ENGI 1331 UTA Common Questions & Answers
Matthew Woodring

In this document, I provide a list of common questions and answers students have about ENGI 1331, engineering, internships, computer science, and academics at the University of Houston. If you would like me to expand on any of these answers, please reach out to me!

The questions that are highlighted are the most important ones.

ENGI 1331 Questions:

1. <mark>**"How can I succeed in this course?"**</mark>
    a. First, you need to complete all of the mastery assignments. It is incredibly difficult to understand the material and make good grades on the exams without doing this. You should start them early so you have enough time to get help if you end up needing it. Also, make sure you can complete all of the mastery assignments in the recommended amount of time.
    b. Second, you need to come to office hours if you're having trouble with *any* of the content. This course has a multitude of professors and UTA's that are willing to help, so please make use of them. Do not sit around struggling for several hours on a problem; come into office hours and get help.
    c. Third, you need to study more than just the mastery assignments. Before each exam, practice problems from past exams are released. These are the perfect study material because they are exactly what you can expect to see on the exams. Make sure you understand and can complete all of these problems.
    d. Lastly, like any class, you need to complete all of the assignments including the ICP's, OR's, and NAE Project assignments. Historically, only about 60% of your grade comes from the exams. If you can get close to a 100 in the other 40% of the grades, then you will be setting yourself up for success.

2. **"Is MATLAB useful in other courses and/or in the job market?"**
    a. Yes, but it mostly depends on your major. Mechanical engineering majors will use MATLAB in many other classes, but electrical/computer engineering majors will likely never touch MATLAB again at UH. The only math courses I know that use MATLAB are Linear Algebra (MATH 2318) and Introduction to Numerical Analysis in Scientific Computing (MATH 4364). For the job market, I know people who have gotten jobs specifically because they are really good at MATLAB. One of them worked at a large biomedical research company and the other currently works at Boeing, so it is definitely useful to know MATLAB. Additionally, I have used MATLAB in various non-academic projects simply because it was the most convenient tool for the job.

3. **"Why are we using MATLAB instead of some other programming language?"**
   a. MATLAB is much easier for a beginner programmer than something like C, C++, or Java. You don't have to worry about memory management, declaring data types, or compiling. MATLAB allows you to ignore many of the small details that comes along with other programming languages. At its core, this course is not about learning MATLAB or even programming. These are just nice bonuses that come along with the main goal of helping students develop their problem solving skills. Additionally, MATLAB is widely used in the field of engineering, so it is likely to be a more useful tool to the average engineer than something like C, C++, or Java.

4. **"Are there any resources you recommend to learn the material?"**
   a. The best resources are the ones provided in class including the mastery assignments, OR's, and ICP's. However, there are a couple of resources that are useful. The MATLAB Onramp course is a great introduction to MATLAB and can be found at: https://www.mathworks.com/learn/tutorials/matlab-onramp.html. The MATLAB help forum is also a great resource, especially for the NAE Project. It can be found at: https://www.mathworks.com/matlabcentral/answers/index. If you run into any error messages in MATLAB, googling them and looking on the help forums will likely help you fix the issue.

5. **"How should I approach the problems given in this class?"**
   a. First, carefully read the problem twice. Make sure you really understand what the problem is saying. If you are still confused after reading it two times, read it again. It is much better to spend an extra five minutes reading the problem than to spend an extra thirty minutes fixing your solution later.
   b. Second, come up with an idea for how you want to solve the problem before you even start coding. You do not need a detailed plan; just a roadmap of how you want to tackle the problem. Working out an example of the problem on paper can be useful here.
   c. Lastly, start coding your solution. If you run into an issue, and you are not taking an exam, try googling the issue or asking a UTA for help.

6. **"What do I do if I get stuck on a problem?"**
   a. First, make sure you are really stuck on the problem. If you have not made any progress in about ten to fifteen minutes, then try taking a break from the problem. If you come back from your break and still are not making any progress, then you are probably stuck.
   b. Second, try googling the problem you are having. If it is an error message, you will likely find someone else who has had the same problem on the MATLAB help forum: https://www.mathworks.com/matlabcentral/answers/index.
   c. Lastly, come to office hours or email your UTA for help. Take advantage of the opportunity of having several UTA's willing to help you solve the problem. Do not sit on a problem for hours struggling. If you come to office hours or email your UTA, you will get help and will better understand the material.

