Team 1
Dear next semester students, Gateway to Space is an amazing class that will teach you practical knowledge and experience in engineering and general life skills such as time management and teamwork. Chris Koehler is not lying on the first day when he mentions that this class is a lot of hard work, but it has been one of the most rewarding classes the members of Team Near Space and Chill has taken. Future students will need to connect with their teammates and develop a positive work environment with each other; they will be spending a lot of time together. Start working as soon as materials and other opportunities make progress possible, and plan to finish well ahead of deadlines. Although many assignments and tasks in this class can be completed completely online or by one person, try to meet in person to work together on documents and important tasks. In-person meetings allow teams to better understand strengths and weaknesses of team members, provide more personal accountability, and allow any disagreements between group members to quickly be resolved rather than having tension build up due to constraints of online communication. Talk to TAs for help on the project and documents, and reach out to other professors and faculty to improve project design.

Team 2
Be diligent in your work and keep up to date with everything; it makes your time so much easier. Stick to the schedule and do not take time spent on this class lightly. Odds are you will fail at some point along your journey, but it’s up to you to not let that hinder you. Embrace when you fail and learn from it to make your mission better. The more you fail before launch, the lower the chance of failing during your mission. Remember to check all components of the BalloonSat thoroughly as you go, so failures are more easily identified. Do not wait until the last week to figure out your test failures. This class is the best hands on experience you can get as a student. The difficulties are high, but the real lesson is to overcome those difficulties and be a better student and teammate. Always follow your goals because they can and will become reality. Good luck and fly high.

Team 3
There are a few things that the team learned constantly throughout the Gateway to Space course that Team Tropo Thunder believes would be helpful to make your time working on the project easier and more efficient. One of the most important aspects of working on this project should be good team communication. If every team member is on the same page, it enables everyone to contribute which leads to tasks being completed faster and with more quality. Separating of jobs is a great idea. However, every member should be looking over every part of the project to ensure the highest quality of the project. Additionally, it can be extremely tempting to rush through the documents such as the proposal and the design documents and begin working on the project. However, it is vital that a solid foundation of design and testing is devised prior to actually working on any part of the project. Doing so guides the project and leaves less room for error while working on the actual hardware and software. The third and final message from our team is that even though this class can be stressful at times, you have to realize that this is a great
opportunity to test your ability work on engineering topics within a team setting over a long period of time. It is quintessential to maintain a positive attitude throughout the project and remember to take breaks. It will be one of the most memorable classes you will take in college.

**Team 4**
To all future Gateway to Space students:

This class, while time consuming, is ultimately fun, rewarding, and highly satisfying. It is fun because you get the opportunity to learn to work in a team on a project which will enter near-space in your freshman year! It is rewarding because you will learn a multitude of new skills, such as soldering, Arduino coding, electrical component construction, structural testing, and more. Finally, it is highly satisfying because you get to see all of the work which your team has put into this project over an entire semester culminate in a flight which will reach tens of kilometers into the sky-- beyond the sky. The time requirement may certainly be painful, but Team Orion's Brawn wholeheartedly believes that it is worth it.

Some things which worked well for this team were to appoint a co-lead as well as a Senior Manager. It is important to have one person who has the last say in any team decision, but it is equally important (especially in college) to have a second person able to take charge if the senior manager becomes unavailable. Also, if you find yourself in the position where your team can only meet for one or two hours per week, fear not! Team Orion's Brawn faced the same predicament and overcame it by clearly setting out what each team member had to accomplish solo in any given week. Then, at each following week's meeting, putting all the pieces together as a team. As a final thought, we recommend against taking Calculus III for Engineers and this class simultaneously. It can be done, but you will be busy.

**Team 5**
Dear Gateway to Space Class,

Gateway to Space is one of the most fun and fulfilling classes you will ever take. It will teach you a lot about teamwork and time management. There will be many long nights, and plenty of stress, but in the end it is all worth it. When you see your payload rise up out of sight all of the stress and exhaustion melts away. It sounds cliché, but the work is worth it, and I would definitely be willing to go through it all again. One big tip from Team Tessellate: Be sure to plan out each meeting and stick to the plan! If you don't have a plan laid out, it is easy to get off track and fall behind schedule. Have fun this semester!

