

Welcome to the

Applied Physics: Data Science Major

in the College of Computational, Mathematical, and Physical Sciences

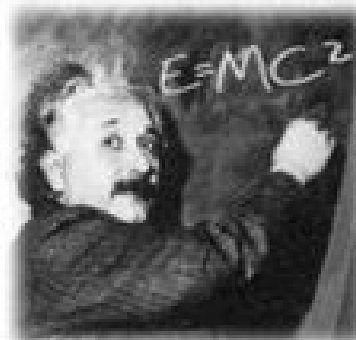
College Advisement Center

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

Physics & Astronomy Department

Website: physics.byu.edu
Email: physics_office@byu.edu
Phone: 801-422-4361
Office: N-284 ESC

See physics.byu.edu/undergraduate/advising



Faculty Advisor – until you have a faculty research mentor, you must meet annually to discuss career and academic options with the faculty advisor.

Traci Neilsen, traci.neilsen@byu.edu, (801) 422-7056, N-269 ESC

Deadlines to meet with Faculty Advisors each year (based on the last digit of your student number):

0 or 1	2 or 3	4 or 5	6 or 7	8 or 9
October 31	November 30	January 31	February 28	March 31

Internship Coordinator – Benjamin Frandsen

Email: benfrandsen@byu.edu
Phone: 801-422-2341
Office: N345 ESC

University Career Services – Anna Kennington

Website: careers.byu.edu (See Handshake flyer in packet)
Email: anna.kennington@byu.edu
Phone: 801-422-3000 to schedule an appointment
Office: C106 BNSN

Clubs

Acoustical Society of America – Contact: Micah Shepherd (shep@physics.byu.edu), visit www.acoustics.byu.edu/asa-student-chapter for more information

BYU Astronomical Society – Contact: Benjamin Boizelle (boizellb@byu.edu), visit www.physics.byu.edu/clubs/astrosoc/home for more information

Society of Physics Students – Contact: Chris Verhaaren (chris_verhaaren@byu.edu), visit www.sps.byu.edu/sps-home for more information

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

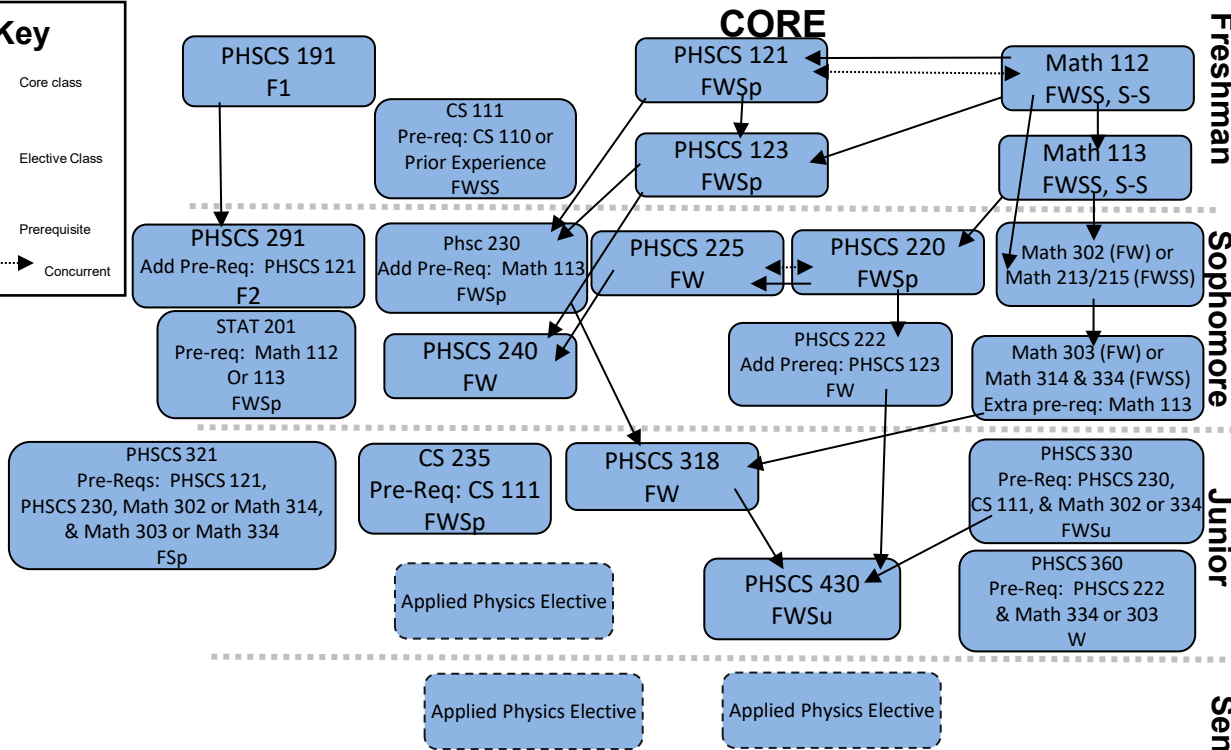
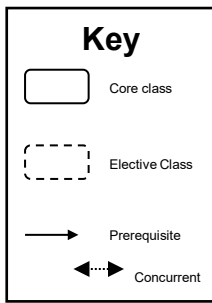
- Check out Careers & Experiential Learning in 1134 WSC and at careers.byu.edu.
- Consider doing an internship.
 - Attend the STEM and Career Fairs held in fall and winter semesters.
 - Talk to your department about internship opportunities.
 - Use LinkedIn and Handshake (see flyer in this packet) to 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.

