



EE & CS EDITION

# UT Survival Guide



IEEE COMPUTER SOCIETY



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## About IEEE-CS

- 1. What are some other projects that the society has done in years past? Are they always org-wide projects or have you participated in smaller projects either within the org or in your own free time?**
  - a. Our goal is to introduce projects that will improve a student's technical skills and we do one big org-wide project in the Fall and another one in the Spring. Members do their own projects within the year as well.
  - b. For example, our Spring 2021 Project is to create a Practical IOT Device (reflects EE319K). It is an org-wide project, but allows for personalization within each team that is working on it. Read more about our projects at our website > <http://ieeecs.ece.utexas.edu/>
- 2. Do we join both IEEE and IEEE CS? What is the organizational structure and what are the fees associated with each?**
  - a. IEEE CS has no fees. You can join whichever one you want. We each work independently but collaborate for events like socials. There is no strict organizational structure.
  - b. Usually, the umbrella IEEE takes care of socials while the sub-clubs are project-based.
- 3. Disclaimer Statement**

All views expressed in this guide are our own and do not represent the opinions of any entity whatsoever with which we have been, am now, or will be affiliated. We wanted to share our experience with you to help. However, please do what fits your needs and style. If you think you have academic emergencies, please contact your advisor.



## Academics

**1. What is a good amount of credit hours to take freshman year?**

- a. Both freshman year and in the future, try to keep your hours **15 or below**. This largely depends on what classes you are taking, but EE classes generally tend to be far more difficult than classes in other majors. Unless you have at least one blow-off (easy course) course, DO NOT take five your first semester. Don't let yourself get overwhelmed by trying to do everything - be strategic and cautious.
- b. To note when taking classes online: back to back classes can be tough as you'll be sitting the whole day.
- c. Balance easier classes with the harder ones!
- d. CS vs. EE : CS classes are harder later on, EE intro are harder

**2. How did you fulfill your flag requirements - do you have any advice/tips on how to incorporate them into your schedule? How did you choose your UGS class? (which year you took them, specific classes, planning process)**

- a. GC and CD are the two flags not covered in the ECE curriculum, and you can only get one of the two from any one class. Try to get either one through your UGS and the other through VAPA/History/etc
- b. CD class Shout-outs: Jazz Appreciation, Hip-hop Decoded (VAPA), History classes
- c. GC class Shout-outs: Intro to Classical Mythology (VAPA), Intro to Ancient Rome (VAPA)
- d. UGS classes: Sleep

**3. What will a virtual semester look like?**

- a. Zoom lectures (synchronous or asynchronous, depends on professor)
- b. Software labs: You'll be asked to share screen to check out projects.
- c. How will professors be enforcing attendance?
  - > Most math and engineering professors don't check attendance and usually don't have you turn on your camera either.
  - > A few classes will require instapolls/pop quizzes.

**4. What was your experience with your FIG (if applicable)? Is there anything an incoming freshman should know about to utilize their FIG more effectively? Did you dislike anything about your FIG (flexibility, etc?)**

- a. If you take a FIG, make sure it is an ECE FIG because it will help you make friends/study groups in your classes.

**5. How did you acquire textbooks for your classes? Did you rent or purchase them? Online or physical copies?**

- a. Try to find books online, search up book names and the word “PDF” or go to this website > <http://libgen.li/>
  - b. ALWAYS look at the syllabus first (i.e don’t buy textbooks before the first class day)! The professor usually states if the textbook is necessary or not and the specific version they use.
  - c. If too expensive, maybe buy from upperclassmen (check out the UT buy/sell FB group)
- 6. Any insider tips on what to prepare before your first week of classes? (summer reviewing, note-taking devices, textbooks, etc.)**
- a. You will know during syllabus day what materials you need and you will have time to get those materials.
  - b. Over the summer, if you can get the required textbook from past syllabus, previewing and self-teaching the first few units would be awesome. Not required though, but can give you a big head start.
  - c. Brush up on a little calculus before the UT math assessment at orientation.
- 7. How did you go about claiming your AP credits for college classes? Anything for freshmen to keep in mind before doing so?**
- a. Send scores to community college and then send your transcripts to UT, helps to save a ton of money and you can claim all your credits.
  - b. Word on the street: take non-ECE classes (GOV, History) at community colleges
    - i. But also note that Gov and History classes are usually easier than EE classes so they could boost your GPA. Up to you!
  - c. Take physics at a community college (most people take it at Western Texas College)
    - i. Students also take credit-by-exam at UT for physics and stats (business)
  - d. UT info on claiming credit >  
<https://utdirect.utexas.edu/ctl/cbe/petition/index.WBX>
- 8. Do you have any academic programs (certifications, minors) at UT that you want to shout out/recommend to freshmen?**
- a. You can usually do the popular Entrepreneurship minor or Foundations in Business minor over one summer. Recommend focusing and finishing over the freshman summer (at McCombs Summer Institute). May have to take ACC 310F first during the school year. Application for McCombs >  
<https://www.mccombs.utexas.edu/Business-Options/McCombs-Summer-Institute/ApplicationForm>
    - i. Note : All the classes are web-based!
  - b. Taking a Math minor is also common among ECE students because the courses can overlap

