Monash Engineering Students' Society

EDUCATION GUIDE

The ultimate guide to ease you into studying engineering at Monash University

2021

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Introduction

The jump between high school and university can feel big, especially in engineering. You might feel completely out of your depth, learning topics and concepts you have never heard about before. You might not know which engineering specialisation you want to pick. You might not know what kind of job you want to do and how to get it…

And that's completely fine! None of us knew at the start. All of us were in that same boat. That's why the Monash Engineering Students' Society (MESS) is here to help.

MESS' academic portfolio aspires to provide a platform that aids engineering students to improve their educational experience at Monash. One of the ways we seek to achieve this is through providing academic support to engineering students throughout their degree.

This guide has been created to ease you into the course, as we understand that engineering can be overwhelming and daunting initially. This guide contains details on the ins and outs of engineering, advice from older students to help you ace your units, and information on where to find help during your time at Monash. Additional information and academic tips will be posted regularly on the 2021 Engineering First Years Facebook group (please join the group if you haven't already).

Although engineering is a demanding degree, it is also extremely rewarding. Studying engineering opens students to a world of opportunity, whilst gaining lots of exciting experiences and many new friends along the way!

If you have any queries or would like to contact someone in regard to your engineering studies, feel free to visit the MESS office (next to the Kenneth Hunt Lawn, opposite E3 and the Mechanical Engineering office) or email me directly at lisa.kowal@mess.org.au.

I hope to see you around!

Lisa Kowal
Education Officer

Essential Uni Glossary

WES: WES is Monash's web enrolment system. WES is the place to view information based on your enrolment, fees/scholarships, student services and course progression. This is where your unofficial academic record (unit resources, current WAM and GPA) as well as the exam timetable can be viewed.

Allocate+: Located within WES, Allocate+ is used to create your own personal timetable each semester.

Live stream: Classes you are expected to attend online at the time of the class – delivered via Zoom or Echo360.

On demand: Classes which can be watched at a later viewing time than timetabled, allowing for a clash of classes if necessary.

CATME: For most engineering units' group assessments, an online peer assessment system called CATME is used to rate your teammates as well as yourself. Your marks for that group assessment is adjusted accordingly based upon your CATME result.

CPD: Continuous Professional Development (CPD) is a compulsory professional practice requirement for all engineering students at Monash. A written record of all your CPD activities and skill reflections are found on Student Futures under 'Engineering CPD' tab. More detailed information on CPD can be found on the Monash website.

Jaffy: A term used often to describe first years. We will leave it to you to figure out what it stands for!

Okta Verify: The multi-factor authentication system that Monash uses to keep your information private and secure. If you get a new phone and need to change your Okta Verify, click here.

Moff: MESS Office = Moff. Located next to the Kenneth Hunt, opposite E3 and the Mechanical Engineering office, this is the place where you can ask us any questions. There will always be a MESS representative in the Moff from 10am-3pm, Monday to Thursday. We also have a microwave, kettle and sandwich toaster, so feel free to drop by anytime!

Moodle: Monash's online learning platform. Moodle keeps you up to date with what is due and when. It is essential to learn how to navigate Moodle and check on each of your units regularly to see if there are any important announcements. You can also find pre-workshop content, discussions, online learning capture, online quizzes and assignment uploading on Moodle.

SETU: Student Evaluation of Teaching and Units. A SETU is a survey that allows you to give honest and detailed feedback on your units. These are really important for improving your educational experience in engineering.

FaME: Friends and Mentors in Engineering. FaME is a program designed to help ease the transition from high school to university by providing every first year with a peer mentor. See the section on FaME for more information.

Things I Wish I Knew in First Year

University is a completely different ball game to high school. Learn how to study effectively and take control of your own academic involvement and success. Tertiary study can be a daunting and crazy experience but it's nothing you can't handle. To help you get a head start, below are some tips from previous first year students.

Transitioning from High School to University

- It is a new learning environment! Don't be too hard on yourself if you are stressed or confused at the start.
- Uni is more independent than school, you will need to go find opportunities and experiences by looking at unit information pages on Moodle.
- Uni's not like high school. It's self-motivated, many members of the staff are 2-4th year students, the lecturers are often PHD level (and they won't act like HS teachers). You can arrive late and leave early to classes if you wish and the environment feels different.
- It's a culture shock with team assignments. VCE hates them. Engineering loves them. Get to know your teammates early, and setup a google drive, a messaging group and organise meetings.
- If you find yourself overwhelmed by the different learning environment at uni, create a schedule for yourself where you study at consistent times. A lot of people join too many clubs, don't study enough, and find themselves screwed when they get 3 assignments due in the same week and they've started none of them.
- The workload is harder than VCE in engineering. Your friends in other courses might say uni isn't hard for them, but you are doing a hard course. They aren't.
- Lecturers are not high school teachers. They don't come up to you if you've missed class and ask what's going on, or if you've not submitted work. It is up to you to keep on top of things and put in the required work to get the mark you want.
- It's completely different to high school where you will be chased up by your teachers. In uni, the responsibility is in your hands to learn content and take initiative when it comes to getting involved with uni and course events.
- Coming from a country town in a school of 300 people, you soon realise that there are a lot more different kinds of people out there! You don't have to be with the same types of people your whole life.
- Age is blurred at uni. In high school you tend to make friends with your year level and that's it but my friends range from 19 to 26 and honestly we have a good time!!
- University life (both academic and personal) is very different from high school. However, you won't find out what works for you and how to tackle this change immediately. So, in the meantime, have fun and try your best and then soon you will find your rhythm and be able to smash uni!

