

# Mathematics and Statistics

*Made in Windsor.*

**MATHEMATICS**

**MATHEMATICS AND STATISTICS**

**MATHEMATICS AND COMPUTER SCIENCE**

**MATHEMATICS WITH FINANCE CONCENTRATION**

**BUSINESS ADMINISTRATION AND MATHEMATICS (BCOMM)**

**MATHEMATICS (BMATH)/CONCURRENT EDUCATION (BED)**



[uwindsor.ca/science/math](http://uwindsor.ca/science/math)



Mathematics and Statistics  
Experience Map



University  
of Windsor

# UWindsor Life

## Highlights and Skills

### PROGRAM HIGHLIGHTS

**Actuarial Science <sup>H</sup>** Be the person with the answers! Develop your critical thinking skills to solve complex challenges and problems in financial and insurance industries. Our supportive learning environment with small class sizes and engaging professors will prepare you for an actuarial designation. Upon graduation, you'll move into an in demand career, assessing risks in the insurance and finance industries.

**MIN. AVG.\* 70% ONTARIO COURSE REQUIREMENTS** ENG4U, MHF4U, and MCV4U required. A minimum 70% average of math courses, excluding MDM4U.

**Mathematics <sup>G</sup><sup>H</sup><sup>C</sup>** Mathematicians are in demand, and this program will prepare you for a career equal to your talents. Combine this program with another degree (double major) for a truly unique experience. Also, take courses that will prepare you for an actuary designation. The small class sizes, camaraderie and support in this program is second to none.

**MIN. AVG.\* 70% ONTARIO COURSE REQUIREMENTS** ENG4U, MHF4U, and MCV4U required. A minimum 70% average of math courses is also required.

**Mathematics and Statistics <sup>H</sup>** If you're interested in a career as an actuary or a statistician, this is the right program for you. You'll train your brain for critical thinking and solving complex problems. You'll be in

a supportive environment with students and faculty who share your passion for numbers. Actuarial preparation available.

**MIN. AVG.\* 70% ONTARIO COURSE REQUIREMENTS** ENG4U, MHF4U, and MCV4U required. A minimum 70% average of math courses is also required.

### Mathematics and Computer Science <sup>H</sup>

In this exceptional program choice if you're equally interested in mathematics and computer science. Your foundation in mathematics will make you stand out from the crowd in the tech world and spur on your career. You'll love the student-centred approach of the program where you'll get any support you need to succeed.

**MIN. AVG.\* 70% ONTARIO COURSE REQUIREMENTS** ENG4U, MHF4U, and MCV4U required. A minimum 70% average of math courses is also required.

### Mathematics with Finance Concentration <sup>H</sup>

Stand out on Bay Street with your background in both finance and mathematics. You'll get the chance to prepare for certification in actuarial science, because you'll be studying in both the in both the department of mathematics and statistics and the Odette School of Business. You'll have access to the best of both worlds. This program is a stellar choice for mathematically inclined students looking for a career in the financial sector. Actuarial preparation available.

**MIN. AVG.\* 75%\* ONTARIO COURSE REQUIREMENTS** ENG4U, MHF4U, and MCV4U required. 75% average in all attempted Math courses.

See other experience maps for related programs:

- Business Administration and Math <sup>H</sup> <sup>T</sup>
- Mathematics (BMath)/Concurrent Education (BEd)

### FUNCTIONAL KNOWLEDGE

- Designing and executing original observational and experimental studies
- Discerning and interpreting patterns, trends, and abnormalities in data sets; working with large data sets
- Intuitively understanding abstract concepts and theoretical approaches to problems
- Rigorously and methodically analyzing problems using established theoretical frameworks
- Communicating mathematical arguments and concepts to diverse audiences with clarity and precision
- Solving complex technical problems and effectively communicating the solution to a lay audience

<sup>G</sup> General – 3-year program <sup>H</sup> Honours – 4-year program <sup>C</sup> Combined Honours programs available <sup>T</sup> Thesis available \* Minimum grade point average for admission to program. A higher average may be required.

## Build your Skills and Experience

Your UWindsor experience is more than attending classes. It is a combination of academics, co-curricular activities, and extracurricular involvement. By making the most of all three elements of your university experience, you will maximize your opportunities to build your skills, broaden your personal network, and clarify your long term academic and career goals.



### CURRICULUM

Courses of study specific to each program



### CO-CURRICULAR

Activities and experiences that complement coursework (Outstanding Scholars, peer mentoring, VIP)



### EXTRACURRICULAR

Activities falling outside the scope of set curriculum (Part-time job, clubs, volunteering, athletics)

## Career Planning Cycle

Intentional career planning will help you prepare for your next step after graduation and beyond. It is a fluid, dynamic, and lifelong process. You can move on or return to an earlier stage in the cycle at any time.