- i. Be careful because it might not be as easy as it seems, depends but is usually 5-7 extra classes (depends on the math track and EE track)
- ii. If you're taking a BSA, they also require you to take a minor, so there may be more classes you have to take.

## 9. Registration

- a. UT Registration Plus chrome extension is highly recommended for registration!
- b. Register for classes and utilize the Add/Drop for classes after syllabus day.
- c. Waitlist for the classes than you want as (usually) you can get in to the class.
- d. eCIS is useful to see real verified ratings of professors/classes (these are the surveys they have you take at the end of each semester). You can access it through the extension.
- e. Make sure to check UT Catalyst for prof grade distributions as well.



## ECE Classes

- 1. What was your hardest lower-division ECE class? Looking back, what would you do differently to make it a better experience?**
  - a. EE 302 can be overwhelming > you have to learn to go to office hours!
  - b. For EE 306 > ask more questions to fully understand concepts.
  - c. Note that bad professors can also make a lower division class WAY harder than it needs to be. Pick your professor carefully.
  - d. Don't let 302 and 306 scare you. Despite what reddit, forums, upperclassmen say about these classes, they are doable. Are they hard? Yes, they're designed to be hard. Will they weed you out and destroy your college career? No, almost definitely not. Remember that almost every ECE undergrad student you meet next semester made it through 302 and 306, and you can too!
- 2. Do you want to shout out any professor that you've had? What did you enjoy/appreciate about their class?**
  - a. **ECE CLASSES:**
    - i. Yerraballi, cool guy for EE 319K and EE 306! Has a giant list of thank you notes in his office, great teaching style, office hours will be \*packed\*. Very nice and understanding prof, high-A grade distributions.
    - ii. Telang, ECE mom for EE 306. Great at answering questions, genuinely cares about students, great grade distributions.
      1. ^^^^Seriously, whenever you need to take a class and one of these two is teaching it, take it with them. Best ECE lecturers no questions^^^
    - iii. Hall, EE 313 best professor!
    - iv. Swartz for 411. Super funny, actually teaches a ton of material, considered borderline blow-off class. Very high A distribution.
    - v. Gligoric is great for 312. He's really good at explaining software concepts and answering questions.
    - vi. Dr. Yu for 302, I TA'd for his 302 3rd semester and took it 1st sem, nicest professor I have ever met at UT, excellent explainer. Office hours the day before/of an exam will be PACKED. Slight downside that unless you ask during office hours, only touches on concepts at a surface level in class.
    - vii. Touba EE 316 (if Telang teaches, take her! Pan is also ok)
    - viii. Algos (EE 360C): Christian Julian and Santacruz,
      1. Soloveichik is also really good. He has an engaging lecture style.

- ix. Garg for EE 361C (multicore computing). Really interesting material and he's pretty funny, but he goes fast at times.
- x. Probability: Vivek Telang was good.
- xi. Dr. Even: ECE God

**b. MATH CLASSES :**

- i. Course Schedule doesn't show professor, email professors or see what time they taught last semester
- ii. 408C Mills was good and easy, flipped class
- iii. 408D take Catherine Davis, teaches a little fast but overall great
- iv. 408C/408D Staron, teaches well and so easy
- v. 427J/427L Differential Equations (Kirk Blazek) is good, focuses on partial credit
- vi. 427J Alex Macedo - easier, breaks class into algorithms
- vii. 427J John Meth - good professor but only looks at solution for tests, no partial credit
- viii. 427L Theresa Martines is the easiest choice
- ix. 325K Sathasivan, she writes fast, so try to keep up. Keep old notes.
- x. 325K Neeman, very straightforward

**3. If struggling in a class, where should freshman go for tutoring/academic help? Is one resource better than another? Any online study resources that you think freshman should be aware of?**

