Environmental Engineering 2023 Class Profile

February 2023

Sujeethan Vigneswaran
s9vignes@uwaterloo.ca

Forward

Environmental Engineering (ENVE) is a five-year undergraduate engineering program at the University of Waterloo (UW). It is a specialization of Civil Engineering that focuses on water resource management and hydrology.

This is the first year the ENVE class has published a survey capturing the student's experiences throughout the program. The ENVE class of 2023 spent eight study terms together (2.5 were online due to the COVID pandemic) and six co-op terms.


JONES
JACKSON
Cheerios

Analysts' Note

This survey was run by ENVE '23 students and is independent of the University of Waterloo or the Faculty of Civil and Environmental Engineering.

Responses were collected in January 2023. All questions were optional.

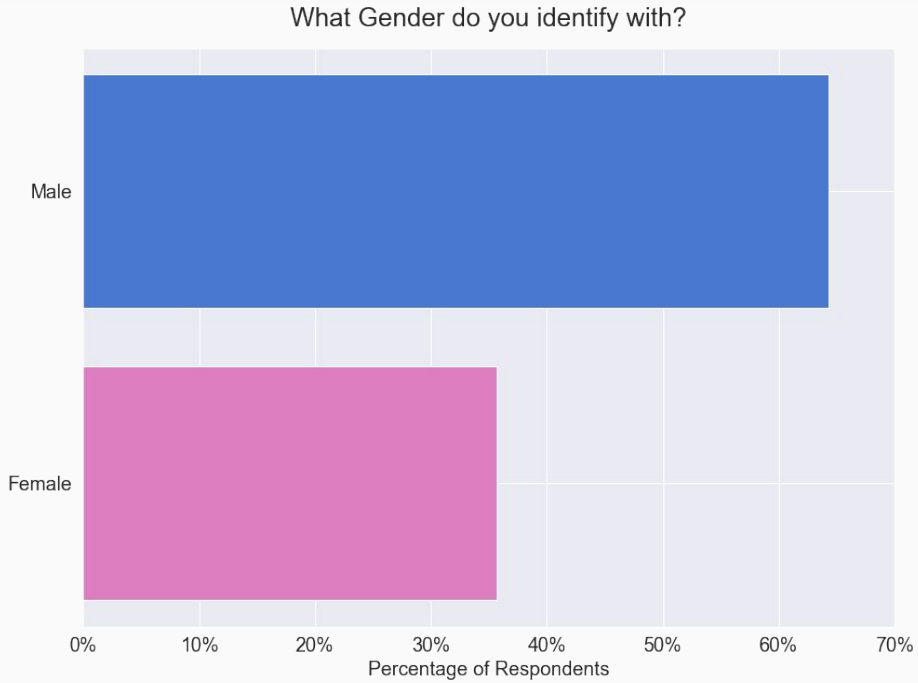
Eight school terms are referred to as 1A, 1B, 2A, 2B, … , 4A, 4B. Each coop term is referred to by the previous school term.

Table of Contents

Demographics

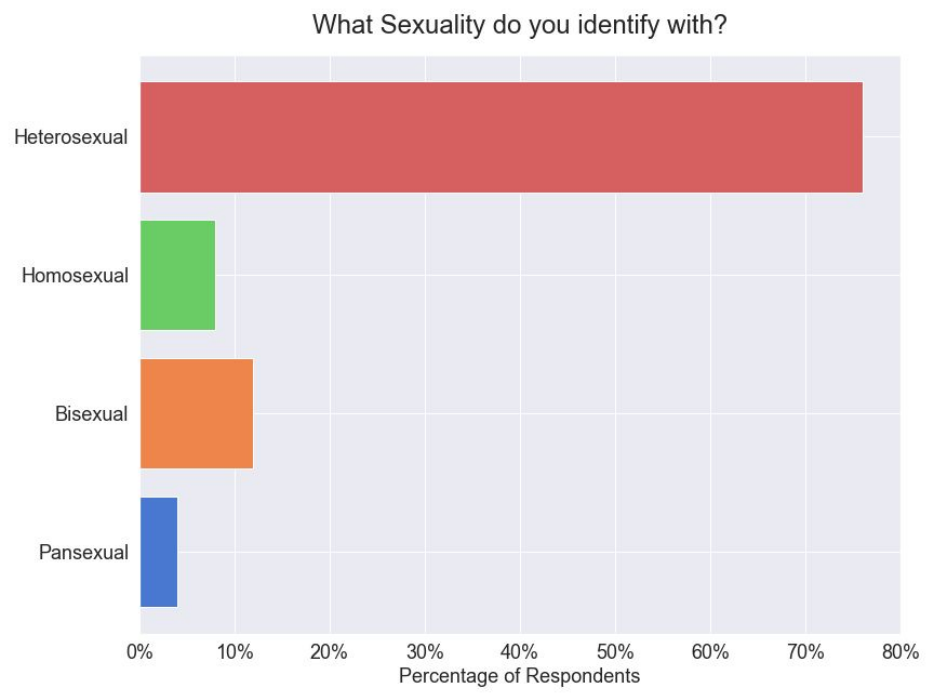
Gender, Ethnicity, Home, Family, High School

Gender



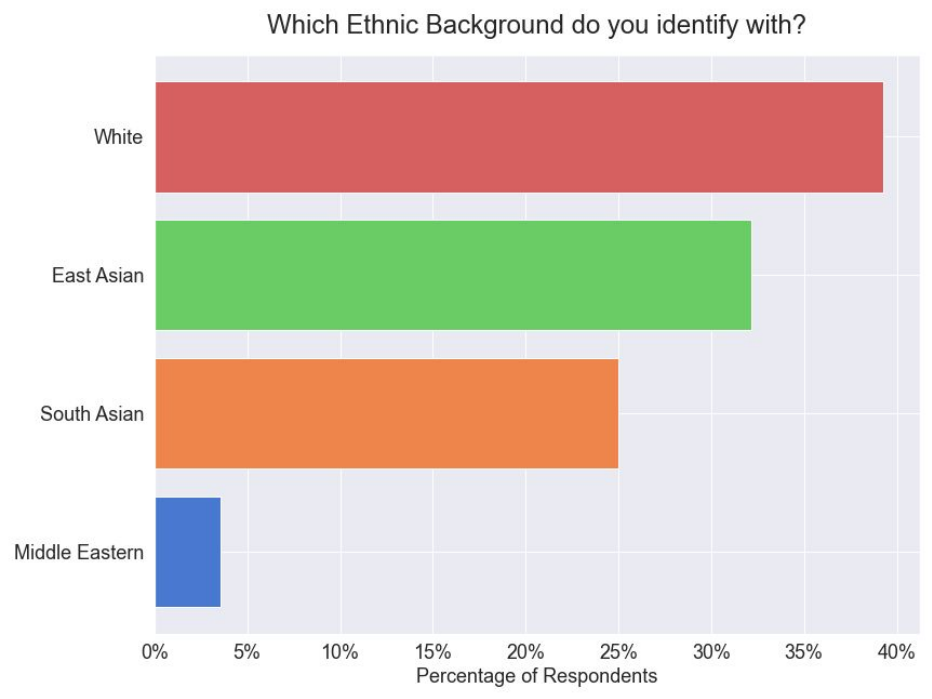
Although ENVE has a large proportion of females compared to other engineering programs at UW, the program is largely male dominated.

