Overall, my expectations were met. This was a really great class, and I ended up with a really great team. I'm somewhat unhappy that I wasn't able to put as much time into this class as I wanted to, because of outside prohibiting factors that I couldn't control, but I was still able to help my team make something really great.

My expectations have been met and further. In the course of most classes you learn the textbook and apply its rules for the purpose of applying its rules. In this case we were given a reason to use our knowledge and a goal to be met that was tangible. I wish all my courses were like this. I genuinely express my gratitude to Chris, Crawford, and all others that allow this course to be as is.

Yes my expectations were met in the class. It was very time consuming as expected, but I enjoyed the work. Being in the group was great we really became close and it helped me to connect with more people than I would have on my own. Gateway was one of the hardest classes I took my freshman year and one of the most beneficial to my education.

This class was much more beneficial than I first imagined. After hearing about the general projects class, I figured I would work fairly hard, and that the class would be much more open-ended. I ended up spending way more time on the logical parts of the class such as design documents, presentations and homework than I expected. I really think that this was a good thing, as that has given me some good experience on a real engineering project as opposed to “build whatever you want”. I am very proud of the design document the team made, I feel it is professional and I learned a lot while doing it.

On one hand I am very happy that I chose a challenging project, because it forced me to learn way more about the Arduino, AD/CS reaction wheels and electronics than most people on other teams (I could be wrong here, I know that they worked hard too). But it would have been nice to do a project that was a bit more successful and a bit less time consuming. I can’t blame the class for this, but I wish I had known more about the project before choosing one. It’s very difficult from the initial meeting to try and figure out how feasible a project is, how much time is required etc. I think prior research should be stressed more in the beginning of the class. Looking back I remember Chris telling us our plan would be difficult, but we had no context to determine how hard it would actually be.

The guest lectures were equally beneficial to the project and the presentations. They provided many different views on the industry and were very inspiring. It is just too bad that not all of them were able to come.

My expectations were not just met, but blown out of the water. This class was the perfect balance of work and fun, late nights and early morning launches. I loved every piece of ASEN 1400, and would recommend it to everyone I meet. I enjoyed each guest lecture and though they were all unique and brought their own touch to the aerospace field. Reading Rocket Boys made me envy Homer Hickam and his rocket launches. Thank you both so much for being at lecture and inspiring incoming students year after year.
Absolutely. The choice between GEEN 1400 and ASEN 1400 was pretty difficult but taking Gateway turned out to be the best choice I made all semester. On the first day of class I truly had no idea what to expect. Chris told us that we would be building our own BalloonSats from scratch and that it would be a ton of hard work. I was nervous at first because I literally knew nothing about space or space flight, but Chris helped us through every little detail. The BalloonSats project seems pretty daunting in the beginning because it really is a daunting project to complete in a semester, but once you schedule out team meetings and put some due dates on your calendar, it really is manageable. Not only did I get the hands on building and coding and drafting of documents that I wanted, I learned a ton in lecture about orbits, launches, and rockets. Most courses I've found to be very one dimensional, in the sense that you focus on one subject in one field. Gateway was different. We saw the whole process through, from design to launch to analysis, and we read a whole book, did community service, heard from guest speakers from the industry and got to make some friends. We focused so much on one project but it felt very interdisciplinary the whole semester. The best part about the semester was all the laughter — in lecture and when we were working with our teams. Getting to know my peers in aerospace was so much fun and made me realize that I love other people who are also interested in space. Gateway proved to me that I am on the right path and pursuing the correct major!

This class definitely met my expectations. I gained valuable experience that will certainly help me in the future as I continue my career. I expected a lot of work, which happened; I expected a sense of satisfaction when I finished my project, which definitely happened.

My expectations were absolutely met and some even surpassed. I expected to spend a lot of hours outside of class on our BalloonSat, and learn a lot in the process. I also expected to have fun on launch day, but I didn’t expect I’d have as much fun as I did. I din’t totally know what to expect for class lectures, so I was pleasantly surprised by all of the guest speakers which I really enjoyed. I had a great time with my team even though sometimes we had rough meetings. I loved the whole process of designing, building, and testing the BalloonSat, and it’s awesome to be able to say I sent something I helped build into near space.

