

Welcome to the
Mathematics Major

in the College of Computational, Mathematical, and Physical Sciences

College Advisement Center

Website: <https://science.byu.edu/advisement>
Email: 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 – Mark Kempton

Email: mkempton@mathematics.byu.edu
Phone: 801-422-4141
Office: 372 TMCB

Make an appointment with Mark Kempton here:

https://outlook.office365.com/book/UndergraduateMathAdvisement@byu.onmicrosoft.com/?ism_saljsauthenabled=true

Internship Coordinator – Allie Sensinger

Email: allies@mathematics.byu.edu
Phone: 801-422-5925
Office: 290 TMCB

Career Services – Lane Muranaka

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

Clubs

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

Learning outcomes can be found here: <https://learningoutcomes.byu.edu/Courses/program-courses/694420/Mathematics+BS+/1326>

Things to Know

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.

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
 - Geological Sciences: S-389 ESC, 801-422-3918, geology@byu.edu
 - Mathematics: 275 TMCB, 801-422-2061, office@mathematics.byu.edu
 - Mathematics Education: A180 ESC, 801-422-1735, office@mathed.byu.edu
 - Physics and Astronomy: N-283 ESC, 801-422-4361, physics_office@byu.edu
 - Statistics: 2152 WVB, 801-422-4505, statsec@stat.byu.edu

Prepare Early for a Career

- Check out Careers & Experiential Learning in 1134 WSC and at 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).
 - 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

Requirements / Prerequisites

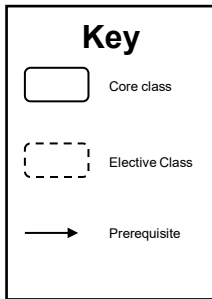
2025-2026 Academic Year

Major (53.5 Hours)

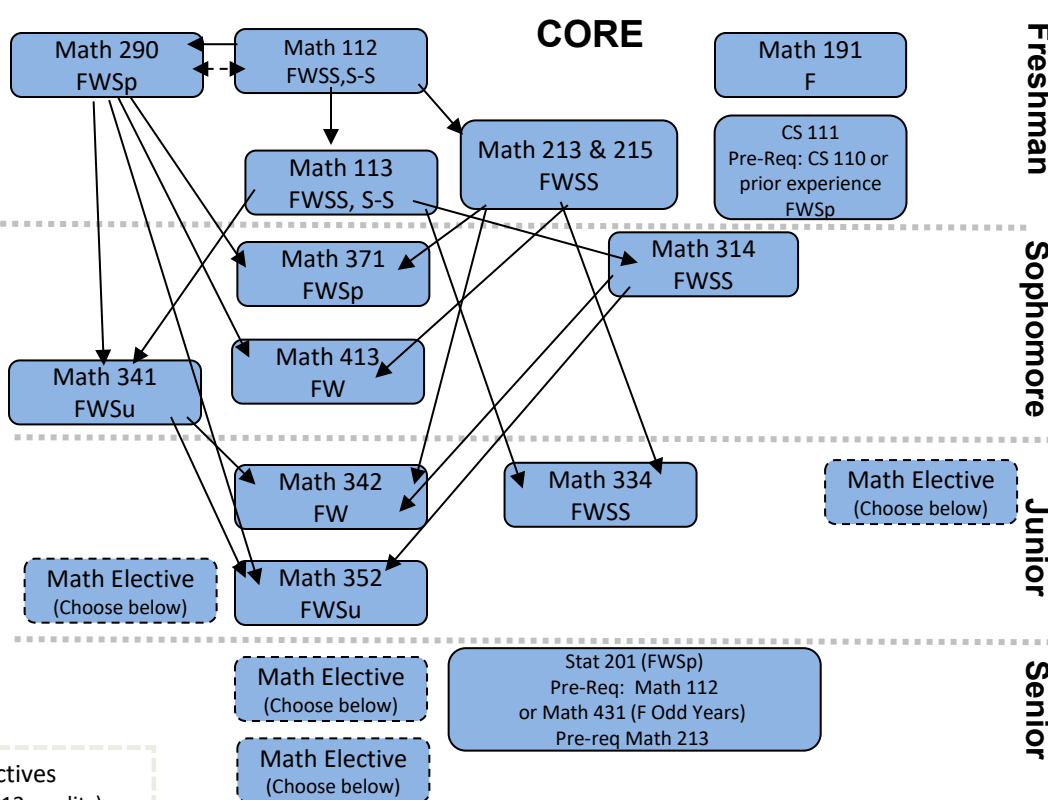
- Grades of C- or below will not be acceptable in major courses.
- Complete the following core requirements: CS 111, Math 112, Math 113, Math 191, Math 213, Math 215, Math 290, Math 314, Math 334, Math 341, Math 342, Math 352, Math 371, Math 413
- Complete one of the following courses: Stat 201 or Math 431
- Complete up to 12 hours from the following options (no double counting with requirement 2)
CS 235, Math 350, Math 372, Math 380, Math 402, 403, 404, 405, 406R, 410, 411, 425, 431, 435, 436, 437, 438, 439, 447, 451, 465, 473, 485, 487, 495R, 510, 511, 513R, 521, 522, 525, 532, 534, 536, 540, 541, 547, 553, 554, 561, 562, 565, 570, 571, 572, 586, 587
- Complete either the GRE Mathematics Subject Test or the Mathematics Major Field Test the last semester before graduation.
- Complete an exit interview.
- Students who continue to graduate work should complete Math 372 or Math 473, Math 410, Math 541, and math 553.
- Students who do not plan to pursue a PhD in Mathematics are strongly encouraged to complete CS 235.