7. **"I am not doing well in the course. Should I drop it?"**
   a. This is a hard question to answer because it depends on your specific situation. Before dropping, always consult with your professor, academic advisor, and financial aid office. Personally, I would only drop a course if I knew I was going to make a D or an F. Just remember you only get six W's for your whole undergraduate degree.

8. **"How can I best utilize my time during office hours?"**
   a. First, and most importantly, make sure you have read the problem *and* made a serious attempt at solving it. You cannot learn MATLAB by watching someone else solve problems or getting a UTA to give you the answer. Developing strong problem solving skills is an active process that you have to build by actively working on problems.
   b. Second, come in with specific questions. It is much easier to help someone when they tell us what they are having difficulty with rather than just saying "My code is not working, can you help me?". Try telling the UTA what error or unexpected result you are getting is and why you think that may be happening.
   c. Lastly, please do not be scared to ask questions. The only bad question is the one that is never asked. It is much better to ask a multitude of questions during office hours than to not ask any and end up worrying about failing the course.

9. **"How should I send an email to my UTA to get the best response?"**
   a. When asking for help over email, you have to expect delays since you are unlikely to get an immediate response. In order to minimize the time spent waiting for a respone, your email asking for help should include: the problem you are having, a screenshot of any error messages, and your .m MATLAB code file. A screenshot of your code, while better than nothing, is hard to troubleshoot. Sending the actual code, which can be pasted into the UTA's MATLAB program, is a much better way of sending the code. Make sure your question is specific and gets across all the necessary information in order to avoid unnecessary waiting time while your UTA asks you for clarification.

10. **"What should I study for the exams?"**
   a. Anything presented in the course is fair game for the exams. Therefore, you should be prepared for any problem that uses the tools taught to that point in the class. Exams, by the nature of programming, are cumulative.
   b. First, make sure you are comfortable with all the topics taught. Make sure you understand how they work and when you should use them. If you skip this step, then solving any problems including that topic will be difficult.
   c. Next, make sure you can complete every mastery assignment within the recommended amount of time. It is great if you can solve the problem, but it is super important you can do it in the appropriate amount of time since you have a limited amount of it on the exams.
   d. Once you can do all the mastery assignments, try solving some of the past years' exam problems. These problems are perfect because they are the difficulty you can expect to see on the exams.
   e. If you have completed all of the above steps, you will likely do fine on the exams. However, if you still want to study more, I recommend reworking the ICP's done in class and looking at some of the practice problems on Zybooks.

11. **"Why do we use Zybooks in this class?"**
   a. Zybooks was not always used in this class to grade the mastery assignments. They used to be graded by UTA's using an Excel sheet. As you might expect, this ate up several hours of UTA's time every week due to the sheer amount of submissions that had to be graded. Zybooks makes grading automatic and presents little problems. It is a much better use of UTA time to host office hours and answer student questions rather than grading hundreds of mastery assignment submissions every week. There are sometimes mistakes in the grading script on Zybooks, but they are rare and easily fixable.

12. "How many decimal points should I use in an 'fprintf' statement?'

    a. If the question specifies an amount you should use, then use that amount. If the question does not specify an amount, then you should use the appropriate amount based on the rules of significant figures. However, in this class, you are usually fine using two or three digits after the decimal. You are unlikely to be penalized regardless of the amount you use *unless* the question specifies an amount and you do not use it.

UH Engineering Questions:

1. **"Is ENGI 1331 a comparatively easier class compared to sophomore and junior level engineering courses?"**
   a. In my experience, yes. However, if you find this course hard, it does not necessarily mean you will find all engineering classes hard. Many students have difficulty with the programming in ENGI 1331, but go on to great success in more senior classes that do not involve programming. Please do not think you cannot complete an engineering degree just because you find this course difficult.
   b. The one thing you will be unlikely to find better in other courses is professor and UTA support. The UTA system in this course is the exception, not the norm, at UH. In future engineering classes, be prepared to not have a large amount of dedicated UTA's available to help you. In many courses, there will not be a UTA available to help at all.

