College of Engineering and Physical Sciences
Career and Professional Success

Applied Math

PROFESSIONAL SUCCESS PATHWAY

PLEASE NOTE: ACADEMIC COURSE SELECTION CHANGES RAPIDLY. MAKE SURE YOU ARE USING DEGREEWORKS AND MEETING WITH YOUR ACADEMIC ADVISOR REGULARLY.

ACADEMIC COURSE TRACK

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Participate in MATH 400-First Year Math Seminar and get to know the major options and your peers. Complete Mathematics and Applications with MATLAB. Start exploring and completing Discovery program courses in collaboration with your program advisor. Consider beginning your science sequence. Select one of 5 options: Computation, Dynamics and Controls, Economics, Fluid Dynamics, and Solid Mechanics and Vibrations.	Continue your program sequence by completing your 500 & 600-level MATH courses related to your chosen option. Continue and complete your science sequence if needed. Continue exploring and completing your Discovery program courses.	Continue your program sequence by completing your 500, 600 & 700-level MATH courses related to your chosen option. Continue exploring and completing your Discovery program courses related to your option. Use DegreeWorks to make sure you're satisfying other UNH academic requirements.	Complete your program sequence with your 700-level requirements and electives related to your chosen option. Fulfill Capstone requirement through your senior seminar or senior thesis. Confirm major and UNH graduation requirements.

FAST TRACK YOUR PROFESSIONAL SKILLS BY PRESENTING YOUR RESEARCH, PROJECTS, AND CAPSTONE/THESIS EXPERIENCES AT THE UNDERGRADUATE RESEARCH CONFERENCE-INTERDISCIPLINARY SCIENCE AND ENGINEERING SYMPOSIUM

WILDCAT WAY TO PROFESSIONAL SUCCESS

BUILD AWARENESS

- [ ] **Identify your interests, skills, and values**
  Career and Professional Success staff can provide assessment tools to help with the exploration process
- [ ] **Learn about your field of interest: industry areas, job types/titles, growth projections**
  Review O*Net, the Bureau of Labor Statistics, Potential Careers for your Major pages, Vault, and Pathsource
- [ ] **Map your skills to industry needs**
  Search job descriptions; indeed.com, LinkedIn, and company specific pages to learn what skills are in demand
- [ ] **Understand the career paths of fellow students and alumni**
  Join Wildcat Connections, review alumni LinkedIn profiles, UNH Today, and college websites for alumni stories
- [ ] **Understand salary ranges for your industry**
  Search Salary.com, Glassdoor, O*Net, and the Bureau of Labor Statistics to find ranges for roles in your industry

BUILD PROFESSIONAL IMAGE

- [ ] **Create and update career documents**
  Including resumes, cover letters, and other professional correspondence
- [ ] **Create and practice your professional pitch**
  Take part in the Career Storytelling workshop series with the College of Liberal Arts CaPS team
- [ ] **Develop your LinkedIn profile**
  Attend Career Express or CaPS Workshop Series to recieve feedback and tips on optimizing your profile
- [ ] **Practice interviewing for your specific industry/field and professional goals**
  Use InterviewStream website to record a practice interview, conduct a mock interview with a mentor/employer
- [ ] **Cultivate your professional image**
  Dress for success, learn industry specific etiquette, and review your digital presence (social media and web search results)

BUILD EXPERIENCE

ACADEMIC

- [ ] **Engage in research and field experience**
  Take the Jackson Career Explorer, Skills Scan, or Values Card Sort (available through Career and Professional Success)
- [ ] **Publish your research and papers**
  Submit your research to psychology specific journals
- [ ] **Present at professional conferences and competitions**
  Take part in the Undergraduate or Graduate Research Conference
- [ ] **Secure a Teaching Assistant , Lab Assistant, or tutoring position**
  Take on a leadership or service position within your department to support your peers
- [ ] **Study away to build your national and global citizenship**
  Find the right program for you with National Student Exchange, Semester in the City, Education Abroad, etc.
- [ ] **Consider submitting your research to appropriate engineering and science journals**
  Take part in the Undergraduate or Graduate Research Conference as well as any department poster sessions

CO-CURRICULAR

- [ ] **Learn about all of the resources available on campus**
  Explore the A-Z Resource Guide on unh.edu to see all UNH has to offer
- [ ] **Volunteer to support your local or global community**
  UNH Civic and Community Engagement
- [ ] **Join and participate in clubs and/or student organizations**
  Find through the Office of Student Involvement and Leadership, academic organizations, and Campus Recreation
- [ ] **Pursue student leadership positions**
  Apply to be a Resident Assistant, take a leadership position in an organization, run for student government

PROFESSIONAL

- [ ] **Shadow professionals and companies of interest**
  Use Wildcat Connections or campus connections to build relationships and request job shadowing experiences
- [ ] **Secure at least one internship**
  Search through Wildcat Careers, established Psychology internship opportunities, or other connections to find options
- [ ] **Get a part-time job to build other transferrable skills**
  Attend the Local and On-Campus Student Job Fair, inquire with campus departments, or local businesses
- [ ] **Search through Wildcat Careers, Indeed.com, and pay attention to department and career weekly emails**

