

Gender in Honours Mathematics at UBC

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We report on available registration data, which lists 'Gender' as either 'F' or 'M.'

We recognize both that gender is non-binary and that the tags 'F' and 'M' refer to sex and not gender.

The MATH Honours Program (vs. MATH Major)

Honours Program

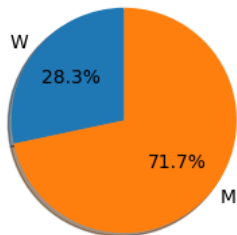
- Small program
 - 99 students currently registered (years 2-4)
 - Includes combined honours (Physics, CS, Stats)
 - Between **22%** and **26%** women over the past 6 years
- Take the steep honours course sequence

Major Program

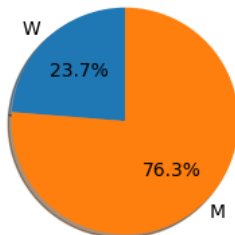
- Larger program
 - 827 students currently registered (years 2-4)
 - Includes combined majors (CS, Econ)
 - Between **38%** and **47%** women over the past 6 years
- Take the flat major course sequence
- 'Mathematically able' students are encouraged to take the honours stream courses instead

Attrition - Registration By Year Level (2013-2018)

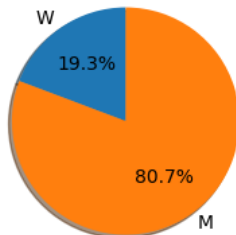
Honours 2nd Year



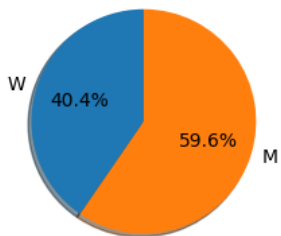
Honours 3rd Year



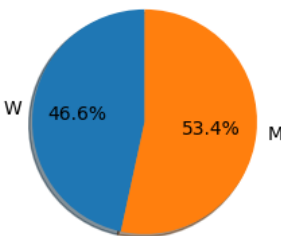
Honours 4th Year



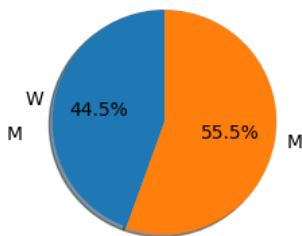
Major 2nd Year



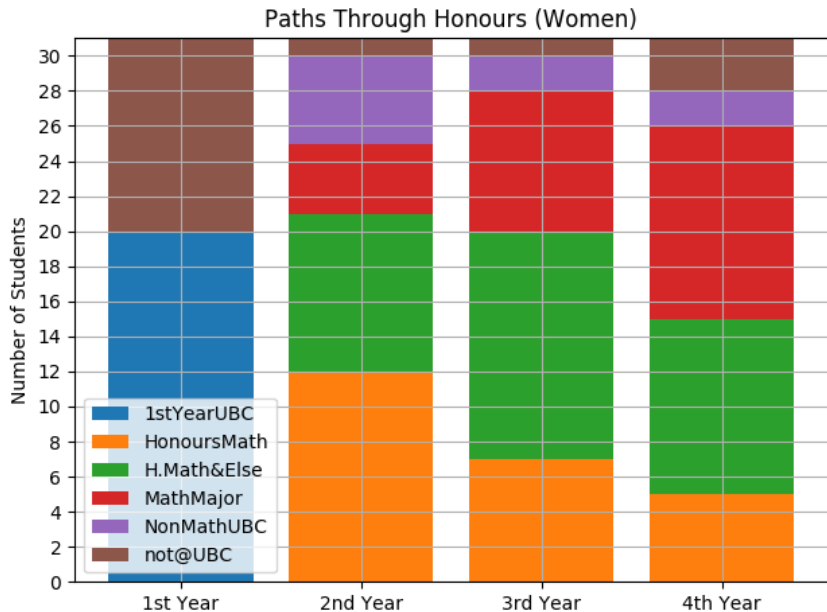
Major 3rd Year



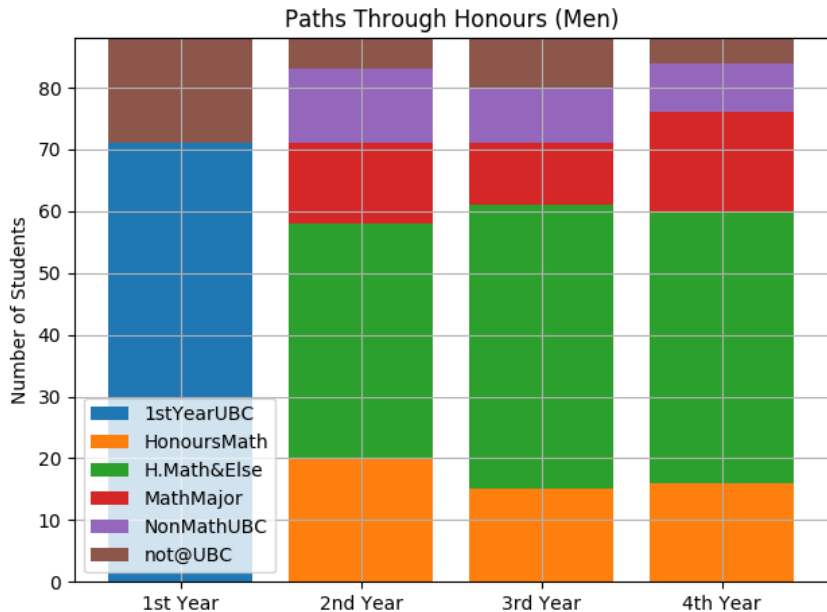
Major 4th Year



Paths Involving the Honours Program (Women)



Paths Involving the Honours Program (Men)



Paths Involving the Honours Program

Graphs above feature all students who **at some point** either:

- registered in Honours Math (non-combined)
- registered in Combined Honours Math (H.Math&Else)

We track 4 cohorts: those starting '1st year' in 2012-2015. Students who are still in 3rd year were removed.

Interesting Features

- Transfer students:
 - **35%/21%** (Women/Men) are not@UBC for 1st year
- Success rate:
 - **48%** of women in 4th year are still in Honours
 - versus **68%** for men.
- H. Math non-combined (orange) struggles, in particular
- Many women who leave Honours choose MathMajor (red)

Some Literature & Next Steps

We currently have a **SoTL Seed** project with Fabian Fröhlich

- **Interviews** and **surveys** to understand our local context

This phenomenon is not unique to UBC [1]

- disparity in **confidence** at the same grade level [1]

Important questions involve:

- Sense of **belonging** [2]
- Alignment of **career goals** with **math culture** [3]

[1] Women 1.5 Times More Likely to Leave STEM Pipeline after Calculus Compared to Men: Lack of Mathematical Confidence a Potential Culprit, Ellis et al

[2] Why Do Women Opt Out? Sense of Belonging and Womens Representation in Mathematics, Good et al

[3] On the Persistence and Attrition of Women in Mathematics, Piatek-Jimenez

Suggestions or Ideas?

Leave me a note :)

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