Sexuality



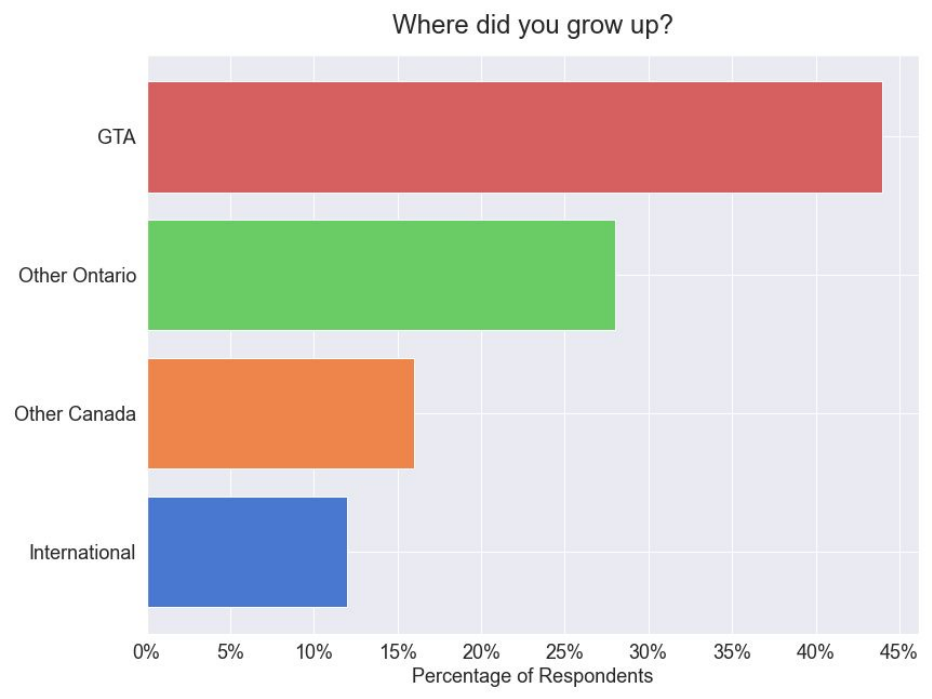
Most of the class is straight.

Ethnicity



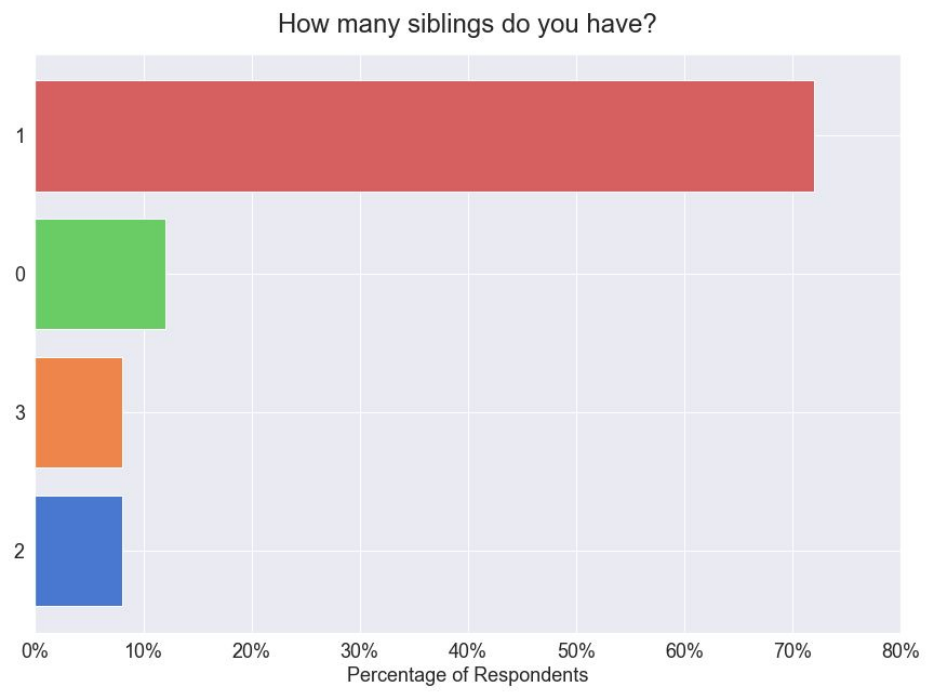
The class is mainly Caucasian (white) followed by East and South Asian.

Where did you grow up?



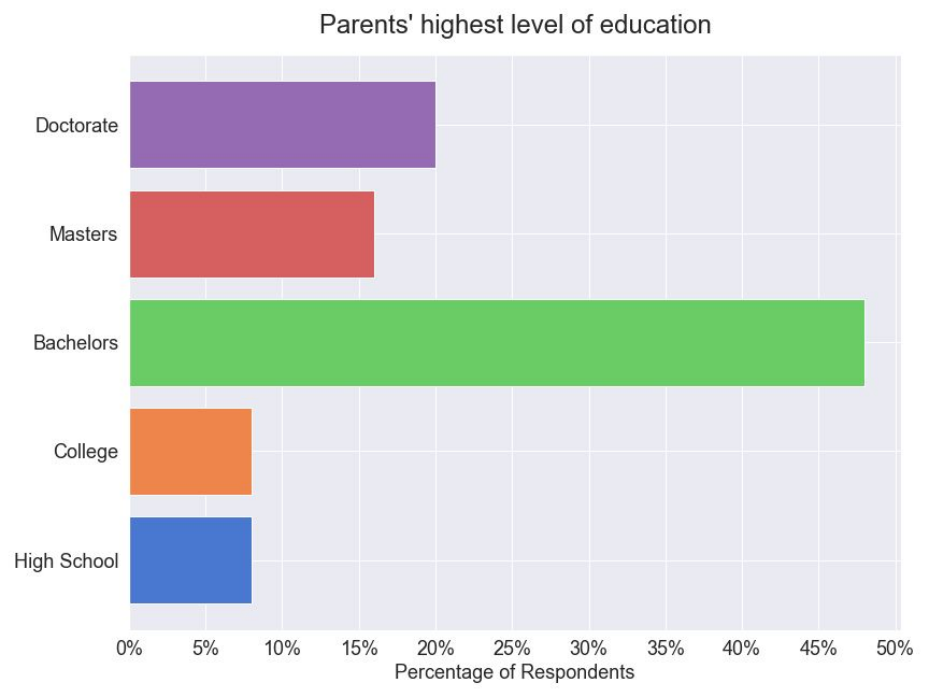
Most of the class grew up in the Greater Toronto Area

