

STEM CAREERS

**Interested in a career in research?
Use this guide to help as you start exploring!**



In this guide, you'll find:

- Resources for getting involved in research across the university
- Sample questions for networking
- Email templates for reaching out to professors or Principal Investigators to learn more about getting involved in their research
- Resume and cover letter tips
- A resume sample
- Two cover letter samples

Do you have questions or need help with your job and internship search?

Email: bacollin@bu.edu

Set up an appointment on [Handshake](#)

How to Get Started in Research

On-Campus Opportunities



BU Office of Research

The [Office of Research](#) supports all aspects of research at BU, overseeing and coordinating between all of BU's research support offices and reporting centers.

BU UROP

[UROP](#) connects BU undergraduate students with funded, faculty-mentored research projects. The program is flexible, allowing research study in any academic area university-wide.

Profiles at BU

[BU Profiles](#) is an online directory and discovery tool designed to help users find and connect with faculty, staff, and researchers at Boston University (BU) and Boston Medical Center (BMC).

Off-Campus Opportunities



National Science Foundation REU

The U.S. [National Science Foundation Research Experiences for Undergraduates](#) program supports intensive undergraduate student research in any area of research funded by NSF.

Pathways To Science

[Pathways to Science](#) connects current undergraduate students interested in research to programs and professional development resources.

AAMC Summer Research

[AAMC Summer Research](#) is a listing of summer programs for undergraduates interested in pursuing careers in medical research.

Job Boards and Direct Employer Websites

- [MassBio Job Board](#)
- [Green Jobs Network Job Board](#)
- Tip: Look up career and internships at the hospitals or companies you are interested in

Additional Resources



Roadmap To Research

A [Roadmap to Guide Your Journey](#) discusses the value of research experiences and how to get started.

Writing Grant Proposals

[Writing a grant proposal](#) is a critical skill for researchers seeking funding for their projects. A well-crafted proposal not only secures the necessary resources, but also communicates the significance of your research to a broader audience. Use this resource for tips on how to write your own proposal.

Examples of Undergraduate Research

UCLA Examples of [Past Undergraduate Research Projects](#). As you think about the kind of research you want to do in undergrad, it can be helpful to look at examples of what others have done.

Sample Networking Questions

Introductory Questions

- What drew you to your current role/organization?
- What excites you most about your work?
- How did you discover that this was the right path for you?

Background Questions

- Was getting into research always a career goal for you?
- What previous roles or experiences shaped your career trajectory?

Job Search Questions

- How can students stand out in applications?
- What common mistakes should we avoid during the application and interviewing process?

Industry Specific Questions

- What current challenges do you see in the research world?
- How do you see your work changing in the future?
- What emerging trends in research should we know about?
- What trends are you paying attention to right now?



Professional Development Questions

- What certifications or training would you recommend?
- Which organizations would you recommend joining?
- Which internships best prepare for this field?
- What networking strategies worked best for you?

Career Path Questions

- What's a typical day like in your role?
- What skills are most essential in your work?
- How did you break into this field?
- What is something you wish you knew when you first started out?

Professional Growth Questions

- What do you wish you'd known at our stage?
- What has been a professional challenge that you've experienced?
- What advice would you give someone trying to break into the field?

Email Outreach Templates

Is there a professor or PI currently doing research that you are interested in? Emailing them directly can be a great way to express your interest and learn more about getting involved. Below is an email template for reaching out to a professor or PI **you have never met**.

SUBJECT: Conversation about your research

Dear [Professor/PI's Name],

My name is [Your Name], and I am a [year, e.g., sophomore] majoring in [your major] at [University Name]. I recently came across your work on [specific topic, paper, or research area], and I found it particularly interesting because [brief reason or connection].

I am interested in finding ways to gain research experience, and I am writing to ask if there might be an opportunity for me to become involved in your research. I am very interested in gaining research experience in [field/topic], and I would be excited to contribute while learning more about the research process.

I have completed [1-3 relevant courses], which helped me develop skills in [specific skills or tools]. I would love the opportunity to assist with tasks such as literature reviews, data collection, analysis, or any other support that may be helpful to your team.

If possible, I would greatly appreciate the opportunity to meet briefly to discuss your research and whether there may be a role a student like myself. I have attached my resume for your reference. If there isn't a role available at this time, I completely understand. I would still greatly appreciate the time to connect to learn more about getting involved in research as an undergraduate student.

Thank you for your time and consideration. I look forward to hearing from you.

