FIRST YEAR RESOURCE ROUNDUP

Hi, my name is Adam Gierlach (ECE2T0+PEY), and welcome to our amazing, warm, and tight knit community that is Skule™ and the University of Toronto Faculty of Applied Science and Engineering. This is an unofficial resource roundup that contains the most impactful tips and resources I used in first year. If you haven't already, be sure to check out the official Guide to First Year. I hope this helps you succeed in first year, and feel free to stop me on campus and ask me questions or message me on Facebook!

TOP 3 TOOLS

These are the tools I use every day that have been with me since first year and I cannot live without:

The Casio FX-991EX

While your calculator can't think for you, it can really help when you are in a jam. The Casio FX-991EX (one of the approved calculators) has more memory and is faster than the ES PLUS and MS models (allowing it to solve for one more unknown). It enables you to:
- ✓ **check answers** by evaluating integrals and derivatives, and table plot functions,
- ✓ **find errors** by solving for variables, and most importantly,
- ✓ **work faster** by solving systems of equations which is needed for ECE110.

It's definitely worth reading the manual!

A Desk Calendar

This falls under the large topic of time management, and specifically finding a strategy and combination of time management tools that works best for you. I use my desk calendar **to have an overview of only the important dates and deadlines**, letting me know:
- ✓ which weeks are going to be heavy,
- ✓ how long I have till then, and
- ✓ how I should be prioritizing my time.

This is always on my desk and keeps me motivated to get stuff done ahead of time. I think this complements most other tools by providing a nice, clean overview, but you need to experiment yourself to see what works best for you. At worst, it gives you something soft to write on.

An Additional Screen, Not a New Computer

Now is a time you may be looking for a new computer or asking if your computer has good enough specs for your discipline. Did you know the university has really powerful computers you can remote into from almost any computer? (see Setting Up Your Computer section). If you already have a computer, you will benefit a lot more by investing in additional screen real estate or upgrading your internet than getting a better computer. Screens that can rotate to portrait are especially great for viewing code and word documents. I personally use a 4K TV as a monitor, which up close is like four 1080p monitors glued together with no bezels, and it is **fantastic for coding and viewing everything at once.**

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If you do need a new computer, I recommend getting the lightest one with the most RAM that you can afford (16GB of RAM is great), lots of ports (2x USB Type A needed for ECE241 – an upper year ECE course – unless you are OK with dongles, and HDMI for presentations), and if you use a mac you will need to use a VM or dual boot for upper year ECE courses (you will be fine in first year). For non ECEs, I would ask an upper year such as your Frosh Leader or someone in your discipline club if there are any other requirements you should prioritize specific to your discipline.

SET UP YOUR COMPUTER

Here are the programs I used more than once a week or that made my life much easier in first year. These are all free, and while not critical, I strongly recommend getting them.

WORKING REMOTELY
- **Microsoft Remote Desktop**: usually already installed, use with ECF Remote Desktop site.
- **PuTTY**: for Linux Remote Desktops.
- **WinSCP**: for graphical file transfer with Linux Labs (setup like PuTTY).

PRODUCTIVITY
- **VLC**: Speed up lecture videos in 0.1x increments up to 5x (use with fast forward key bindings).
- **Video DownloadHelper**: To download videos to use in VLC, especially useful if you have poor internet.
- **Firefox Containers**: Great for logging into multiple google accounts in different tabs, keeping your personal and school (APS111/2/3 Google Docs) accounts separated.
- **Veeam or Time Machine**: Free computer backup software (or use university computers which back up nightly).

COLLABORATION
- **Office Suite**: 1TB of OneDrive available to backup and collaborate on documents with your UofT email.
- **Zotero**: Reference manager, especially useful for APS111/2/3.
- **Messenger, Slack, What's App, etc**. depending what your friends use. I recommend Slack for team projects, or an app that does not already get a lot of notifications.

IF YOU HAVE SPACE
- **MATLAB**: free from UofT, useful if you want to experiment before the labs at home.
- **Canvas (Quercus), Tophat* and Piazza* phone apps**: for easy access (* if your class uses it).
- **PDFSam**: for combining PDFs on Windows (required for many job applications) without having to upload your files to an online merging tool. Can use Preview to combine PDFs on Macintosh.
- **PyCharm, CLion and Google Colab**: free as a student, my coding IDEs of choice when on my own computer, but in first year I did all my work in the lab or used PuTTY and WinSCP to remote into the labs to ensure my code would build correctly.

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ONLINE RESOURCES

Below are the resources and references I used most often.

GENERAL

Past Exams (Most with Solutions)
Courses.skule.ca
For studying before your exams, harder problems more realistic of what you will see on your exam. (But not always! Don't study past exams, use them to find where your gaps are).