Number of Siblings



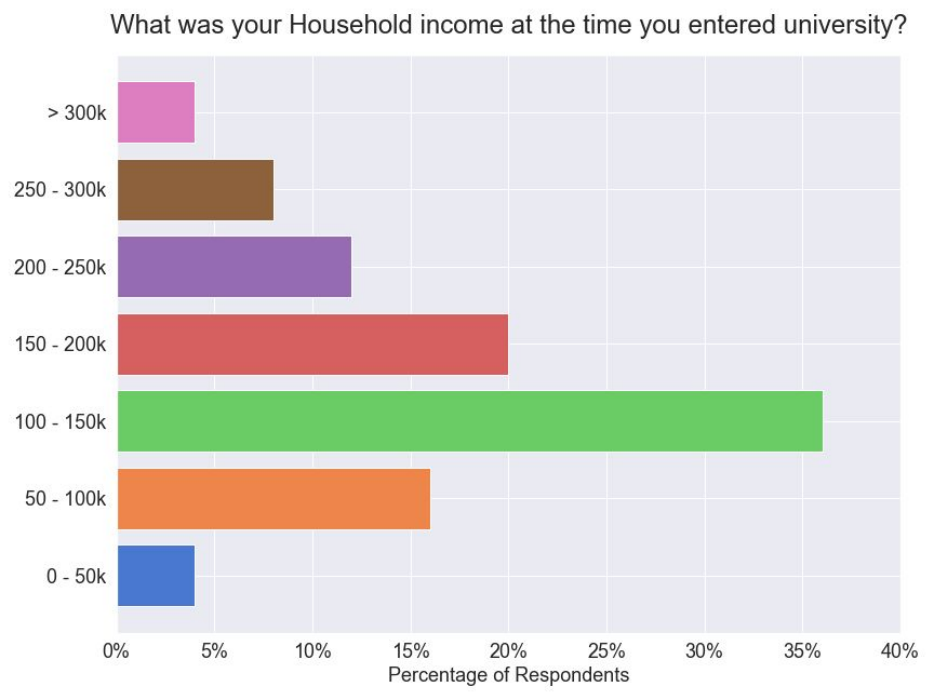
The class generally has 1 sibling

Parent's Education



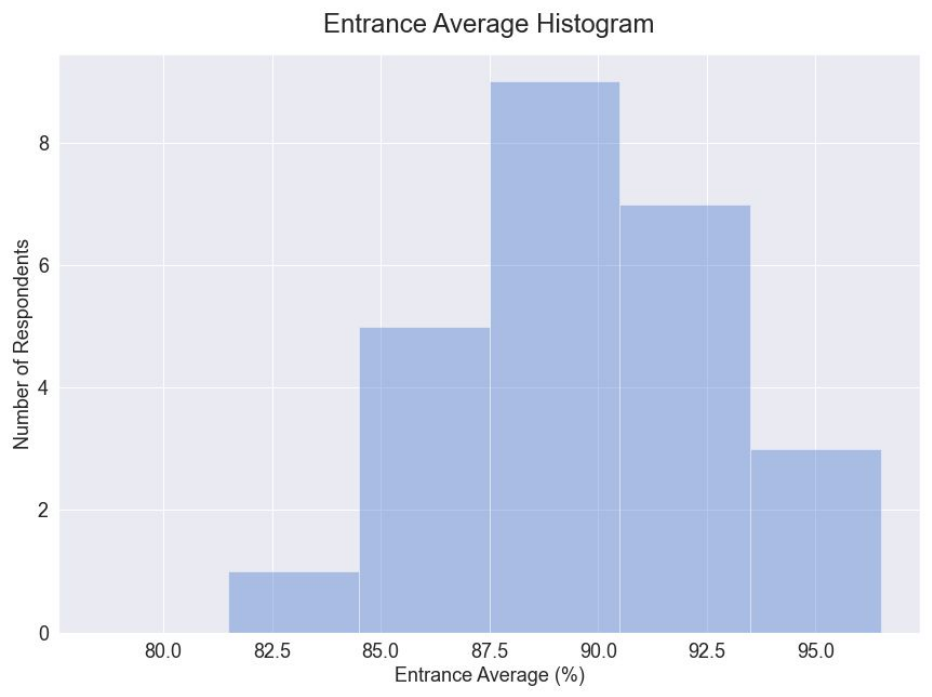
The class generally have university educated parents

Household Income



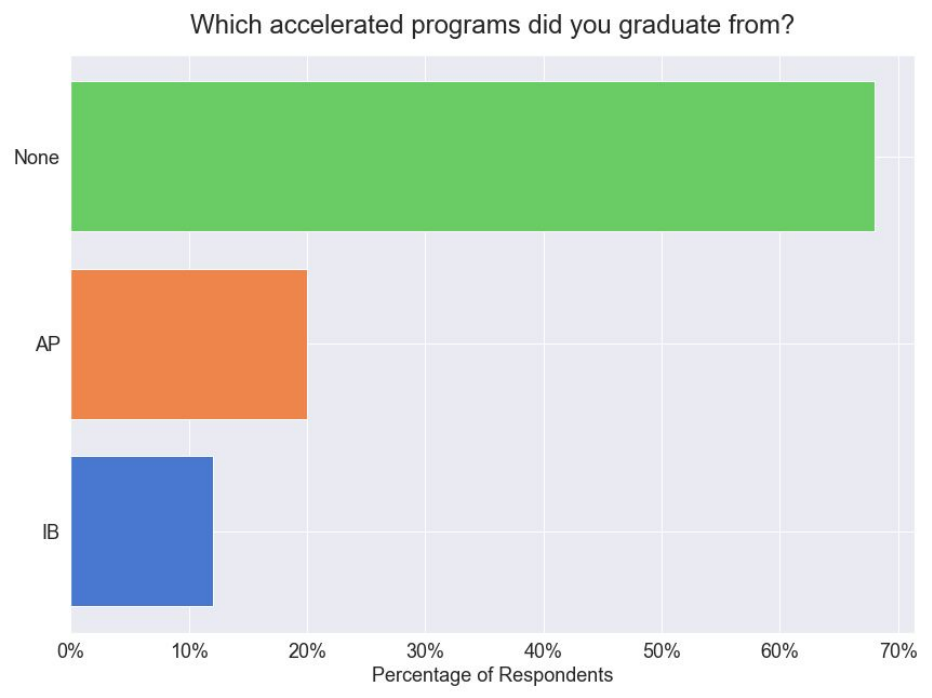
There are some $baller$ families in ENVE

High School Entrance Average



The mean entrance average for the ENVE class of 2023 was 90.2%

High School Accelerated Programs



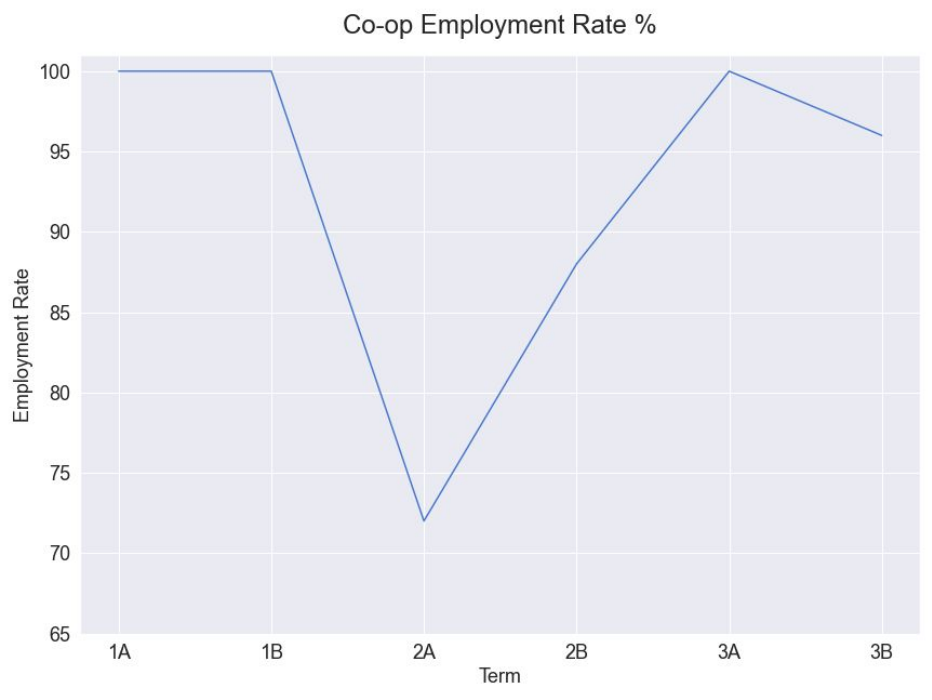
Most of the class did not do an accelerated program

