADVANCE from our Registrar if they are to count for degree.
- NOTE: Many of you will have AP credit for Biology (111/112), Chemistry (107/108), Math (125 or 161), and English (110) courses. Use AP credit only sparingly; most schools will expect additional upper level coursework if you choose to use AP to meet intro level math, biology, english, etc.
- Covid Comment: In the pandemic schools may enact changes rapidly, or stop accepting courses they previously accepted. Rely on up-to-date, credible sources for your info...like HP Advising :-)

Sample Health Professions & Allied Health Programs: **Recent Life Sciences Alumni**

- Physician Assistant
 - Occupational Therapy
 - Veterinary Medicine
 - Medicine (M.D./D.O.)
 - Chiropractic Medicine
 - Dental Hygiene
 - Physical Therapy
 - Nursing
 - Optometry
 - Dentistry
 - Medical Sciences
 - Public Health
- **IMPORTANT:** These examples are exclusively from First Destinations Data. Keep in mind that many alumni pursue additional health professions and allied health programs after graduation.

Alumni Profiles



Anjali Toole · 2nd

Pediatric Physical Therapist at Children's
Hospital of Philadelphia

New Hope, Pennsylvania, United States · [Contact info](#)



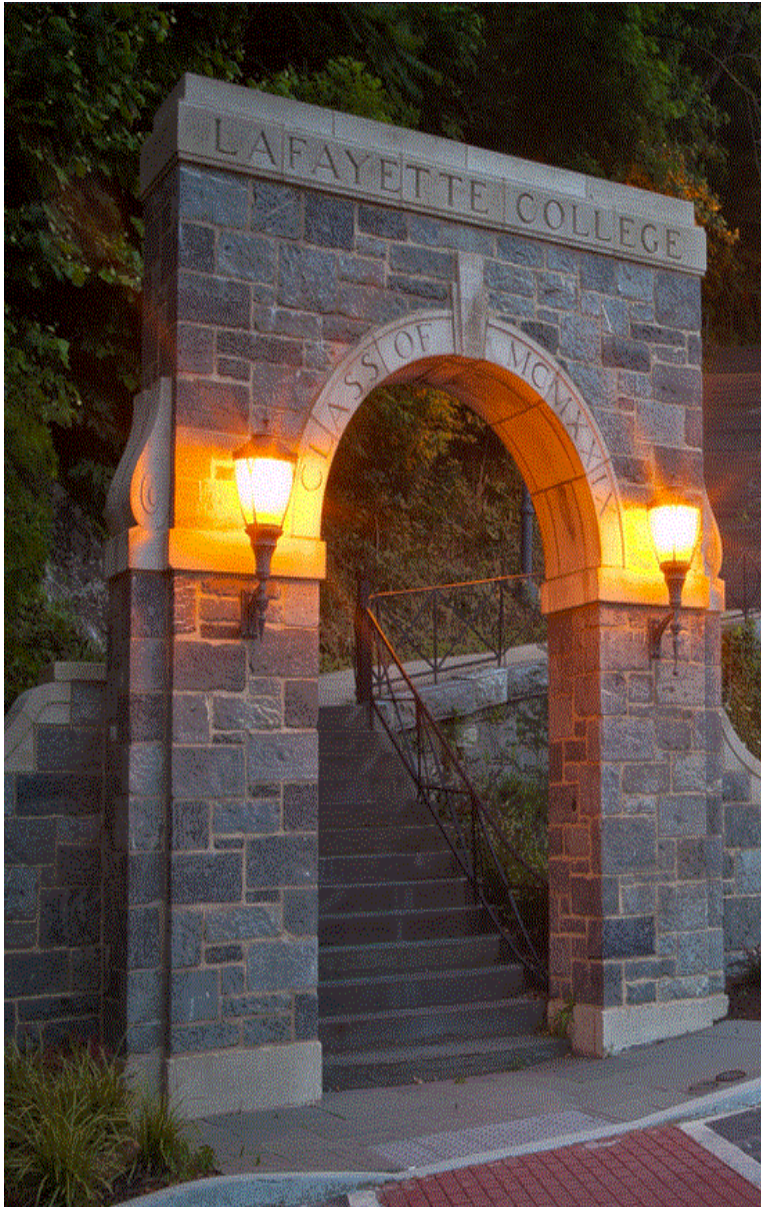
Adam Finkelstein M.D. · 2nd

General Surgery Resident VCU Medical Center

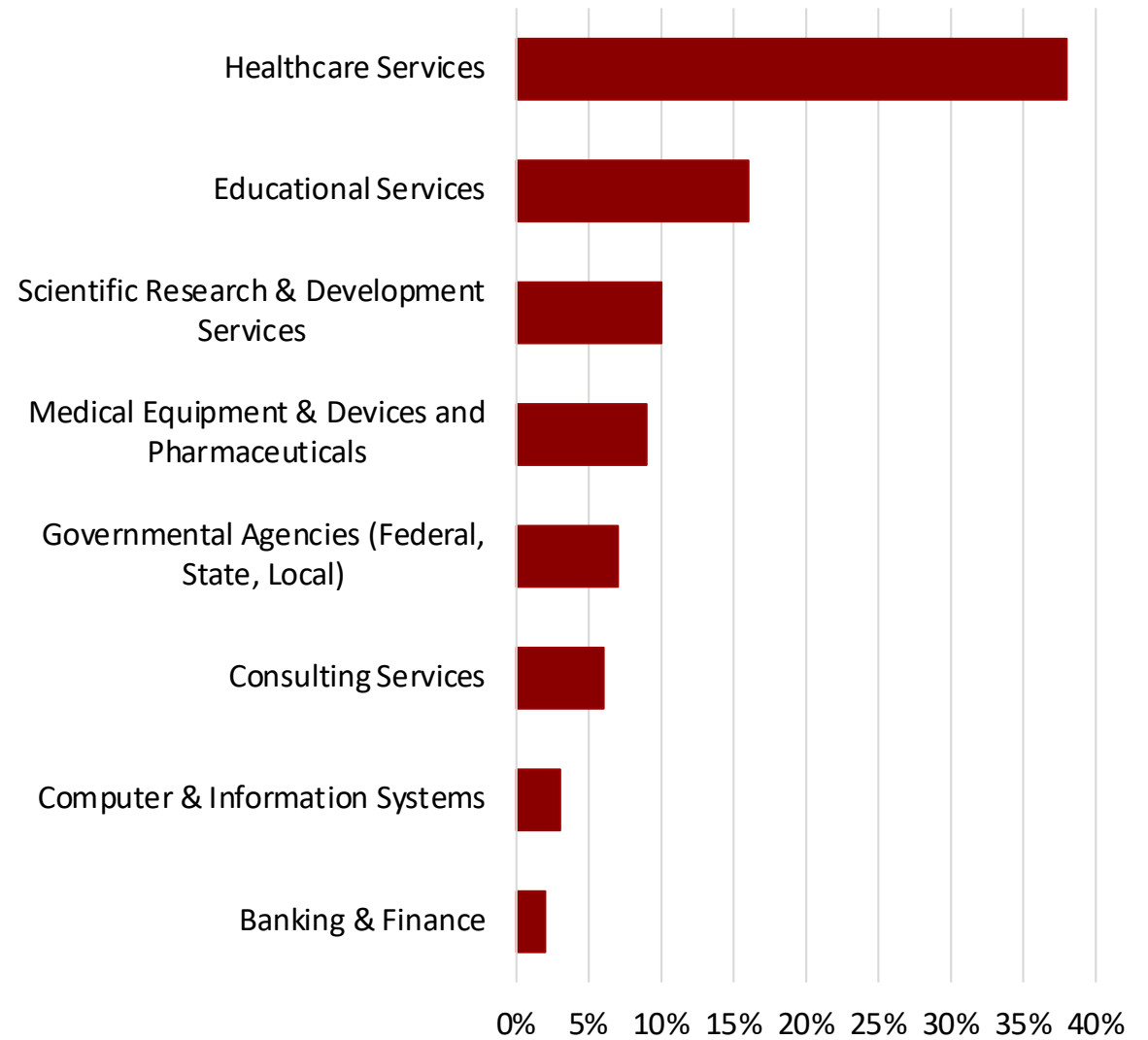
Wellesley, Massachusetts, United States ·

Industry? Government? Education?

