



ACADEMIC PATHWAYS IN
TECHNOLOGY & ENGINEERING

PATHWAYS TO ACADEMIC ENGAGEMENT // **JANUARY 29, 2020**

PLAN FOR TODAY:

- Welcome and Framework
- Find Your Path at UW Bothell
- Career Pathways in Technology & Engineering
- Academic Majors in Technology & Engineering
 - *Pre-major: Technology & Engineering*
 - *Applied Computing*
 - *Computer Science & Software Engineering*
 - *Computer Engineering*
 - *Electrical Engineering*
 - *Mechanical Engineering*
 - *Mathematics*
 - *Physics*
 - *Science, Technology, & Society*
- Career Services Resources
- Advising Q&A with Success Team

Enter a raffle drawing for exciting prizes before you leave!



WELCOME

WHAT ARE MY INTERESTS?

WHAT ARE MY GOALS?

WHAT ARE MY STRENGTHS?

WHAT IS MY MOTIVATION?

WHAT IS MY PASSION?

FIND YOUR PATH IN  **TECHNOLOGY & ENGINEERING**

Technology & Engineering: Video



Meta-Major
TECHNOLOGY & ENGINEERING



Physics
Mathematics
Applied Computing
Electrical Engineering
Computer Engineering
Mechanical Engineering
Science, Technology & Society
Computer Science & Software Engineering



TECHNOLOGY & ENGINEERING

ABOUT TECHNOLOGY & ENGINEERING

Deepen your interests in experimentation and data analysis to address contemporary global and societal challenges.

- > **Solve complex problems that include scientific, social, political, cultural, and ethical dilemmas.**
- > **Enhance your ability to solve problems or equations using logic and technology, and gain skills in data visualization and analysis.**



Sample Career Paths:

- Lab Scientist
- Biomedical Research
- Electrical Engineer
- Mechanical Engineer
- Software Engineer
- Science Education
- Science Policy & Advocacy
- Information Security
- Web Development
- Data Analyst

TECHNOLOGY & ENGINEERING

Academic Majors:

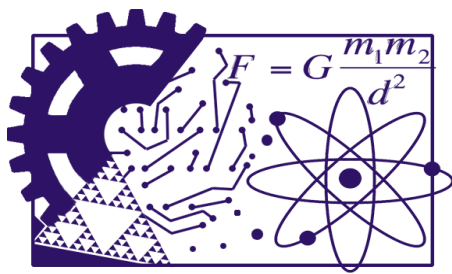
- Applied Computing
- Computer Engineering
- Computer Science & Software Engineering
- Electrical Engineering
- Mechanical Engineering
- Mathematics
- Physics
- Science, Technology & Society

TECHNOLOGY & ENGINEERING

**HOW TO FIND
YOUR PATH IN
TECHNOLOGY
& ENGINEERING**

As we review the next several slides....

1. Think about the **classes** you enjoyed most in high school, or that you look forward to most at UW Bothell.
2. Be realistic about the time needed to develop **skills** and pursue **experiences** important for academic and professional success.
3. Make plans to **connect** with success team members who can help shape your path in **Technology & Engineering**.



TECHNOLOGY & ENGINEERING

PRE-MAJOR ADVISING

Help you make sense of your academic strategies and academic progress towards a UWB degree.

Meet with Pre- Major Advisor for:

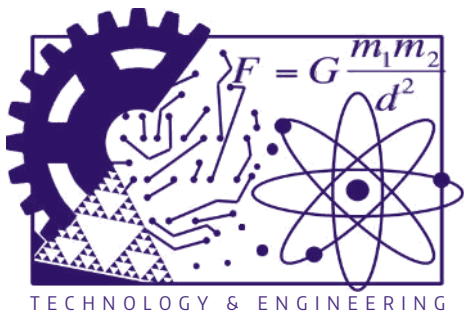
- Registration Prep
- Reflecting on Academic Planning
- Problem solving Academic Difficulty
- Interest & plans to enhance your UW-B experience

A Pre-Major Advisor's Role:

- A member of your Student Success team
- Helping to support your Academic Success
- Make Referrals to Campus Resources
- Engage in Reflective Conversations on Academic Trajectory at UWB

Tips for creating a Student and Academic Advisor relationship

- Be curious about your academic journey
- Ask Questions! If your interests change inform your advisor
- Be prepared to make decisions with the options given
- Do your research! Explore your interests, majors & career options
- Make advising appointments at least quarterly- We want to see you!