2. **"When should I register for next semesters courses?"**
   a. The second you are able to. I have seen many students not know registration opened and end up not getting the courses they need. Avoid this unnecessary difficulty by watching your email and AccessUH account carefully. Many engineering courses do not have enough seats available, so you need to register as soon as you can.

3. **"Is Engineering Mathematics (MATH 3321) difficult?"**
   a. For some reason, I get asked about this course more than any other. I am guessing it is because, unlike calculus, students do not know what to expect. The good news is that this class is not difficult if you can learn the algorithms for solving the different forms of differential equations. Once you learn the algorithms, every problem is solved exactly the same. You just need to have the steps memorized for each algorithm and know when to use them. In some ways, it is a less creative and more robotic class than calculus. You can read about what topics are covered here: https://www.uh.edu/nsm/math/undergraduate/courses/math3321/. You can get a great head start on the class here: https://www.math.uh.edu/~etgen/MATH3321-Sum22.html. This is the best resource for MATH 3321 at UH.

4. **"Is Techinal Communications for Engineers (ENGI 2304) difficult?"**
   a. I did not find it difficult. I did find it entertaining and I improved my writing a lot. It is probably one of the most important and useful classes I have taken at UH. I highly recommend Dr. Wilson for this course. He is an excellent professor and makes this writing intensive course somewhat fun.

5. **"What is the hardest engineering course for an ECE major?"**
   a. Applied Electromagnetic Waves (ECE 3317) was the hardest class for me. Other classes that myself and others have found difficult include: Signals and Systems (ECE 3337), Electronics (ECE 3355), and Circuit Analysis II (ECE 2202).

6. **"Which professor should I take for [certain class]?"**
   a. With professors changing every semester, it is hard to say which one you should pick for any given semester. I recommend using the following four resources together to make an informed decision. You are always welcome to ask any UTA for their experience with a given professor or class.
   b. https://www.ratemyprofessors.com/. Take all of these reviews with a grain of salt. This site tends to suffer from selection bias where only those with either really good or really bad experiences tend to write a review. Despite this, I have found RateMyProfessor to be a useful tool.
   c. https://cougargrades.io/. On this site, you can see historical grade data for all classes at UH. This can help give you an insight about a certain professor's class and potentially how difficult it is.
   d. https://www.reddit.com/r/UniversityOfHouston/. This subreddit has posts about every class at UH for the most part. You can search it for class/professor reviews or questions people have asked about them. I have used this subreddit for my class selections more than the other two.
   e. Faculty/Course Evaluation section on AccessUH. This is a relatively unknown resource, but provides a lot of great data. I highly recommend taking a look here for any classes you are thinking about taking.

7. **"How do I get an engineering internship?"**
    a. Getting an internship can be difficult. It is impossible to guarantee you will get one for any given semester/summer, but there are some things you can do to maximize your chances.
    b. Most importantly, have a great looking resume. For engineering, a simple and easy-to-read design is better than a complex one. Make sure that you have no spelling/grammer mistakes and have listed all of your relevant skills, experience, and awards. Also, have someone else take a look at your resume to check for any mistakes. You could also post your resume on: https://www.reddit.com/r/resumes/ to get a review from someone who does not know you personally. I recommend limiting your resume to one page. Finally, make sure you tailor your resume for the position you are applying to. Many automated resume checkers will deny your application before a person ever sees it if you do not meet enough of the keywords given in the application.
    c. Another important thing is to have a good LinkedIn page. I have had a good amount of recruiters reach out to me from there, so it definitely is useful. It also gives you extra space to expand upon the things in your resume.
    d. Make sure you attend every career fair you can. This is one of the better ways at getting your foot in the door because you are able to meet recruiters face-to-face. If you are a freshman, many companies will unfortunately not be interested in hiring you. However, you should still attend the career fair because it is great practice. You do not want to be attending a career fair for the first time as a junior or senior and not know what to expect. Going to a career fair only takes a few hours and will net you far better results than blindly applying to jobs on career websites.
    e. Lastly, try to make connections with professors, other students, and anyone else you meet in your field. Some of the best internship opportunities come from people you personally know. Having a reference from someone already inside a company can help a ton in getting an interview.

