Team S³

This class is not about space, it is not about math, it is not about engineering—this class is about teamwork. Your success and satisfaction in this class will be wholly determined by how well you work with your team. As a leader, you need to make sure every member of your team is invested in your project—including yourself. This is a tough balance to find, but it’s necessary to do so because if you don’t, you’ll pay for it with the success of your project. Chris won’t give you reliable deadlines or expectations, and this will hurt your ability to lead, so you need to be flexible in your initial planning of the semester.

Work hard. Be efficient. Have fun. This class is worth it, but only if you have a dedicated team. We did, and we succeeded.

Team Carnivorous Ninja Warriors

Hello students of ASEN 2500, you are about to embark upon an epic journey of colossal and mammoth proportions. You will delve deep into systems engineering, programming, interpersonal relationships and even deeper into the enigmatic abyss that is your psyche. However, good sir or miss, there are a couple morsels of insight and advice I would like to give to you to feast upon; keep in mind that despite the seemingly superfluous nature of the cornucopia of knowledge I am to bestow upon you, it is but to whet your appetite rather than intimidate you into retreating from this higher plane of education. Firstly, the role of the leader and the choice of whoever is in charge not only dictates how the rest of the project will unfold, but also is the lodestone upon which the group’s success will be built upon. Whether stoic or anxious, the leader is the nexus to keeping a balance between power and harmony within the group and ensuring that everyone, whilst maintaining a spirit of individualism, forges a cohesive gauntlet with whence to meld and fabricate a working Cube Sat. Yet another bit of knowledge for you to indulge in is that time is a vital resource, but alas, it is one in short supply. One must remain always aware that although time is a tool that you will use, it is tool and as such it can and will be used against you; do not be ensnared by a false sense of security that several months may evoke, as it will be turned against you and time will become but a scythe that lays a swathe of pestilence and despair upon your team. If all else fails, simply remember that there never is enough time, only the skewed disillusioned perception that such luxury exists. The last morsel I would like to impart upon you is that programming the board is an endeavor that must be undertaken early and quickly. Akin to an early freeze sweeping through a garden, failure to program early will bring desolation and cessation to the fruits of labor that were sowed early on. Sadly, our dialogue must come to an end and I must bid thee farewell, but I wish you the best of luck, you’re going to need it…

Team Skills that Killz

This class is hard and it should be about a 10 credit class. You will sacrifice a lot of sleep this semester. Be prepared to be stressed and worried about your experiment. That being said, it’s also a class that teaches you a lot about working with a team and using your resources. Don’t be afraid to ask questions! Most people don’t know what they’re doing right away; usually it’s alright to have no idea what you’re doing, as long as you work hard to figure it out. You’re very likely going to worry about your grade, but don’t. Worry more about using this class as a learning experience. It’s hard to mess up your grade if you go to class. But definitely always be working on the project. Don’t wait to make deadlines, no matter how much time you think you
have! *Everything* takes longer than you think it will. You’re not done after launch! There is a lot to analyzing data and preparing the final report, no matter how simple it sounds.

Also, make sure your team communicates well. Communication is critical to having a successful project. If your team is having problems, address them early. Have meetings frequently and make sure everyone is caught up with the project. Make sure more than one person knows how the components of your satellite work and that everyone is involved. Take advantage of the people in Space Grant who know what they’re doing. Most of them will be more than willing to help you.

**Team Search**

This class is an awesome learning experience if you make the most of it and work diligently over the semester. Make sure that you organize your team and schedule wisely to ensure a smooth semester. And ensure that you schedule your meetings early and often, don’t leave all the work until the night before because you will be there for at least eight hours or more. Pick a project that everyone is interested in and that is within the scope of the class, don’t make too easy or complicated of a project; KISS (keep it simple stupid). Don’t forget that you are actually launching something into near space, so be prepared for a lot of challenges, but also be prepared for a ton of fun.

**Team Garlic Armageddon**

This class is going to be a lot of work, but very rewarding. If you are looking for a class where you can make something without having to put much effort into it, then you should look somewhere else. For every hour you spend working on your satellite it’s a safe bet that you will be spending at least two more writing about it. This class involves a lot of writing. It’s not busy work, though, as it thoroughly prepares you for real life presentations and proposals. You are going to have to know your stuff and be prepared for all sorts of problems along the way.

Though Chris says it every day, Time is not on your side! Try to finish everything at least a week before flight, so you have time to run at least two or three full length flight simulations. Testing everything is crucial.

On the other hand, you will have a blast. Chris is an amazing teacher, and will make you love every class. Groups can sometimes be tough to work with, but if you work at it, you can make great friends. If you do have group problems, try to work it out As Soon As Possible! Having one poor worker in the group can drag the rest of the group’s morale down too. At the same time, you all can have a lot of fun together.

Launch day will be unforgettable. There’s nothing like seeing the satellite you worked so hard on soar through the sky, to disappear behind the clouds. A few tips on that note: use anti-fog on the lens of your camera, and for goodness sakes, don’t forget to turn your AVR board on!

As a final note, try to pick something that you know you will have fun working on. If you are willing to work hard for a great reward, then Gateway to Space is right for you!

**Team Dionysus**

Some people seemed to hate this class but we really liked it. We had a good group that worked well together and has diverse talents/knowledge coming into the project. We were fortunate enough to have people with backgrounds in computing, astronomy, business, and leadership. Be prepared to work a lot but…it’s really not that bad, just manage your time well. Expect to work more than once a week; we met three times a week and still ran out of time. Even
if you think you’re ahead of schedule, don’t take a week off; keep working. Also learn as much about your hardware as much as you can so that when “the shit hits the fan” you know how to fix it. Team leader, don’t be afraid to tell your team what to do. Assign them different sections of the DD and make sure they get done when you want them done. Overall this class was a valuable learning experience in more ways than just launching a satellite. And it was fun!

