

Introduction

This is the decade in which the President’s Council of Advisors on Science and Technology recommended increasing the number of STEM graduates by one million to meet projected employment needs. Yet we rarely see a job title of “mathematician.” Why is that? Because mathematicians can do anything.

In this book you’ll encounter mathematicians with job titles ranging from Senior Data Scientist to Senior Bicycle Planner, from Pilot to President and CEO. A degree in mathematics does not just knock upon the doors of business and industry; it flings them wide open. Mathematicians are valued by their employers for their logical reasoning, clear communication, and their ability to teach themselves anything they need to know. A degree in mathematics shows that its holder has grit and determination, is able to analyze and synthesize information, and doesn’t back down from a challenge. We are problem-solvers and hard workers. We are adaptable and versatile. We are the workforce of tomorrow whom businesses and government seek.

If you are a high school student, use this book to get inspired. Read profiles and talk to your teachers and your counselors about opportunities to learn and do more mathematics. Pursue a mathematical activity that challenges and excites you. You could solve recreational problems, code up a neat algorithm, volunteer to tutor math to other students, or even apply to a summer math camp.

If you are a college student, use this book to explore your interests. Read profiles and find careers that sound like they fit your strengths and your values. Read the essay “Starting your job search” in the back of this book. Talk to your professors about careers and ask what kinds of jobs previous students have pursued. Talk to your career center about internships and use your school’s resources to help with your job search and resume and interview preparation.

If you are a teacher, don’t let this book gather dust on your shelf! Put it in a spot where students congregate so they can peruse it. Bring a career profile to class and show your students the interesting things you can do with a degree in math.

Our appreciation goes to Andrew Sterrett for allowing us to edit this new fourth edition of *101 Careers in Mathematics*. This book was Andy’s brainchild; it has provided generations of students with many answers to the enduring question: “What can I do with a degree in mathematics?” We hope this new edition will be just as useful to another generation of mathematics students and educators.

For more career resources, check out the career information websites from the Mathematical Association of America (mathcareers.maa.org) and the American Mathematical Society (www.ams.org/profession/career-info/career-index) and the Society for Industrial and Applied Mathematics’s new book, *BIG Jobs Guide*.

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