aka regular academic courses

Coop

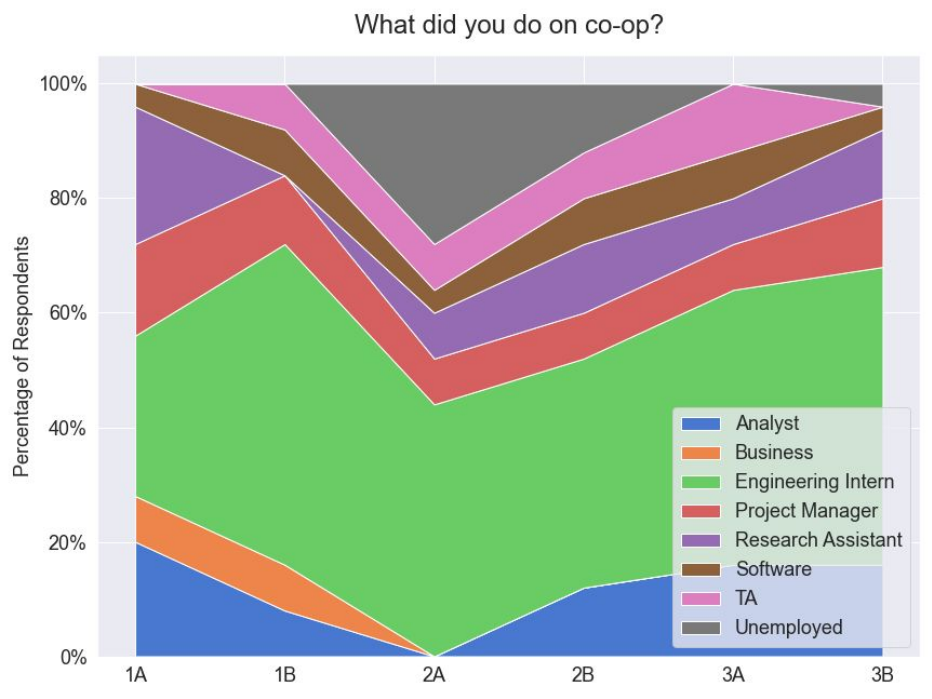
Employment Rate, Jobs, Salaries

Employment Rate



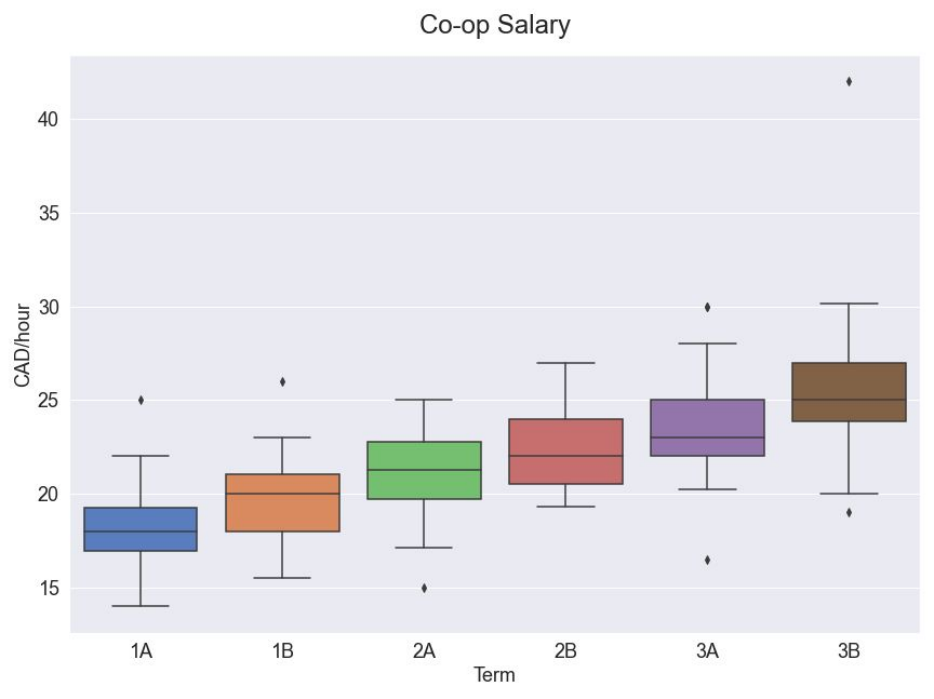
COVID hit us hard in 2A and slowly recovered by 3A

Job Title by Term



Engineering Interns, Project Managers, and Analysts were the most common jobs by the 6th coop term.