General Uni Advice

- Uni might stress you out at times, but you'll eventually realise it's silly to be stressed about it all. Just because it's hard, that doesn't mean you're bad or inadequate. It just means your expectations are high enough that they're pushing you to achieve more and you're going to look back at the challenges with a smile.

- Do your best to get involved with FaME! It's an amazing way to meet new people and learn the ropes of uni. The more you engage with your mentor and mentees the more you will get out of the program.

- Get to know as many people as you can, both in your course and outside of it. Makes the University experience that much better and you never know when you could use some help with a specific concept!

- Make use of the group chats as they can be super helpful!

- Take the time to look through your unit guides and Moodle before you start the semester, noting down important (assessment) dates in your calendar and familiarising yourself with the content of each unit.

- Social life is really important, it really helps support your mental health. Don't push yourself too hard, if you need more time you can underload/drop a subject/drop a commitment. Prioritise your mental health and try your best to make friends and grow a strong support network, you'll need it.

- The start of the semester will begin slowly, but work will build up quickly. Complete tasks ahead of time if you can! Form study groups for efficient studying. Any opportunities that come up, such as hackathons, career expos, industry nights... go to them!

- First year concepts form the backbone of 2nd/3rd/4th year concepts. If you can nail everything (or as much as possible) now, you won't have to re-learn things later down the track.

- Join clubs/societies early and start researching student teams early in the year. I didn't find out about student teams until far later in the year, and by then it was too late to apply to any of them.

- Engineering units tend to put all of the info you need on the lecture slides and tutorial sheets so don't waste your money buying textbooks.

- Time management and prioritisation is so important; it's impossible to do everything 100%. Decide what you want to achieve, then work out what will give you the greatest benefit for given time/effort and start there.

- Make friends with your demonstrators in each subject. They can give you really handy advice about the subject and also about how to tackle engineering. They are also super helpful to talk to if they are doing the type of engineering you are interested in.

- Just talk to anyone! Come in with an open mind because you never know who you might meet. You might have a conversation with someone and walk away not wanting to be friends with them, and that's ok…but you might also make a new friend.

Academic Advice

- Be prepared to put in extra effort in group work. While in some groups everyone might contribute evenly, this isn't always going to be the case. Remember not everyone is aiming for HDs.

- Spend time getting to know your group members - it makes the project way more enjoyable and means you can allocate tasks more efficiently because you have a sense of people's interests/strengths/weaknesses.

- Engineering is very study heavy, to get good grades you really need to put the work in, your grade will almost always reflect your effort during the semester.

- Figure out where and when you are most productive for study - for me it was at a library in uni, away from any distractions. I recommend sitting down after lectures or practicals to get some work done, so you can go home and just relax.

- It is very hard to find a time for groups to meet up. Make sure you are very clear and strict about when everyone is available or that could severely hinder your project's progress.

- Keep all worksheets and notes for every subject into one folder so it is easily accessible come SWOTVAC time. The material is what carried me to a HD most of the time.

- DO NOT leave all your study until SWOTVAC. DO NOT tell yourself "I'll learn it in SWOTVAC". You do not want to experience that kind of stress. Take the extra time every single week to go through your notes/lecture material and ensure that you understand the theory. This advice comes from past experience.

- When in team assignments, it is so important to build a team culture. Teams work best and will get the best grades when you understand each other and everyone's weaknesses and strengths. This part is obvious and very necessary. Simply have casual conversations about people's outside lives which can let you know about what type of work style this individual has. Just as important, but less talked about, it is so important to have trust and morale in a group. Assignments can be hard and working in a team can be stressful but turn to your teammates for help, a laugh and support.

- Help desk. Help desk. Help desk. Force yourself to go to the help desk within the first week of semester. Even if you don't think you need it. You need it. Don't be one of those people who get to SWOTVAC and realise what an amazing resource help desk is and regret not having been earlier. The people at the help desk not only help you understand concepts but can destress you and bring you back to reality if you are feeling overwhelmed. It is also the best place to find friends who are doing the exact same subject as you and having the same issues with it.

- Every weekend if you can, set aside a few hours to go over an old topic. My biggest issue was getting to SWOTVAC and not remembering a single thing from Week 1. It is a massive time saver in the long run. Just complete a few old worksheet questions, go over your notes, remember that one part of the topic you were struggling with. Just do it for 30 mins for each subject and it will save you hours of revising by the time you get to SWOTVAC.

Organisation

With uni comes a lot more responsibility of personal learning which can be tough. Below are some websites to help you keep on track.

