STEM

Students fascinated with Science, Technology, Engineering, and Math (STEM) frequently like to solve abstract problems by thinking about and analyzing ideas. A career in STEM may be involved with planning, managing, and providing scientific research and professional and technical services. Explore some concentration areas to determine what path best fits YOU!

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PHYSICAL SCIENCES

The field of physical science is the study of the physics and chemistry of nature. Positions in this field work in laboratories, conduct experiments, analyze findings, operate necessary equipment, and develop tests and theories in a private research laboratory, government agency, or as a teacher.

EXPLORING THE INDUSTRY

Key Roles

- Surveyor
- Astronomer
- Nuclear Power Reactor Operator
- Physicist
- Aquarist
- Hydrologist
- Meteorologist
- Chemist
- Park Ranger
- Fire Protection Engineer
- Geophysical Technician
- Atmospheric and Space Scientist
- Biological Science Teacher
- Biostatistician
- Conservation Scientist
- Genetic Counselor
- Industrial Ecologist
- Molecular and Cell Biologist
- Statistician
- Technical Writers

Key Skills

- Operate scientific equipment
- Information handling & organization
- Statistical awareness
- Analytical and quantitative abilities
- Numerical computation
- Laboratory skills

Recommended Reading

- Occupational Outlook Handbook: Life, Physical, and Social Sciences
- ONET STEM Career Cluster
- American Chemical Society Career Advice
- Sloan Career Cornerstone Center

FINDING OPPORTUNITIES AND GETTING INVOLVED

Jobs and Internships
Key words for job searching:

- Lab
- Scientist
- Clinical
- Technician
- Chemistry
- Synthesis
- Analysis
- Organic
- Spectrometry
- Molecular
- Research
- Pharmaceutical
- Quality
- Regulatory
- Protocol
- Engineer
- Safety
- Environmental

Job Search Resources

- BioSpace
- BIOTECH Career Center
- Biology Jobs
- The Scientist/Careers
- Science Careers
- The American Society of Forensic Sciences
- ChemJobs.net

Fellowships and Research

EMORY DEPARTMENTAL RESEARCH COORDINATORS AND RESOURCES

- Biology
- Neuroscience and Behavioral Biology
- Physics
- Chemistry
- Center for Community Partnerships
- Emory Undergraduate Research Programs
- The Council on Undergraduate Research
- Center for Science Education
- Center for Science Education Summer Opportunities
- Office of International and Summer Programs International Research Opportunities.
- College of Arts and Sciences
- Honors Program
- Handshake

Approach professors whose class especially interested you. They may have a project for you or recommend someone who does.
Talk with your major advisor about research opportunities within your major.

EXTERNAL RESEARCH OPPORTUNITIES

- IRES: International Research Experience for Science Students
- REU: Research Experience for Undergraduates
- SIP: Summer Internship Program in Biomedical Research
- National Institutes of Health
- National Science Foundation Research Experience for Undergraduates
- Post-Baccalaureate Research Education Program (PREP)
- Smithsonian Opportunities for Research and Study
- National Oceanic and Atmospheric Association Coastal Management Fellowships
- American Society for Microbiology Undergraduate Research Fellowship
- Data Observation Network for Earth (internships and fellowships)
- National Oceanic and Atmospheric Association Hollings Fellowship
- FDA Commissioner’s Fellowship Program
- Commonwealth Stem Industry Internship Program
- GLOBE Internship at the Nature Conservancy
- Oak Ridge Institute for Science and Education
- Parent’s Committee Internship Grant (funding)
- Institute for Health Metrics and Evaluation
- Mickey Leland Energy Fellowship Program
- Google Policy Fellowship
- Smithsonian Internship Program
- Smithsonian Fellowship Program
- Code For America
- Hertz Foundation Fellowship
- Chicago Botanic Gardens
- Morven Summer Institute
- DOD SMART Program (funding)
- GETExperience: Science-based research internships, fellowships, and jobs
- Science.gov Internships and Fellowships
- American Association for the Advancement of Science Internships
- Barnard College: Science Summer Internships Search Tool

Campus Organizations and Volunteering

For the latest information on meeting times and leadership, please visit OrgSync

- Women in STEM
- Korean American Scientists and Engineers
- ChEmory
- SciComm: Emory Science Communication
- Emory Biotech Club

Don’t see your student organization represented? Please contact Sarah Clark to have it added to this list!

PREPARING TO APPLY

Resumes and Cover Letters
Resume vs CV

You may be asked to submit a CV or a Curriculum Vitae in place of a resume. What is the difference and when do you know which to use? Typically a resume is used for positions in business and industry. It is a short (one page) summary of your skills and experiences and is tailored toward the position at hand. In contrast, a Curriculum Vitae is typically used for applications to graduate school, and for submissions to positions in academia or research intensive positions. The Curriculum Vitae is much more comprehensive and detailed than what we typically see in a resume, and may span many pages. In addition to the standard sections you would find on a Resume (Name and Contact Info, Education, Experience, Skills) a CV may have the following categories:

- Coursework
- Teaching Experience
- Research Experience
- Project Management
- Conference Presentations
- Publications
- Professional Association Membership
- Programs and Workshops
- Special Training
- Certifications
- Leadership Experience

If you are unsure which version to use, you can always contact someone in the organization to double check which version of your experience to send. Be aware that some organizations will use the word interchangeably, but a good rule of thumb is to use the resume for industry and the CV for academics.