Much love,

Team Tessellate

**Team 6**
Team Nacho Libre would like to first address the next class by simply saying good luck. There are going to be some very long nights, some frustrating failures, unreliable people, bad grades, expensive parts, and things that no one could even expect. However, in the end, you and your team will be lucky enough to send a payload with a personalized mission into near space, a project that very few will be lucky enough to be involved in. Be prepared to sacrifice a lot of time for the class, so prepare your schedule accordingly. Do not work on the project absent-mindedly; rather, dedicate yourself to the mission. Have an active role in it, and be there for the team. There is nothing worse than a team member who believes their time is more valuable than anyone else’s. You are all here to learn, so come in with an open mind, and be willing to be wrong every now and then. Team Nacho Libre has learned more from their failures than they would have from any successes. It is the harder moments that really define whether or not your team will be successful in the class and later in life. It will seem daunting in the very beginning, but you will start accruing knowledge very quickly over the course of the semester. One thing to also bear in mind is that launch day is much closer than you believe it is. Never stop working towards that day and always pace yourself and the team accordingly. To conclude, Team Nacho Libre would like to leave the following semester with a quote that has been the team’s motto for the duration of Project S.C.I.E.N.C.E.:

“Adversity causes some men to break, other men to break records.” –William Arthur Ward

Team Nacho Libre wishes the best to subsequent classes, to Chris, to the Colorado Space Grant Consortium, to EOSS, and to the other teams that launched their missions this semester. It was a wonderful opportunity, and the team could not be more thankful.

**Team 7**

Since much of the work in this class, depending on the mission, is self-guided and self-paced, meet twice a week with your team for two hours each. Team 7 believes that this is key to help pace yourself and the team; it spreads out the work evenly over the semester so it doesn’t get overwhelmingly busy at the end. On that note, do not wait for the day before an assignment is due to do the work because you will regret it in end. Also, have someone in your group get laser cutter certified so you can laser cut your box. It takes a while, but it makes your box look professional and nice, and you can do homework while it cuts. Use Tim May and Daniel Godrick in the electrical engineering department for project help; they are easily accessible and very helpful. Delegate jobs to certain members and make members responsible for those jobs for efficiency. Lastly, become friendly with your team and learn how to work with them so you can work quickly and efficiently. Working in a friendly environment really helped the team complete the project and made it fun to do so. This advice is what Team 7 believes will help the next Gateway to Space Class the most in having a successful project and mission.

**Team 8**
The first thing to know about this class is that it is not easy. You will spend a large amount of time both at team meetings and on your own working on the payload, reports, and presentations. Therefore, as one could conjecture, time management is extremely important. If a team manages their time well, they could avoid the last minute rush and subsequent flood of stress that comes as launch day approaches.

The second thing to know about this class is that it is a group effort. Everything you do from beginning to end will be team work. Work well with others, be accessible, do your part, and all should be well for the semester, but be ready for the unexpected. There are a lot of things that can happen in this situation, be it personnel, mechanical, or logistics issues. The best way to deal with personnel problems is to be a good group member as discussed previously, and the best way to deal with mechanical problems is to test, test, test.

Finally, know that this class is immensely satisfying. The second that the balloon lifts off the ground, all the team’s work is validated, no matter how well the experiment goes. So don’t let the stress get to you. Always remember that you get to send something to the edge of space, and that something, which you made, will experience the edge of our world, and return effectively unharmed. Now that is not something that many people get to do in their lifetimes.

Team 9
This is a one of a kind experience and Chris is your guide through it. He is a wonderful person, in and out of the class. There’s a lot to learn and a lot to do but at the end of the day, it’s all worth it. This class will inspire you and at the same time guide you to what may end up being your career. Tip: Begin testing early on in the class and do not hesitate to ask questions, they will be answered.

Team 10
Time management is crucial to the team’s success in this class. Each team has to make a schedule, but it would be a good idea to have a specific goal in mind for each team meeting and also specific roles assigned to each team member. Team Riva met three times a week outside of class for two hours, and that was an adequate amount of time to turn in documents and presentations on time. Be sure to get work done early in the semester, so you will not be rushing and putting in a lot of hours the week before launch. Early on in the semester, the team should figure out each team member’s strengths, like coding, researching, or soldering. Whenever the teams are assigned, it would be a really good idea to start a group text message as soon as possible. It is fundamental to have good communication between all team members and make sure each one is aware of what is going on in the project. Also, it is important to get help from the resources on campus. Inevitably, there will be problems that arise, but these can be remedied so much faster by asking any of the TAs, Chris, or CU engineering faculty for help.

Overall the main message Team Riva wants to pass on is that Gateway to Space is an incredible class. Throughout this project, each person had to think outside the box
and be creative in problem solving. Gateway helps students better their presentation skills, allows them to get teamwork experience, and not to mention launch a satellite into near space. Each member should put in as much work as they can into this class and their project because what you can learn and get out of it is invaluable. Enjoy every second of this truly unique class!