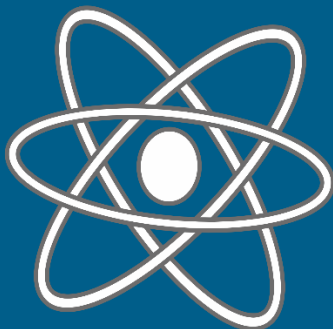


SFU LAB COURSES SURVEY REPORT

simon fraser
student society



Introduction

The Simon Fraser Student Society (SFSS) is a student-led non-profit organisation that represents and advocates for over 25,000 undergraduate students across the three campuses of Simon Fraser University (SFU) in Burnaby, Vancouver and Surrey, British Columbia. Our mission is to support students in reaching their full potential by providing resources that represent, connect and benefit our membership. The SFSS works to ensure the financial health, wellbeing, and engagement of our members.

The COVID-19 pandemic has presented unprecedented challenges to the entire world. Post-secondary students have been hit particularly hard by this crisis. According to a [survey](#) conducted by Statistics Canada, academic life has been disrupted for 57% of post-secondary student respondents, who face work placements and courses being delayed, postponed or cancelled. Just over a quarter of respondents (26%) indicated that their courses were cancelled or postponed, specifically classes that involve hands-on instruction such as labs and other forms of applied learning that cannot be delivered online. Students planning to graduate in 2020 are particularly concerned, as 11% of respondents reported that they were unable to complete their degree, diploma or certificate as planned.

The SFSS applauds the work that SFU has done to keep students safe in the midst of the pandemic. While many students can complete courses online, the SFSS is concerned for students that are enrolled in lab-based courses. Lab courses include science labs (for biology, chemistry, and other courses), computer labs (for programming, statistics, and other courses), environmental labs (for outdoor learning courses like geography), design and publishing labs (for spatial and graphic design courses and publishing courses), and engineering labs. These courses span the faculties of Science, Health Sciences, Applied Sciences, Environment, Business, and Communication, Art & Technology, impacting a wide variety of SFU students. Lab courses offer students hands-on, experiential-based learning and allow them to develop specific skills that are valuable and essential to a variety of careers.

In May 2020, a voluntary survey was administered to students taking, or planning to take, lab courses at SFU remotely. The survey received 61 responses as of May 14th, 2020. The following report summarises those responses.

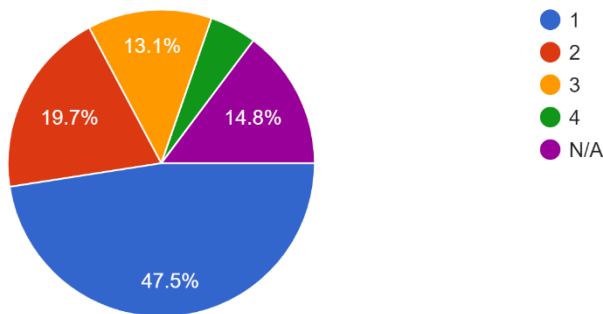


Results

Of the 61 students that responded to this survey, just under half of respondents (47.5%) are only taking one course that has or is meant to have a lab component, while 33.7% are taking between two and four courses with labs, as shown below. The survey responses indicate that most students are taking these courses because they are required courses for their degree (77.0%), and it is part of their course planning in order to graduate on time (74.7%).

How many courses are you taking that have/meant to have labs?

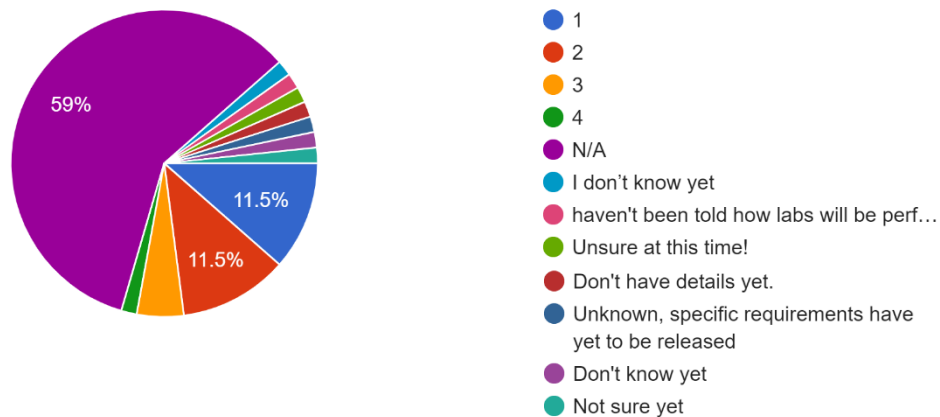
61 responses



About half of the courses the respondents are taking require some sort of specialised software. Additionally, 23.0% of respondents have one or more courses that require software that they do not have access to while working from home, or the software is incompatible with their computer's operating system, as shown below. Many others reported that they are unsure if the software is compatible as it has not been communicated how labs will be performed virtually by their instructors yet.