This class was exactly what I expected. It was incredibly fun and intellectually challenging, and I was glad to be able to learn different skills for the class. What I didn’t expect was the time commitment. It was a real shock to me as to how much time this class takes. At first it wasn’t bad meeting with the team for 6 hours a week, but soon it started to ramp up to 12 hours a week. It was stressful putting this class in priority than my other classes. Time was not good to me for this class. However, we pushed through and created a successful experiment and the time spent was indeed worth it.

My expectations of the class were met. I had heard previous to this class that it is a lot of work, but very rewarding. This was exactly the case. My team had many times that we were doing a lot of work late at night before the deadline.

My expectations for this class were met. I was expecting it to be very difficult but also very rewarding—the kind of experience where one begins with almost no knowledge of a subject and is thrown in head first. Through those initial moments of bewilderment, we were provided with the resources and support necessary to step up and rapidly fill out our knowledge. For instance, the soldering workshop and Arduino classes provided just enough help to show us that our missions could be accomplished. Although there were many moments throughout the class where I felt slightly lost or overwhelmed by the sheer amount of work, difficulties with the design, or the intellectual complexity of
Gateway to Space – Messages to Fall 2015 Students from Spring 2015 Students

the theory behind our project, I was encourage by the documentation from past classes and by lectures to continue working and eventually figure everything out. The team aspect also met my expectations; we experienced some problems but became friends through the process. The only thing that surprised me was how stressful and frustrating it was to have teammates that didn’t contribute. Obviously, with group projects one must expect that some people will not be as helpful as others but the problem became more severe with the sheer magnitude of work that Gateway requires. If I relied on certain team members to help, they would perform very poorly with little effort and negatively impact the team, but if I didn’t rely on them to help I ended up with much more work for myself and the other contributing teammates. Mostly I ended up doing the latter for the sake of the project but it was very disheartening how little I could do to address the situation.

>> My expectations for this class was definitely met. In all honesty I did not expect to receive as much as I did from this class. I learnt so much about hardware and software, but most importantly I learnt about the applications behind them. I loved learning about arduinos and applying them the Balloon Sat. Most of all I didn’t expect to gain so many amazing friends. My gateway team has really bonded through this process and Gateway to Space truly gave us this opportunity. At the beginning everyone was very skeptical of our project, and whether it would launch or not. I wish that we had a bit more access to understanding previous designs and knowing whether they would work or not. In the end however everything worked out and I really enjoyed the process. It did keep us up for many nights, and all of worked really hard. This class was also very time consuming, however it was because the team wanted to put in as much time as we could to achieve such a lofty goal. I do appreciate the amount of time we got I think it was just the right amount, and the mass allocation helped a lot as well.

>> I enjoyed this class, but my group was difficult to work with. There were personal conflicts, which, although I was not a part of, still negatively impacted the group. I really really enjoyed the lectures and I wish we had gotten to hear more guest speakers. I enjoyed launching the satellite, but honestly it’s not what I want to do for a living. I like much more physical projects like rockets, robots and mechanical challenges, whereas this class focused most of the effort on the science portion of the project. I think that’s why I liked the lectures so much, especially the propulsion lectures. This class really helped me get a good idea of what kind of an aerospace engineer I want to be.

>> Beyond just being a lot of work and lot of great hands-on experience, this class showed me how to work effectively on a team, especially if not everyone has equal dedication to the project. My people skills developed as the project progressed; I can now say that I’m capable of working on a team, something I couldn’t say entering the project. I didn’t think I would be heard on the team, but all my ideas were welcomed. Tensions were handled by the team as a whole, and we learned together how to handle them without hindering development of the project. But beyond that, a couple teammates became friends that I don’t think I’ll lose for the rest of my college career and perhaps more than that.

No class in my college career so far has taught me as much as this one. I learned how to handle big projects, how to research background information and apply it the next day, how to write professional documents and deliver formal presentations. While my required lectures teach me what to think, this class taught me how to think. Chris has been the most valuable resource I worked with in college, and I’m so thankful that he gave me this opportunity.