Resume Tips for Entry-Level STEM Careers

Interview Preparation

Depending on the organization, some employers may have you demonstrate specific skills they're looking for that might pull from your scientific coursework. It's more likely that they will focus on specific questions related to your technical and laboratory skills as well as questions about transferable skills. Check out our Interview Guide here.

Portfolios and Online Presence

It's customary for science majors to include links to their LinkedIn profile on their resumes. Additionally, it's appropriate to include links to any published articles that are available publicly. Be aware of how long the link is and change it to a bit.ly if necessary.
WHAT IS ENGINEERING?

The profession in which math and science - gained by study, experience, and practice - is applied with judgment to develop ways to economically use the materials and forces of nature for the benefit of society.

EXPLORING THE INDUSTRY

Key Roles

The following links can help you begin to consider a variety of roles that exist within Engineering including core tasks, associated lifestyle, educational requirements, job growth trends, salary information, and much more.

- Aerospace Engineer
- Biomedical Engineer
- Chemical Engineer
- Civil Engineer
- Computer Engineer
- Electrical Engineer
- Environmental Engineer
- Industrial Engineer
- Material Engineer
- Mechanical Engineer
- Nuclear Engineer
- Petroleum Engineer

You may also consider alternative professions that interface with engineers is areas, such as research and development, management, and law.

*For further salary information, visit: Average Salary Ranges for Engineering Jobs or Architecture and Engineering Occupation Salaries

Key Skills

While the engineering field has numerous concentration areas, many positions tend to have an overlap in needed skill sets.

Developing the following skills can help you as a more competitive candidate for jobs and internships:

- Problem solving (abstract or with tools or machines)
- Inventing or repairing things
- Conducting research
- Learning or working with facts or principles
- Collecting, organizing, and interpreting data
- Working independently
- Working with quantitative data
- Producing tangible results
- Computation and Computer Literacy
- Analysis
Be mindful that each concentration areas may also require specialty skills. Students looking to be competitive in their internship and job search should identify those specialty skills and be strategic in gaining experience cultivating those skill sets.

**Recommended Reading**

- **VAULT** (*A favorite Career Center resource*) - The Vault Guide to Engineering Jobs loaded with information on industry trends, employments and earnings statistics, and what employers look for in employees. NOTE: Log in to VAULT from the Career Center’s homepage (Resources). You must create an account using your Emory email address to gain access. Once on VAULT’s homepage, look for a link at top to GUIDES.
- **WETFEET** (*A favorite Career Center resource*) - The Wetfeet Guide about the Industries and Careers for Engineers highlights more than 25 engineering specialties. And while most engineers refer to themselves by their degree or professional specialty, such as “mechanical engineer” or “civil engineer”, crossover work is becoming increasingly common. This insider guide is the perfect place to start your engineering career search.

**FINDING OPPORTUNITIES AND GETTING INVOLVED**

**Engineering at Emory**

- **Bachelor of Science in Engineering Sciences** - If you are interested in professions that interface with engineers, such as engineering management and patent law; or you are planning to pursue a graduate degree in engineering. Three tracks are available: Engineering Physics, Materials Science (which includes many chemistry courses), and Geosciences (which includes many courses in Environmental Science)
- **Dual Degree Program in Engineering** - In cooperation with the Georgia Institute of Technology (Georgia Tech), Emory University offers a joint education path, referred to as the Dual Degree Program in Engineering. The Dual Degree Program leads to a Bachelor of Arts, or a Bachelor of Science, degree awarded by Emory and a Bachelor of Science in engineering awarded by the Georgia Institute of Technology.

Considering the Dual Degree Program? Check out "A Guide For Prospective Students" created by Emory Student, Veronica Chua!

**Jobs & Internships**

- **Handshake** - The Career Center’s main resource for connecting students to great job and internship opportunities
- **Career Shift** - Career Shift is the Career Center’s additional resource to help job seekers successfully navigate the published and hidden job market to find career opportunities
- **UCAN** - University Career Action Network (UCAN) provides access to domestic and international internships to students from 20 of the nation’s top institutions.
- **Vault** - In addition to using Vault to learn more about specific industries, companies, and receive career advice, Vault can also be used to identify internships and job opportunities
- **EngineeringJobs.com** - Search engineering jobs by engineering discipline or location and find opportunities in the U.S and Canada
- **National Society of Professional Engineers – Job Board** - Professional organization job board resource for professional engineering employment and a robust search capability

**Fellowships, Scholarships & Research**

- **Handshake Fellowships** - The Career Center’s main resource for connecting students to great fellowship and research opportunities
- **National Science Foundation** - Research experience for undergraduates (REUs)
- **National Science Foundation - Research and Development** - Master government list of federally funded research and development centers
• National Society of Professional Engineers Scholarships - Professional organizations resource for scholarships for both undergraduate and graduate students
• Emory University Office of Undergraduate Research
• Emory University Office of National Scholarships & Fellowships

Diversity Scholarships:

• Engineering Scholarships for Minorities
• Society of Women Engineers Scholarships

Campus Organizations & Volunteering

• Emory Engineering Society - An organization is for students who are interested in pursuing a field of engineering – not limited to any major, including students seeking to pursue the Dual Degree Program with Georgia Tech
• Society of Physics Students - A professional association explicitly designed for students. Besides physics majors, members include majors in chemistry, computer science, engineering, geology, mathematics, medicine, and other fields.
• Volunteer Emory - An organization whose mission is to collaborate with agents of change for service projects and social justice work that promote learning about self and society.