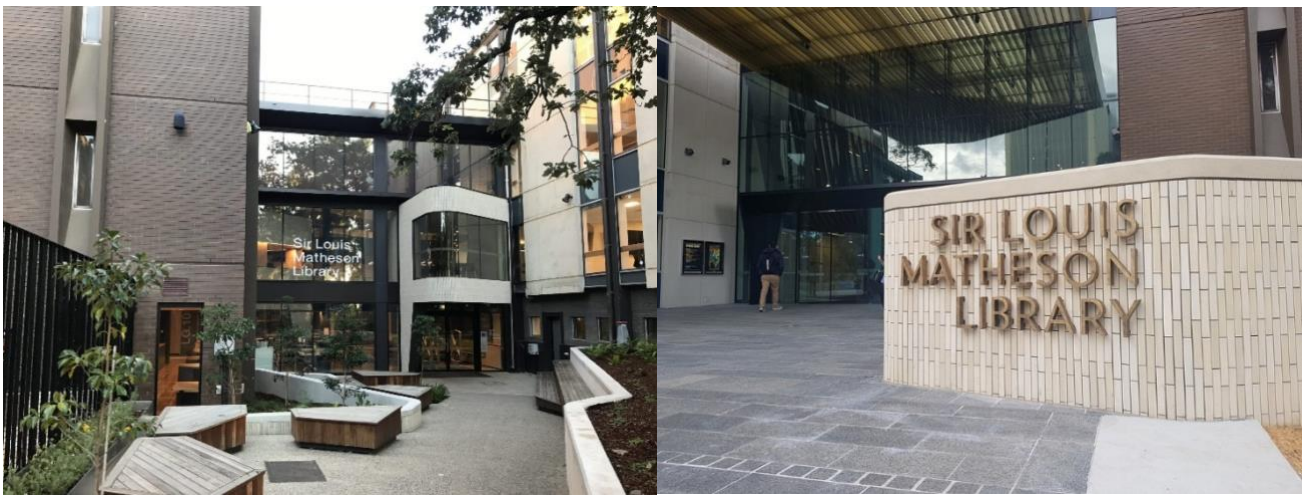
- Will.io – This timetable generator is a great way to maximise your time at uni and work your classes into your other commitments.
- Todoist – An app which lets you create and manage 'to do' lists. You can create tasks, set due dates and track your progress.
- Google Calendar – Using a digital calendar helps you manage your time and is also great at providing reminders for those meetings you almost forgot about.
- Forest – Use this app to help remove the distraction that is your phone, allowing you to focus on the task at hand.
- Lost on Campus – Find your next classroom easily with this app.

Best Places to Study on Campus

Monash has numerous places to get work done, however, the best place to study depends on what type of work you would like to do.

Hargrave-Andrew library: Located at 13 College Walk, the Hargrave-Andrew library (HAL) is the science and engineering library. With many engineering resources, prime location near engineering buildings and the Secret Garden café below, this library is a favourite among many engineering students. Collaboration and banter can always be found in HAL, as well as more quiet areas to get some solo study done.

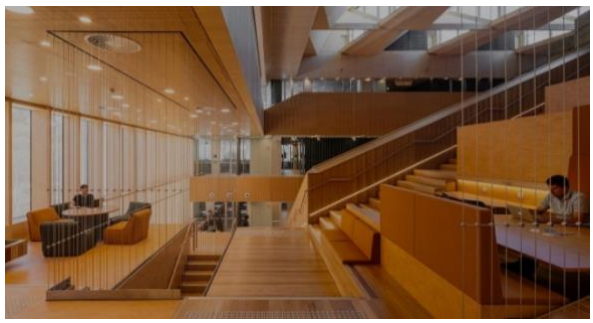
Sir Louis Matheson Library: Located near the LTB, it is the art, education and business library. It's normally deemed to be the nicest library at Monash and is generally very quiet. It has a great combination of quiet study spaces, computer labs and bookable small rooms.



First Year Learning Lounge/Centre: Located within the main Engineering building (14 Alliance Lane) on the second floor, this space is dedicated to first year engineering students. It's a great place to work on group projects (e.g. spaghetti bridges, lamps) as well as ask questions to your lecturers at help desks that are often held here. Due to its collaborative nature, the first year learning centre can get pretty crowded and loud during peak times (i.e. during weeks when major group projects are due!).

Woodside Building for Technology and Design: A brand new building located at 20 Exhibition Walk, the Woodside building has more than 30 learning spaces and many rooms set up for collaboration and interaction. This is a great place to appreciate Monash's newest addition to campus as well as take advantage of all the cool, new study spaces and resources!

Learning and Teaching Building: Located near the main bus terminal of Clayton campus, the Learning and Teaching Building (LTB) has lots of rooms that can be booked for smaller groups. Make sure you get in early as they book out quickly! This building is also open until midnight on weekdays so if you find yourself needing somewhere to study late at night the LTB is for you!