**Team Supernova Brigade**

Rule number one: stick with a simple experiment! Our team went with a simple experiment, and the project ended up being enormously time consuming and wrought with problems. A complicated experiment would spell trouble. Furthermore, make sure to continue to stay on top of the work and not leave anything for the last minute. Most importantly, work extremely hard to understand every nut and bolt of the experiment for the proposal. This will keep the team from having to rework the entire circuitry for Rev A/B. For our experiment, the team designed a large structure to maximize the available space to attach insulation to protect the satellite from heat loss. This was a great success since the internal temperature of the balloon satellite never dropped below 2 degrees Centigrade. Furthermore, make sure to use anti-fog because the photos are among the most tangible results from your experiment. However, make sure the camera is extremely secure. Our team was extremely lucky because condensation caused the sticky tape of the Velcro to detach from the insulation. The Velcro finally separated from the foam core on landing; however, if this had happened immediately following burst, the internals would have been ripped to shreds. Most importantly, have fun and keep your chin up because this is your first engineering project and will dramatically help your confidence and experience but only if you keep working to optimize the project.

**Team Ochocinco**

Get a head start! You've probably heard it a million times by now but we can't stress enough the idea of getting started early; if you don't (which few people actually do) then at least have a solid schedule set and don't fall behind on it. If you end up having a troublesome/lazy team member (which there often is), deal with that early on as well. One of our biggest mistakes was not to bring our team issues in front of the professor until late on in the semester and it cost us. No, he can't force that student to work and no, he can't make you all get along better, but he is the one in charge of the grade and he can make sure that you don't get unfairly graded because of that members failure. Also, a lot of people have misconceptions of what this class is about; this is a very hands-on class that should probably be worth 4 credit hours, not 3. If you’re feeling that this doesn't seem like your kind of class, drop it. The description that's given in the first week is a pretty good representation of how the class will go and there are usually people on the wait-list that would love to take your spot. Many of you may be wondering if the class has a good professor. On the bright side, he's a lot of fun, he often shows humorous videos during class and he even broke into a light-saber fight once mid-class. On the bad side, his grading can be a bit harsh at times and he's not the kind of professor that will hold your hand through the class; if you need help, he expects you to go off and find the answers on your own and he often won't give help unless you've looked elsewhere first.

**Team Magnaritaville**
The most important thing to understand about Gateway to Space is that it will be the most time consuming class in your schedule. Moreover, the rewards and experiences you gain from it will be based on your own effort and commitment in the class.

In terms of time management, you definitely want to establish a weekly meeting time for the group upon which everyone should agree. Decide this early and make sure the meetings are consistent. Start videotaping your group early – you never know what you might capture (it will most likely be something incriminating about your team mates).

As for the satellite itself, keep the experiment simple. The more complex an experiment becomes, the more room there is for problems and mistakes. Try to cohesively research your science experiment, and order the hardware early.

When you come across problems and seemingly impossible barriers (which you inevitable will) utilize your resources. This includes professors you may know, Space Grant, other teams, and research. Also, make sure that everyone likes the experiment and is interested in it. This will directly affect your team’s commitment to the project and the quality of your satellite.

Most importantly, enjoy this semester; as overwhelming and intimidating as it may be, it will be one of the most valuable experiences of your education thus far. Bond with your team mates (after all, you will be devoting many all-nighters to the team), and have fun.

Team Alpha

Gateway to Space will be everything that Chris describes to you on the first day: fun, challenging, a great experience, and a lot of work. Don’t underestimate the intensity of the work you will be taking on, but also don’t be intimidated by the amount of work, because this will most likely be your favorite class in freshman year and it will be a class you’ll never forget. The day that you finally launch your satellite which you have spent so many hours working on will be incredibly rewarding, but there are a few things that Team Alpha would recommend doing to make this a more enjoyable experience for you.

First off, get to know your team. You will be spending a lot of time with them. Becoming friends with all of them will make this project a lot more fun and getting over difficult challenges along the way will be significantly easier if you can interact with all of your team members well. Also, when choosing the experiment your team will do, you don’t need to go overly complex. Simple experiments will do just fine and there’s no reason to make your life harder then it needs to be. Teams that chose really complex projects often had to either dumb down the experiment or change it all together because there was no way to accomplish their goals in the timeline given. You also need to be careful with time. Don’t put your project off for too long, or you will find that there is not enough time for sufficient testing, which is one of the most important parts in this project.

This class may seem overwhelming, but getting A’s and B’s is not difficult. As long as you put effort forward and take the time to do a good job with all of the work you do, it will pay off. Make sure to do well on the proposal, design documents, and revisions, because they are worth a lot of points and can easily boost your grade as well as improve your understanding of your project. They are not very difficult as long as you break up the work, edit it well, and get started on them early. The next important point is to look ahead on the schedule. Know how long you have to get everything done and you will do fine. Getting an early start on things will give plenty of time to get help on any problems which you are sure to run into, and this will give you enough time to finish your satellite and test sufficiently.
Finally, give this class your all, and it will give back to you. All the stress is worth it because in the end you’ll find yourself wanting to show everyone your flight pictures and tell them about your satellite and how it works. You will have so much more knowledge about engineering and what is necessary to become an engineer than if you never took this class. The experience will leave a lasting impact on you and it is an amazing opportunity to have as a freshman. How many undergraduate college students can say that they have successfully launched and recovered something they built by hand into space? This class will be more beneficial to you than any other, so have fun and try your best!