How many courses are you taking that require software that you don't have access to at home or is incompatible with your macOS/Windows?

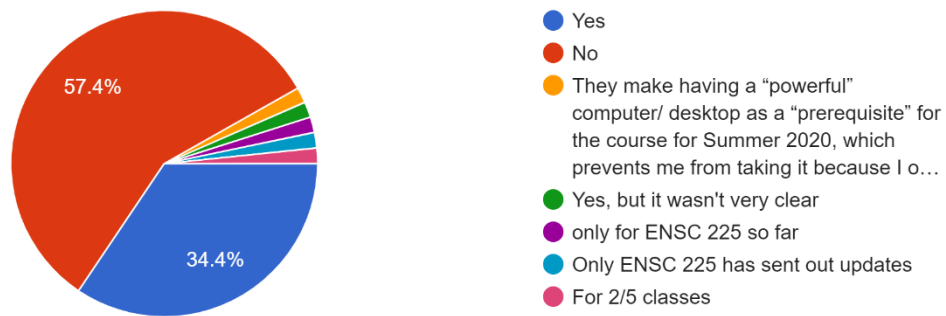
61 responses



As of May 14th, 2020, over half of students (57.4%) taking lab-based courses had not heard from their instructors regarding how the lab courses will be adjusted for online learning, as shown below. Several others taking multiple lab-based courses had heard from some of their instructors, while others had received instructions that were not clear to them. The inconsistent approach has left some students feeling unsupported compared to their peers.

Have you received updates on how these courses are adjusted for online learning?

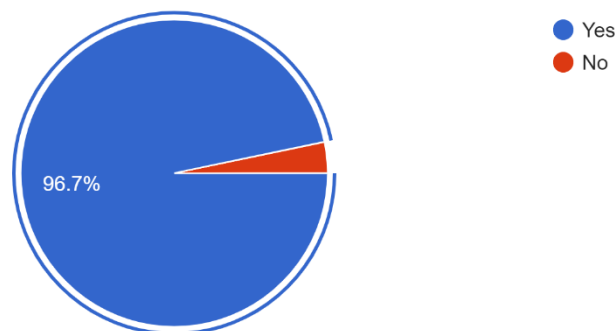
61 responses



Critically, all but one survey respondent indicated that they believe that they should be paying less tuition due to in-person labs not operating, as shown below. Student financial wellbeing is a top priority of the SFSS, and it is clear from the responses of this survey that students feel that online labs diminish the quality of their education.

Do you think you should be paying less tuition due to the absence of in-person labs that are crucial to the course?

61 responses



Discussion

While edtech tools like lab simulation software can be helpful to students' learning experience, virtual instruction prevents instructors from teaching students essential fine motor skills, such as how to use a micropipette for chemistry and biology students. Furthermore, in order for some programs such as engineering to receive accreditation from standardisation bodies, [hands-on lab work is required](#). If online lab simulation software or other similar digital tools are used to teach students, ease of operation and compatibility of software should be a priority for instructors. Enabling remote desktop access for essential software would assist the rollout of these applications.

SFU students are taking lab courses now because they need them to graduate on time. Delaying graduation can have many negative financial impacts on students in the long-term, particularly for low-income and international students who already face large financial barriers to obtaining their education. Communicating requirements for online lab courses should be done early, consistently across faculties and programs, and with consideration of required courses, so students can make decisions quickly regarding their course load.

Conclusion

The entire world has been impacted by the COVID-19 pandemic. While students are appreciative of SFU moving courses online, SFU undergraduates taking lab courses have reported that the quality of their education has been impacted, and as such, recommend the following:

1. *Reduced tuition fees for semesters with remote lab work*
2. *More clarity and communication from professors (e.g. more office hours and earlier communication of the course syllabus)*
3. *Restructured lab formats (e.g. offering additional time slots, creating lab tutorial videos, and using "breakout rooms" with smaller instructor-to-student ratios)*
4. *More course options (e.g. courses without lab requirements)*
5. *Pass/Fail grading options continued into the Summer and Fall 2020 semesters*
6. *Free learning resources (e.g. textbooks and software)*

Student wellbeing is a core strategic value of the SFSS. We strive to enhance students' experiences and engagement while they are students at SFU. We hope these recommendations will be taken into consideration when planning for another remote semester in the fall.

For more information or questions about this report or the survey mentioned in this report, please contact the SFSS Science Representative, WeiChun Kua, at sciencerep@sfss.ca.