Applied Physics: Data Science BS

Requirements / Prerequisites 2025-2026 Academic Year

Major (66-68 Hours)

- No more than 3 hours of D credit is allowed in major courses.
- Complete the following: CS 111, CS 235, Math 113, PHSCS 121, PHSCS 123, PHSCS 191, PHSCS 220, PHSCS 222, PHSCS 225, PHSCS 230, PHSCS 240, PHSCS 291, PHSCS 318, PHSCS 321, PHSCS 330, PHSCS 360, PHSCS 383 PHSCS 430, STAT 201.
- Complete one of the following: PHSCS 427, PHSCS 428, PHSCS 441, PHSCS 451, PHSCS 461, PHSCS 471, PHSCS 581
- Complete nine hours of the following: CS 270, CS 473, CS 474, EC EN 380, Math 380, Math 510, PHSCS 530, PHSCS 580, Stat 220, Stat 230, Stat 251, Stat 286, Stat 330, Stat 386
- Complete one of the following math options: Take either Math 302 and Math 303 OR Math 213, Math 215, Math 314, and Math 334.
- Complete two credits from either PHSCS 492R or PHSCS 498R.
- Take the Physics Major Field Test your last semester.

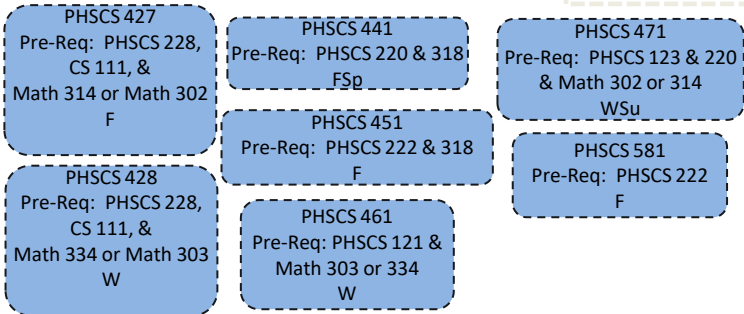


Physics Minor

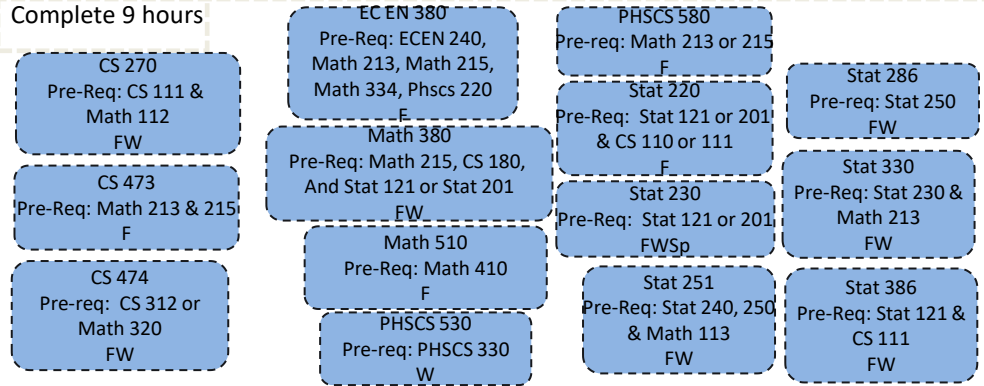
Minor (20 Hours)

- Complete the following 5 courses: Math 113, PHSCS 121, PHSCS 123, PHSCS 220, PHSCS 222.
- Complete 4.0 hours from the following courses: PHSCS 127, PHSCS 137, PHSCS 167, PHSCS 225, PHSCS 230, PHSCS 240, PHSCS 310, PHSCS 311, PHSCS 318, PHSCS 321, PHSCS 330

Requirement 2: Choose 1



Requirement 3: Complete 9 hours





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!

Possible Careers with a Physics major

(Not a comprehensive list)

Accelerator operator	Manager, esp. high-tech industry
Acoustician	Materials scientist*
Aerodynamicist*	Mathematician*
Aerospace Scientist	Medical doctor*
Astronomer*	Medical physicist*
Biophysicist*	Meteorologist
Biotechnologist	Nanotechnology microscopist
Business administration, esp. high-tech industry	National security analyst
Business, self-employed	Neurologist*
Computer scientist (many types: financial software developer, hardware engineer, IT consultant, programmer, software engineer, systems analyst, web developer, etc.)	Noise and vibration engineer