*For a complete list of Emory University’s student organizations, please visit the Office of Student Involvement, Leadership, and Transitions’ online student organization management system, OrgSync.

Recruiting at Emory

Organizations that currently or historically recruit on campus, or have had alumni representation at networking nights:

• AT&T
• Atlanta Tech Village
• City of Atlanta
• City Year
• Eastdil Secured
• Equifax
• Fast Enterprises, LLC
• Gas South
• Google
• Inroads
• NCR Corporation
• Porsche Cars North America
• Sightlines

Working Abroad

• GoinGlobal
  Find information about working, interning and volunteering abroad. Contains Country Guides with specifics about the job search, helpful advice for life and work, and job/internship search database by country.

PREPARING TO APPLY

Resumes & Cover Letters

Resumes
The primary purpose of a resume is to obtain an interview. Used correctly, it can open doors. Used incorrectly, it slams them shut. A good resume connects your experience to your job goal. An engineering resume should clearly show a candidate’s technical skills. To achieve, create a section that highlights those technical expertise. You may also opt to break this section into subcategories for a quick scan of your knowledge of programs and applications following the education section of your resume.

Sample Resume:

- Engineering Resume Sample
- Emory Career Center Resume Writing Guide

Cover Letters

A cover letter parallels with your resume. Together they create a first impression of you. Your cover letter should work as a connecting tool between you and the organization you’re writing to. Tailor your cover letter to each position to which you apply. In order to write a convincing cover letter, you will need to research the organization and think about why you are genuinely interested in the work that they do. Do not use generic language in your cover letter that could apply to any position and/or any company within your field of interest.

Sample Cover Letters and Tips

- Vault- Engineer Cover Letter Sample
- Emory Career Center Cover Letter Writing Guide

Resume and Cover Letter Writing Support

For additional help writing cover letters, schedule an appointment to meet with a career advisor at The Career Center by calling 404-727-6211.

Additional support with drafting and critiquing cover letters, as well as basic instructions on grammar, style and punctuation can be obtained by appointment at the Emory College Writing Center.

Interview Preparation

The interview is where your work ultimately pays off! Preparation and practice are the keys to a successful interviewing. There are many different types of interviews including general and behavioral based. Visiting the Interviewing section of the Career Center’s website will provide an opportunity to view samples to both general and behavioral based interviews.

Technical interviews are also commonly used for engineering type positions. In these interviews, you’ll consider technical problems, and then write working programs that solve them. Expect to answer engineering questions that will assess your knowledge of the field as well as your creative problem-solving abilities to turn a theoretical device into a real product. In addition, come ready to discuss examples of past projects or designs and how you would excel in a team-oriented setting.

Interviewing Tips and Resources

- InterviewStream - An excellent way to practice by yourself using a webcam, how to respond to common interview questions. This web-based practice interview program can assist you in preparation for upcoming interviews for internships, jobs, or graduate or professional school admission. It is a simple, fun, and effective way to refine and master your interviewing skills. This platform also offers additional resources including the Umm Like Guide.
- WetFeet Guide: Ace Your Interview
- Vault Guide: Interview Etiquette
- How to Ace Your Technical Interview
- Glassdoor: Technical Interview Questions
MEETING PEOPLE, MAKING CONNECTIONS

How to find alumni in key roles, arrange an informational interview, and connect through networking nights, career fairs, professional associations, conferences and more.

Alumni Profiles

- LinkedIn’s Alumni Tool - A cool tool that can tell you what Emory Alumni are up to! You can also narrow down by date range, what they studied, what they’re skilled at, and how you’re connected on LinkedIn. Just click on any bar in the Alumni Tool to drill down into specific careers, employers, locations, major, skills, or degree of connection. Utilizing this tool can help you to explore a career path, choose an academic path, or begin your job hunt.

Tools to Connect

For advice about networking through Informational Interviews, at networking nights and career fairs, click here.

- LinkedIn.com - Advice for creating a profile, job seeking, and networking etiquette using LinkedIn.com

In partnership with Emory Alumni Association:

- Emory Connects - The Emory Online Community's most recent upgrade is an exclusive mobile and online networking platform where you can guide students and find alumni professionals in your area. The knowledge you exchange will help uplift the next generation of world leaders.
- Career Discovery Days - First and second year Emory students of all colleges and schools are invited to participate in Emory Connects: Career Discovery Days! This program is designed to help Emory students learn what “it is really like” to work in a particular job, industry or organization by providing the opportunity to shadow a professional for a day. This will be a great way to explore various career options and build professional connections.
- Emory Alumni Chapters - Find a chapter near you, in the U.S. or abroad!

Events on Campus

- Emory Fall and Spring Career Fairs
- High Five Networking Series
- HandShake On-Campus Recruiting and Events Calendar
- Sign up to receive STEM cluster newsletter

Professional Associations

A professional association is an organization of people who have similar career interests. These membership-based organizations often offer a reduced rate for students that allow access to the many resources they provide. Professional association websites can also offer job/internship databases as well as opportunities to find mentors or other contacts. These groups may also sponsor conferences that you can attend, both for educational purposes and to make valuable connections – sometimes you may even interview for jobs!