8. **"What do I do if I am not good at math? Can I complete an engineering degree?"**
    a. You can complete an engineering degree regardless of how good you are at math as long as you are willing to put in the time necessary to learn and understand the math used in your classes. However, if you do not like math, then you will have a hard-time finishing an engineering degree. All of your engineering course will be math-heavy, so it is extremely important that you atleast somewhat enjoy math if you are going to complete an engineering degree. Being good at math is far less important than enjoying math.

9. **"Where can I find information about my engineering degree?"**
    a. This page on the UH website has all the information you could need about your specific major: https://www.egr.uh.edu/academics/undergraduate-programs.
    b. This subreddit has over a decade of posts that you can search: https://www.reddit.com/r/UniversityOfHouston/. It is most useful for looking up specific professors, courses, or general questions about your major.
    c. This subreddit can be useful for general engineering questions/advice, but will not be useful for UH specific questions: https://www.reddit.com/r/EngineeringStudents/.
    d. If you have any questions about a specific situation you are in, then you should meet with your advisor.

10. **"What is the best online circuit simulator?"**
    a. I highly recommend https://www.multisim.com/, but there are other great ones you can find online.

11. **"What are the best clubs for an engineering major?"**
    a. This depends on your major. I highly recommend you join the club that best matches your major. This is not an exhaustive list, but these are some of the best engineering clubs that myself or others have found useful.
    b. Electrical/Computer majors: https://ieee.ece.uh.edu/.
    c. Mechanical majors: https://www.uhasme.com/.
    d. Chemical majors: https://aiche.egr.uh.edu/.
    e. Civil majors: https://asce.egr.uh.edu/.
    f. Biomedical majors: https://linktr.ee/uhbmes.
    g. Industrial majors: https://iiseuh.wordpress.com/.
    h. Petroleum majors: https://www.uhspe.com/.
    i. Any engineering majors: https://aiaa-uh.com/ and https://www.uhcougarracing.com/.

Internship Questions:

1. **"Where should I look for internships?"**
   a. The first place you should look is within your own network. Ask around and see if anyone you know (family, friends, professors, old bosses, LinkedIn connections, etc.) know of anyone who is hiring an intern. Having an inside recommendation is one of the best ways to get an internship.
   b. Career fairs are another great way to find an internship. I have received many offers from companies I met at various career fairs. Even if you do not find an internship from these career fairs, attending them will help you build the soft skills necessary to get hired anywhere.
   c. You can also find internships online. You could message recruiters on LinkedIn or look at some of the following sites: https://www.indeed.com/, https://www.glassdoor.com/, and https://www.internships.com/. You can also look on any companies' career section on their website for open positions.
   d. For people who want to work in the aerospace industry, I highly recommend looking at NASA internships: https://intern.nasa.gov/. They hire a lot of college students and they do interesting work, so it is a great place to look.

2. **"What companies are good to work for?"**
   a. This is a hard question to answer without knowing your major, what you want to work on, and the current year. I highly recommend you read reviews online to see how a company is to work for. Some companies myself and others have worked for, and had good experiences with, are: Cisco (CS), L3Harris Technologies (CS), Zillow (CS), Amazon (CS), Apple (CS), Paycom (CS), Raytheon (Mechanical), Boeing (Mechanical), Lockheed Martin (Mechanical), NASA (Electrical & Mechanical), GE Aviation (Mechanical), Northrop Grumman (Mechanical), Cummins (Electrical), Iron Ring Technologies (Electrical), GE Healthcare (Biomedical), Avanade (Biomedical), Dow Chemical (Chemical), LyondellBasell (Chemical), Shell (Chemical), and State of Alaska (Petroleum).

3. **"Should I do an unpaid internship?"**
   a. These are rare in engineering, but they do happen sometimes. I highly advise you *not* to do one of these. Your skills and experience as an engineer are worth much more than $0 per hour. If you only receive one offer for a summer internship, and it is unpaid, I recommend you do anything *but* that internship. Do not work for a company that does not value you enough to pay you.