Salary by Term

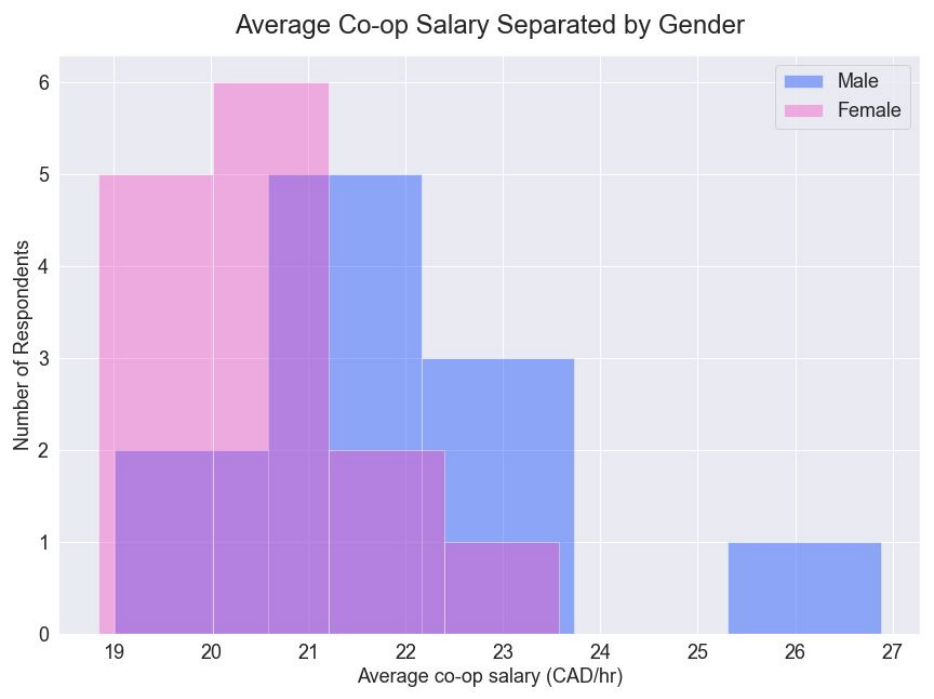


On average co-op salaries increased each term starting at $17/hr to $25/hr

Average Salary Histogram

The average coop salary over all terms was around $21/hr

Average Salary Histogram by Gender

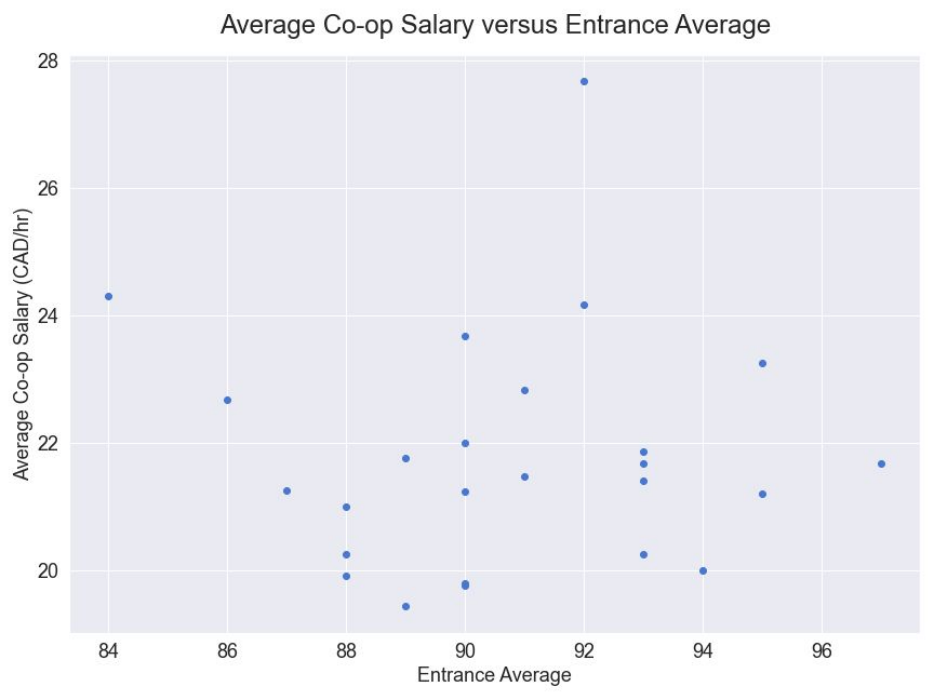


The wage gap is significant!

Female students reported having lower coop salaries than their male counterparts

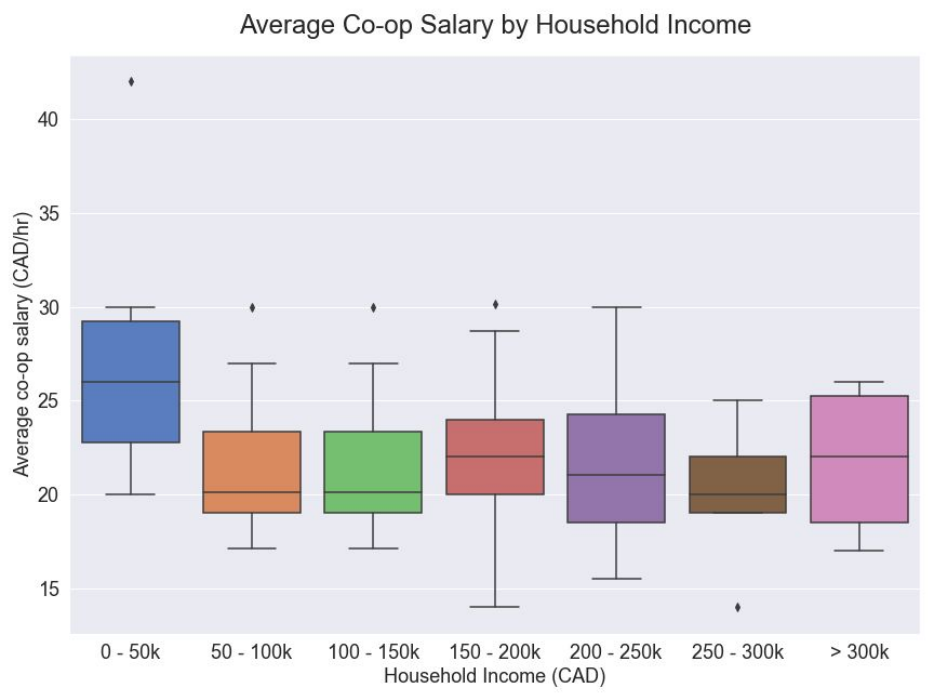
:(

Admission Average versus Salary



There was no correlation between admission average and coop salary

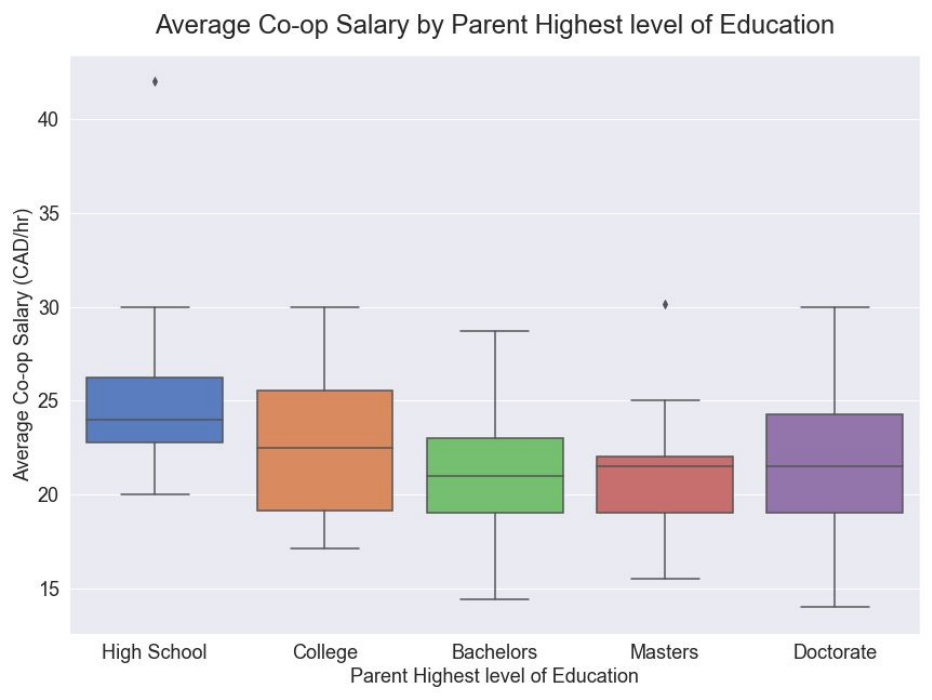
Parental Income Versus Salary



Lower income students had higher coop salaries than students with high incomes.