First Year Office Website
https://undergrad.engineering.utoronto.ca/first-year-office/
For key updates and resources. Be sure to look out for the assignment calendar with each course's midterms and deadlines, as well as other social events.

Campus Map
Map.utoronto.ca
For finding where each building is.

Online (Room) Booking Calendar
Ace.utoronto.ca
To see which rooms are empty for impromptu team meetings, if there is a class in the room before you without awkwardly sticking your head in, or finding where the room is in a building.

Quercus
q.utoronto.ca
Where all your courses live. Be sure to configure your notification settings for what works best for you and download the Canvas app on your phone.

Acorn
Acorn.utoronto.ca
For your official timetable, exam schedule, current balance, and tax forms. When checking grades, the notifications are a bit delayed.

MATH

Prof. Burbulla's Calc Notes and Past Tests
https://www.math.toronto.edu/burbulla/mat186/MAT186.html
Prof. Burbulla posts all his lecture notes which are fantastic for reading on your commute. He also has an extensive test bank with solutions that are great for practicing. To get to his Calc2 or LinAlg sites, just change MAT186 in the URL or google Burbulla and the course code.

WolframAlpha Pro for Students
Wolframalpha.com
Great for showing you step by step solutions, showing the problem visually, and acting as a super calculator. It's one of the few online subscriptions I pay for! While you shouldn't use it to blindly solve your problems, it can be very helpful when you are really stuck.

Desmos
Desmos.com
For interactive graphing. Helpful to see how things change by updating constants with sliding bars.

Calculus Student Solution Manual
https://media.pearsoncmg.com/aw/aw_briggs_calculus_se_et_1/ssm/bcseet01_ssm.html
For help when you are stuck.

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PROGRAMMING

Python Tutor
Pythontutor.com
Great resource for visualizing memory in Python and C, allowing you to run your code step by step and see what's happening on the back end.

Cplusplus
Cplusplus.com
A great reference for what built in functions do with example code. While meant for C++, it also has good documentation on C libraries. My first stop for a quick reference.

Cpprefference
Cppreference.com
Another resource for looking up C libraries. More detailed than Cplusplus with more correct examples, but contains a lot of other information you shouldn't worry about right now so just filter what you need. My first stop if I really need to understand how something works.

Difference Checker
Diffchecker.com
Useful in labs when need to compare files or terminal output.

ECF Lab Status and Schedule
https://undergrad.engineering.utoronto.ca/undergrad-resources/engineering-computing-facility-ecf/ecf-labs/
This was not around when I was in first year but is really helpful when you want to use one of the labs.

EXTRA

UofT my.access and Google Scholar UofT Links
https://onesearch.library.utoronto.ca/faq/how-do-i-install-u-t-libraries-myaccess-bookmarklet
For free access to most journals and articles through the UofT Library. Use either the my.access bookmarklet when on the page of a paywalled journal, or see how to add UofT's library to Google Scholar searches here.

LinkedIn Learning
https://lnkd.in/gf85Mmv
Free access to LinkedIn Learning and Lynda.com resources through the university if you want to do some extra learning on the side.

Microsoft Imagine Webstore
One of your first emails in your UofT inbox.
This used to be a lot better, in my year it had lots of free software (Windows 10 licenses, Microsoft Projects, etc.) but now primarily offers discounts. There still might be something you need, so worth taking a quick look.

Skule™ Facebook Groups
Facebook.com
A lot of good information (as well as lots of club/team advertisements) are spread primarily on Facebook. I recommend joining:
- Skule™;
- Your classes year, e.g. Class of 2020;
- Your discipline's year, e.g. ECE2T0;
- Your discipline clubs page.

UNIVERSITY RESOURCES

There are lots of helpful resources UofT provides, no matter if you are struggling with something or want to learn more advanced tips and tricks. Whether you need help with math, improve your communication skills, or figuring out what to get involved with, there is a resource for that!

Engineering Communication Program (ECP)
Book in person or online appointments at uoft.me/tutoring or go to a drop in session at BA2197.
For help with all parts of writing and oral presentations for course assignments and beyond. Especially helpful for APS111/2/3 documents.

Math Aid Office
GB149, check door for hours.
For help with Calculus or Linear Algebra from Prof. Burbulla. It's best to first isolated where you are stuck or what you don't understand. But it's OK if you are completely lost and need to go through everything. Professors office hours are a good alternative if busy, or vice versa.

Office Hours
Different for each prof, usually set in the first or second lecture.
For help with course content, general advice, and learning about the Profs research (and possible research opportunities!). It can be a very productive way to spend one-hour breaks if scheduled correctly. When deciding on when to have office hours with each prof, do not set the time to be during your midterm time block – this is a time everyone has available in their timetables, but you will consistently not be available once midterms start.

