University of Louisiana at Lafayette

FA17 - Student Evaluation of Instruction Results

MCHE201-001 (23213.201820-1)

Dear Joshua E Vaughan:

The attached report contains SEI results for: MCHE201-001 (23213.201820-1)

The evaluation and results are divided into the following question groups:
- Student reported demographic information
- "Thinking about the overall course listed above, please complete the following questions:"
- "Thinking about the instructor listed above, please complete the following questions:"
- "Please rate the usefulness in this course the following instructional activities."
- "Please rate the usefulness in this course the following activities and resources."
- The Profile displays the responses of this survey in a graphical presentation.
- A compiled list of all open-ended comments submitted for this course.

For each question, the number of students(n) who responded, the average or mean(av), the median(md), and standard deviation(dev) are displayed.If you have any questions, please contact Melissa Lewis at courseevaluation@louisiana.edu or 482-6974.

Sincerely,

Office of Institutional Assessment
courseevaluation@louisiana.edu

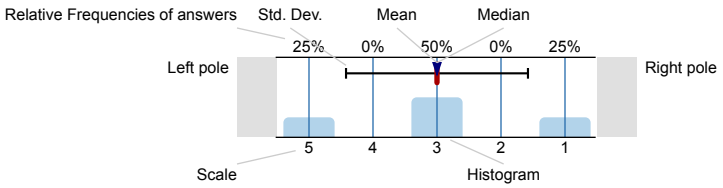
Joshua E Vaughan

FA17
MCHE201-001
No. of responses = 80
Response Rate: 86%

Survey Results

Legend

Question text

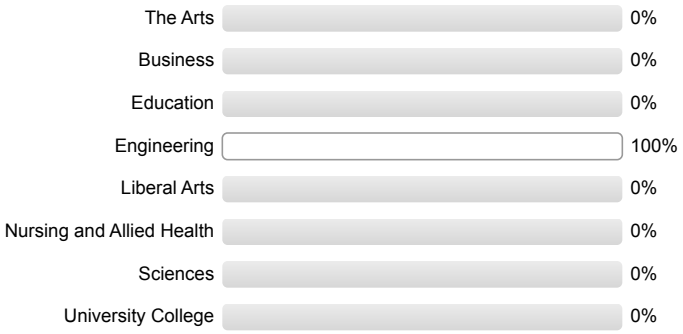


n=No. of responses
av.=Mean
md=Median
dev.=Std. Dev.
ab.=Abstention

About the Student:

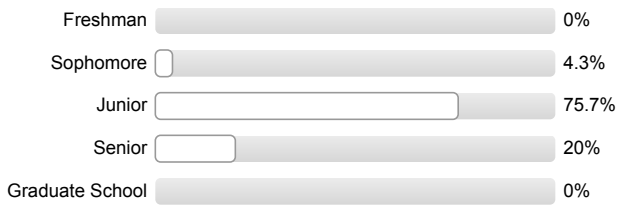
What is the college of your major?

n=72



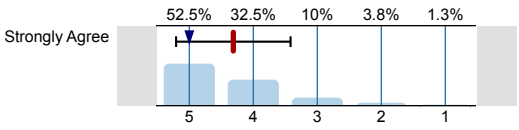
What is your classification?

n=70



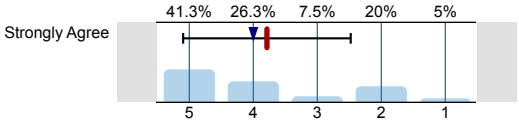
Thinking about the **overall course** **MCHE201-001**, please complete the following questions.

The course learning outcomes and objectives were made clear at the beginning of the course.



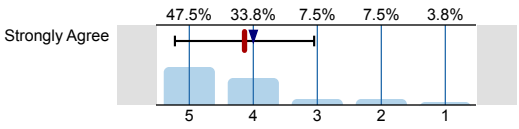
n=80
av.=4.3
md=5
dev.=0.9

Sufficient instructions on assignments, projects, and/or exams were clearly communicated.



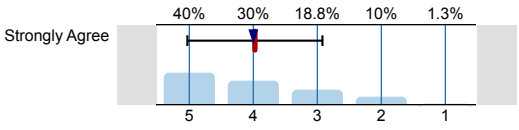
n=80
av.=3.8
md=4
dev.=1.3

Assignments, projects, and exams were relevant to the course learning outcomes and objectives.



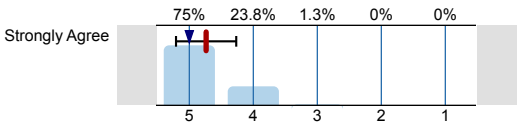
n=80
av.=4.1
md=4
dev.=1.1

The format/design of this course was conducive to learning.