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# Explore Opportunities Using This Chart

Explore a selection of opportunities recommended for students in your program. This chart shows some of your many options – you don’t have to do everything on it or limit yourself to it. Engage in opportunities from each of the three categories to set yourself up for success.

## High-Impact Practice (HIP)

A HIP is an enriching educational experience that can be life-changing and often includes learning outside of the classroom while encouraging meaningful interaction and collaboration, such as:

- Co-op, internship or field experiences
- Research with faculty
- Culminating senior experience
- Capstone courses
- Service-learning
- Learning communities
- Study abroad

## Academics


*Your Coursework*




## First Year

- Take required courses including Linear Algebra, Differential Calculus, Integral Calculus, Computer Science, and Mathematical Foundations and review degree course requirements
- Participate in our **PASS** program during **Welcome Week** to be coached on the skills necessary to be successful as a Faculty of Science student
- Visit the **Mathematics and Statistics Learning Centre** in Erie Hall 3125 for support in all of your first year Mathematics courses and to meet other students in your program
- Meet with the department’s Undergraduate Counselor
- Receive peer mentorship from an upper-year **MySci** advisor

## Middle Years

- Take required courses and meet with the department’s Undergraduate Counselor to make sure you are on the right path
- Consider completing an undergraduate research project in final year 
- Begin taking courses to specialize in Pure Mathematics, Statistics, Applied Mathematics, Actuarial Sciences, Finance or Operations Research
- Consider taking courses toward a minor or double major in a second Science, Business, or Arts discipline
- Continue taking courses required as preparation for professional schools
- Plan the third and fourth year courses to be taken as many are offered in alternate years. Refer to **Future Courses** on the department’s website




## Final Year



- Meet with an academic advisor to go over graduation requirements
- Complete all required courses for your degree
- Apply to graduate through **UWinsite Student Portal**
- Undertake an undergraduate research project with a faculty member 
- Study for and write the **Society of Actuaries Exams**
- Apply to graduate and professional schools, as well as for post-graduate scholarships

## Experience

*Ways To Get Involved*



- Begin the process of becoming a **LEAD Medallion Scholar** and participate in credit and volunteer activities 
- Learn about research opportunities within the Department of Mathematics and Statistics 
- Attend an undergraduate **Pizzanar** (pizza served during the seminar)
- *Discover* research opportunities as part of the **Outstanding Scholars** program 
- Join the **USci Network** to take part in collaborative and integrative science experiences
- Join a club like the **Mathematics and Statistics Student Association, Actuarial Science Club, Students Offering Support**, or the **Science Society**
- Participate in the **Bystander Initiative** workshop to gain skills that will help you be an effective and supportive ally to prevent sexual assault on campus
- Apply for a co-curricular experience such as **VIP - Community Service Learning**

- Consider studying for and writing the **Society of Actuaries Exams**
- Apply your knowledge through a summer research assistant position 
- Apply for an **NSERC** – Undergraduate Student Research Award
- Participate in **UWill Discover** undergraduate research conference 
- Gain valuable *Leadership* skills through the **Mathematics and Statistics Student Association** and the **Departmental Council**
- Assist with problem-solving workshops offered by the Mathematics and Statistics Department
- Assist with the planning and organization of mathematics outreach programs such as **Kangaroo Math, Tournament of the Towns**, and **Science Academy**
- Apply to the Department for a paid job as a Teaching Assistant

- Conduct research with faculty member or apply to be a lab instructor for Calculus or Linear Algebra 
- Become a **MySci** advisor and/or tutor for **Students Offering Support (SOS)** or the **Mathematics and Statistics Student Association** 
- Consider attending off-campus workshops and seminars such as the **Fields Institute, Canadian Math Society** conferences, and **Math in Moscow**
- Enter the **William Lowell Putnam Mathematics Competition**
- Expand your *Leadership* skills with an executive position in the **Mathematics and Statistics Student Association, Actuarial Science Club**, or the **Science Society**
- Complete **LEAD Medallion Scholars** in two areas for Bronze, three areas for Silver, or four areas for Gold in accordance with *Leadership, Engagement, Application, Discover* 

## Career

*Plan Ahead For What’s Next*



- Start planning your career by making a list of things you enjoy, your skills and areas where you excel
- Meet with a career advisor in **Career Development and Experiential Learning (CDEL)** for help developing a plan for your future years
- Consider a **Career Exploration Program** appointment to help you identify possible career paths
- Get involved with a part-time job, volunteer opportunity, campus group, or research assistantship
- Attend **CDEL** workshops to learn how to find a summer or part-time job and write a university-level resumé
- Chat with an advisor during **CDEL’s Drop-In** hours to get answers to your career and job search questions
- Speak with faculty members within the department about career options

