

Welcome to the  
**Mathematics Major**  
**Applied & Computational Mathematics Emphasis**  
in the College of Computational, Mathematical, and Physical Sciences

College Advisement Center

Website: <https://science.byu.edu/advisement>  
Email: [cmsadvising@byu.edu](mailto:cmsadvising@byu.edu)  
Phone: 801-422-2674  
Office: N-181 ESC



Mathematics Department

Website: <https://math.byu.edu>  
Phone: 801-422-2061  
Office: 275 TMCB

Faculty Advisor: Email [acmeasst@mathematics.byu.edu](mailto:acmeasst@mathematics.byu.edu) to set up an appointment with a faculty advisor.

Internship Coordinator – Allie Sensinger

Email: [allies@mathematics.byu.edu](mailto:allies@mathematics.byu.edu)  
Phone: 801-422-5925  
Office: 290 TMCB

Career Services – Lane Muranaka

Website: [careers.byu.edu](https://careers.byu.edu) (Handshake--see flyer in packet)  
Email: [lane\\_muranaka@byu.edu](mailto:lane_muranaka@byu.edu)  
Phone: 801-422-9360  
Website: <https://careers.byu.edu/lane-muranaka> (schedule appointment)  
Office: 2172 WVB

Mathematics: Applied and Computational Mathematics Emphasis website: [acme.byu.edu](https://acme.byu.edu)

Clubs

SIAM—Website: <https://stem.byu.edu/society-for-industrial-and-applied-mathematics>

SACME--Contact: Contact Tyler Jarvis ([tyler\\_jarvis@byu.edu](mailto:tyler_jarvis@byu.edu)) and check the website: <https://acme.byu.edu/sacme>

Learning outcomes can be found here: <https://learningoutcomes.byu.edu/Courses/program-courses/694432/Mathematics+BS+Applied+and+Computational+Mathematics/1326>

# Things to Know

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## Resources for Graduation Planning

- Flow Charts and Major Academic Plans (MAPs) can be found here: <https://science.byu.edu/advisement/explore-majors-and-minors>.
- Academic advisors in N-181 ESC will help you understand course sequencing and help you plan classes to efficiently fill requirements. They can also help you with study skills and initial career exploration as well as connecting you with correct resources.
- Plan and register from your plan on MyMAP. Your academic advisor can help you understand how to best utilize this resource.
- Evaluate your current program. Periodically major programs are updated. An academic advisor would be happy to review the differences between the programs with you to help you determine what would be best for you.
- Consider meeting with a faculty advisor in your department. Contact info is found on the first page of this packet.

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## Tutoring Resources and Research

- Volunteer peer tutors are available through Y Serve if you need help with a class. Also, if you excel in a subject, consider serving your fellow students by becoming a tutor. Find out more here: <https://tutoring.byu.edu/>.
- Many departments provide TA Tutorial Labs and research opportunities. Check your department for details:
  - Chemistry and Biochemistry: C-104 BNSN, 801-422-6261, <https://chem.byu.edu/department/faculty/>
  - Computer Science: 3361 TMCB, 801-422-3027, [cs-office@byu.edu](mailto:cs-office@byu.edu)
  - Geological Sciences: S-389 ESC, 801-422-3918, [geology@byu.edu](mailto:geology@byu.edu)
  - Mathematics: 275 TMCB, 801-422-2061, [office@mathematics.byu.edu](mailto:office@mathematics.byu.edu)
  - Mathematics Education: A180 ESC, 801-422-1735, [office@mathed.byu.edu](mailto:office@mathed.byu.edu)
  - Physics and Astronomy: N-283 ESC, 801-422-4361, [physics\\_office@byu.edu](mailto:physics_office@byu.edu)
  - Statistics: 2152 WVB, 801-422-4505, [statsec@stat.byu.edu](mailto:statsec@stat.byu.edu)

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## Prepare Early for a Career

- Check out Careers & Experiential Learning in 1134 WSC and at [careers.byu.edu](https://careers.byu.edu).
- Consider doing an internship.
  - Attend the STEM and Career Fairs held in fall and winter semesters.
  - Talk to your department about internship opportunities.
  - Use LinkedIn and Handshake (see flyer in this packet) to connect with alumni and apply for jobs/internships. BYU Connect is another great resource for networking ([connect.byu.edu](https://connect.byu.edu)).
  - Talk with the college Career Director who can help you search for internships as well as assist you with many other career related strategies (see first page of this packet).
- Consider taking StDev 317 (Career Strategies) your junior year.
- Consider taking either Chem 502, CS 502, Geol 502, Math 502, PHSCS 502, or STAT 502 (1-credit Networking Class). Class is held for 1 hour each week.