- Most organizations and government agencies demand experience. Therefore, get it.
- Relevant Experience:
 - Internships
 - Externships (Job Shadowing)
 - Career Tracks
 - Volunteering
 - Part-Time Work
- Research Experience (Independent, Honors Thesis, Excel, LEARN, TA, REU, CURE)
- Key Projects, Presentations & Lab Assignments



Top Employment *Industries**



*Classes of 2018-2022 Biology, Biochemistry, Environmental Science, Neuroscience

Sample Employers & Positions: Recent Life Sciences Alumni

- Bristol-Myers Squibb
 - National Institutes of Health (NIH)
 - BioSig Technologies
 - Children's Hospital of Philadelphia
 - Cambridge BioMarketing
 - Havas Health (healthcare advertising)
 - Huron Consulting Group
 - L'Oreal
 - Teach for America
 - Memorial Sloan Kettering Cancer Ctr
 - NAXION Consulting
 - Research Assistant
 - Physical Therapy Aide
 - Pharmaceutical Sales Representative
 - Mental Health Specialist
 - Microbiologist
 - STEM Teacher
 - Healthcare Research Analyst
 - CAR-T Cell Processing Specialist
 - Patient Care Coordinator
 - Staff Scientist
 - Neurocognitive Enrichment Specialist
 - Community Health Organizer
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Alumni Profiles:



Lauren Johnson · 1st

Vaccines Health & Science Specialist at Pfizer

Boston, Massachusetts, United States · [Contact info](#)

500+ connections



Nicole Wamser  (She/Her) · 2nd

B&W Fragrance Design Specialist at Unilever

New York City Metropolitan Area · [Contact info](#)

300 connections

Emerging Fields & Roles

- Keep in mind, new employers, career fields, and positions are emerging all of the time!
- For example, as a result of COVID-19, there has been a need for increased numbers in certain roles as well as newly created positions.

clinical trials
community health
direct care
research&development
manufacturing
regulatory affairs
compliance public health
medical equipment
ppe equipment development
global health




Start Learning about Finding Opportunities Now

- Connect or re-connect with a Gateway Counselor in the Gateway Career Center! [Schedule via Handshake!]
- Check online posting sites: Handshake, plus many others through Gateway and beyond!
- Create and/or update your resume/CV
 - “Resources” area of your Handshake account → samples, tutorials
- Do you know how to write cover letters?
 - Check your *Writing Papers in the Biological Sciences* from Biol. 111/112.
 - “Resources” area of your Handshake account → cover letter guide, samples, and tutorials

Considering Other Options? Not sure?

- Fellowships: <https://externalscholarships.lafayette.edu/>
 - Dean Julia Goldberg and Dean Brandon Morris
- Term of Service Opportunities
 - Meet with your Gateway Counselor to learn more!
- Not sure? Explore!
 - There are MANY resources available to help you begin to identify, rule out, and/or confirm your interests and direction forward.
 - You can't make an informed choice unless you're informed.
 - It's okay to take small steps forward, but don't stand still.

Not sure?

- Search your soul
 - Where do you see yourself ten years from now?
 - Do you want to make money?
 - Do you have a passion for helping people?
 - Do you want to save the planet?
 - Do you want to have a family?
 - Do you like to solve problems?
 - Do you like to work in a lab?
 - Do you see yourself as patent lawyer?
 - Career assessment available through Career Center
 - Talk to your peers, your family, your advisor, Gateway Counselor
 - Sustain and take on leadership positions in your support groups, including student clubs (e.g., LEADERS, Tri-Beta, etc.)
 - Have informational conversations with alumni who are eager to share their story and provide advice!
 - READ! PodCasts! TED Talks! Discover what motivates others to help discern what motivates YOU.
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Next Steps

- Dive into the key resources included in handout (which will be sent to you following today's session!)
- Leverage faculty and your Gateway Career Counselor to help you:
 - Explore your interests
 - Identify opportunities
 - Prepare your professional materials
 - Acquire information and gain experience
 - Reflect on information/experiences and plan next steps
- Schedule an appointment with your Gateway Counselor
 - From the "Career Center" section of your Handshake account

Questions?