First Year Advisors
Book appointments through the Advising Portal or by contacting the First Year Office by phone.
For questions about your program, what's next, academic success supports and personal matters. These amazing people help you make a successful transition along with the rest of the First Year Team, so go introduce yourself!

Guided Engineering Academic Review Sessions (GEARS)
Now online! See uoft.me/gears for current schedule.
For help with anything from reviewing course material to how to get a summer job, GEARS are optional drop in sessions led by upper year students (like me in 2018-2019!). A great place to ask questions or create a study group.

Engineering Campus Experience Officer (engCEO)
On hiatus until September 2020. See uoft.me/engceo for details.
Supporting you by listening, answering questions and providing information about Faculty resources. Connect with an engCEO by email to learn about their experiences on a variety of topics: keeping up with course work, finding a job, making friends and more.

Recorded Lectures
On Quercus, usually under each course or under APS100.
For catching up if you missed a lecture, need to hear something explained again, or in another way if in a different section. Great when paired with VLC for faster viewing.

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INVOLVEMENT & WELLNESS

Your studies should only be one component of your time while at university; these are going to be some of the best years of your life, and you have to enjoy them! Here are professional development events I always keep an eye out for, ways to get involved in extra curriculars, things to do with your friends around the city to relax, and wellness resources.

PROFESSIONAL DEVELOPMENT OPPORTUNITIES

You're Next Career Network Engineering Career Fairs
Fairs in September and January, with events throughout the year, see Yourenext.ca.
You're Next Career Network (YNCN) runs the best career fairs for engineers with many great events throughout the year to help tailor your resume, pitch, and they facilitate other networking events too.

UofT Engineering CONNECT
https://uoftengineeringconnect.ca/events.
UofT Engineering Connect helps you connect with UofT alumni and has some really powerful features. In first year, my main use was to find cool events that enabled me to explore my interests.

Professor Networking Events
Usually November onward, organized by different clubs/organizations.
In preparing for summer research, many clubs host networking opportunities with professors. I always attended the CUBE Industry and Prof mixers because I'm interested in biomed, but there are also club held faculty meet and greets and other opportunities if you look for them. Another great event to look out for is the Dinner with Your Professors event at Chestnut.

First Year Summer Research Fellowship
Application available from the First Year Office, deadline historically mid March.
Doing summer research becomes a lot easier when you have funding. While First Years are not eligible for a NSERC USRA, there is a summer research fellowship you can apply for which does not get that many applicants. The First Year Office also has a great Summer Research FAQs that is worth the read.

Troost Institute for Leadership Education in Engineering (iLead)
Many events throughout the year, see ilead.engineering.utoronto.ca.
For leadership workshops, especially useful for club leaders. iLead also has their own upper year courses you can take.

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EXTRACURRICULAR

Club Fair
During Frosh (and Godiva) Week.
See what clubs are out there and speak with club members to see what resonates with you! There are professional organizations, sports and design teams, musical and arts clubs, and so much more. If you miss it, there are often club specific recruitment events you can go to, and you can always see the current listing of engineering affiliated clubs at skule.ca with contact emails and links to their websites. Many clubs ramp up in the summer and winter break, so don't worry if you can't get involved during the year.

First Year Rep
Elections held first semester.
If governance is more your thing, you can get involved in the Engineering Society (Eng Soc) as your disciplines class rep or explore other roles available to you in Eng Soc.

Outreach
Department specific and Outreach Office opportunities throughout the year.
If you already love UofT Engineering so much that you have to tell everyone else, you can get involved with your department as an ambassador (I'm an ECE Ambassador!), directly with the outreach office, or Hi-Skule.

EXPLORE TORONTO

I did not realize how many cool things there are to do here in Toronto until I left for a year to do my PEY, so make sure to go out and explore! Meeting downtown has always been an easy central meeting point for us commuters. Here are a few fun and easy to organize things I do with my friends to get you started:

- Try something new in Kensington Market;
- Skate at Nathan Phillips Square;
- Go to the ROM or AGO on student days;
- Out of ideas? Search BlogTO for more!

WELLNESS RESOURCES

If you are feeling stressed or overwhelmed, do reach out. Whether it's with a friend, a professor, or with one of the resources below.
- **First Year Advisor**
- Health & Wellness Center
- Accessibility Services

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JUST FOR FUN

Discipline Club Events

Usually posted on Facebook pages, or on posters

Your discipline club hosts many cool events throughout the year! Be sure to follow their Facebook page, public calendar, or look for posters to stay up to date. If you don't know where to start, you can find contact info for all the discipline clubs [here](#).

Online Activities

[*Netflix Party*](#), [*Codenames*](#), [*Jackbox*](#)

Now is an interesting time we live in, but you can still do things together online! Whether it's watching Netflix with friends or playing online board games, here are a few to get you started.

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