New Horizons Research Centre: Found near the N1 carpark and the main engineering building (14 Alliance Lane), this building is the research hub of Monash. With mostly post-graduates and researchers in the building, many nice and quiet study spots can be found away from the buzz of the rest of the campus.

Ways to Get Involved

MESS Events:

MESS hosts a variety of academic, industry and social events throughout the year. These events will be advertised through the MESS Facebook, so it's definitely worth dropping it a like!

Student Teams:

Monash has a range of engineering student teams, which are a great way to gain practical experience, apply your engineering skills and knowledge as well as get to know others from a multitude of year levels and specialisations.

Monash Brewlab:

The first student-led team in Australia operating in a nano-scale brewery, that produces craft beer and kombucha. They design and implement procedures to produce beer and kombucha while establishing a business model around this initiative. Monash Brewlab aims to establish a core range of high-quality products to be distributed and build a positive reputation among the Monash and Victorian Brewing Community. Find more about the team on their Facebook page.

Monash Connected Autonomous Vehicle (MCAV) team:

The MCAV team focuses on building autonomous vehicles that operate in a connected network. Their vision is to build a safe and efficiently operated connected Autonomous Vehicle in a shared environment, such as public roads or spaces. To get involved with MCAV, like their Facebook page.

Monash High-Powered Rocketry (HPR):

The HPR team is a team of enthusiastic students working towards the design, manufacture and flight of rockets. HPR builds rockets that reach supersonic speeds and altitudes of 30,000 feet, whilst running onboard scientific experiments. HPR runs recruitments twice a year for interested students, like their Facebook page to receive updates.

Monash Human Power:

A student-led team that aims to build the fastest human powered vehicle (HPV) to break the current world record of 144km/h set in Battle Mountain, Nevada. To get involved, follow the Monash Human Power team on their Facebook page, which will contain updates about their recruitment periods at the end of every semester.

Monash Motorsport:

A student-run organisation who design, build, test and compete with a Formula style race car every year as part of the Formula student competition. To get involved, check out their Facebook page.

Monash Nova Rover:

A passionate group of students who were the first Australian team to compete at the international University Rover Challenge in Utah, USA. Their rover is designed to assign an astronaut on Mars and is equipped with a large robotic arm, in-situ life detection and autonomous capability. Monash Nova Rover generally recruits bi-annually. To get involved, follow their Facebook page.

Precious Plastic Monash:

A student-run team that aims to develop and implement solutions to plastic pollution. In discussing the impact of unsustainable plastic use, the Precious Plastic team helps change individuals' attitudes through education and thought-provoking products which demonstrate the unrealised potential of recycled plastic. Check out their Facebook page to get involved.

Robogals Monash:

Robogals is a not-for-profit, student-run organisation that aims to inspire and encourage more young women to pursue STEM career opportunities. They aim to achieve this by running interactive robotics workshops for students at primary schools, high schools and local libraries across Melbourne. To get involved, like their Facebook page to find out when their next training session will be held.

Monash Forge:

The first student-run Materials Engineering project team at Monash Clayton that provide opportunities for students to develop fundamental, practical and soft skills required by industry through engagement with their Forging and Foundry teams. Their main goal is to investigate, test and provide sustainable manufacturing processes currently in the areas of casting and forging, utilising primarily recycled materials. To find out more, like their Facebook page.

Monash Fuel from Waste:

The Monash Fuel from Waster is a new initiative created by the Chemical Engineering Department to investigate the production of biodiesel through sustainable methods and address current issues of sourcing viable feedstocks. The team will work to demonstrate that food waste produced on campus can be converted into functional biodiesel through biological methods. You can apply for the team through this link and check out their Facebook page.

Other academic and engineering specialisation clubs:

- Association of civil engineering students (ACES)
- Engineers without borders (EWB)
- Female engineers at Monash (FEM)
- Queers in STEM (GLEAM)
- Materials engineering society (MATES)
- Mechatronics engineering Clayton club (MECC)
- Monash aerospace and mechanical engineering club (MAMEC)
- Monash engineering and pharmaceutical science society (MEPSS)
- Monash environmental engineering society (MEES)
- Resources engineering student society (RESS)
- Society of Monash electrical engineers (SMEE)
- Society of Monash University chemical engineers (SMUCE)

First Year Unit Tips

From your first engineering maths class to building a bridge made of spaghetti, first year engineering at Monash is quite the experience. In order to succeed, it is pivotal that you keep up to date, use the resources that are available and use your peers to get the most out of your studies. Below is a collection of tips for many of the units you will need to conquer, provided by the amazing and experienced members of MESS.

ENG1001 Engineering Design: Lighter, Faster, Stronger

Study Tips:

- The help desks are probably one of the most valuable academic resources in this unit.
- Try to have a go at the weekly worksheets before the lecture each week. You'll learn more in the lecture doing this. Try to start revising throughout the semester for exams. There's a lot to get through.
- Refer back to VCE physics notes as that was quite helpful.
- Understand different units. This is VERY important as it will make comprehension of questions so much simpler.
- Do the worksheets and past exams so that you know the concepts and methods to solve problems well. ENG1001 is a mathematically heavy unit and it's good to get used to the methods to solve problems as you'll be using them to tackle the problems both in your projects and in the exam.
- Don't rush the weekly worksheets. Show full working out otherwise it's useless as a revision resource before exams. This is important since you don't revisit the content ever until the exam since you're busy with the projects.

