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**
  - M: 71.7%
  - W: 28.3%

- **Honours 3rd Year**
  - M: 76.3%
  - W: 23.7%

- **Honours 4th Year**
  - M: 80.7%
  - W: 19.3%

- **Major 2nd Year**
  - M: 59.6%
  - W: 40.4%

- **Major 3rd Year**
  - M: 53.4%
  - W: 46.6%

- **Major 4th Year**
  - M: 55.5%
  - W: 44.5%
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


Suggestions or Ideas?

Leave me a note :)