

STEM | INDUSTRY ROADMAP

Career Paths and Desired Skills

STEM careers involve using analytical tools and skills to gain new information about the world around us and the application of technical skills to investigate new questions in your area of expertise. These skills might include data analysis, laboratory procedure, qualitative interviews, or mechanical abilities. Many careers in STEM require an advanced degree, such as a Master's or a PhD; the candidates becoming field experts with highly specialized subject knowledge. As an undergraduate, you can gain relevant experience in both research and industry roles, which will prepare you for post-graduation options. Further, a STEM degree and related experiences foster transferable technical, communication, and quantitative skills are applicable to a variety of industries including finance and technology.

Entry-Level Role

INDUSTRY, DATA ANALYST

Data Analysts interpret data to drive decision making. Data Analysts are crucial in providing input on statistical methodology, performing quality assurance checks to improve existing data sets, and developing code to ensure data compatibility.

Key Functions

- Collect, clean, and analyze data
- Interpret results
- Data visualization
- Database management
- Predictive modeling

Internships to help you get there

- Consultant, Clearview Healthcare Partners
- Analyst, IBM Quantum

Skills: Analytical Skills | Use of statistical tools | Modeling and Programming | Problem Solving | Interpersonal skills

RESEARCH ASSOCIATE / RESEARCH SPECIALIST

Research associates conduct research at a variety of institutions, ranging from academia to national laboratories. Industry jobs are also available to conduct research at organizations that develop products or techniques.

- Carefully prepare and conduct experiments
- Analyze data to inform future research plans
- Communicate research findings in both written and oral formats

- Lab Technician, Cold Spring Harbor Laboratory
- Research Associate, Novartis

Skills: Analytical thinking | Strong communicator | Creativity | Interpersonal skills | Attention to detail | Organization

GRADUATE STUDENT

Many careers in research require an advanced degree, such as a Master's or a PhD; researchers are experts with highly specialized subject knowledge. Many recent graduates interested in STEM research choose to attend graduate school to prepare them for future careers in research settings such as academia and industry.

- Engage in graduate courses in your area of expertise
- Design and execute a research plan
- Communicate research findings and defend a thesis

- Undergraduate Researcher, UChicago Campus Lab
- Research Assistant, Argonne National Lab

Skills: Problem solving | Analytical skills | Interpersonal skills | Organization | Quantitative ability

BUILDING EXPERIENCE FOR CAREERS IN STEM

Career Advancement offers a number of events and resources to help prepare you for a career in STEM research:

EVENTS

Fall Quarter

- September 30 | Applications Open for Winter Break STEM Treks to Paris and Lyon, France; Washington, D.C; and Santa Clara, CA
- September 30 | Google Info Session & Resume Workshop
- October 1 | Meet the UChicago Champions Employer Networking
- October 2 | UChicago Career & Internship Fair
- October 10 | Quantum Employer Spotlight: Quantinuum
- October 17 | Fireside Chat with Dean of Physical Sciences Division, Ka Yee Lee
- October 21 | Alumni in Mathematics Career Panel and Networking Night
- October 22 | National Lab Application Bootcamp
- October 30 | EPIC Climate Frontiers Career Fair
- November 4 | Application Deadline for Engineering Fellows
- November 20 | Quantum Employer Spotlight: Rigetti
- November 21 | Trek to Argonne National Lab

Winter Quarter

- January 6 | Applications Open for Spring Break STEM Treks to Dublin, Ireland; Los Angeles, CA; and New York, NY
- January 14 | STEM Recruiting Night
- January 30 | Careers in STEM Office Hours
- February 15-16 | UChicago Hackathon

Spring Quarter

- April 2 | Undergraduate Research Panel
- Mid-April | Behavioral Science Case Competition
- April 24-25 | Quantum Recruiting Forum
- May 6 | Summer Success Series: Preparing for Research Roles
- May 13 | Summer Success Series: Preparing for Industry Internships

REPRESENTATIVE EMPLOYERS, GRADUATE SCHOOLS, AND FUNDING OPPORTUNITIES

Research Institutes & National Labs

Argonne National Lab
CERN
Centers for Disease Control and Prevention
Mathematica Policy Research
National Institutes of Health
NASA

Industry

Genentech
Environmental Protection Agency
Field Museum
HRL Laboratories

Graduate Schools

University of California Berkeley
Harvard University
MIT
Yale

Funding & Fellowship Opportunities

BSCD Fellowships
NESSTP Fellowships
National Science Foundation's Graduate Research Fellowship (NSF GRFP)
Fulbright Fellowship



Thomas Sheppard, AB'24

Major: Math and Philosophy

Involvement: Quantum Research and Industry Analyst at Duality; ILC Entrepreneurship and Technology Club

Post-Graduation Plans: Director of Data and Analytics at Great Lakes Crystal



Kyla Mullaney, AB'24

Major: Astrophysics

Involvement: Research on-campus, minors in Media Arts and Design and Science Communication, and involvement in student film with Maroon TV.

Post-Graduation Plans: Post-baccalaureate researcher at NASA Goddard with CRESST