This is likely as low income students typically fund their own schooling and look for higher paying jobs to compensate

Parental Education versus Salary



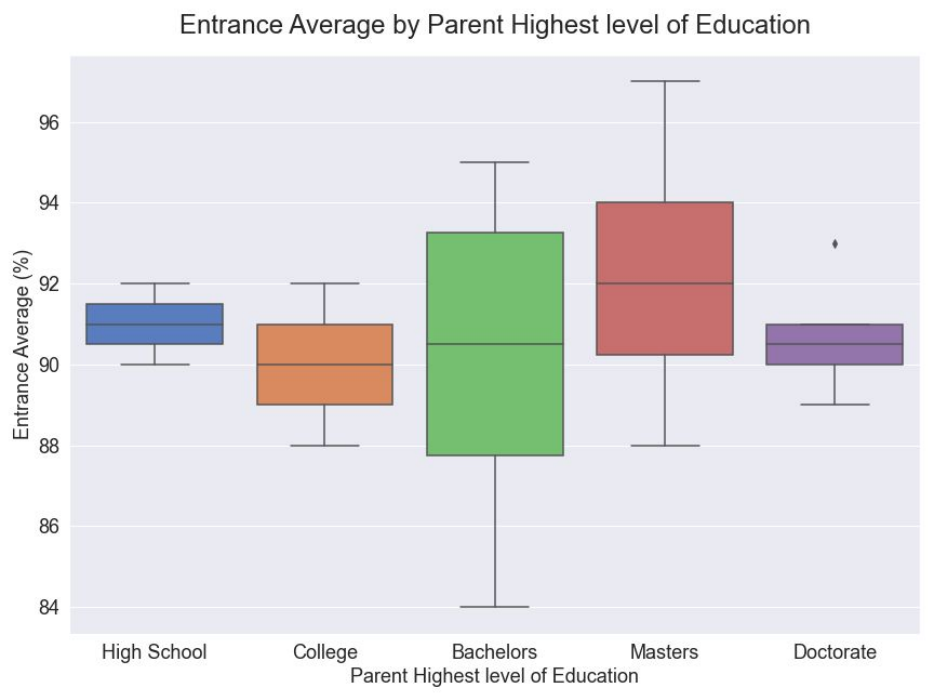
Students with highly educated families had lower coop salaries.

This is likely due to students doing research roles with lower pay to gain experience for grad school

Academics

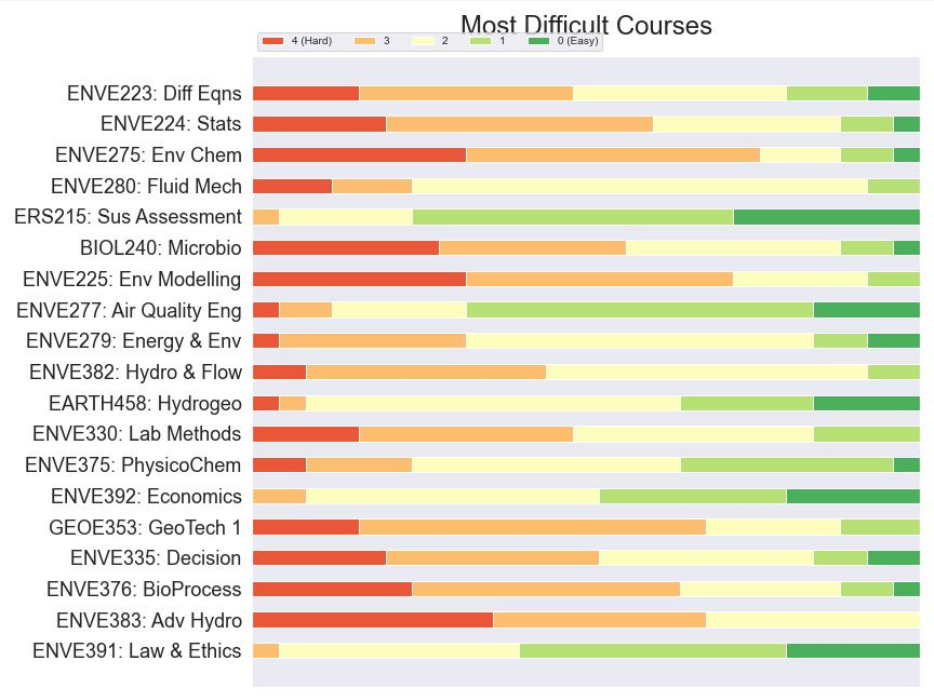
Admission, Grades, Courses, Program

Admission Average vs Parent's Education



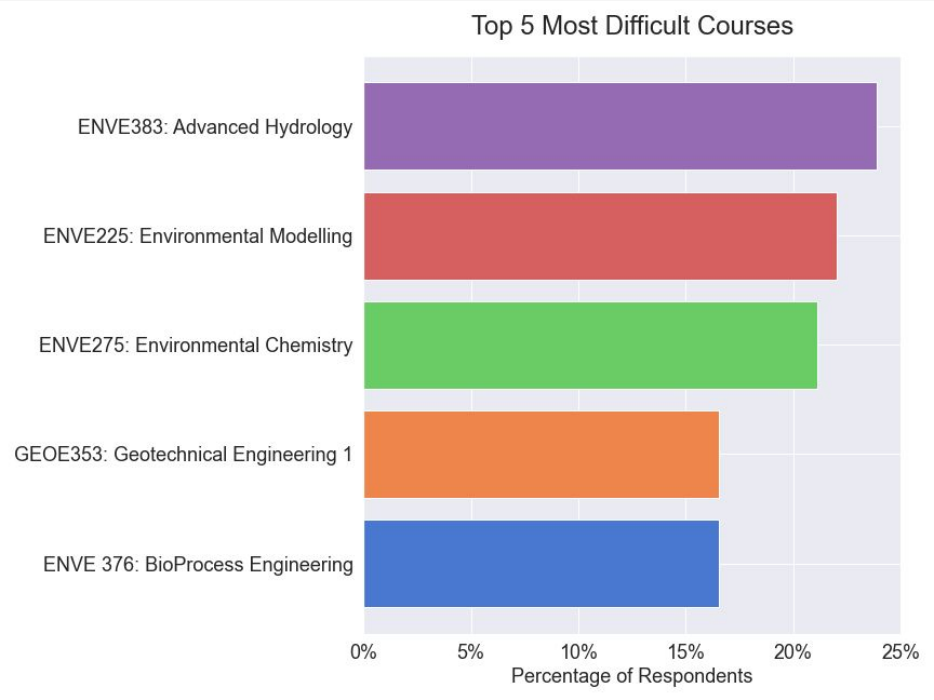
Students with parents who have a masters degree had the highest admission averages

Most Difficult Courses



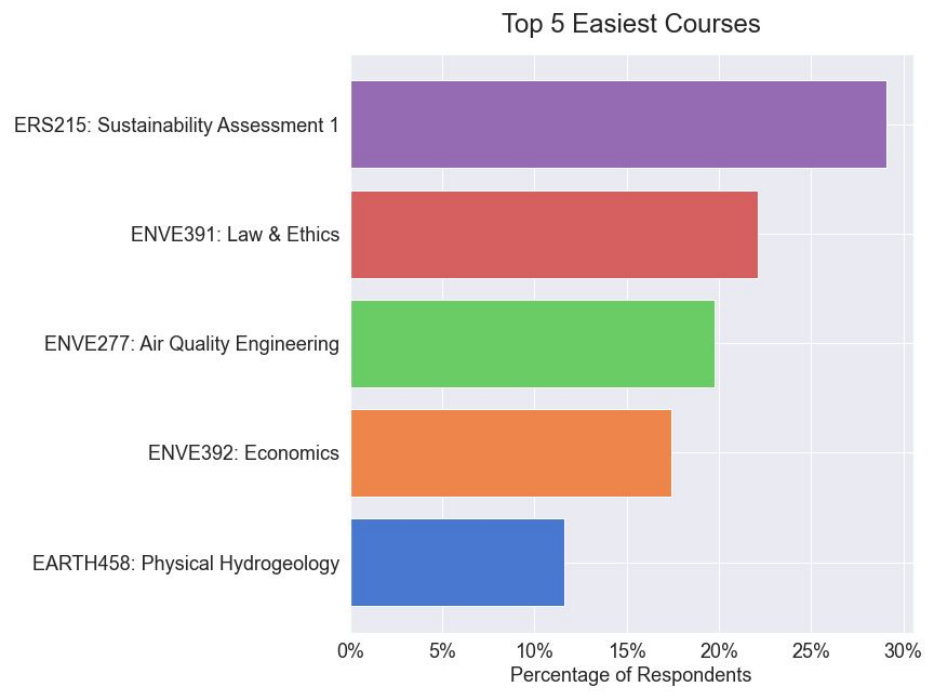
Some of the hardest courses happened towards the beginning and end of the program