Group Work and Project Related Tips:

- Practice building your bridge super early. Practice loads of times and have a plan for exactly how you will build which bits in what order.
- Draw the spaghetti bridge on baking paper, then sticky tape the spaghetti bundles onto the paper and glue it onto the paper (saves heaps of time).
- Don't underestimate the impact tight screws can have for the trebuchet project!
- For the spaghetti project, focus on achieving the fastest building time and the most accurate weight prediction. That is achieving two out of the three criteria. The third one is the most difficult, it is achieving a strong bridge that is still light. The easiest marks are to make sure you achieve the first two criteria, and once you have that, then move onto achieving the third point.
- Building a good team will not only make this unit's teamwork assessments a breeze, but your individual assessments too as you help each other out. It is important to use this unit to work on your teamwork skills.

ENG1002 Engineering Design: Cleaner, Safer, Smarter

Study Tips:

- Make yourself a detailed formula sheet! Include what the symbols mean and the units - this was a lifesaver for me and it was nice to have all the formulas in one place.

- Try to look at the labs before you go in and have an understanding of what to do. Also pay attention in labs, because you are virtually given step by step instructions for everything you need for both projects.

- Make sure you understand the work sheets as they go and don't try to learn all of each topic right before the exam because you'll be stressed. Not leaving them to the last minute will allow you to understand the process involved in solving each type of question, leaving you fully prepared for the exam!

- Most of the content in lectures is introduced in the pre-lecture videos/reading so it's a good idea to go through the pre-material 4-5 days before your lecture so that it counts as a refresher on the material and you will only have to add very few notes allowing you to listen to the lecturer and participate in examples.

- Go to the PASS classes if you can - the leaders are really helpful especially if you're falling behind! If you are struggling with projects, the tutors/lecturers at the help desk will help you however they can as long as you can demonstrate that you've given it a go.

Group Work and Project Related Tips:

- Every circuit you build for lab activities can be directly applied to your lamp, so don't be afraid to experiment.

- Make sure you know what every member of your team is aiming for and allocate work to each member with respect to those goals. Use CATME as leverage; tell them that if they want to do less work but they're still cooperative they'll get a 0.9-0.95 CATME.

- Try to read everything beforehand as the labs can be stressful if you don't know what you are doing (you can't wing it like 1001 or 1060). Also make sure your team knows what is going on during the labs as once you fall behind it is very hard to catch up even if you know what you are doing.

- Being able to solder properly for the lamp is really important so it's worthwhile to practice using resistors on a spare piece of board. Once you have a feel for it, it can be done very quickly so it's worth taking a little bit of time to figure out how it works.

- Excel things can be confusing at first, so it's good to read and understand the material each week and immediately go to the help desk to ask any questions you may have. If you don't, you risk falling behind and having no clue what's going on in later weeks.

- They will mention this during the pracs, but I cannot stress this enough: just because you think you know how to write reports (i.e. in high school) doesn't mean you'll do well in the assessment. Make sure you put in the effort into each section, do proper research.

ENG1003 Engineering Mobile Apps

Study Tips:

- Spend a few minutes before the course going through a website like code-academy for JavaScript, especially if you haven't done 1060 beforehand.
- If you are struggling, ask your demonstrator if you can go to the extra tutorial class. It runs once per week and will give you more time to ask questions/get help from demonstrators.
- Always make sure you've attended/watched the workshops before you go to your practical class. Also put screenshots of the work you do in workshops into a word document for each week, so you have easy quick access to the workshop examples during your pracs.
- Do all the worksheets - whilst they may seem time consuming for the marks, they are extremely helpful for the assignments.
- Go to the Help Desks and Lecturer Consultations. The lecturer and demonstrators are helpful when it comes to assignments and any questions you may have.
- Focus on the logic of the code. Once the logic is well planned out and understood by the team, the implementation and syntax is much smoother and you can get help from teachers.
- Finish the lab tasks before the actual lab is due. It gives you time to understand how different lines interact with each other as well as ask assistance from friends and staff to further your knowledge.
- There is no point in memorising how to do anything in HTML and CSS. It is better to save your work, so you can copy and apply it to another page you're working on. w3schools.com has really good references for HTML and CSS.
- Do every task they give you, then do it again. Then practise it until you understand exactly what's going on. The workload is a lot and making friends with someone who has software experience will save your life. Doing ENG1060 before this unit will definitely help.