- National Society of Professional Engineers - National Society of Professional Engineers offers free membership for students. Provides information regarding licensure, ethics, issues, and advocacy. The Career Center on this platform provides a job board, and the student resources including information regarding scholarship and student chapters of the organization.
- American Association of Engineering Societies - A multidisciplinary organization of engineering societies dedicated to advancing the knowledge, understanding, and practice of engineering.
• **National Academy of Engineering** - Created by Congress to advise the federal government on issues involving science and technology, NAE membership consists of over 2000 peer-elected individuals. NAE analyzes and reports on technical aspects of public and military issues and concerns.

As there are multiple engineering concentrations, consider searching for additional organization specific to your discipline of interest including:

- **Association for Computing Machinery**
- **The American Society of Mechanical Engineers**
- **Institution of Electrical and Electronics Engineers**
- **Institute of Industrial and Systems Engineers**
- **American Academy of Environmental Engineers and Scientists**
- **American Institute for Medical and Biological Engineering**
- **Society of Manufacturing Engineers**
- **Association of Energy Engineers**
  - [List of discipline-specific societies](#)

**Diversity Resources**

- **Hire US: Connecting a Diverse Workforce with Inclusive Employers** - An event designed to connect Emory students who have historically faced under representation and/or discrimination in work environments and hiring processes with employers committed to building and supporting a diverse and inclusive workforce. Sponsored by the Emory Career Center, Office of Accessibility Services and departments of the Belonging & Community Justice area of the Center for the Advancement of Student Agency and Advocacy: Center for Women; Office of Lesbian, Gay, Bisexual, & Transgender Life; and Office of Multicultural Programs & Services.
- **Emory Alumni Association Affinity Groups** - Connect with a variety of populations and like-minded people through special events tailored to specific interests.
- **American Indian Science and Engineering Society (AISES)**
- **Association for Women in Computing (AWC)**
- **Chinese Institute of Engineers USA (CIE-USA)**
- **Korean American Scientists and Engineers Association** - A non-profit professional organization established in 1971 and has over 6,000 registered members with more than 70 local chapters and 13 technical groups across the United States.
- **National Society of Black Engineers (NSBE)**
- **Society of Hispanic Professional Engineers**
- **Society of Mexican American Engineers and Scientists (MAES)**
- **Society of Women Engineers** - Established in 1950, the Society of Women Engineers provide collegiate membership and scholarship opportunities.
- **Women in STEM** - Women in STEM serves as a safe forum and open mental space for all Emory students who identify as a woman and study a STEM discipline.
EXPLORING THE INDUSTRY

Key Roles

The following links can help you begin to consider a variety of roles that exist within Technology, including core tasks, associated lifestyle, educational requirements, job growth trends, salary information, and much more.

- Business Intelligence Analyst
- Computer Network Architects
- Computer System Analyst
- Computer System Engineer/Architect
- Database Administrators
- Database Architects
- Information Security Analysts
- Information Technology Project Managers
- Network and Computer Systems Administrators
- Quality Control Systems Managers
- Quality Control Analysts
- Software Developers, Systems Software
- Software Quality Assurance Engineers and Testers
- Web Administrators
- Application Developer
- Computer and Information Systems Manager
- IT Project Manager
- Web Administrator
- Database Architect
- Graphic Designer
- Software Developer
- Video Game Designer
- Web Developer
- Computer Programmer

Work Environments

One can tell that the roles in the technology industry vary greatly, so it only makes sense that the work environments of those very roles vary too! For example, software developers work for firms that deal in computer systems design and related services or for software publishers, computer programmers usually work in offices, most commonly in the computer systems design and related services industry, and information security analysts work for computer companies, consulting firms, or businesses.

Students looking for internships should look at computer companies, consulting firms and firms that deal with computer systems design as well as any organization that utilizes technology as a key component of their output.

Key Skills

While the roles in technology vary broadly, developing the following skills can help you as a more competitive candidate for jobs and internships:

- Analytical skills
- Problem solving skills
• Creativity
• Critical thinking skills
• Determination

More specifically, these technical skills are most sought skills in these sectors of the technology industry:

Top Skills for Those Interested in Computer Science

• SQL
• JAVA
• C#
• PYTHON

Top Skills for Those Interested in Data Science

• SQL
• R
• PYTHON
• Excel

Top Skills for Those Interested Information Security

• Application Security
• Biometrics
• Data Leak Prevention
• Disk and File Level Encryption Solutions

Recommended Reading

• VAULT CAREER GUIDE TO INFORMATION TECHNOLOGY
• VAULT CAREER GUIDE TO COMPUTER SOFTWARE JOBS
• CAREER LAUNCHER: COMPUTERS AND PROGRAMMING
• How to Get a Cybersecurity Job in Three Charts: a Degree, a Certification, and a Clearance
• How To Get Hired -- What CS Students Need to Know
• How to Get a Junior DBA Job – Part 1
• How to Get a Junior DBA Job – Part 2
• How to Get a Junior DBA Job – Part 3
• How to Build a Successful Information Security Career
• Increase the Odds of Getting That Security Job
• Information Security Interview Questions

Also check out the books in the Emory Career Center’s Library!