- a. First, TAs: Undergrad TAs are usually more helpful because they have taken the class recently.
  - b. Second, professor.
    - i. For profs like Yerraballi, Telang, Yu, go to the prof first. For profs like Nandakumar, Valvano, Cuevas (in software classes), TAs may help a lot more.
    - ii. Side note: getting to know your prof is very important, they can be references for you or ask for you to be a TA later on. Getting to know TAs is important also, can be great connections.
  - c. Third, upperclassmen and friends.
  - d. Fourth, googling and sometimes Textbook.
    - i. The 302 textbook is pretty good...306 not so much....
  - e. Fifth, YouTube/Google
  - f. Sixth, EE tutoring.
- 4. What did studying for these classes look like for you? Do you have a specific way you study that you think freshman should emulate? (recording lectures, practice tests, etc.)**

- a. Don't recommend recording lectures. You're not going to have time to rewatch/relisten.
- b. Taking notes is the most useful.
- c. Practice tests and practice problems are super useful. These include ones in the book and ones the class provides you.
- d. Don't recommend group studying where you finish homework together or right before exams. Utilize study sessions to check answers and review. Spend time right before exams at class review sessions.
- e. For exams: practice/previous year exams, practice problems, professor's study sessions/reviews are helpful (go to other professors' as well)
- f. For ONLINE classes: Professors will share recordings from all the professors so check the other ones out too.
- g. Textbook is a good backup option - sit down and read if totally lost -> math textbooks are better than EE textbooks (since they have more editions and thus are more polished)

**5. What did note-taking in these classes look like for you? Do you take notes on a specific device?**

- a. The professors sometimes talked too fast. So, preview the lecture and write down things not in what you previewed.
- b. It's always great to review what you might have missed after class with friends. I used to use pencil/paper.
- c. I highly recommend using an iPad, Notability (the app) is great.

**6. Did you take a GE class? Would you recommend taking these classes to freshmen?**

- a. Depends on you. Don't recommend GE unless you really want the extra help because you could have spent the same time at recitation / office hours / studying.
- b. GE > is now pass/fail (doesn't help GPA wise, not very helpful course-wise either)

**7. What laptop would you recommend us purchasing for UT ECE**

- a. Some software students prefer Mac.
- b. UT info link >  
<http://www.ece.utexas.edu/it/laptop-system-requirements-undergraduate-programs>
- c. From my experience as a 302 TA, 302 lab is pretty unfriendly to MAC users. Would recommend Windows or Linux, lab manual for 302 was written with windows users in mind. Mac might be good later on though.
  - i. Note : If you have a Mac, you can get a copy of Windows for free from UT and dual boot it using Bootcamp. Labview worked well for me that way.

## Upper Division ECE Classes

1. **How did you choose your specialization? Were you able to make a decision based on the lower-division classes you took? Are there any resources (professors, etc.) that you recommend students consult with before making a choice?**
  - a. Classes are good enough to help you. You normally decide at the end of sophomore year. You can always change though! Talk to upperclassmen but take it with a grain of salt.
  - b. I would recommend studying up a bit on ALL of the specializations before making your pick. Over 70% of ECE students end up in the 3 software tracks. If you're a freshman with an interest in hardware especially, intro classes might not be enough as they have a heavy bias towards software classes (the latter are more engaging). Explore on your own and talk to profs / upperclassmen.
  - c. Keep an open mind about choosing your tech core the first couple years. Try to engage with all of your ECE classes, even if you think you know exactly what you want to do.
  - d. Internships and side projects can help you figure out what you like doing in the real world/for a career, as opposed to what you like learning in school. Often they overlap but sometimes they don't.



## Academic Extracurriculars

### 1. How did you seek out extracurricular project opportunities?

- a. ECAC Externships can actually be a great way to network and get internships.
  - i. Externships are 1 day programs where you tour a company you are interested in for free, with the UT student group.
  - ii. You have to apply and they are usually during winter break.
- b. Personal Projects
  - i. Explore internet for ideas, learn frameworks about things you know (start small)

### 2. Research

- a. If you like a professor and what they research, go up and ask for a project!
  - i. Test the waters (short-term) and see how it goes from there.
- b. Website: Eureka, NSF
  - i. UT research projects link > <https://eureka.utexas.edu/>

### 3. Did you study abroad? What was your experience like? Did you have any red flags to share or resources that helped you?

- a. A semester abroad can be difficult to fit in the ECE degree plan.
- b. That said, people that do a summer abroad usually love their experience!

### 4. Did you feel like you were able to manage your four years between studying abroad/internships and co-ops?

- a. Internships that are over the summer have no coursework interference (unless doing research)
- b. Part-time internships during the semester can be a good experience.
- c. CO-OPS - only consider if you have the credits to take one semester off (don't overload the next semester, and make sure you can graduate on time)

### 5. Did/do you work on-campus or in surrounding areas in Austin? Do you recommend one area over another? Any tips on when to look out for on-campus student jobs? (tutoring, libraries, front-desk work, etc.)