APPLIED COMPUTING

A combination of computer science and a second discipline of your choice

A CSS info session will be held February 5th 3-4pm

Classes you might enjoy:

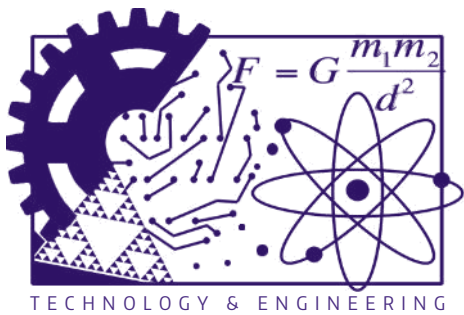
- Digital Thinking
- Programming through Animated Storytelling
- Introduction to Programming I & II
- Math, including Calculus I
- Statistics or probability
- Women in STEM
- CSS Career Exploration

Experiences you might enjoy:

- Internships & undergraduate research
- Clubs & organizations
 - Association for Computing Machinery
 - Blockchain Society
 - Gray Hats
 - BWISE (Bothell Women in Science and Engineering)
- Exploring lots of other subjects to be your second discipline (business, biology, social sciences)

Career Industries or Job Roles you might enjoy:

- Positions in healthcare, informatics, and other interdisciplinary fields
- Data scientist/analyst
- Human-computer interface designer
- Software engineer/developer
- Technical or business writer
- Project manager
- Careers in your second discipline



COMPUTER SCIENCE & SOFTWARE ENGINEERING

Related fields of study are data science, mathematics, statistics

A CSS info session will be held February 5th 3-4pm

Classes you might enjoy:

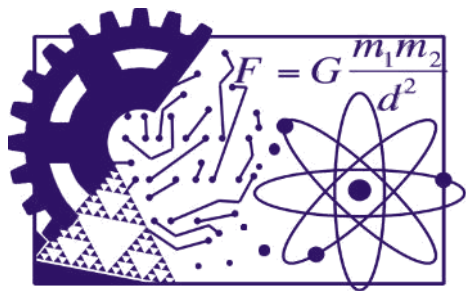
- Digital Thinking
- Introduction to Cybersecurity
- Introduction to Programming I & II
- Math, including Calculus I & II, as well as Matrix Algebra
- Statistics or probability
- Women in STEM

Experiences you might enjoy:

- Internships & undergraduate research
- Clubs & organizations
 - Association for Computing Machinery
 - Blockchain Society
 - Gray Hats
 - BWISE (Bothell Women in Science and Engineering)
- Coding events & hackathons
- Technical resume and interview workshops

Career Industries or Job Roles you might enjoy:

- Front end/full-stack web developer
- Project manager
- Artificial intelligence/machine learning engineer
- Database administrator
- Cybersecurity officer
- Mobile application developer
- Project design specialist
- Systems manager



COMPUTER ENGINEERING

Related fields of study are Computer Science and Electrical Engineering

Classes you might enjoy:

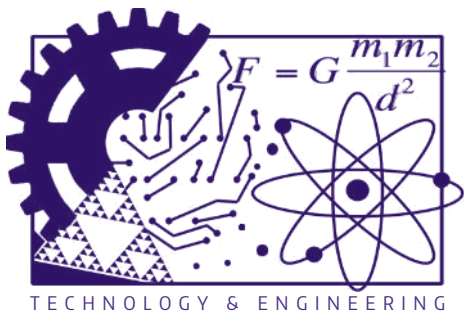
- Digital Thinking
- Introduction to Cybersecurity
- Calculus
- Probability and statistics

Experiences you might enjoy:

- AT&T Labs, T-Mobile
- Software Engineering Intern
- Research with EE or CSS faculty, REU
- IEEE, Trickfire robotics, ACM

Career Industries or Job Roles you might enjoy:

- Validation Engineer
- Systems development
- Testing and quality assurance
- Project management
- Semiconductor devices
- Mobile computing
- Network design and development



ELECTRICAL ENGINEERING

Computer Engineering

Classes you might enjoy:

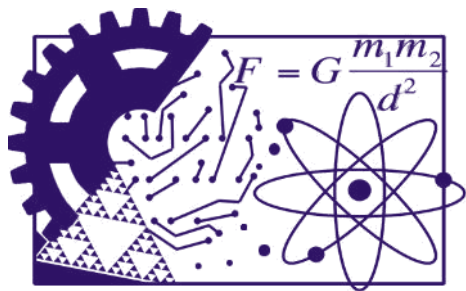
- Calculus
- Waves
- Electromagnetism & Oscillatory Motion
- Introduction to Differential Equations

Experiences you might enjoy:

- Puget Sound Energy, PACCAR, Sound Transit
- Speech and audio processing research
- Signal processing
- IEEE, Trickfire Robotics

Career Industries or Job Roles you might enjoy:

- Electrical Engineer
- Controls Engineer
- Digital Design Engineer
- Power & Energy Systems
- Product Development
- Aerospace
- Bioelectronics



MECHANICAL ENGINEERING

Classes you might enjoy:

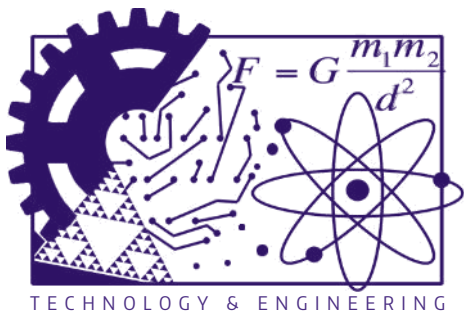
- Intro to Programming for Sci Apps
- Statics
- Matrix Algebra
- Probability and Statistics for Engineers

Experiences you might enjoy:

- Internships with local companies; Aerojet, Flatiron, McKinstry, and Lockheed Martin
- Marine Acoustics
- Trickfire Robotics , ASHARE, ASME, Marine Technology Society

Career Industries or Job Roles you might enjoy:

- Mechanical Engineer
- R&D Engineer
- Automation Engineer
- Aerodynamics Engineer
- Renewable Energy
- Transportation
- Energy & Conservation
- Medical
- Aerospace



MATHEMATICS

Accounting, Computer Science, Engineering, Finance and Physics

Classes you might enjoy:

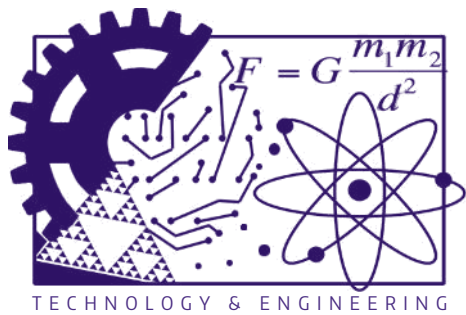
- Calculus 1-3
- Statistics
- Linear Algebra and Differential Equations
- Computer Programming

Experiences you might enjoy:

- Internships and Undergraduate Research
- Volunteering in K-12
- Work on campus- QSC, grader, Peer Facilitator
- Math Society, BWiSE, anything!

Career Industries or Job Roles you might enjoy:

- Education
- Actuarial Science
- Data Analysis
- Actuarial Science
- Database and Computer Systems
- Network and Data Communication
- Financial Economics
- Engineering
- Financial Planning
- Investment Analyst
- Accounting



PHYSICS

A related area of study is Math and Electrical Engineering.

Friday February 19th, 11 am to noon physics information session

Zoom link: <https://washington.zoom.us/j/4253523242>

Classes you might enjoy:

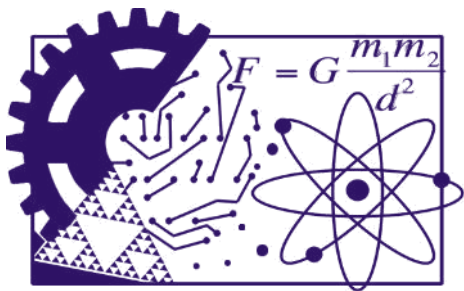
- The Cosmos
- Intro to Astronomy
- Classical Mechanics
- Modern Physics
- Thermal Physics

Experiences you might enjoy:

- Internship in Nasa's Jet Propulsion Lab!
- Research at LIGO (Laser Interferometer Gravitational Wave Observatory)
- Conduct undergrad research
- Join our UWB Physics & Astronomy Club!
- Join APS (American Physics Society)

Career Industries or Job Roles you might enjoy:

- Geophysics and Meteorology
- Space and astronomy
- Medical science
- Engineering
- Manufacturing
- Patent Lawyer or Patent Examiner
- Designer/Researcher/Tester of modern and future tools and instruments
- Professor or Researcher or Teacher
- Researcher, Scientist, Physicist



TECHNOLOGY & ENGINEERING

SCIENCE, TECHNOLOGY & SOCIETY

Sometimes this major is called the History of Science or Technology & Culture.