FINDING OPPORTUNITIES AND GETTING INVOLVED

Jobs & Internships

• Handshake - The Career Center’s main resource for connecting students to great job and internship opportunities
• Career Shift - Career Shift is the Career Center’s additional resource to help job seekers successfully navigate the published and hidden job market to find career opportunities
• UCAN - University Career Action Network (UCAN) provides access to domestic and international internships to students from 20 of the nation’s top institutions.
• **Vault** - In addition to using Vault to learn more about specific industries, companies, and receive career advice, Vault can also be used to identify internships and job opportunities.

**Fellowships, Scholarships & Research**

• **Handshake Fellowships** - The Career Center’s main resource for connecting students to great fellowship and research opportunities

• **Journal of Young Investigators** - Summer opportunities for those interested in Computer Science

**Scholarships**

• Betty Stevens-Frecknall Scholarship
• Dave Sanders Memorial Scholarship
• Kevin Jetton Service Scholarship
• William R. Reaugh Scholarship
• Robert Half Technology/AITP Student Scholarship

Visit the [Emory University Office of National Scholarships & Fellowships](#) to learn more about these programs and other opportunities.

**Research Opportunities**

Connect with faculty in the Department of Math and Computer Science to inquiry about research opportunities. Also visit the [Emory University Office of Undergraduate Research](#) to discover other research programs.

**Further Education**

Coding Academies are a great way for one to further their education in coding as well as getting hands one experience with what coding looks like in the real world.

Here are some coding academies in Atlanta:

• **The Iron Yard**
• **Coding Bootcamp-Georgia Tech**
• **Digital Crafts**
• **General Assembly**

Getting certifications in Information Security can definitely boost your resume and are sometimes required in order to get hired. Here Some certifications one can obtain.

• CISSP – The Certified Information Systems Security Professional. If you want to work at the Department of Defense, obtaining your CISSP certification is a requirement. And it carries a lot of weight beyond the Dept. of Defense as well. By getting your CISSP certification you open the door to higher level positions and the possibility of increased pay.

• CISM – Certified Information Security Manager. This certification focuses on governance, risk management and compliance.

• CISA – Certified Information Systems Auditor. This certification focuses on auditing, controlling, monitoring and assessing information systems and can add a significant pay boost to a cyber security professional’s annual salary.

• GIAC – Global Information Assurance Certification. This certification focuses on specialty hands-on technical capabilities such as intrusion detection and forensics among others.

• CEH – Certified Ethical Hacker. For entry-level applicants, a CEH certification can be a great way to land your first job or get you into an entry-level position at your top choice company.

Databases certification can also help boost your resume. Here are some popular ones! Do not rely solely on certifications to get your foot in the door. There should be a fair amount on experience and a few certifications based on your interests.
• BM Certified Database Administrator for DB2
• MTA DB
• MCSA: SQL Server
• MCSE: Business Intelligence
• MCSE: Data Platform
• Oracle 12c Database Administrator
• SAP HANA
• Oracle Certified Professional, MySQL 5.6 Database Administrator

Campus Organizations & Volunteering

Campus Resources:

• HackEmory Facebook page
• OrgSync
• Active database of all Emory campus organizations.
• Some clubs to take note of:
  • Association for Women in Science
  • Data Science Club
  • Emory Women in Computer Science
  • Hack Emory
  • Robotics Club

Beyond Campus:

The following Professional Associations have chapters in Atlanta.

• Association of Information Technology-Atlanta
• ATP
• Information Security Systems Association-Metro Atlanta
• Technology Association of Georgia

Recruiting at Emory

CS and Math/CS Graduates of the previous three years have landed positions at the following companies:

• Amazon
• Accenture
• Apple
• AT&T
• Athenium
• Bain & Company
• Bank of Montreal
• EPIC
• EY
• Fast Enterprises
• Fidelity Investments
• Flatiron Health
• Google
• Hearsay Social
• IBM
PREPARING TO APPLY

Resumes & Cover Letters

Resumes

The primary purpose of a resume is to obtain an interview. A good resume connects your experience to your desired job. Support your candidacy by highlighting relevant skills – e.g., JAVA, C languages, SQL, Python etc. Include any activities, jobs, or internships directly related to technology. Did you create an app? Were you in an upper level Computer Science? Did you create your own website? Add less-related activities only if they are outstanding. Be selective. Your resume is a selling tool, not a life history. Keep it neat, clear, and precise. Try to make it unique and interesting but not gimmicky.

Resume Writing Support

For additional help writing resumes, schedule an appointment to meet with a career advisor at The Career Center by calling 404-727-6211.

Additional support with drafting and critiquing resumes, as well as basic instructions on grammar, style and punctuation can be obtained by appointment at the Emory College Writing Center.

Cover Letters
A cover letter parallels with your resume. Together they create a first impression of you. Your cover letter should work as a connecting tool between you and the company you’re writing to. Don’t let it read like a form letter. Instead, include real knowledge of the company, its work, and its position. Tell the company why you are interested in them and why you think you’d be right for them. And then make sure that you are prepared to discuss in your interview whatever you say in the cover letter. And remember, you’re qualifications are based on your technical skills, analytical skills, and critical thinking skills. Watch spelling, grammar, and typing. Most important of all, be clear, crisp, and brief.