Minor (20-21 Hours)

- Grades of a C- or below will not be accepted.
- Complete the following courses: Math 112, Math 113, Math 290.
- Complete math 213.
- Complete one of the following courses: Math 302 or Math 314.
- Complete 4 credits of the following courses: Math 215, Math 303, Math 334, Math 341, Math 342, Math 350, Math 352, Math 362, Math 371, Math 372, Math 380, or any approved 400 or 500 level minor courses listed in catalog.



F=Fall, W=Winter,
Sp=Spring, Su=Summer,
S-S=Spring-Summer,
SS=Spring & Summer.



Electives (Choose 12 credits)

CS 235 Pre-req: CS 142 or CS 111 FWSp	Math 403 Pre-Req: Math 323 & Math 347 Concurrent enrollment in Math 402 FW	Math 411 Pre-Req: Math 334 W odd years	Math 437 Prereq: Math 323 & Math 347 Concurrent in 436 FW	Math 465 Pre-Reqs: Math 314 & Math 341 E Odd Years	Math 511 Pre-Req: Math 303 or Math 447; Math 410 W	Math 532 Pre-Req: Math 352 Contact department	Math 547 Pre-Req: Math 334, & Math 342 W Odd	Math 565 Pre-Req: Math 342 W Odd Years
Math 350 Pre-Req: Math 213 & 290 Contact Dept.	Math 404 Pre-Req: Math 402 & 403 Concurrent enrollment in Math 405 FW	Math 425 Pre-Req: Math 334 W Odd years	Math 438 Pre-req: Math 436 & 437 concurrent with math 439 EW	Math 473 Pre-Reqs: Math 371 F	Math 513R Pre-Req: Instructor Consent Contact Department	Math 534 Pre-Req: Math 334 & Math 341 F Odd Years	Math 553 Pre-Req: Math 341 F	Math 570 Pre-Req: Math 302 or Math 313 or 213 Contact Dept.
Math 372 Pre-Reqs: Math 371 W	Math 405 Pre-Req: Math 403; Concurrent enrollment in Math 404 FW	Math 431 Pre-Req: Math 313 Or 213 F Odd years	Math 439 Pre-Reqs: Math 437 Concurrent in 438 FW	Math 485 Pre-Req: Math 313 or 213 E	Math 521 Pre-Req: Math 334 Contact department	Math 536 Pre-Req: Math 341 Contact Dept.	Math 554 Pre-Req: Math 553 Or Instructor Consent W Even Years	Math 571 Pre-Req: Math 372 F
Math 380 Pre-Reqs: Math 112, Math 215, CS 180, and Stat 121 or stat 201 Contact department	Math 406R Pre-Req: Instructor Consent—Contact Dept.	Math 435 Pre-Req: Math 431 W Even Years	Math 447 Pre-reqs: Math 303 or Math 314 & Math 334 W Even Years	Math 487 Pre-Req: Math 371 W	Math 522 Pre-Req: Math 213, 215, 314, and CS 111 Contact department	Math 540 W	Math 561 Pre-Req: Math 571 or Concurrent F Even Years	Math 572 Pre-Req: Math 571 W
Math 402 Pre-Req: Math 322, 323, & Math 346 Concurrent with Math 403 FW	Math 410 Pre-Req: Math 314 & CS 111 or 142 F even years	Math 436 Pre-Req: Math 323 & Math 334 & Math 346 Concurrent enrollment in Math 437 FW	Math 451 Pre-Req: Math 290 W	Math 495R Pre-Req: Instructor Consent FWSS	Math 525 Pre-Req: Math 413 or 334 (or concurrent) Contact department	Math 541 Pre-Req: Math 341; Math 314 or Math 342 E	Math 562 Pre-Req: Math 561 Contact Dept.	Math 586 Pre-Req: Math 372 F Even Years
Math 406R Pre-Req: Instructor Consent—Contact Dept.	Math 410 Pre-Req: Math 314 & CS 111 or 142 F even years	Math 436 Pre-Req: Math 323 & Math 334 & Math 346 Concurrent enrollment in Math 437 FW	Math 451 Pre-Req: Math 290 W	Math 510 Pre-Req: Math 410 E	Math 525 Pre-Req: Math 413 or 334 (or concurrent) Contact department	Math 541 Pre-Req: Math 341; Math 314 or Math 342 E	Math 562 Pre-Req: Math 561 Contact Dept.	Math 587 Pre-Req: Math 352 F Odd Years

Guide only—please consult MyMAP for full requirements.

Please Note: When Taught is subject to change.

Updated 06/24/2025

Freshman
Sophomore
Junior
Senior



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 >>> 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 (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

\$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

Applied & Computational Mathematics Emphasis (ACME)

\$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 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 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