

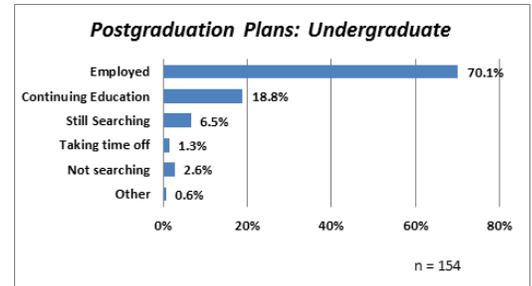
COLUMBIA UNIVERSITY CENTER FOR
Career Education

WHAT CAN YOU DO WITH A DEGREE IN **MATHEMATICS**?

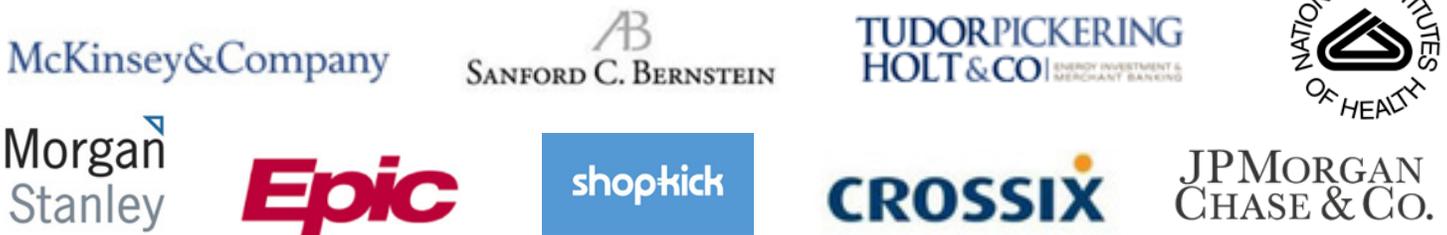
Where do Mathematics majors go?

According to the Graduating Student Surveys for 2012–2014 (with a 57.2% response rate for undergraduates in the Mathematics major), in the last few years:

- 88.9% of graduates were employed or going to graduate school.
 - 70.1% were employed
 - 18.8% had secure plans to attend grad school



Here are some examples of organizations that have hired Columbia Mathematics majors in recent years:



What jobs do Mathematics majors do?

A degree in Mathematics provides knowledge and skills relevant to a wide variety of jobs across the career spectrum, including:

- **Mathematics/Computational Science:** Research (Theoretical, Applied), Mathematical Specialties (Modeling and Simulation, Numerical Methods and Analysis, Statistics and Probability, Engineering Analysis, Differential Equations, Operations Research, Discrete Mathematics), Functional Areas Include (Accounting and Finance, Computer Programming, Computer Systems, Analysis Operations, Sales and Marketing Management, Actuarial Science, Engineering, Analysis and Control of Processes, Optimization and Scheduling of Resources)
- **Education:** Teaching, Research, Higher Education Administration
- **Computers:** Programming, Systems Development, Systems Analysis, Software Development, Network Administration, Web Administration, Technical Support, Training
- **Insurance:** Actuarial Science, Risk Management/Assessment, Loss Management/Control, Underwriting
- **Banking and Finance:** Corporate and Consumer Credit Analysis, Commercial Lending, Trust Management, Capital Services and Mergers and Acquisitions, Mortgage Loans, Originations and Packaging, Branch Management, Operations, Cash Management, Credit Scoring and Risk Management, Private Banking, Financial Analysis, Investment Banking
- **Other Business Areas:** Buying, Purchasing, Sales (Industrial Sales, Consumer Product Sales, Financial Services Sales, Services Sales, Advertising Sales, E-commerce, Customer Service, Sales Management (District, Regional, and Higher)

Use CCE's [Industry Exploration](#) webpages to learn more about these, and other fields.

What do employers want?

Most of the skills/qualities sought by employers are transferrable and/or soft skills that students can gain through classes, extracurricular activities, internships, volunteer experiences, or part time jobs including:

1. Ability to work in a team structure
2. Ability to make decisions and solve problems
3. Ability to verbally communicate with persons inside and outside the organization
4. Ability to plan, organize, and prioritize work
5. Ability to obtain and process information
6. Ability to analyze quantitative data
7. Technical knowledge related to the job
8. Proficiency with computer software programs
9. Ability to create and/or edit written reports
10. Ability to sell or influence others

Source: National Association of Colleges and Employers, 2015 Job Outlook

Your major can definitely demonstrate relevant coursework and knowledge to a prospective employer, but your studies aren't the only aspect of your experience that employers are evaluating. They select people who they believe can do the job (have the right skills), want the job (have demonstrated an interest in the field) and are a personality fit for the team and organization.

What value do Mathematics majors bring?

The Mathematics curriculum helps you to develop the following skills:

- Critical thinking
- Logical reasoning
- Discipline
- Learning/Applying difficult and complex concepts
- Problem solving
- Generating solutions
- Data analysis
- Pattern recognition
- Identification of relevant and extraneous data
- Computational skills
- Understanding of algorithms and processes

What if I'm an international student?

For international students at Columbia under student visas, selecting your major can play a significant role if you plan to work in the US after completion of your degree. Optional Practical Training is a work authorization that allows an international student to work in a job directly related to the student's major area of study either before or after degree completion. Employer sponsored H1B Visas also have similar strict requirements. Students with more questions about this should visit the International Student & Scholars Office (ISSO) and view CCE's International Students webpage at careereducation.columbia.edu/students/International-Students.