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4. <mark>**"What can I do to make myself more likely to get an internships?"**</mark>
   a. There are several things you can do to increase the likelihood of you getting an internship. Some of them are more obvious than others.
   b. First, increase your network and practice your soft skills. Your chances of landing an internship go up when you know more people. Someone you meet may have an opening in the company they work for and can give you a recommendation. A friend you make in class may have a parent who owns a company that can hire you. Knowing more people exposes you to more opportunities. Practicing your soft skills is also important because people want to work with others who are easy to talk to and make their lives easier. You could be the smartest person in the room and still not get an internship if people do not like interacting with you.
   c. Second, and fairly obviously, make the best grades you can. Companies like hiring students with good grades because it increases the odds you will be a good employee. However, you do not need a 4.0 to get hired. Most companies have a cutoff of 3.0, but some have lower cutoffs and some have higher ones. Just do the best you can, and if possible, stay above a 3.0 because it will make getting hired much easier.
   d. Third, build up your resume with experience, projects, and skills. If this is your first internship, add any prior work experience you have and really sell yourself. Do not lie on a resume, but make yourself sound great on it. Adding class or solo projects is also a big boost to your resume because it shows companies that you have some useful engineering skills. Try working on projects you find interesting and add those to your resume. They do not need to be amazing, but they should show case some of your engineering skills.
   e. Lastly, apply to more internships. At the end of the day, getting hired somewhere is partially a numbers game. I recommend applying to any internship where you like the company, position, and meet at least 50% of the requirements.

5. **"What skills are most in-demand for an ECE major?"**
   a. For hard skills, there are several applications and tools that make you a more desirable to companies. Programming is becoming more important in engineering everyday, so I recommend you be familiar with at least one of them. MATLAB, Python, C/C++, and Java are the best choices, in that order. For applications, Arduino, LogicAid, SimUAid, and GitHub are all nice to know how to use.

6. ==**"Who can I get to review my resume?"**==
    a. There are many places you can go to have your resume looked over. I would recommend having several different people take a look at your resume.
    b. Myself and most other UTA's would be happy to take a look at your resume. Just make sure you have it completed and have looked over it yourself for any spelling or grammar mistakes. You could also ask a professor that you are comfortable with if they would be willing to look at it.
    c. UH hosts resume reviews throughout the year, which can be useful events. Information about this is emailed throughout the semester and can also be found at: https://uh.edu/ucs/students/get-resume-support/.
    d. There are some places online that will also look at your resume and give you feedback such as: https://www.reddit.com/r/resumes/ and https://www.reddit.com/r/EngineeringResumes/. These can be helpful because people here do not know you personally and will not be scared to give you honest feedback.

7. **"Will a company hire me if I am a freshman?"**
    a. The answer to this depends on the company, your skills, and what the current market looks like at the time you are applying. If you apply at a company that hires freshmen, likes the skills you have, and the job market is good, then you have a good shot at getting an internship. I highly recommend freshmen apply for internships, and do any interviews, even if you are not likely to get hired. Going through the process is an invaluable learning tool that will help you a lot when you apply for more as a sophomore, junior, and senior. Getting an internship as a freshman is not all that important. It is great if you can get one, but do not think it's the end of your career if you do not get one.

8. **"What should I do if I do not get an internship?"**
    a. If you do not get an internship, there are still lots of things you can do to have a productive summer and increase your chances next year. You could also take the summer off and relax, travel, or work a summer job. All of them are fine options, especially if you are a freshman or sophomore. You could also work on a personal project that you can put on your resume. Make sure it is one you find enjoyable and not just one you chose because it will look good on your resume. If you enjoy what you are working on, you will learn more in the long run.

9. **"Will having a UTA position help me get an internship?"**
    a. In my, and other UTA's experiences, yes. Being a UTA shows companies you are dependable, able to communicate well, and can work in a team. It is also a fun position to have. If you do not like MATLAB, there are other UTA positions available. You could be an ENGI 1100 UTA or one for a class in your major. I know many courses in ECE that hire UTA's such as: Digital Logic Design, Microprocessors, Circuits I & II, Electronics, and Signals and Systems. You are welcome to ask any UTA about their experience as a UTA if you want to get other perspectives on it.