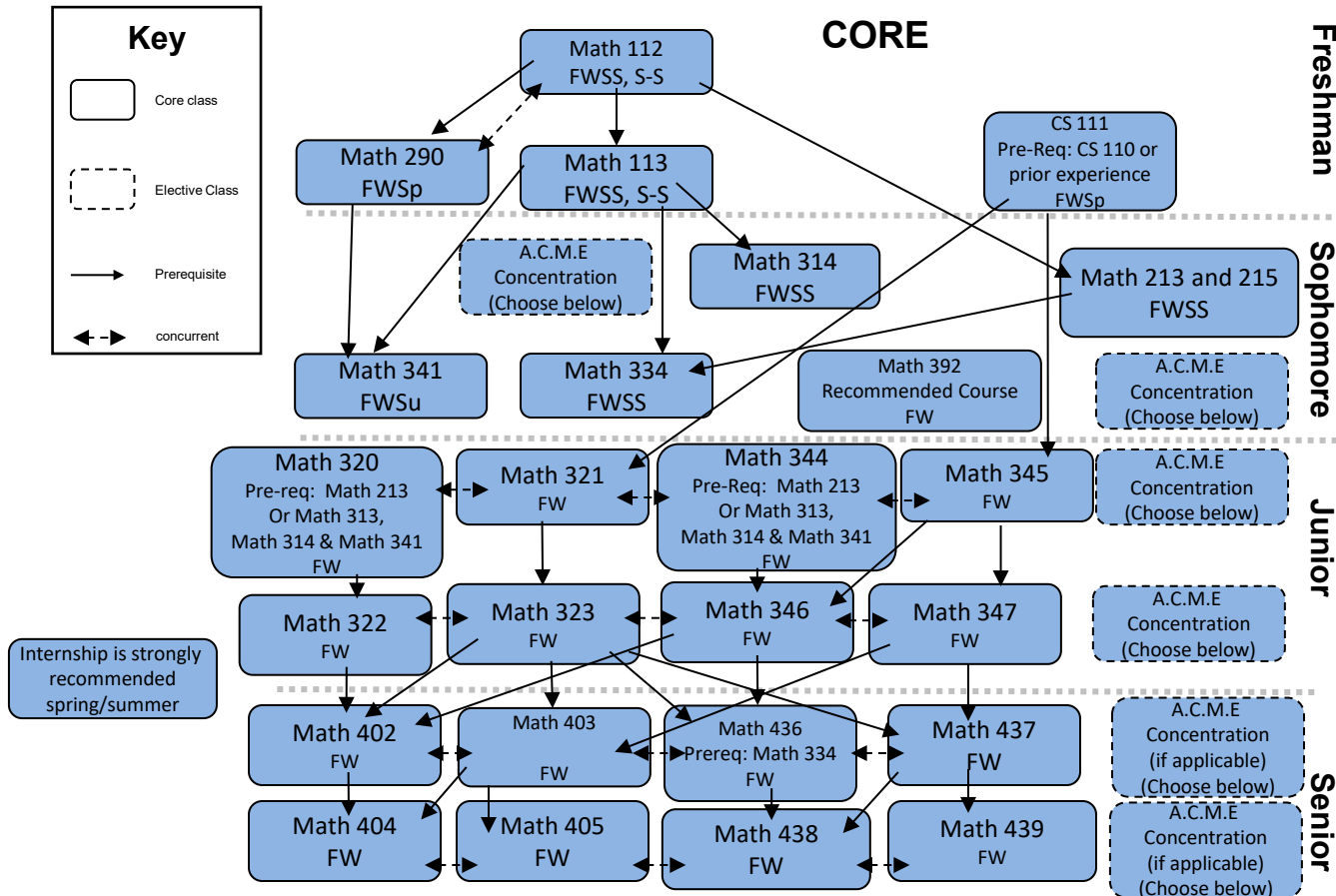
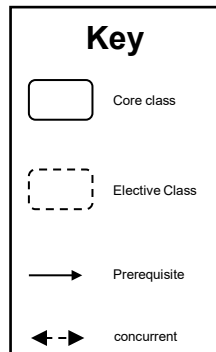
# BYU Mathematics:

## Applied & Computational Mathematics Emphasis

### Requirements / Prerequisites 2025-2026 Academic Year

#### Major (71-76 Hours)

- Complete the following core requirements: CS 111 or Math 495R (4 credits) as part of EMC2 (<https://math.byu.edu/emc2/>), Math 112, Math 113, Math 290, Math 314, Math 334, Math 341.
- Complete Math 213 and Math 215 (or Math 313).
- Complete the following core courses during fall semester of junior year: Math 320, Math 321, Math 344, Math 345
- Complete the following core courses during winter semester junior year: Math 322, Math 323, Math 346, Math 347.
- An internship in the spring/summer after your junior year is strongly recommended.
- Complete the following core requirements during fall semester of senior year: Math 402, Math 403, Math 436, Math 437.
- Complete the following core classes during winter semester of senior year: Math 404, Math 405, Math 438, Math 439.
- Complete a concentration from list found at <https://acme.byu.edu/concentrations-in-acme>
- Complete either the GRE Mathematics Subject Test or the Mathematics Major Field Test.