Top 5 Most Difficult Courses



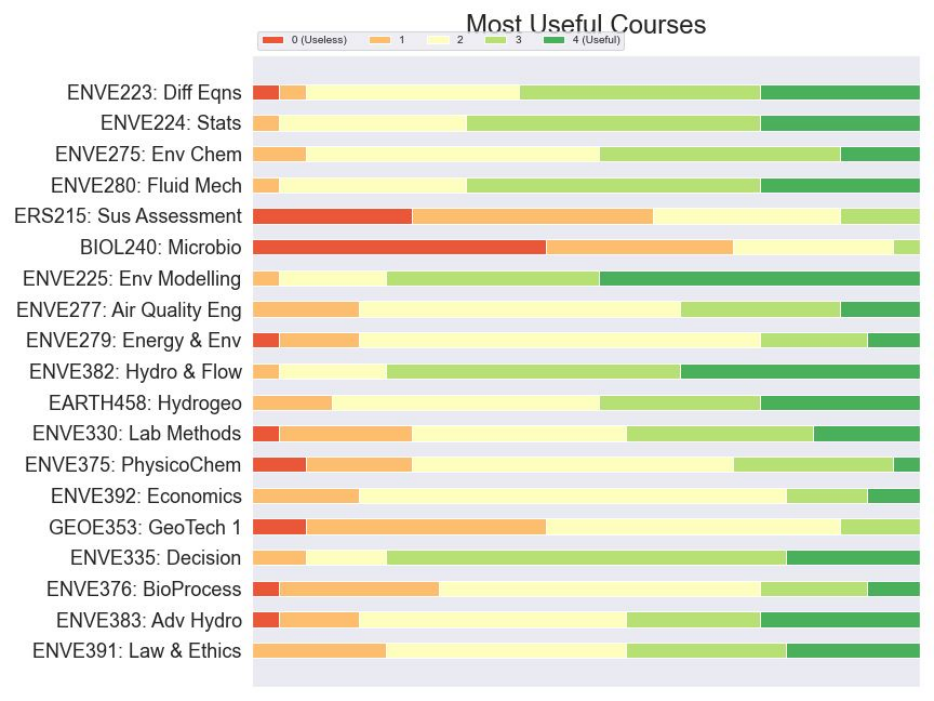
Advanced Hydrology, Environmental Modelling, and Environmental Chemistry were by far the hardest courses!

Top 5 Easiest Courses



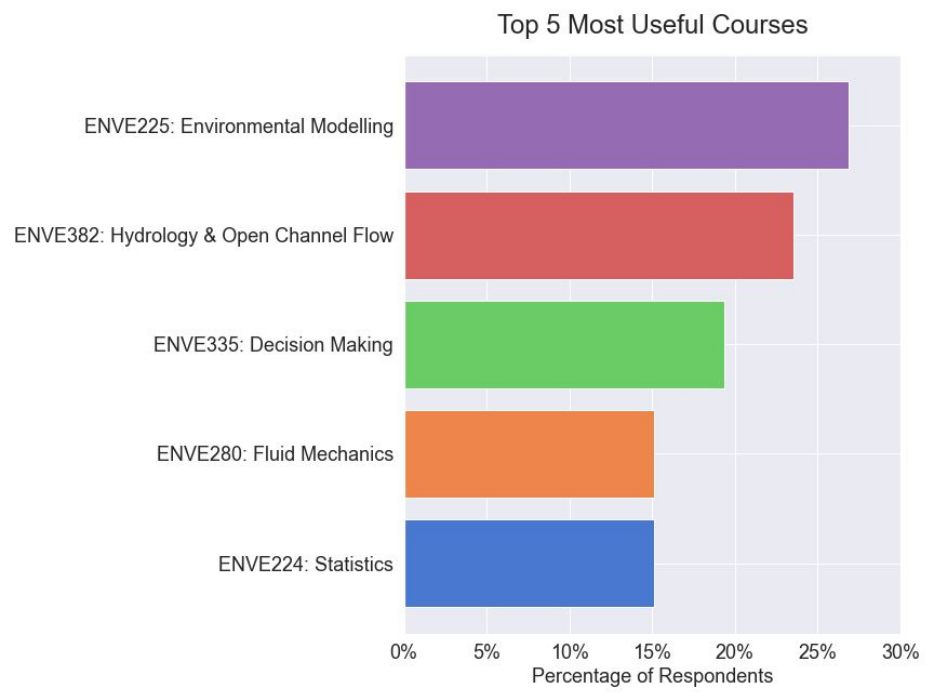
Sustainability Assessment (online) was the easiest course

Most Useful Courses



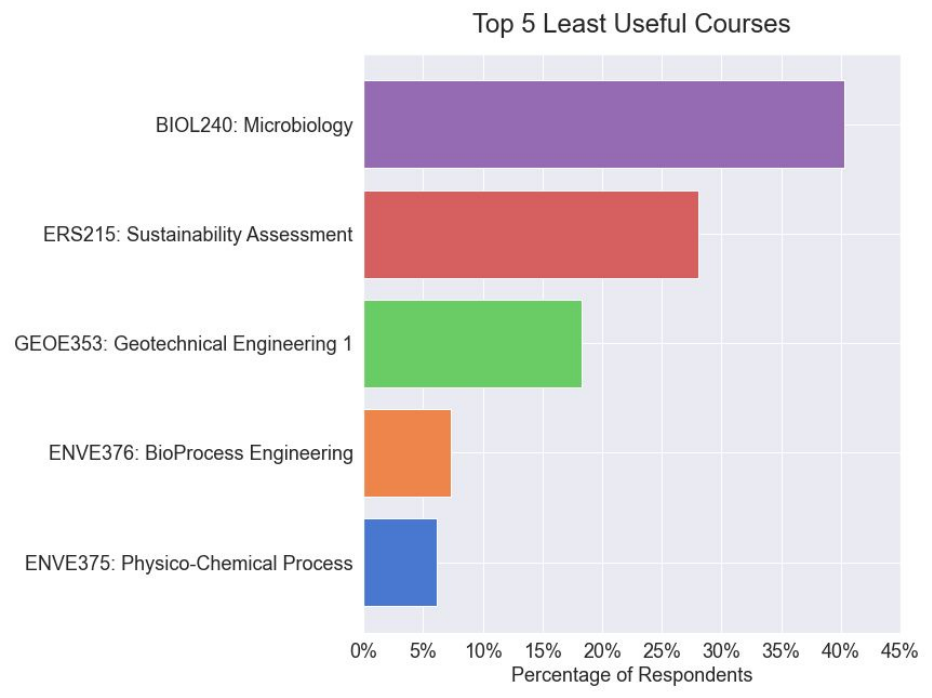
Generally courses were useful!