10. **"Will I be unhirable if I do not get an internship?"**
    a. No. It *may* be harder to get a job after graduation, but it by no means impossible. I know many people who had no internship or work experience, but got hired on right out of college by good companies. Getting an internship is a good idea because it will make the job search easier and will also help you determine if you really enjoy engineering. Try and get an internship if you want to, but do not panic if you cannot get one.

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Computer Science Questions:

1. **“Should I switch my major to computer science?”**
   a. This question depends on what you want to work on, live at, and do in the future. There are benefits to switching to computer science for the right person. Below, I will describe the steps you should take before deciding if computer science is the right major for you.
   b. Think about what you want to do in the future, such as: what you want to work on, where you want to live, and how much money you want to make. Some people want to make $500,000 a year, which is very hard in engineering outside of owning your own business. It is also hard in computer science, but much more accessible than in engineering.
   c. Make sure you are not running from math/science when deciding to switch majors. A computer science major still requires you to take many math and science courses. You will take more pure math classes as a computer science major than you probably would have as an engineering major.
   d. Make sure you enjoy coding in a language outside of MATLAB. Computer science courses are different than what we do in ENGI 1331. The programming language used in almost all computer science classes at UH is C++. If you took AP Computer Science (Java), and enjoyed that, then computer science might be right for you. Otherwise, I would advise you to take COSC 1437 (Introduction to Programming) and see if you like it. Please know that you do not have to take COSC 1336 (Computer Science Programming) as a prerequisite for COSC 1437 if you pass ENGI 1331 (read more about this in question #2). This website: http://www2.cs.uh.edu/~arjun/courses/ds/ is from a sophomore-level course at UH and has all the topics presented in the course listed. Research some of these topics and see if you find them interesting.
   e. Try and work on your own small projects in a language other than MATLAB and see if you enjoy them. Something like a small calculator app would be perfect. There are many ideas online if you look up “computer science beginner projects”. Try doing a few of these on your own and see if you like the process.

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2. **"Do I have to take COSC 1336 in order to take COSC 1437?"**
   a. *No*. While it may appear that you do, I know a student who did this and I have asked computer science advisors about this exact question. I do *not* recommend you take COSC 1336 if you have already taken ENGI 1331 because the course is much easier than anything we do in ENGI 1331 and will not help you make a more informed decision about switching majors. Tell an advisor that you have already taken ENGI 1331 and want to take COSC 1437. They will help you sign up for the course. If you are interested in switching your major to computer science, please do *not* waste your time and money by taking COSC 1336.

3. **"What are the best resources for learning about computer science?"**
   a. This will largely depend on the programming language you choose. However, once you understand the fundamentals of computer science, you can program in most any language once you learn the syntax. Below, I'll list some useful resources for learning the basics of some of the most common programming languages. Remember that just like MATLAB, the only way to truly learn a language is by using it. Try to create some of your own projects. I have also listed some useful sites and IDE's (Integrated Development Environment) I recommend.
   b. For C++, I recommend https://www.w3schools.com/cpp/, https://www.youtube.com/watch?v=vLnPwxZdW4Y, and https://www.learncpp.com/ for an introduction to the language. I recommend using Apache NetBeans, Dev-C++, or Replit for your IDE.
   c. For Java, I recommend https://java-programming.mooc.fi/, https://www.w3schools.com/java/, and https://docs.oracle.com/javase/tutorial/java/index.html for an introduction to the language. I recommend using Apache NetBeans or Replit for your IDE.
   d. For Python, I recommend https://www.w3schools.com/python/, https://www.python.org/about/gettingstarted/, and https://www.programiz.com/python-programming. I recommend using PyCharm, IDLE, or Replit for your IDE.
   e. For practicing your given choice of language, I recommend creating your own programs. This is the best way to learn. Outside of that, https://leetcode.com/problemset/all/, https://www.hackerrank.com/, and https://projecteuler.net/archives can be useful for learning the deeper parts of computer science.