I’m more proud of my BalloonSat than anything I’ve ever created, and the stress, the tension, the all-nighters, and the steamroller of work was more than worth what I gained throughout the semester.
As a junior, I came into this class not expecting much. I was not looking forward to working with a bunch of freshman who I assumed would act like they knew everything. I was very wrong to prejudge. Although I may not be staying in school much longer, I feel as though this class helped with many aspects in my professional life. In my three years I have yet to write such a comprehensive and detailed design report, other classes have had design reports but they do not have as much detail as the one that my group wrote throughout the semester. I enjoyed the class and I believe my presentation and writing skills have improved a lot. I have also learned to better work in a team by realizing how important it is for every team member to contribute. This class took more work than some of my upper division engineering courses this semester and made my life incredibly hard trying to juggle this class with others, but I do not ever regret enrolling in this class (not that I had a choice in the first place).

My expectations were absolutely met, and even exceeded. I knew the basic concept for the class, but I could never have imagined what it would be like to fully complete a project, where the product went to near space. It was brutal at times, and trying of my patience at others, but overall the most satisfying team endeavor I have ever participated in.

YES!!! The Gateway to Space class far surpassed my expectations. I expected it to be interesting and it was always interesting, encouraging and often mind blowing. I also expected it to be hard and it was extremely hard and time consuming. Most importantly, it was fun. I never expected I would be running to recover my BalloonSat with the enthusiasm I felt. This class was an amazing experience overall and definitely exceeded my expectations.

My expectations were more than met for this class. I came into this class expecting it to be my fun, engaging class and I could not have been more accurate. To be honest I did not expect to put more than 15 hours a week but looking back on the entire BalloonSAT launch experience I feel significantly more prepared for rigorous classes that take time, along with effort. In this class I built upon my soldering, computing, programming, and hands-on skills to the point where I wish sophomore engineering students had the chance to participate in a projects class. I truly felt a connection with the course and it was nice seeing my skills get exponentially better in a week or two. Additionally, I felt like I learned so much about circuitry, currents, plastics, and other finer topics that I had a minimal knowledge base about prior to this experience. My expectations were more than exceeded in so many ways, and I am going to recommend this class to all of my engineering friends who are coming to CU next year!

The Course was a very fun experience in and out of the class room. It also taught me how to solder and program Arduino Uno’s which are much needed skills for an engineer, and for that I am extremely grateful. Being a part of the launch of the BalloonSats was very fun and thrilling. The chase was also very fun. The project was a fun one that really excited me. Thank you for making it a very memorable time.

My expectations were by far and away exceeded for this class. I came into this class feeling that we were going to be walked through every little detail of how to build a satellite and that didn’t sound that terrific to me, but I love the industry and I thought it would be really cool to create a BalloonSat, regardless of how much of my actual hard work and ingenuity went into it. Little did I know that we would be given the tools through our Arduino classes and the first couple homeworks to figure out how to construct the BalloonSat, but other than that aid, we were responsible for the construction and work behind our own BalloonSat. This was an amazing thing to be able to experience in the class, and it was better than I could have ever imagined. I also was unaware of the amount time that would be spent constructing the Design Document as well as our multiple presentations over the course of the class. There was twice as much work put into writing the Design Documents and creating and practicing the
PowerPoints than there was building the BalloonSat which really says something considering our group spent upwards of 40 hours constructing our BalloonSat. Overall, I couldn’t have been more pleased with the course. I have nothing to add because this class surpassed my expectations coming in, and everything that happened was impressed me more than I thought possible from a college course.

>> My expectations for this class were definitely exceeded. I expected long hours of hard work and that is what I got. I want to experience and adventure like none that I had experienced before. The whole mission of our BalloonSat was a thrilling adventure. I wanted to challenge myself and I did face great challenges. I am more than happy with the way this class turned out to be. I learned many great things, not only about the aerospace industry, but also about myself. I discovered new talents and skills that I had never tried before. I am truly happy that I enrolled in this class instead of the other projects classes. Chris is truly an amazing professor; tough at times, but all worth it. Without him the class would not be close to the success it is.

>> My expectations for this class were definitely met. Overall, the workload was much more than I originally expected, and I do think everyone who participates deserves more credit hours, but it was all worth it to be able to participate in a mission such as this one. It gave me invaluable experience and knowledge that I would love to put to use in the future.

>> Absolutely! This class was amazing. Amazingly challenging, yes, but still great. It was a huge exercise in teamwork, coordination, planning, and achievement. This class offered the chance to have an amazing experience and my team and I certainly took up the offer. The project provided us with a great insight into the design process, and guest lectures were great for going into detail about particular Aerospace fields and or events. I was exceptionally lucky to have held a leadership position in this project, as it was phenomenal challenge. I was able to learn so much from such an extended project.