Best regards,
[Your Name]

Email Outreach Templates

Is there a professor or PI currently doing research that you are interested in? Emailing them directly can be a great way to express your interest and to learn more about how to get involved. Here is an email template for reaching out to a professor or PI **you've met before or have taken a class with.**

SUBJECT: Conversation about your research

Dear [Professor/PI Name],

I hope you are doing well. My name is [Your Name], and I took your [Course Name / Course Number] class in [semester and year]. I really enjoyed the course, especially the section on [specific topic, project, or concept], which sparked my interest in learning more about research in this area.

I am interested in finding ways to gain research experience, and I'm reaching out to ask whether there might be any opportunities for students to get involved in your research. I would be very interested in gaining hands-on research experience in [field/topic] and the work you are doing in [current research being done at the lab] feels like it would be a perfect fit.

Since taking your course, I have also completed [relevant course, skill, or experience], which helped me develop skills in [relevant skills]. I would be excited to assist with tasks such as literature reviews, data collection, analysis, or other work that supports the team's research.

If you have time, I would really appreciate the chance to meet briefly to learn more about your current projects and discuss whether there might be a way for me to contribute. I would be happy to provide my resume or any additional information if helpful.

Thank you for your time, and I hope to stay in touch.

Best regards,
[Your Name]

Resume & Cover Letter Tips

On your Resume:

Formatting Basics

- One full page is ideal for resume
- 0.5 (narrow) - 1 inch margins
- Black ink only and **no graphics**
- 11-12pt. professional font
- Use bullets, **bold**, *italics*, & CAPS
- **Save as PDF** before submitting

Experience Section

- Get creative with your headings and group similar experiences together
 - For example: Research Experience, Projects, Clinical Research
- Within each section, experiences should be in **reverse chronological order** with the most recent at the top
- Use **language directly from the job posting** in your explanations!

Education Section

- After your first year, high school can be removed
- **GPA is optional!**
- Include study abroad or any courses you've taken (5-6) that are relevant to the role

Skills Section

- Name any professional certifications/licenses
- **Organize by skill type**
 - For example: Lab, Coding, Data Analysis, Languages

Additional Optional Sections

- Summary/Objectives
- Volunteer
- Publications
- Conference Presentations

On your Cover Letter:

Formatting Basics

- One full page is ideal for cover letter
- 0.5 (narrow) - 1 inch margins
- Black ink only and **no graphics**
- 11-12pt. professional font
- **Save as PDF** before submitting

Anatomy

- First paragraph (1): State **interest** in the position and organization
- Body paragraphs (2, 3): **Explicit connection** between your background and the skills/qualifications in the position description.
- Closing paragraph (4): **Reiterate interest**, include interest in employer (if not already mentioned)

Resume Templates

Terrier Sample

rterriersample@bu.edu | 123-345-6789 | Boston, MA

EDUCATION

Boston University

Bachelor of Arts in Neuroscience

Boston, MA Expected
May 2026

RESEARCH EXPERIENCE

B.U. Medical School, Dracari Cardiovascular Center

Research Assistant, Cardiovascular Disease Project

Boston, MA

Jan 2025 - Present

- Collect and input data for biobank of aortic and associated conditions that will enable physicians and researchers to better understand patient conditions and progression.
- Recruit and enroll 200+ patients to participate in study and enter relevant patient data in RedCap.

Boston Medical Center, Department of Emergency Medicine

Research Assistant

Boston, MA

Jan 2024 - Dec 2024

- Studied hypertensive, target-organ cardiac damage and its effects on disparities in cardiovascular disease, particularly within Black community, while investigating efficacy of vitamin D therapy.
- Interacted with 200+ patients, recruited them to be study participants, and screened them using FirstNet as part of recruitment process.
- Drew patients' blood samples and took blood pressures to collect vital stats.
- Collected patients' personal health information for data entry and analysis to draw connection between family history and cardiovascular disease.

B.U. Psychology Department, Cruyff Neuropsychology Lab

Research Assistant

Boston, MA

Feb 2023- Aug 2023

- Focused on affective neuroscience, studied neural basis of positive desire and sensory pleasure, and negative disgust and fear involved in emotion and addiction.
- Triggered learning behaviors and addictive tendencies in subject rats and video recorded reactions to observe their pleasures and desires.
- Learned about animal protocols and research methods, enhanced knowledge and interest in neuroscience and psychology.

COMMUNITY INVOLVEMENT

Health Leads

Patient Advocate

Boston, MA

Sep 2024 - Present

- Explain in simple terms how to navigate health care system for 12 patients unfamiliar with its complexity.

Hometown Heroes

Peer Coordinator

Hometown, NY

Sep 2022 - Aug 2024

- Organized group of 30 student volunteers; tracked results using CRM software and Excel to report out data.