Cover Letter Writing Support

For additional help writing cover letters, schedule an appointment to meet with a career advisor at The Career Center by calling 404-727-6211.

Additional support with drafting and critiquing cover letters, as well as basic instructions on grammar, style and punctuation can be obtained by appointment at the Emory College Writing Center.

Interview Preparation

Be articulate. Be self-confident, think carefully and critically and be enthusiastic. But relax and do it naturally. Don’t try to recite everything you know. Remember, someone is interested enough in your background to invest 30 minutes or more in you. That person wants you to succeed.

Interview preparation will vary for the various jobs in the technology industry. Regardless of the job you’re interested in, you should always know information about the company you’re interviewing with and the skills required for the position you’re interviewing for. If you’re interested in jobs in computer science, you might want to practice coding for coding interviews and conceptual knowledge. Glassdoor is great resource for the looking at previous asked questions. If you’re interested in jobs in information security look at these questions. It is also a great idea to read up on news in Information Security and brush up on key concepts in information security. This demonstrates that you are up to date with current events and you know what concepts are relevant

- Interview Cake-Great for weekly questions sent to your email

Check our these sites for more news in Information Security

- Security Week
- Security Intelligence


Interview Tips and Sample Questions

The best way to prepare for a coding interview is the practice your coding. Here are some resources to practice your coding skills.

- https://leetcode.com/
- https://pramp.com/
- https://www.hackerrank.com/
- www.careercup.com
- http://www.geeksforgeeks.org/
- http://www.crazyforcode.com/
- Glassdoor is also a good resource for looking at past interview questions!

Portfolios & Online Presence
It is a great idea to show the work you have completed either in your coursework or free time. GitHub is a great way to development platform inspired by the way you work. From open source to business, you can host and review code, manage projects, and build software alongside millions of other developers. Creating an application on your own or with friends, creating a website, etc. can boost your resume and shows your interviewers what you’re capable of.

MEETING PEOPLE, MAKING CONNECTIONS

How to find alumni in key roles, arrange an informational interview, and connect through networking nights, career fairs, professional associations, conferences and more.

Alumni Profiles

- Henry Chen, ’17 CS and Math
- Mengbo Li, ’15 CS
- David Dvorak, ’15 CS
- Melissa Mendoza, ’16 CS
- Patrick Cook, ’11 CS

Tools to Connect

For advice about networking through Informational Interviews, at networking nights and career fairs, click here.

- LinkedIn.com - Advice for creating a profile, job seeking, and networking etiquette using LinkedIn.com

In partnership with Emory Alumni Association:

- Emory Connects - The Emory Online Community's most recent upgrade is an exclusive mobile and online networking platform where you can guide students and find alumni professionals in your area. The knowledge you exchange will help uplift the next generation of world leaders.
- Career Discovery Days - First and second year Emory students of all colleges and schools are invited to participate in Emory Connects: Career Discovery Days! This program is designed to help Emory students learn what “it is really like” to work in a particular job, industry or organization by providing the opportunity to shadow a professional for a day. This will be a great way to explore various career options and build professional connections.
- Emory Alumni Chapters - Find a chapter near you, in the U.S. or abroad!

Events on Campus

- Emory Fall and Spring Career Fairs
- High Five Networking Series
- Handshake On-Campus Recruiting and Events Calendar
- Sign up to receive Creative cluster newsletter

Professional Associations

A professional association is an organization of people who have similar career interests. These membership-based organizations often offer a reduced rate for students that allow access to the many resources they provide. Professional association websites can also offer job/internship databases as well as opportunities to find mentors or other contacts.

- Association for Computing Machinery (ACM): Delivers resources that advance computing as a science and a profession. It offers training, resources and networking for members as well as a job board.
- Association of Information Technology Professionals (AITP): Professional development opportunities, networking and job connections. Student membership is available.
Foundation for Information Technology Education: With the mission of promoting professional development of individuals in information-systems industry, this organization provides scholarships and coordinates conferences.

NAMEPA: A national network of educators and representatives from industry, government and nonprofit organizations who share a common commitment to improving the recruitment and retention of African Americans, Hispanics and American Indians earning degrees in engineering. Offers scholarships, conferences and resources.

National Science Foundation (NSF): An independent federal agency created by Congress in 1950 "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense..."

National Society of Black Engineers (NSBE): One of the largest student-run organizations in the country and is active both regional and national level. The website offers job database and resume posting service for members.

Society of Hispanic Professional Engineers (SHPE): SHPE is the Source for Quality Hispanic Engineers and Technical Talent providing professional development opportunities, and promoting academic excellence. The website offers scholarships to current students.

Society of Women Engineers (SWE): Empowers women to succeed and advance in the field of engineering. The site includes resume posting service and job listings for members, as well as scholarship opportunities.

Diversity Resources

Hire US: Connecting a Diverse Workforce with Inclusive Employers - An event designed to connect Emory students who have historically faced under representation and/or discrimination in work environments and hiring processes with employers committed to building and supporting a diverse and inclusive workforce. Sponsored by the Emory Career Center, Office of Accessibility Services and departments of the Belonging & Community Justice area of the Center for the Advancement of Student Agency and Advocacy: Center for Women; Office of Lesbian, Gay, Bisexual, & Transgender Life; and Office of Multicultural Programs & Services.