>> Yes, my expectations were far surpassed. I had heard great things about this class, but actually taking it makes the difference. I’m so glad I was able to experience Gateway to Space.

>> Yes the expectations I had for this class were met, I expected it to be a great learning experience while it still being a challenge, and it definitely delivered in that regard. I would most definitely take this course again if given the chance.

>> My expectations were more than met. This class was so much more than I ever imagined. More work, fun, stress, excitement and a handful of other emotions. I was most surprised by how much time I spent outside of class on Gateway. Between reports, designs, homework, construction, and presentations Chris keeps you really busy. Yet I always wanted to do my Gateway work before any other class. My team and I poured our hearts and minds into that box of paper, foam and wires. While I am very proud of our BalloonSat, holding our 40 page design document on Expo day was very fulfilling, seeing the paper manifestation of a semester’s work for six people. I wish I could have a class like Gateway every semester. I never expected the amount of time I spent with my team. I saw them 5 out of the seven days every week for the whole semester. Even though one of our members was a bit of a butt, we still had a great time.

>> My expectations were certainly met, and arguably exceeded. I expected to be a part of an interesting, challenging, and more in-depth experience of what aerospace engineering actually is like, and that is exactly what I got. However, I didn’t expect the amount of excitement I experienced throughout the semester. That excitement was a result of both good and bad situations, such as after the successful
launch or after realizing you screwed up and had to stay up late to fix it. I hoped to expand my engineering horizons and further develop the experience and skill sets that will help me succeed in internships and careers. I think this course definitely helped with that, and even provided practice on other career skills, such as writing a good resume. I actually really enjoyed giving all of the many reviews this semester, too. They were very helpful in developing the skills to successfully present ideas thoroughly but concisely. Without a doubt, one of the best days this semester was launch day. The satisfaction of success, and resulting pride was so exciting.

>> My expectations for this class were met. I expected it to be a lot of work, but definitely worth it in the end, and both of those happened. I developed my skills in teamwork and leadership, and I acquired many hands on skills that will help in industry. The only expectation I had that was not met was how much I enjoyed the class. I thought this would be my favorite class this semester, something I would look forward to going to every day and never want to end. Unfortunately, this was not the case, as I honestly could not wait for it to be over. The problem was not the class, but it was that I discovered my passion for space was not as intense as I had previously thought. Gateway to Space was an incredible experience, but it also allowed me to come to the realization that the space industry is not for me. Because of this class, I changed majors; however, I do not regret taking it due to the skills I developed and acquired and the major sense of accomplishment I now feel.

>> In the beginning of this class, I have never imagined that this class will be so cool and challenging! I met new friends in the class with different background and also great Professor, like Chris. In Gateway to Space class, I learned so many things about space and I believe that it will be useful to give me strong foundation in Aerospace Engineering career. Other than that, I did not only learn about the things that usually done by engineer such as soldering, programming, etc, but I also learn how to think and work as an engineer and scientist. However, in fact, this class took a lot of my time so much in order to complete the project, but I think it is worth it. I am really glad that my team could fly the BalloonSat successfully, although there is a bit failure on the project. Despite the failure, the experiment and experience that I got from this class were really amazing and I have such a great time in this class. All in all, my expectations for this class were definitely met.

>> My expectations for the class were surpassed. My older brother took this class two years ago. He often talked about the class so I was well prepared for it. The work load was definitely a challenge but I expected as much and was prepared to dedicate a lot of time to the class. I was very impressed by all the guest lectures and through the Systems Engineering talk was able to reaffirm my decision to choose that as a career. This class has been a great experience. It still amazes me that I was able to develop a project that was flown in space*. I think that it is amazing that this class puts so much trust in us to accomplish these things when we are only freshmen. It is definitely a very unique opportunity that I will never forget.

>> My expectations for this class were more than met. I came into the class a bit unsure of what it was, but I knew that it was going to be a lot of work, but worth every second of it. At first, I kind of hated it. I did not really like my team and it seemed like we were putting more work into presentations than the BalloonSat. However as the semester went on, I learned more and more and had more and more fun building the BalloonSat. The class periods themselves were also awesome. I thoroughly enjoyed all the guest speakers and learned a ton. So, in the end, I affirm that this class is very difficult and takes an extraordinary amount of work, but is totally worth it!