LEADERSHIP & ACTIVITIES

President | National Senior Honor Society, B.U. Chapter **Active**

Sep 2025 - present Sep

Member | Boston University Hillel

2022 - present

Student Board Member | Dean of Students Advisory Board

2022 - 2023

LAB TECHNIQUES

- Chronic video-EEG recording and analysis
- Confocal immunofluorescence microscopy
- Fiber optic NIR spectroscopy
- Neurophotonics
- Histology
- In situ hybridization
- Fluorescence in vivo imaging
- Controlled cortical impact
- Immunohistochemistry



Cover Letter Example

Terrier Sample

terriersample@bu.edu | 123-345-6789 | Boston, MA

March 26, 2026

Dear Hiring Committee,

I am writing to express my interest in the Clinical Research Assistant position in the Department of Pediatric Otolaryngology at Boston Children's Hospital. I am a senior at Boston University studying Neuroscience, and through my research experiences in both clinical and laboratory settings, I have developed strong interests in clinical research and a future career in medicine. I am excited about the opportunity to contribute to research investigating pediatric laryngeal pathologies while further strengthening my research, data management, and patient-facing skills.

As a Research Assistant at the Boston University School of Medicine Dracery Cardiovascular Center, I contribute to a cardiovascular disease project focused on aortic and related conditions. In this role, I collect and manage patient data for a biobank and recruit and enroll study participants during clinical visits. I have recruited more than 200 patients and regularly enter and manage clinical data using REDCap, ensuring accuracy and organization for future research analysis. This experience has strengthened my attention to detail, ability to manage sensitive patient information, and familiarity with clinical research workflows, all skills necessary to be a strong Clinical Research Assistant.

Previously, as a Research Assistant in the Department of Emergency Medicine at BMC, I worked on a project examining hypertensive cardiac damage and cardiovascular disparities. I interacted directly with patients in the emergency department, screening and recruiting participants using electronic medical record systems, and collecting clinical measurements. In addition to my clinical research experience, my earlier work in a neuropsychology laboratory provided exposure to experimental design, animal research protocols, and data collection methods. Across these roles, I have developed strong organizational skills, the ability to manage multiple responsibilities simultaneously, and experience collaborating with multidisciplinary research teams.

I am particularly drawn to this position because of the opportunity to participate in multiple stages of the research process while working alongside clinicians and researchers dedicated to improving pediatric patient care. I am excited to contribute my research experience, attention to detail, and commitment to collaborative work to support the department's ongoing projects. Thank you for your time and consideration. I would welcome the opportunity to further discuss how my experience and interests align with your research team's goals.

Sincerely,

Terrier Sample

Bulleed Cover Letter Example

Terrier Sample

terriersample@bu.edu | 123-345-6789 | Boston, MA

March 26, 2026

Dear Hiring Committee,

Growing up in a neighborhood where access to healthcare was limited, I watched neighbors struggle with chronic conditions and became determined to contribute to research that improves patient outcomes and equity in care. For this reason, I am excited to apply to the Research Assistant I position at BMC's Department of Internal Medicine. My academic background, hands-on lab experience, and dedication to community-centered healthcare make me well-suited to contribute to BMC's mission-driven research teams.

- **Research Experience:** During the past 2 years, I have conducted cancer biology research on campus where I prepared samples, maintained cell cultures, ran PCR assays, and followed strict laboratory protocols. This role has strengthened my laboratory technique, attention to detail, and familiarity with the most recent advances in curing cancer. I have developed a deep understanding of how research in lab settings can have profound impacts on patient care. This will allow me to work with even more dedication to further the work in harm reduction that your team is engaged in.
- **Basic Data Analysis:** During my 2025 NYU Langone summer internship, I performed data cleaning on large sets of patient survey data. In particular, I used the finalized data to create a visualization that highlighted a gap in our survey participants. As a result of my presentation, our team worked for an additional 6 weeks to source participants from a broader age spectrum, adding validity to the results that will be produced.
- **Organization and Time Management:** During my time at NYU Langone, I also managed multiple projects. All of these were integral to the work of my PI and involved maintaining a detailed task tracker and weekly priority list, coordinating survey collections with other interns, and batching data entry tasks to maximize my time. As a result, I consistently met weekly deadlines, finishing the survey collection project early and allowing the team to move forward 3 months ahead of schedule.

I am inspired by Boston Medical Center's commitment to equitable, patient-centered care and translational research that addresses community health needs. Being from Boston, I am invested in being a part of the next generation of researchers improving the lives of people in my community. I would be honored to contribute my lab skills, analytical capabilities, and collaborative spirit to support BMC's mission. Thank you for considering my application. I look forward to discussing how I can contribute to the Internal Medicine team.

Sincerely,

Terrier Sample