Dentist*	Nuclear medicine technologist
Data Scientist	Nuclear pharmacist*
Engineer (many types: Aerospace, Chemical, Electrical, Electro-optic, Mechanical, Medical device, Nuclear, Optical/laser, Semiconductor device, Manufacturing, Design, Process, Quality Control, Research & Development, Systems, etc.)	Optical Scientist*
Financial analyst	Patent agent or lawyer*
Geophysicist*	Physicist* (many types: Astrophysics, Atomic & Molecular, Biological, Condensed Matter, Nuclear, Optical & Photonic, Particle, Plasma & Fusion, etc.)
Hazardous waste management specialist	Professor* (university, college, community college)
Health physicist*	Research lab assistant, research technician
Lawyer (esp. patents)*	Sales, esp. high-tech industry
	Space scientist
	Scientific computer programmer
	Teacher (high school physics, high school science, middle school science)

*Usually requires a graduate degree

Gathered from the Counseling and Career Center and from the American Institute of Physics (aip.org)

Research Groups

Group	Day	Time	Location
Acoustics	Thursday	10:00AM	TBD
Astronomy	TBD	TBD	ESC C465
Atomic, Molecular, Optical	Contact individual professors		
Biological Physics	Contact individual professors		
Computational General Relativity	Thursday	2:00 PM	ESC N216
Computational X-ray Imaging	Thursday	1:00 PM	ESC N288
Condensed Matter	Thursday	3:00 PM	ESC N288
Laser Physics (Peatross and Ware)	Thursday	12:00 PM	ESC U160
Materials for Space Observatories	Friday	3:00 PM	ESC N288
Protein Engineering (Della Corte)	Thursday	11:00 PM	TBD
Quantum	Monday	5:00 PM	ESC N216
Science Education	Monday	2:00 PM	ESC N209
Theoretical and Mathematical	Tuesday	3:00PM	ESC N209

*For most updated information on times and locations of research groups, please visit:
<https://www.physics.byu.edu/undergraduate/research> Be sure to scroll down to the professors for additional information.