Group Work and Project-Related Tips:

- Don't fall behind, otherwise it becomes increasingly difficult to catch up, because each new concept builds on prior knowledge. Be proactive with your group/project so you don't leave an unrealistic amount of work to do in the final week.
- Start early on assignments as there's always some unexpected way you get stuck on a task that can take up too much time if under stress.
- Work together as a team! Everyone has different levels of coding experience and working together will allow everyone to completely understand the code and how it works! Don't just segregate parts of the projects and meet back up at the end.
- Most teams will often have that one person who knows what they're doing. Even if you've never done coding before or you suck at it, you should at least find something to help out in the projects with, like documentation or code reviews or easy parts of the code. That way your peer review score won't get destroyed.

ENG1060 Computing for Engineers

Study Tips:

- Don't just copy code you don't understand, and if you do, make sure you at least go back and understand it at some point.
- Ask questions in your labs if you are stuck - your classmates can often spot typos and issues that are super quick to fix. Also don't just sit quietly not knowing what to do because the content from each week builds upon previous week.
- Try and code the tasks for solving ODEs, integration, and all of that stuff completely from scratch. It will help you test yourself to see just how well you know how those things work.
- Always go to or watch the workshops! The lecturers will step you through the function and code that you need to know for the exam! If you know how the code works, you won't need to memorise it line by line for the exam!
- Make sure you understand the functions that are written in lectures. Don't stress if they're hard to begin with but they need to be known for the exam.
- Refer to the lecture slides a lot. There is a lot of useful information on there.
- If you are struggling to understand how MATLAB works (or you are just struggling in general), go to MATLAB Academy MathWorks (google it) and do some of the courses to increase your understanding. The courses are free as it comes with your uni MATLAB subscription.
- This unit is very important to those who wish to do electrical engineering in the future as it teaches you the fundamentals of MATLAB. Make sure you actually learn while meeting the deadlines because MATLAB is very important in this engineering course and you will most likely be using it in future units.
- Start the assignment AS SOON AS IT'S RELEASED!!! It took 40+ hours of grinding (at least for me) to finish it, and it's only worth 10%!

Lab Tips:

- If you complete lab tasks quickly and have some spare time, try to find a simpler or different way of doing the same function. It's worth even asking how other people did the tasks even if you had no trouble just to see other approaches.
- Do the labs prior to coming in so you can use the time to fix any problems, ask questions and help others as teaching makes you learn it more thoroughly.
- The laboratories for 1060 are so well thought out, the demonstrators are so smart and Tony is super supportive. Most importantly, you get 3 hours with students who are going through the exact same thing as you are. Talking through topics, asking questions, explaining concepts will teach you so much more than just trying to write code alone.
- Make sure to clarify with your demonstrators if you are approaching the tasks correctly.

ENG1005 Mathematics

Study Tips:

- Do your assignments properly and study for your quizzes. Be sure to go over any mistakes with your tutor in class and redo the question until you understand it.
- It's tempting to just use lecture slides as notes but I would highly recommend writing your own notes for this subject! It really helps with your understanding which is key!
- Use the Maths Learning Centre (MLC). They have instructors help with homework and assignments. It got me through every maths unit. It gets busy at the end and near assignment due dates though.
- Do the problem sets before you get to the tutes and ask questions at the tutes instead of sitting in the tutes doing the problem sets. You'll be way ahead of the curve if you do that and it's not that hard to keep up with.
- Do as many questions as possible, particularly ones from the textbook and old exams! Doing a variety of differently worded questions will deepen your understanding of the topics/formulas!
- 3Blue1Brown, Khan Academy and patrickJMT all have great maths videos on YouTube.
- Do not worry too much about not getting quiz answers correctly. They do not factor in your final grade as much as the rest of the assessments. Assignments and the exam is the most important!
- Everything you learn each week will be continually built upon, and if you fall behind, you may be in serious strife. The difference here from high school is that uni really doesn't afford you the luxury of comprehensive consolidation time, meaning that it is imperative that you take the time each week to properly learn the weeks content.
- The best way to pass this unit is to tough it out through the lectures, no matter how boring or rough they are because only in lectures do they go through the tough and/or common questions found on exams and assignments.....WRITE EVERYTHING DOWN.
- Since assignments are due almost every second week it is very handy to have your support classes at the end of the week. This gives more time to look over the assignment, digest the previous weeks topics and organise meetings with a lecturer/tutor if you are unsure about one of the questions.
- Everybody seems to do well in the assignments in this unit, the main reason is that there are online tools that simply solve every question for you step by step. I advise against doing this as this prevents you from learning the content. Many of the students in my cohort were acing the assignments and they were failing the in-class quizzes and the exam, so doing the assignments on your own is very important.
- This unit more than any other first year unit needs constant attention and practice. Although it may seem obvious, don't just practice the stuff you're good at or already understand to make you feel better about yourself. Practice the hard stuff because it will all be on the exam and it may destroy you if you aren't properly prepared.

ENG1090 Foundation Mathematics

- This is harder because the learning is more independent than other units. Force yourself to watch every lecture (they will be super helpful for the assignments) and set aside some time to do the practice problems.

- Study for the quizzes, they will give you questions in formats you haven't seen before, therefore you need to understand the topic and not just how to do a particular style of question!

- If you struggled at maths in school, then you'll have to learn to be able to work consistently for this unit. You will do best if you chip away at the practice questions and notes EVERY WEEK, you can't cram especially for this.