Complete a Concentration

**Be sure to work on your concentration early on to ensure you have time to complete it without extending graduation. The most updated list of concentrations can be found here:** <https://acme.byu.edu/concentrations-in-acme>.

The faculty advisors for ACME are great resources to help you determine which concentration is best for you or whether a customized concentration will better meet your needs. (contact info for setting up an appointment is on the first page of packet).



BYU's own job board. Employers who want to hire BYU graduates or offer internships to current students post job openings to this website and students apply. Just like LinkedIn, employers can view student profiles and students can network as they apply for jobs and internships



**Login to [handshake.byu.edu](https://handshake.byu.edu) >>> BYU Net ID**

*\*you do not need to create an account, just sign in with your BYU information*

## HOW TO MAKE THE MOST OUT OF HANDSHAKE:

### 1. COMPLETE YOUR PROFILE

- Upload your resume and it will auto-fill in your profile
- Completed profiles tailor your Handshake experience
- Information from your transcript is already uploaded
- Fill in the Summary/Bio section
- Fill in your past jobs and experiences, including all the bullet points you use on your resume
- Add a professional headshot and background photo

Remember: every word in your profile will be searchable by students and employers

### 4. EXPLORE FELLOW STUDENTS

- “Students” tab
- Search for fellow BYU students to view their profiles and job positions.

### 5. ATTEND EVENTS

- The “Events” tab will be your key to attending info sessions, interviews, and Career Fairs
- The “Calendar” tab under “Events” will show you what events are coming soon
- Make sure to save events you are interested in or RSVP so you do not forget to attend
- Spread the word to your friends on social media

### 6. DOWNLOAD HANDSHAKE APP

- Search: “Handshake” not “Handshake Career Services”
- Input your BYU e-mail address: [netID@byu.edu](mailto:netID@byu.edu) (it will forward emails to the e-mail you have on file with BYU)
- Handshake will send you a link via e-mail to enable your account in the app
- Navigate the app to perform all the functions of the website that have been previously mentioned

### 7. VISIT THE CAREER STUDIO

- Freshen up your resume, cover letter, or LinkedIn
- Receive networking help
- Practice interviewing with a mock interview
- Meet with a full-time Career Director in your field

### 8. GET A JOB, RING THE BELL

- Once you're hired, stop by the Career Studio to ring our Victory Bell and get a picture for the Victory Board



**employers are**  
**5X MORE LIKELY**  
**to view a profile that has**  
**at least one job/skill/organization**

### 2. APPLY FOR JOBS

- Search for job titles, employers, or skills
- Apply for interesting jobs that meet your skill set

### 3. RESEARCH COMPANIES

- Under the “Jobs” Tab there is an “Employers” Tab
- Search for keywords or locations to find companies that are the right fit for you
- Plan to attend their info sessions on BYU Campus, connect with them at Career Fairs, or set up informational interviews to learn more

Remember: when looking at companies or jobs, Handshake will tell you what other BYU students have worked there. Use this resource to network and discover more information!

**71%** Employed at Graduation

**91%** Employed in 3 Months

**100%** Employed in 6 Months

Math alumni who have worked in academia: **150+** (5.4%)

## Mathematics Major

## Applied & Computational Mathematics Emphasis (ACME)

**\$70k**

Median Starting Salary

**40%**

of Math majors choose general Math

After graduation, Mathematics students go into:

53% Industry

25% Masters Degree

22% PhD

### Graduate Schools

- Berkeley
- BYU
- Columbia
- Cornell
- Dartmouth
- Duke
- MIT
- New York University
- Oxford
- Princeton
- Stanford
- UCLA
- University of Chicago
- University of Michigan
- Univ. of Pennsylvania
- Yale

### Grad School Majors

- Computer Science
- Economics
- Finance
- Law
- Mathematics
- Mathematic Teaching
- Medicine
- Statistics