Classes you might enjoy:

- Health, Medicine and Society
- Mathematics across Cultures
- Energy, the Environment, and Society
- Conservation and Sustainable Development

Complementary minors:

- Policy Studies
- Health Studies
- Information Technology
- Business Administration
- Mathematics
- Computing & Software Systems

Complementary learning opportunities free at UW:

LinkedIn Learning

- Python for Data Visualization
- R for Data Science
- Tableau Essential Training

Career Industries or Job Roles you might enjoy:

- Science Journalism
- Intellectual Property Regulation
- User Experience
- Data Visualization
- Science Teaching and Research
- Technology Policy and Law

ANDY SOEUR

Mechanical Team Lead in Training
The Boeing Company

Science, Technology & Society '19

“ IAS has opened many doors in my career, giving me opportunities to educate myself in various areas of knowledge to excel in my professional life with so many diverse experiences. Because of IAS, I know I will have a stable future. ”



CAREER SERVICES RESOURCES

> Appointments

- Career exploration
- Application materials and interviews
- Job & internship search strategies
- Grad school prep

> Virtual resources

- Watch: videos, webinars, presentations at your own pace
- Explore: Candid Career, What Can I Do With This Major?, WOIS, Vault

> Handshake & LinkedIn

- Build your profile and connect with people in your industry
- Research what alumni and professionals in your field have done
- Search for jobs & internships

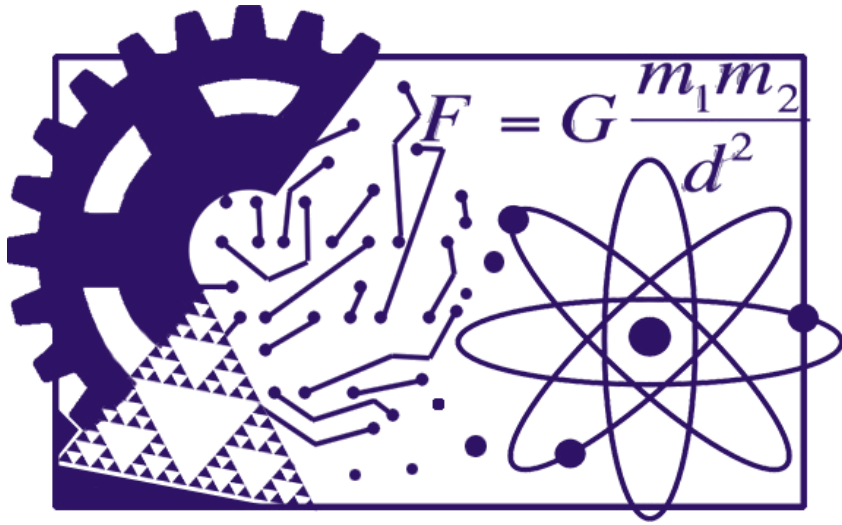


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uwb.edu/careers



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TECHNOLOGY & ENGINEERING

STUDENT SUCCESS TEAM

UNIVERSITY *of* WASHINGTON | BOTHELL



Pre-Major Advisors



LAUREN

Berry



RACHAEL

Gilchrist

Meet with your Pre-Major Advisor!

Schedule a meeting in Navigate to meet with a pre-major advisor if interested in the Technology and Engineering Meta Major.

Contact Pre-Major Advising:

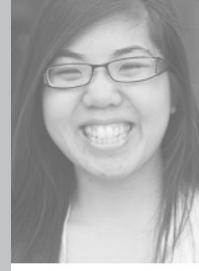
uwbadvis@uw.edu

Interdisciplinary Arts & Sciences Advisors



WISAM

Berry



NHI P.

Tran

Want to bridge your interests in science, technology and society?

Connect with the STS advisors by email or on Instagram:

IASADV@uw.edu

 [@uwb_ias](https://www.instagram.com/uwb_ias)

Career Coaches



WILL

Radcliffe



DAKOTA

Bennett

Explore career paths according to your interests!

Contact Career Coaches to learn about related experiential learning and work opportunities related to your interests:

career@uw.edu

Science, Technology, Engineering & Mathematics Advisors



Laura

Avila

Mathematics
Advisor



Amy

Feldman-Bawarshi

Biology, Chemistry
and Physics



Kristen

Attebery

Computing &
Software Systems
Advisor



Mary

Ramirez

Computing &
Software Systems
Advisor



Chris

Shaeffer

Computing &
Software Systems
Advisor



Leon

Lewis

Engineering Advisor

- **Computer Science Pre-Major Information Session**

- **February 5, 2021 3:00pm-4:00pm**

- **Engineering and Mathematics Pre-Major Information Session**

- **February 26, 2021 11:00am-12:00pm**

What are the **three most useful skills or talents** a student should have before entering this major?

What kind of **work-life balance** should a student in this major expect?

What is the **most underrated skill** or attribute to have as a graduate in this major?

What skills will a student **need to develop** to succeed after being admitted to the major?

What **myth about the major** would you like to bust?

What **advice** do you have for someone considering this major?

STAY CONNECTED



www.uwb.edu/degrees/meta-major-pathways



<https://tinyurl.com/y54dwt4d>