- Do the practice questions - they will seriously help consolidate your understanding of the concepts and very quickly identify anything you don't understand. Also, appreciate the formatted notes that you are given, because this is a first-year privilege.

- Generally, collating formulas and concepts helps for the exam. Just on a couple pieces of paper, go through your lecture notes and pull out all the formulas and any difficult concepts and write them all down. If you need, even write down the steps on how to tackle any questions that you found difficult throughout the semester. It'll help you easily identify what you need to spend more time revising before the exam and memorise any formulas that won't turn up on the formula sheet during the exam.

- Do all of the assigned questions every week, they're crucial for consolidating some of the newer concepts you might learn that are crucial for 1005. Also, if you know a friend who did specialist maths in year 12, keep them on standby if you come across problems, they should be able to answer a lot of them.

International Student Support

Moving to a new country to study can be daunting, especially if you are living away from family for the first time. That's why Monash offer a wide range of services that support you before and after you arrive in Australia - from airport pick up arrangements, to social clubs and English language support. To learn more, visit the Monash website.

Below are also some top tips from current engineering international students to help you get started.

- Find a group of friends and be each other's support system.

- Be yourself, don't let anyone put you down.

- Don't be afraid to talk in breakout rooms because you think your English is bad, it is unlikely that anyone cares about your grammar as long as they can understand you!!

- Get ready to work hard if you want the grades.

- Make use of the support services Monash provide, and don't be scared to talk to the staff at the Library if you're struggling with any oral or written assignment problems!

Things to Know

Networking 101

Having technical knowledge is very important in engineering, but it could mean nothing without networking skills. Networking literally means to connect with people in your area of industry to develop beneficial connections. Most graduate jobs are actually referrals, and never announced to the public; this is why giving a positive image of yourself to future employers or employees is essential in your way to 4th year.

Some important qualities you can develop as a professional networker engineer are confidence, good communication, the ability to summarise, good phone and email skills, etc. The best way to acquire these skills is to practice since your first year, so you become a professional by the end of your degree.

Through MESS, you can find plenty of industry events in which representatives from engineering firms will be present. They are seeking students interested in internships, but it is an amazing opportunity for younger students to practice that formal networking tone without pressure. When on-campus events resume, be sure to attend this and get job hunting!

Academic Integrity – Plagiarism and Collusion at Monash

According to the Monash University website, plagiarism is "to take and use another person's ideas and/or manner of expressing them and to pass them off as your own by failing to give appropriate acknowledgement". These materials could come from anywhere, including reports, images, designs, code and lecture notes.

Collusion is defined by Monash as "the unauthorised collaboration on assessable work (written, oral or practical) with other people". This includes assignments, quizzes, code and exams.

As a student, it is your responsibility to understand and avoid all forms of academic dishonesty, as any breaches will be taken very seriously.

To help ensure you are maintaining academic integrity, follow these tips:

- Always reference when you have used others work
- Write things in your own words (yes, you will hear this a million times and just replacing some words with synonyms is still plagiarism!)
- If you haven't changed the wording, then put it in quotation marks
- Don't reuse work for different units, even though it is your work, this is self-plagiarism
- Don't be afraid to study with friends! It is super helpful to discuss concepts, ideas and worksheet questions as long as you aren't collaborating for assignments where group work isn't permitted
- Don't share code or assignments with others, even if they say they'll 'just read it for ideas'
- Don't write or edit the work of another student for individual work

To brush up on the difference between plagiarism and collusion, check out the Academic Integrity module.
For more information, head to the Monash academic policies page.

Academic Grievances

If you have feedback about a unit, there is a procedure that should be followed by all students. The steps of this process are outlined below.

Step 1 - Informal Direct Complaint
You should firstly contact the staff member involved (in-person or in writing). Most issues can be resolved by simply talking to staff. Do this as soon as possible.

Step 2 - Informal Escalated Complaint
If not resolved at step 1, you can take the complaint to a senior staff member of the unit (e.g. a chief examiner, course director, head of school or department or director of the administrative area). Again, this can be done in-person or in writing.

Step 3 - Formal Complaint and Investigation
If not resolved in step 1 or step 2, you can lodge a formal complaint. Your grievance will be investigated by staff members without previous involvement with the complaint. You must complete a prescribed form and you should arrange an appointment with your student association (eg. MSA, MONSU, MGA) to help you with this. This needs to be completed within 6 months of the issue.

The Academic Affairs Officer is responsible for providing feedback to faculty about academic grievances. If you need any help along the way, or believe this is an issue that affects a large number of students, please don't hesitate to contact Billie Bennett, the MESS academic affairs officer, at *billie.bennett@mess.org.au*.

Further information can be found at https://www.monash.edu/student-complaints/how-to.