BUILD RELATIONSHIPS

- [ ] **Build professional and personal networks**
  Connect with alumni, faculty, staff, employers, supervisors, parents, friends, friend's parents, etc. Create a profile on Wildcat Connections, join national associations, and expand your LinkedIn connections
- [ ] **Attend employer events on campus and in the community**
  Resume Review Days, Career and Internship Fairs, employer tabling, information sessions, employer and alumni panels
- [ ] **Conduct informational interviews**
  Meet with a variety of professionals from desired industry/organizations to hear their career stories and advice
- [ ] **Secure 3-5 professional references**
  Connect with a combination of appropriate employers, faculty, staff, and/or supervisors

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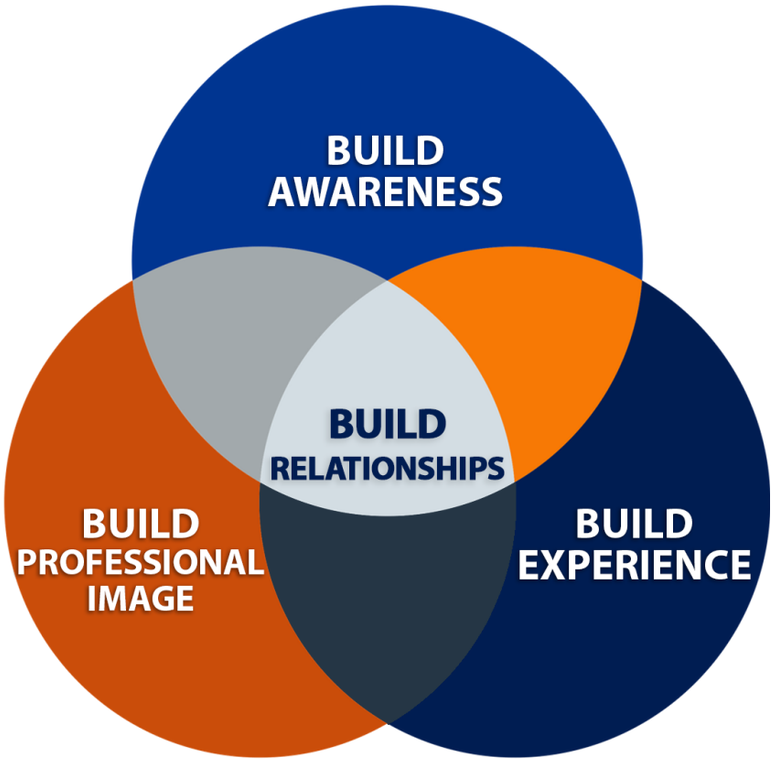

At the University of New Hampshire, students develop personal and professional skills by following the Wildcat Way to Professional Success.
This model is designed to provide guidance and recommended action steps throughout the UNH experience, equipping students with the knowledge and tools to thrive in an ever-changing future.

EXPERIENTIAL LEARNING

Learning happens not only in the classroom and on campus, but also, and equally as important, through hands-on interactions and engagement with industry, national labs, NSF-REUs, and other organizations and partners. Experiential learning helps students to "connect the dots" and explore the link between academic interests and potential career paths. Students participate in experiential learning at a variety of sites, including:

Cigna
Liberty Mutual Insurance
Elementary & Secondary Schools
Mathworks
Novo Nordisk
Technology Business Research, Inc.

GRADUATE SCHOOL

Graduates from the CEPS Class of 2017 enrolled in masters and doctoral programs at the following institutions:

University of New Hampshire
Clemson University
Colorado State University
Duke University
Rensselaer Polytechnic Institute
Stanford University
Technical University of Munich
Texas A&M
Tufts University
University of Colorado Boulder
University of Michigan

POTENTIAL CAREERS

Applied Math

Overall employment of mathematicians and statisticians is projected to grow 33 percent from 2016 to 2026, much faster than the average for all occupations. Employment growth will vary by occupation.

Employment of statisticians is projected to grow 33 percent from 2016 to 2026, much faster than the average for all occupations. Growth is expected to result from more widespread use of statistical analysis to make informed business, healthcare, and policy decisions. In addition, the large increase in available data from the Internet will open up new areas for analysis.

Employment of mathematicians is projected to grow 29 percent from 2016 to 2026, much faster than the average for all occupations. However, because it is a small occupation, the fast growth will result in only about 900 new jobs over the 10-year period. The amount of digitally stored data will increase over the next decade as more people and companies conduct business online and use social media, smartphones, and other mobile devices. As a result, businesses will increasingly need mathematicians to analyze the large amount of information and data collected. Analyses will help companies improve their business processes, design and develop new products, and even advertise products to potential customers.

In addition, mathematicians and statisticians will be needed in the scientific research and development services and pharmaceutical and medicine manufacturing industries. The aging of the U.S. population is expected to prompt pharmaceutical companies to develop new treatments and medical technologies. Biostatisticians will be needed to conduct the research and clinical trials necessary for companies to obtain approval for their products from the Food and Drug Administration. Potential careers include, but are not limited to:

- Actuary
- Mathematical Scientist and Research Analyst
- Mathematical Consultant
- Cryptographer
- Operations Research Analyst
- Numerical Analyst
- IT Analyst (Liberty)
- Software Developer
- Systems Engineer
- Content Developer
- Teacher