- a. Tutoring on campus is popular.
- b. Front desk jobs usually are more lenient in terms of commitment and scheduling.
- c. Keep in mind time for office hours, review sessions, club time, and study time before you commit to other things. For every credit you take, spend around 3 hours more outside of class (engineering recommendation from advising office).
- d. Get to know profs and you might be able to TA for them. This is a time commitment but well worth it!
- e. Volunteering is popular, part-time jobs not as recommended
  - i. UT orgs - gardening/planting/philanthropy have opportunities.

## Internships/Co-ops

- 1. Where was your first internship/co-op? How did you land them?**
  - a. Silicon Labs - EXPO.
  - b. Emerson - Mostly got it because of my externship.
  - c. NXP - EXPO
  - d. Cisco - referred/connections
  - e. Olympus - referral
- 2. LinkedIn Tips**
  - a. Build a good online LinkedIn presence! Add professionals you meet at tech talks and EXPO
  - b. Search for recruiters and send out requests and meaningful messages.
  - c. UT Alumni (younger people respond more)
  - d. Engineering job - reach to an engineering manager to learn more about what they do
  - e. Put a lot on your linkedin > don't be shy to put accomplishments on there!
- 3. Any tips on preparing for EXPO? (questions to have answers to, where to read up on companies, resources to prepare for resume building, how to dress, talking tips)**
  - a. Visit ECAC for resume checkup.
  - b. Don't say: "I'm only a freshman." You are a freshman and should be proud.
  - c. Go to gather experience even if you don't want to, it will help you a ton in the future. You are not wasting your time nor theirs.
  - d. Ask the companies you are interested in what they are looking for.
  - e. Your fig mentor might say something like "don't worry about expo, you're just a freshman". They're (mostly) wrong. Take it seriously, it's great for building connections.
  - f. Connect with recruiters on LinkedIn afterwards, maybe send an email to thank them for their time.
  - g. Attire: Officially it's business casual but pretty much everyone will be wearing a suit.
  - h. If you're interested in software engineering, try to visit the CNS career fair too. Many big software companies go to that instead of EXPO.
- 4. What do you look for in an internship or co-op?**
  - a. Try to get internships that align with your professional interests. The internship will provide you exposure and relevant work experience, which will help you decide if this type of position is what you want.
  - b. Don't try to "just get an internship, any internship". Be focused on what you think you are interested in.

## Grad School

1. **How and when did you decide to go to Grad school? Did you decide after you had worked for a couple of years or did you just decide to go straight to higher education.**
  - a. Going to Grad School right after Undergrad gives you a leg up to build skills and learn about what's happening real-time in the industry. In addition to a traditional Master's path, UT has :
    - i. 5 Year Master Program (a.k.a Terminal Degree)
      1. Takes out the research part of a traditional Master's program so is only an additional 1 to 1.5 years (rather than 2).
      2. Don't need to take the GRE!
      3. Comparatively at UT, this program is not too expensive.
        - a. TAs get tuition cuts + are paid (\$12 - \$25 / hour)
      4. Apply your Junior Year - need at least a 3.0 (3.5 recommended)
        - a. Make sure you're well on your 4-year track.
      5. Once admitted > take Grad classes your Senior Year
    - ii. Higher acceptance into the 5 year program rather than coming back to do a Masters (40% compared to 15% acceptance rate)



## Social

### 1. What other orgs are you in, how do you balance those?

- a. Join things you are interested in. Learn a bit more about them. Limit to 1 - 3 orgs. Be committed to what topics interest you. For example, you can attend tech talks and info sessions with any org. You don't have to be a member.
- b. Try to have a social org and another professional org to balance mental health.
- c. KNOW YOUR LIMITS. This is important not only to orgs but to all of college as an ECE/CS student. A single ECE course is a massive endeavour compared to a single course in most other majors. It is very easy to think you can do things X, Y, and Z at the same time and then get roped into a semester you can't handle. Learn and know your limits, and make your mental health a priority.
- d. Follow all your interests then cut down.

### 2. Dorm life

- a. Engineering roommates can be helpful because they will understand your busy schedule.
- b. Try to get someone with a similar sleep schedule.

### 3. General Advice

- a. Make friends with other students, sometimes it's nice to know you are not the only person feeling overwhelmed. It's okay to just say hi and try to know the person you keep bumping into at classes.