Special Consideration

Special consideration is Monash's policy for students who miss assessments due to extraordinary circumstances. If you ever find yourself unable to attend an assessed class (such as a practical, laboratory or tutorial) or complete an assessment (such as an assignment or exam) for reasons out of your control, you should be eligible for special consideration. You can usually find a form on each unit's Moodle page that allows you to apply for special consideration, otherwise get in touch with your unit coordinator. Each case is reviewed by faculty members and, if special consideration is granted, an appropriate solution is provided. Common outcomes include receiving an extension, completing an alternative assessment or, in the case of exams, having the exam deferred. For more information, have a look at the Monash website.

Specialisations

Choosing your engineering specialisation may seem quite daunting at the start but don't stress because you have plenty of time to consider your options. You don't need to select your specialisation until the end of your first year at the earliest (depending on your degree).

There are some restrictions in choice if you are enrolled in a double degree so be sure to check your options here. MESS also run a specialisation fair in semester 2 where students from each stream share their first-hand experience and knowledge, and are happy to answer any questions you may have, so follow MESS' social pages for updates on the event.

Where can I get help?

Help desks:
Most first-year core engineering units have help desks that run multiple times each week. This is the place to go to ask questions to lecturers/tutors for worksheets, assignments and projects, as well as meet students within your unit. Times and locations can be found in each unit's Moodle page.

Lecturers and Tutors:
Although they may seem intimidating and scary, lecturers and tutors are very helpful. They are always happy to answer questions and see students engage with their content. You can find their contact details online or in the unit guide. Most lecturers also have consultation hours.

PASS program:
Peer Assisted Study Sessions (PASS) are offered for most first year engineering subjects. This is a great place to work through additional problems in groups, and it is led by competent older students who can help you with problems and give out extra tips. You can sign up to PASS through Allocate+. If a PASS session is fully booked on Allocate+, there is no harm in rocking up at the assigned time and place as you can usually join in.

MESS exam revision sessions:
MESS will be running revision sessions for first year engineering units towards the end of each semester. Keep an eye out on MESS' socials for details.

Study groups with friends:
Creating a study group with friends is an amazing place to get help. By collaborating and discussing questions and concepts with friends, it is easy to understand someone of a similar level to you.

Monash study skills:
Monash University offers study skills assistance which can be found here.

FaME

Monash wants every student to feel welcome and supported right from the start. That's why every first-year student is matched with a peer mentor from the Faculty of Engineering to ease their transition to university life and help them build friendships. This program is known as Friends and Mentors in Engineering (FaME).

As a new student, you'll be grouped with other first-year students to receive mentoring support from a peer mentor in your first year. Your mentor will be an experienced student who can share knowledge and answer your questions about university life. They can show you where to find programs, resources and services at Monash, so you can have an enjoyable and successful first year.

Mentoring will take place across the semester with four main sessions:

1. Welcome and connect
2. You and our University
3. You and your study success
4. You and your assessments

Beyond this, mentors will check in and offer support at various times. Throughout the program, there will be social events and professional development opportunities for both mentors and mentees to attend. Once the semester starts, your peer mentor will be in touch.

Zoom 101

This is a time of great change in everybody's lives. We have had to revolutionise how to stay connected, and how to learn for our future beyond 2020. If you are not used to using online services, such as Zoom, to learn and connect, it can be difficult to be adjust to this new learning style. However, by following Zoom etiquette, you will be able to streamline your experience of learning online if need be!

Zoom Etiquette

- Join 2-3 minutes before the start time. Use this time to ensure that your microphone and webcam works, as well as double-check that you have everything you need (e.g. water, snacks, headphones, notes, tutorial questions, worksheets, etc.).

- Invest in some headphones with an attached microphone. Even cheap ones are often better than nothing! If you turn on your laptop microphone without headphones, often others in the meeting will get feedback, which reduces the quality of the class for everyone.

- Engage where you would in person! By participating in Zoom classes (e.g. answering questions, responding to polls, acknowledging others by using the 'reacts' function), it increases how much you gain from a class, as well as enhancing the learning experiences of your classmates.

- Turn your microphone off if you aren't speaking. Sometimes there is background noise that can be distracting and detract from the current speaker. But don't be scared to turn it back on to join in!

- Respect others during your Zoom classes. Just like in physical classes, always respect your tutor and fellow classmates. Even though others may not be able to hear/see you all the time, ensure you treat others in a way that you would like to be treated yourself. Do not use the messaging function inappropriately, you never know who can access your private messages!

Your online learning environment

Your surroundings play a massive role in how much you get out of a class. Ensure that you are in a prime position to learn through the following tips:

- Ensure you are in a quiet, cool and comfortable space. Try and avoid working from your bed, you will constantly need to move, and it messes with your sleep schedule!

- Isolate yourself from distractions. Put/move away from any distractions, such as your mobile phone, TV or loud siblings.

- Get yourself some water and possibly some snacks for your class. It is easy to forget to stay hydrated during online Zoom sessions, and you don't look organised to your tutor and classmates if you are walking around constantly grabbing things during your meeting!

- Wear clothes that are comfortable yet appropriate. This will help you focus and feel prepared.

- Ensure you have good lighting for your class. Put a soft lamp behind your laptop (not behind you) so your video comes through in higher quality.