4. **"Where can I learn more about the computer science major?"**
   a. There are several places online to learn about computer science in general and about UH computer science specifically. The computer science advisors host change of major sessions throughout the semester where you can join and learn a little about what to expect in a computer science major. You are *not* obligated to change majors after attending one of these sessions.
   b. This website: https://uh.edu/nsm/computer-science/undergraduate/programs/bs-cs/ has all the information about the courses you will be required to take. I would recommend looking up some of the courses on Google and YouTube and seeing if you find the content interesting.
   c. These YouTube channels make interesting computer science content: https://www.youtube.com/user/Computerphile, https://www.youtube.com/c/LiveOverflow, https://www.youtube.com/c/BenEater, and https://www.youtube.com/c/Reducible. Watching some of the content from these channels will help you decide if you find computer science interesting.
   d. Reddit is also a good resource for reading about computer science. I recommend the following subreddits: https://www.reddit.com/r/csMajors/, https://www.reddit.com/r/cscareerquestions/, https://www.reddit.com/r/computerscience/, and https://www.reddit.com/r/compsci/.

5. **"What is the process for changing my major to computer science?"**
   a. Once you have decided computer science is right for you, the process is fairly easy. First, you will need to attend a change of major session hosted by the computer science advisors. You can schedule one of these meetings on Navigate. I recommend you sign up for one of these as soon as you can once you make the decision to switch. They tend to fill up quickly and they do not host a ton of these every semester. After this session, an advisor will send you a change of major form for you to fill out. You just need to complete this form and email it back to the advisor who sent it to you. Once you send the form back, you are done with the process. The hardest part of switching majors is deciding if you want to switch majors.

6. **"What are the best clubs for a computer science major?"**
   a. This site: https://uh.edu/nsm/computer-science/connect/student-organizations/ is by far the best place to look. If you had to choose just one, I would choose CougarCS. I also highly recommend: https://uh.campuslabs.com/engage/organization/cougarmathletics. It is a math based club, but is great for any computer science student.

7. **"What is the most useful computer science course for my future career?"**
   a. While many of the courses are important, the two most important are COSC 2436 (Programming and Data Structures) and COSC 3320 (Algorithms and Complexities). Most of what you will do in a computer science job are based on these two courses. Almost all technical interview questions deal with the subjects covered in these courses.

8. **"What programming language is used in UH computer science courses?"**
   a. C++ is exclusively used in almost all courses. There are a few professors who use Java for COSC 2436 (Programming and Data Structures), but most have switched over to C++. The only exception to this is COSC 1336, which uses Python. However, as explained in question #2, I do not recommend you take this course as it is unnecessary.

9. **"Is my experience in MATLAB useful for a computer science major?"**
   a. Yes. While MATLAB is not used much in the computer science courses, the knowledge you gained about programming is useful. For loops, while loops, if statements, and algorithms are all used extensively in computer science courses, so it is good to already have experience with them. I have only directly used MATLAB a couple of times while creating graphs in my computer science courses, but knowing it has been helpful.

10. **"What cities tend to have computer science internships"**
    a. You can find a computer science internship in almost any decently sized city. A few of the most common include: San Francisco, Los Angeles, NYC, Chicago, Houston, Dallas, Austin, Miami, Las Vegas, Denver, Seattle, Portland, Boston, Washington DC, Raleigh, Atlanta, and Phoenix. Remember, there are tons of other places who hire computer science students outside of this small list.

General Academic Questions:

1. <mark>**"What is the easiest/best minor for an engineering major?"**</mark>
   a. Mathematics will be the easiest minor. Most engineering majors will only need to take one additional math course to complete the mathematics minor. The best minor depends on what you are interested in. I recommend picking a minor that you are interested in and will not add any time to your degree.

2. **"How do I declare a minor?"**
   a. There is a form you fill out and submit online. For example, the form for a mathematics minor can be found here: https://www.math.uh.edu/~tai/Departmental_Forms/UHME/Minor_request.pdf. The process may be different for other minors, but will likely be similar. I recommend asking your advisor when the time comes to declare your minor.

3. **"Can I change my minor?"**
   a. Yes. Just like you can change your major, you can also change your minor. Make sure to ask your advisor about this if you choose to change it.