Top 5 Most Useful Courses



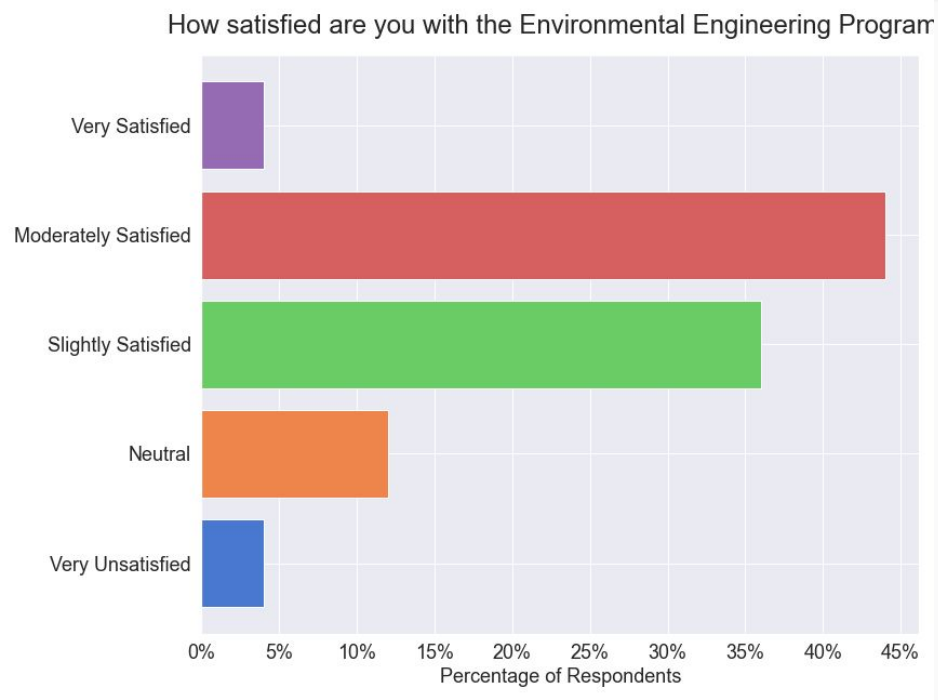
Environmental Modelling was both difficult and useful

Top 5 Most Useless Courses



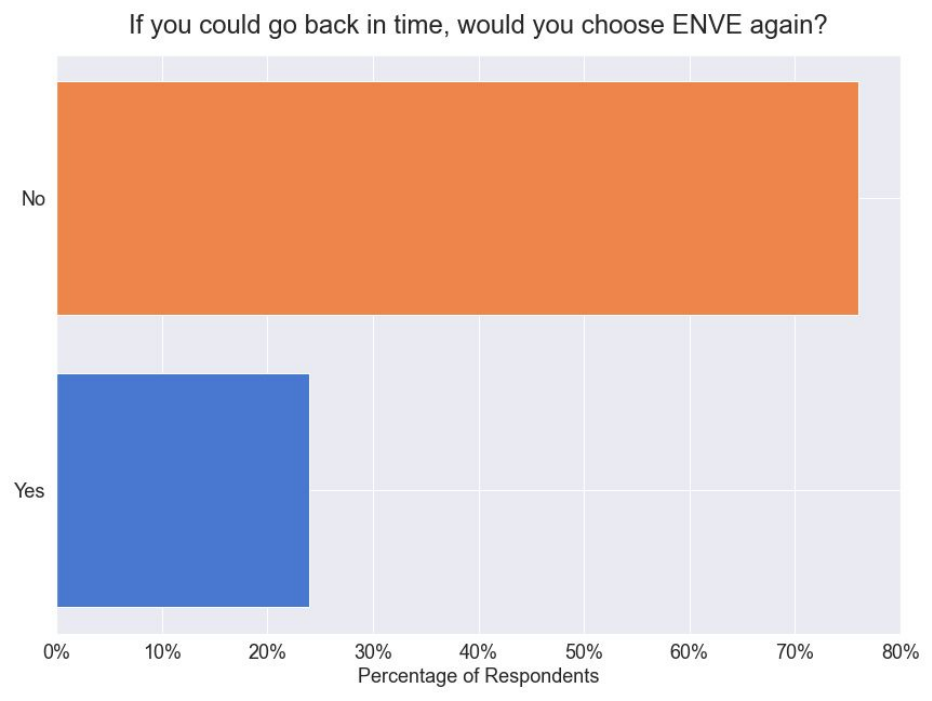
We found microbiology the least useful as we do not refer to the course content after the course

Program Satisfaction



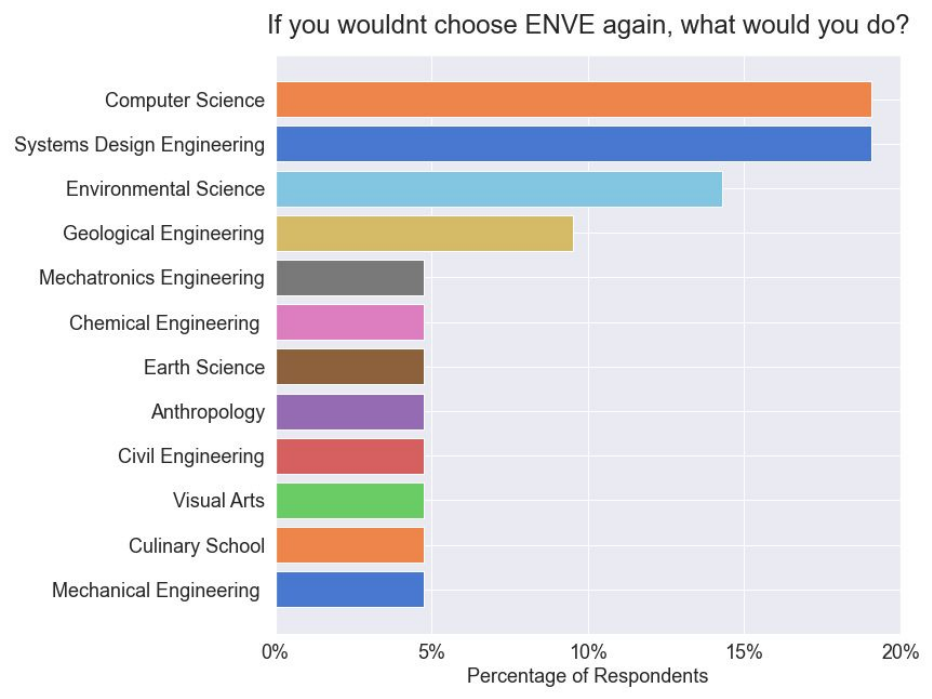
The class was slightly to moderately satisfied with the program

Would you choose ENVE again?



Most of the class would not do ENVE again.

What would you rather do than ENVE?



In hindsight, Computer Science and Systems Design Engineering were the most sought after programs

Closing Remarks

Thanks for reading!

Final Thoughts

Thank you for learning about the Environmental Engineering class of 2023!

This project was inspired by the Systems Design Engineering and Software Engineering cohorts that create annual class profiles.

Hopefully, this tradition lives on with the ENVE cohort.