- Explore opportunities and meet potential employers by participating in, job fairs, and industry networking events
- Explore further educational opportunities by attending the **Graduate and Professional Schools Fair** and researching admission requirements for programs that interest you
- Create a **LinkedIn** profile and have it critiqued by **CDEL**
- Attend information sessions on career opportunities in actuarial mathematics
- Research career fields and occupations with the help of a **CDEL** career advisor
- Take part in informational interviews and join online communities like **LinkedIn and Ten Thousand Coffees** to connect with people in your target profession or industry
- Search job postings to learn what skills, knowledge, and credentials you will need for potential careers

- Meet with **CDEL** to prepare application documents like a resumé, cover letter, CV, or personal statement for jobs and education programs you are applying to
- Attend **CDEL**’s workshops on interview skills and job search strategies
- Set up a mock interview with a career advisor for professional school or job applications
- Take part in recruitment events and job fairs hosted by **CDEL** and other organizations
- Compose a portfolio of relevant academic and work experience
- Write entrance exams for professional schools (**MCAT, LSAT**)
- If you are considering graduate or professional school, be aware of early application deadlines

# Life After Graduation



Math + UWindsor = Great Student Experience. The professors are supportive, and the student body has a community feel. The courses provide exposure to many sub-disciplines of mathematics along with flexibility to pursue your interests. I did research through the Outstanding Scholars program and was the President of the Mathematics & Statistics Student Association, among other involvement."

*Katherine Vrantsidis – BMath (Honours) in Mathematics  
Katherine is now working as an Associate Actuary Health Alliance Plan*

**8** Number of  
Graduates

(2020)

**100%** Employment  
Rate of Graduates

*Employment rate of graduates 2 years following  
degree completion (OUGS Mathematics, 2019)*

## Career Tracks\*

Accountant  
Actuary  
Appraiser  
Astronomer  
Bank manager  
Business advisor  
Claims adjuster  
Computer programmer  
Computing consultant

Cryptographer  
Data scientist  
Doctor  
Economic developer  
Economist  
Financial advisor  
Financial analyst  
Insurance underwriter  
Lab technician

Lawyer  
Loan consultant  
Logistician  
Market researcher  
Mathematician  
Modeling analyst  
Operations research analyst  
Payroll officer  
Professor

Project manager  
Quantitative analyst  
Real estate broker  
Research co-ordinator  
Risk management analyst  
Software engineer  
Statistician  
Teacher

\*Additional education and/or training required for some of the above careers.



## Common Sectors For Graduates

- **Academia**
- **Actuarial science**
- **Banking and financial services**
- **Business and commerce**
- **Education:** Curriculum design, teaching

- **Government:** Research and policy development
- **Industry:** Forecasting, product development/testing
- **IT and computer science**
- **Statistics and Research:** Public and private sectors
- **Telecommunications**

## Career-Readiness Competencies



**Critical Thinking &  
Problem Solving**



**Professionalism &  
Work Ethic**



**Teamwork &  
Collaboration**



**Communication**



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# Campus Resources

- Research undergraduate scholarships and bursaries through the **Student Awards and Financial Aid Office**
- Visit **Leddy Library** and the **Writing Support Desk** for help with academic assignments
- Check out the **Bounce Back** program designed to improve academic performance as well as decrease feelings of stress and anxiety through both effective learning strategies and life skills acquisition
- Build leadership skills and find leadership opportunities at the **Leadership Hub**
- Get advice and support about your academic status by making an appointment with **Central Academic Advising**
- Seek out assistance with academic accommodation from **Student Accessibility Services**
- Discover ways to get involved on campus through the **Student Success and Leadership Centre**
- Broaden your cultural awareness through the **International Student Centre** and **Student Exchange Office**
- Look into the **Ignite: Work Study** program for on-campus employment
- Get assistance developing your career plan and job search skills from **Career Development and Experiential Learning**
- Develop your entrepreneurial skills and learn how to start your own business at **EPICentre**
- Find support for Indigenous learners and broaden your understanding of Indigenous culture by visiting the **Aboriginal Education Centre - Turtle Island**
- Tend to your health and wellness with support from **Student Health Services**, the **Wellness Outreach Office** and **Lancer Recreation**
- Receive confidential mental health counselling delivered by trained professionals at the **Student Counselling Centre**
- **Prevent.Resist.Support.** Seek personal support or learn more about sexual violence prevention and resistance education through the **Office of Sexual Violence Prevention, Resistance & Support**
- Explore professional development opportunities through **Continuing Education**



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## Student Recruitment

**Phone:** 519-973-7014

**Toll-Free:** 1-800-864-2860

**Email:** [info@uwindsor.ca](mailto:info@uwindsor.ca)

## Department of Mathematics and Statistics

**Phone:** 519-253-3000, Ext. 3015

**Email:** [mthsta2@uwindsor.ca](mailto:mthsta2@uwindsor.ca)

## Career Development and Experiential Learning

**Web:** [uwindsor.ca/cdel](https://uwindsor.ca/cdel)

**Email:** [careerservices@uwindsor.ca](mailto:careerservices@uwindsor.ca)