Emory Alumni Association Affinity Groups - Connect with a variety of populations and like-minded people through special events tailored to specific interests. The professionalism of the industry.

NACE LBTQ Resources
MATH AND ANALYTICS

An undergraduate mathematics education can be an entryway to many rewarding and engaging career opportunities. Studying mathematics will enhance your creativity, augment your critical thinking skills and boost your problem solving capabilities. As a result, you will be more marketable and more competitive in the workforce!

EXPLORING THE INDUSTRY

Key Roles

The following links can help you begin to consider a variety of roles that exist for those whom enjoy Math & Analytics including core tasks, associated lifestyle, educational requirements, job growth trends, salary information, and much more.

- Actuary
- Appraiser
- Biostatistician
- Business Analyst
- Consultant
- Credit / Loan Officer
- Data Analyst
- Financial Planner
- Insurance Underwriter
- Market Research Analyst
- Mathematical Technician
- Mathematician
- Purchasing Manager
- Securities Broker
- Statistician

Additional roles you may consider include: Data Curator, Merchandising Planner, and a Mathematical Consultant, just to name a few! Analyst roles are becoming increasingly popular across multiple industries. Analyst roles you may consider include: Marketing Analyst, Human Resource Analyst, Financial Analyst, Numerical Analyst, Budget Analyst, Risk Management Analyst, Pricing Analyst, Reporting Analyst, Credit Analyst, Quantitative Analyst, Systems Analyst, Strategy Analyst, Operations Analyst, and Modeling Analyst, which may require additional skills based on the needs of the role.

Key Skills

Learning Mathematics is comparable to learning a language. As we write and speak using symbols with meaning, those interested in Math can apply essential content and skills in a real world context.

Developing the following skills can help you as a more competitive candidate for jobs and internships:

- Adept at solving quantitative problems
- Ability to understand both concrete and abstract problems
- Proficient in communicating mathematical ideas
- Detail-oriented
- Ability to make critical observations
- Accurately organize, analyze, and interpret data
- Extract important information and patterns
- Assess and solve complex problems
- Able to work independently and on a team
Recommended Reading

- **American Mathematical Society** - Considering a career centered on mathematics? Use this resource to learn more about preparation for careers in mathematical research, education, and other careers that utilize math and its applications to build and enhance important work in the sciences, business, finance, manufacturing, communications, and engineering.

- **Society for Industrial and Applied Mathematics** - A career in applied mathematics isn’t just about crunching numbers. It’s a career that uses mathematics to solve problems in the environment of your choice. This resource provides great profiles of professional mathematicians and computational scientists.

- **When Will I Use Math?** - As this is a commonly asked question to math teachers at every level, this nonprofit website helps to answer this question. This resource describes the importance of mathematics, provides many rewarding career opportunities available to students who study math, and gives tips on how to succeed in math.

**FINDING OPPORTUNITIES AND GETTING INVOLVED**

**Jobs & Internships**

- **Handshake** - The Career Center’s main resource for connecting students to great job and internship opportunities
- **Career Shift** - Career Shift is the Career Center’s additional resource to help job seekers successfully navigate the published and hidden job market to find career opportunities
- **UCAN** - University Career Action Network (UCAN) provides access to domestic and international internships to students from 20 of the nation’s top institutions.
- **Vault** - In addition to using Vault to learn more about specific industries, companies, and receive career advice, Vault can also be used to identify internships and job opportunities

**Fellowships, Scholarships & Research**

- **Handshake Fellowships** - The Career Center’s main resource for connecting students to great fellowship and research opportunities
- **National Science Foundation** - Research experience for undergraduates (REUs) in areas including mathematical science
- **American Mathematical Society** - List of fellowships and scholarships that the AMS administers of supports
- **Society for Industrial and Applied Mathematics** - Professional organizations resource for fellowships and research opportunities for both undergraduate and graduate students
- **Emory University Office of Undergraduate Research**
- **Emory University Office of National Scholarships & Fellowships**

**Diversity Opportunities**

- **National Association of Mathematics** - NAM’s list of REU’s which are especially friendly to underrepresented minorities in the mathematical sciences

*Students may also research professional organization associated with a specific function areas (Finance, Accounting, etc.) to identify additional fellowship and research opportunities*

**Campus Organizations & Volunteering**

- **Emory Mathematical Modeling Association** - Eemma focuses on mathematical modeling and other math-inspired interdisciplinary researches. Their goal is to equip motivated individuals in various academic areas with essential modeling techniques used in modern researches.
- **Society for Industrial and Applied Mathematics (Emory Chapter)** - The Emory SIAM Chapter is a student organization whose purpose is to interact with SIAM (Society for Industrial and Applied Mathematics), creating opportunities for students to learn and network with other applied mathematicians.
• **Data Science Club** - The Data Science Club allows students interested in data science to learn more about potential career opportunities, provide relevant and meaningful industry information and foster a space to expand interests within the field.

• **Goizueta Actuarial Science Association** - Goizueta Actuarial Science Association (GASA) is the actuarial community at Emory's campus. GASA introduces students to the career path of one of the highest ranked jobs in the US, offers exam resources and study groups, and connects students with professional actuaries.

• **Volunteer Emory** - An organization whose mission is to collaborate with agents of change for service projects and social justice work that promote learning about self and society.