### Employers

- Capital One
- Cornerstone Research
- Family Search
- FBI
- Federal Reserve Board
- Fidelity Investments
- General Motors
- Goldman Sachs
- Lawrence Livermore National Lab
- Lucid
- McKinsey & Company
- Microsoft
- NSA
- Qualtrics
- Tampa Bay Rays
- The Church of Jesus Christ of Latter-day Saints
- Vivint
- Zions Bank

### Jobs

- Actuarial Analyst
- Bioinformatics
- Biostatistics
- Business Analyst
- Cyber Security
- Data Analyst
- Data Architect
- Economic Analyst
- Financial Analyst
- Management Consulting
- Math Professor
- Math Teacher
- Product Development
- Quantitative Analyst
- Software Engineer
- Software Testing
- Systems Engineer

**\$85k**

Median Starting Salary

**60%**

of Math majors choose ACME

After graduation, ACME students go into:

58% Industry

30% Masters Degree

12% PhD

### Graduate Schools

- Berkeley
- BYU
- Carnegie Mellon
- Duke
- Georgia Tech
- Harvard
- Johns Hopkins
- Northwestern
- Rice
- UCLA
- UNC Chapel Hill
- University of Chicago
- University of Michigan
- UT Austin
- Yale

### Grad School Majors

- Computer Science
- Computational Science
- Electrical Engineering
- Economics
- Mathematics
- Math Teaching
- Statistics

### Employers

- Amazon
- Ancestry
- Apple
- CIA
- Ernst and Young
- eTrade
- Facebook
- Goldman Sachs
- Google
- Intel
- IHC
- KPMG
- Microsoft
- Morgan Stanley
- NSA
- Raytheon
- Recursive Analytics
- Sandia National Lab
- The Church of Jesus Christ of Latter-day Saints
- Wells Fargo

### Jobs

- Actuarial Analyst
- Bioinformatics
- Biomedical Researcher
- Biostatistics
- Cyber Security
- Data Architect
- Data Engineer
- Data Scientist
- Economic Analyst
- Financial Analyst
- Machine Learning Engineer
- Management Consultant
- Math Professor/Teacher
- Product Development
- Quantitative Analyst
- Signal Processing
- Software Engineer
- Software Testing
- Systems Engineer

## Why Study Mathematics

- Graduate schools for business, law and medicine view Math graduates as strong candidates because of their analytical and problem solving skills.
- Graduate entrance exam scores are substantially higher on average. LSAT +12.8%, GMAT +13.3%
- Starting salary is substantially higher than average +37.7%
- The median annual wage for mathematicians was \$108,100 in 2021.
- Excellent job placement in Finance, Management Consulting, Computer Science, Cryptography & Security, Biotech and Data Science
- “The top 15 highest-earning college degrees all have one thing in common: math skills.”
  - “Most Lucrative College Degrees” - Julianne Peptone, CNNMoney magazine, July 24 2009.
- “The mathematical science occupational group is projected to grow the fastest among all STEM occupational groups.”
  - U.S. Dept of Labor Statistics, 2021
- “Overall employment of mathematicians is projected to grow 31 percent from 2021 to 2031, much faster than the average for all occupations.”
  - U.S. Bureau of Labor Statistics, 2021

## Hard Skills

- Analysis
- Understanding a problem at its root
- Exploring new ways to think about old problems
- Working with a problem until you understand it
- Ability to interpret data
- Programming skills (ACME)

## Soft Skills

- Problem Solving
- Analytical Attitude
- Logical Thinking
- Resilience

## Pathway to Becoming a Math Major (Traditional or ACME)

The Math major is designed with flexibility and breadth in mind to allow you to create a customized pathway into industry or academia.

### Begin with these required classes:

- Math 290- Fundamentals of Mathematics
- Math 112- Calculus 1
- Math 113- Calculus 2
- Math 213/215- Linear Algebra

Reach out to an advisor at: [ugradassistant@mathematics.byu.edu](mailto:ugradassistant@mathematics.byu.edu) for more information.

## Interested in ACME?

ACME combines math, programming, and data science. It operates as a cohort in the junior and senior years. It is designed to prepare you to solve real-world problems in industry.

Because ACME is interdisciplinary, talking to an advisor is the best way to see if it's a good fit for you. Email: [acmeasst@mathematics.byu.edu](mailto:acmeasst@mathematics.byu.edu) to set up an appointment.

## Interested in a Math Minor?

### Required Classes:

- Math 290- Fundamentals of Mathematics
- Math 112- Calculus 1
- Math 113- Calculus 2
- Math 213/215- Linear Algebra
- Math 314 - Calculus of Several Variables (or Math 302 - Math for Engineering)
- One Elective Math class