

**LEARNING FROM THEIR EXPERIENCE:  
Advice from Senior Undergraduates for First-Year Students Pursuing Science Degrees**  
by Ashley Welsh

Administrators within the Faculty of Science at the University of British Columbia (UBC) were concerned with improving the success of their students and were eager to understand what factors students perceived as influential to their academic performance. This concern fostered the orchestration of an exploratory mixed method study with data being collected via a survey (~500 respondents), 24 one-on-one interviews, and a four-person focus group discussion. This study was intended for students within the Faculty of Science at UBC who were in their second academic year of study or higher.

Throughout the interviews and focus group discussion, students were asked to reflect on their experience and to “provide advice for incoming students regarding how to be successful in the sciences”. Students’ responses to this question along with their reflections on their first-year experience and transition were parsed out from the interview and focus group discussion transcriptions. Regarding the transition from high school to university, a fourth year female commented that:

*“What I could not even fathom was the time management, finding friends, the sheer scatter and size of things to put into order and assimilate. It was such a huge jump. High school is a lot more structured – do the assignments and then the tests look a lot like assignments. There [were] no surprises.”*

The following table summarizes the advice from senior undergraduates regarding how to be successful in the sciences and describes why students perceive this advice as important.

| Advice for incoming students   | Why students perceive this advice as important   |
|--|--|
| Adapt and develop study skills and habits for university courses <ul style="list-style-type: none"> <li>• Don’t cram</li> <li>• Figure out what works for you</li> <li>• Make a list of what you do not understand</li> <li>• Take regular breaks</li> <li>• Review your notes before/after lecture</li> </ul> | <p><i>“At my high school they didn’t put a strong emphasis on how to study material... In high school you can procrastinate and still get a good mark and that’s the typical mentality of students coming in from high school. They do that and in the first term they find out that doesn’t work and need to do something else.”</i></p> <p><i>“I actively seek [study techniques] out and read them on the internet all the time. I’m kind of unusual in that respect... maybe first semester I’ll try one thing, next semester try another. I try to improve [my study habits] that way.”</i></p> |
| Consider reducing your courseload to help manage your time <ul style="list-style-type: none"> <li>• 3 or 4 courses per term in first-year instead of 5</li> </ul>  | <p><i>“I didn’t know how to change and I should have talked to some people and didn’t seek the guidance so I got bad marks the first semester. In second semester I lightened the courseload and started studying more regularly and doing questions at the end of the week.”</i></p>  |

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|---|--|
| Seek advice/help from your professors early on in your degree <ul style="list-style-type: none"> <li>• Seek out research opportunities</li> </ul>                             | <i>“Go to the prof’s office hours. They are helpful with explaining and when you know them in person you feel more connected and pay attention in class.”</i>  |
| Plan your degree <ul style="list-style-type: none"> <li>• Take a variety of courses</li> </ul>  | When you come into university, look ahead and develop a degree plan with courses you would be interested in taking. After each semester re-evaluate your plan and make the appropriate changes. This will help you see what pre-requisites you will need and what electives would be of most interest to you.<br><br><i>“If you take a variety of courses you might find something else you’re interested in and that’s exactly what happened to me.”</i>  |
| Get involved <ul style="list-style-type: none"> <li>• Build an academic/social community</li> <li>• Find balance between your academic and social responsibilities</li> </ul> | Whether it be on- or off-campus, get involved. Volunteer for a student society, at a hospital, or in a research lab. Such experiences will enhance your university experience while providing an outlet from your everyday academics.  |
| Increase: discipline, initiative, and responsibility  | In comparison to high school, at university you have an increased responsibility for your own learning. You are now responsible for monitoring your progress and being disciplined about finishing your assignments and studying for tests and exams.<br><br><i>“I became more disciplined, I learned to think ‘you need to understand these concepts and not memorize them... You need to be more disciplined to learn concepts and to ask questions to make sure you know what you’re talking about.’”</i> |
| Be healthy <ul style="list-style-type: none"> <li>• Exercise</li> <li>• Eat properly</li> <li>• Get enough sleep</li> </ul>   | Exercising, eating properly, and getting enough sleep will help you stay healthy so you can focus on your academics.   |
| Have fun!   | When you enjoy what you’re learning, you really start to value your education and see where it might lead you in the future.   |

Throughout the interviews and focus group discussion, students stressed the importance for incoming students to take responsibility for their own learning and to be pro-active when dealing with any conflicts or barriers to their success. A third year male summarizes it nicely with:

*“After all those shortcomings and not doing well in that first semester I came to the conclusion that it’s going to be hard and I have to put a lot of work in. If I don’t put a lot of work into it – I’ll have to take what I can get.”* \_