*For a complete list of Emory University's student organizations, please visit the Office of Student Involvement, Leadership, and Transitions’ online student organization management system, [OrgSync](https://www.emory.edu).

**Recruiting at Emory**

Organizations that currently or historically recruit on campus, or have had alumni representation at networking nights:

- Aetna
- AT&T
- Delta Air Lines
- Ernst & Young, LLP
- Fast Enterprises, LLC
- Federal Home Loan Bank of Atlanta
- Federal Reserve Bank of Atlanta
- First Data
- Gas South
- Marsh
- Mercer
- Oldcastle Architectural
- Oracle
- Porsche Cars North America
- PwC
- Regions Bank
- Turner Broadcast Systems, Inc.

**Working Abroad**

- **GoinGlobal** - Find information about working, interning and volunteering abroad. Contains Country Guides with specifics about the job search, helpful advice for life and work, and job/internship search database by country.

**PREPARING TO APPLY**

**Resumes & Cover Letters**

**Resumes**

The primary purpose of a resume is to obtain an interview. Used correctly, it can open doors. Used incorrectly, it slams them shut. A good resume connects your experience to your job goal. As a math resume can be applicable across many different roles, it is imperative to highlight skills that align with the position(s) of interest. You may opt to do this by including related coursework or demonstrating them through your bullet points. For data driven positions highlighting your statistical software knowledge (SPSS, SAS), and your proficiency with Microsoft Excel is also very important! Be sure to place close attention to job descriptions to tailor your resume to align with skills needed for each position.

**Sample Resumes and Tips**
Cover Letters

A cover letter parallels with your resume. Together they create a first impression of you. Your cover letter should work as a connecting tool between you and the organization you’re writing to. Tailor your cover letter to each position to which you apply. In order to write a convincing cover letter, you will need to research the organization and think about why you are genuinely interested in the work that they do. **Do not use generic language in your cover letter that could apply to any position and/or any company within your field of interest.**

Sample Cover Letters and Tips

- Emory Career Center Cover Letter Writing Guide
- Killer Cover Letters & Resumes: Consulting

Resume and Cover Letter Writing Support

For additional help writing cover letters, schedule an appointment to meet with a career advisor at The Career Center by calling 404-727-6211.

Additional support with drafting and critiquing cover letters, as well as basic instructions on grammar, style and punctuation can be obtained by appointment at the Emory College Writing Center.

Interview Preparation

The interview is where your work ultimately pays off! Preparation and practice are the keys to a successful interviewing. There are many different types of interviews including general and behavioral based. Visiting the Interviewing section of the Career Center’s website will provide an opportunity to view samples to both general and behavioral based interviews.

Interviewing Tips and Resources

- **InterviewStream** - An excellent way to practice by yourself using a webcam, how to respond to common interview questions. This web-based practice interview program can assist you in preparation for upcoming interviews for internships, jobs, or graduate or professional school admission. It is a simple, fun, and effective way to refine and master your interviewing skills. This platform also offers additional resources including the Umm Like Guide.
- WetFeet Guide: Ace Your Interview
- Vault Guide: Interview Etiquette
- Ace Your Case II: Mastering the Case Interview
- How to Ace Your Technical Interview
- Glassdoor: Technical Interview Questions

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Alumni Profiles

- LinkedIn’s Alumni Tool - A cool tool that can tell you what Emory Alumni are up to! You can also narrow down by date range, what they studied, what they’re skilled at, and how you’re connected on LinkedIn. Just click on any bar in the Alumni
Tool to drill down into specific careers, employers, locations, major, skills, or degree of connection. Utilizing this tool can help you to explore a career path, choose an academic path, or begin your job hunt.

Tools to Connect

For advice about networking through Informational Interviews, at networking nights and career fairs, click here.

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- American Mathematical Society - Fulfills its mission through programs and services that promote mathematical research and its uses, strengthen mathematical education and foster awareness and appreciation of mathematics and its connections to other disciplines and to everyday life.
- American Statistical Association - A scientific and educational society founded, ASA is the second-oldest, continuously operating professional society in the U.S.
- Institute of Mathematical Statistics - An international professional and scholarly society devoted to the development, dissemination, and application of statistics and probability. This organization provides free membership to students, and a job board.
- Mathematical Association of America - Committed to providing a range of activities that foster professional skills and enrich the broader mathematical community.
- Society for Industrial and Applied Mathematics - SIAM exists to ensure the strongest interactions between mathematics and other scientific and technological communities through membership activities, publication of journals and books and conferences.

Diversity Resources

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employers committed to building and supporting a diverse and inclusive workforce. Sponsored by the Emory Career Center, Office of Accessibility Services and departments of the Belonging & Community Justice area of the Center for the Advancement of Student Agency and Advocacy: Center for Women; Office of Lesbian, Gay, Bisexual, & Transgender Life; and Office of Multicultural Programs & Services.

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- **International Association of Black Actuaries**
- **National Association of Mathematics** - A non-profit professional organization in the mathematical sciences with membership open to all persons interested in the mission and purpose of NAM which are: Promoting excellence in the mathematical sciences and promoting the mathematical development of all underrepresented minorities.
- **Women in STEM** - Women in STEM serves as a safe forum and open mental space for all Emory students who identify as a woman and study a STEM discipline.