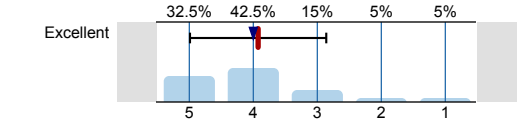
n=80
av.=4
md=4
dev.=1.1

This course was challenging.



n=80
av.=4.7
md=5
dev.=0.5

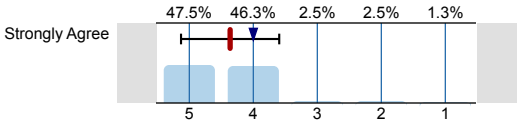
Overall, I would rate this **course** as:



n=80
av.=3.9
md=4
dev.=1.1

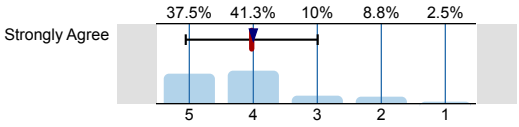
Thinking about the **instructor Joshua E Vaughan,** please complete the following questions.

Made appropriate use of illustrations, demonstrations, examples, and/or required materials.



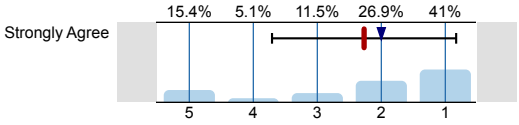
n=80
av.=4.4
md=4
dev.=0.8

Explained subject matter in a way that I could understand.



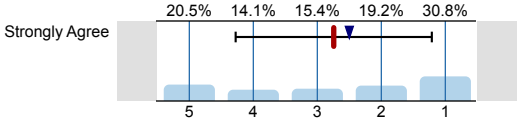
n=80
av.=4
md=4
dev.=1

Provided **prompt** feedback on completed projects, assignments, and tests.



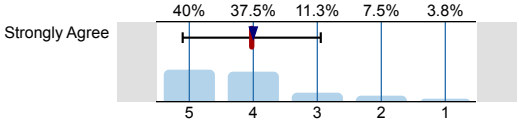
n=78
av.=2.3
md=2
dev.=1.4
ab.=2

Provided **helpful** feedback on completed projects, assignments, and tests.



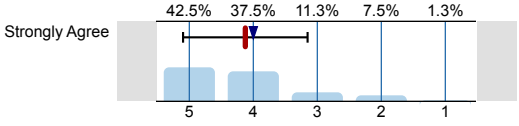
n=78
av.=2.7
md=2.5
dev.=1.5
ab.=1

Created an atmosphere where ideas could be exchanged freely and easily.



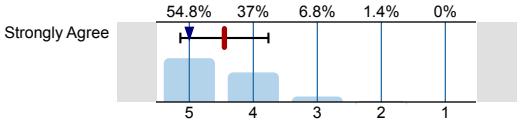
n=80
av.=4
md=4
dev.=1.1

Communicated clearly.



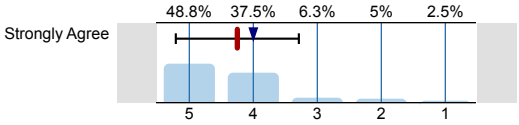
n=80
av.=4.1
md=4
dev.=1

Was available for scheduled appointments.



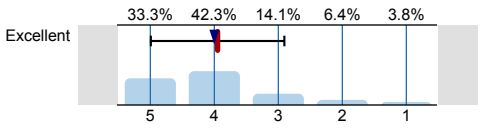
n=73
av.=4.5
md=5
dev.=0.7
ab.=6

Was respectful to students.



n=80
av.=4.3
md=4
dev.=1

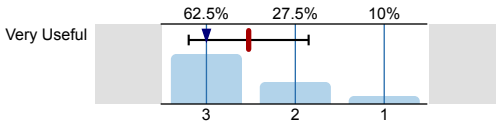
Overall, I rate this **instructor** as:



n=78
av.=3.9
md=4
dev.=1

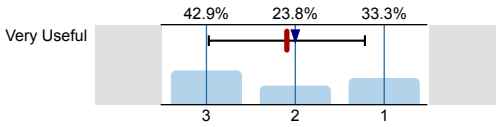
Please rate the usefulness in this course of the following **instructional activities**.

Lectures



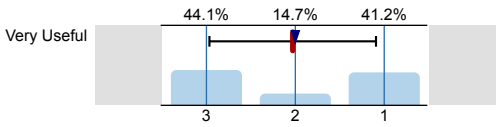
n=80
av.=2.5
md=3
dev.=0.7

Library



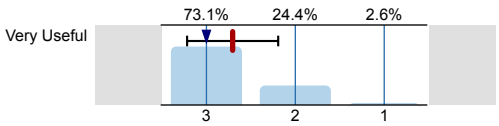
n=42
av.=2.1
md=2
dev.=0.9
ab.=38

Moodle



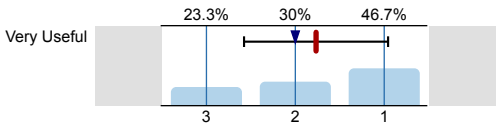
n=34
av.=2
md=2
dev.=0.9
ab.=46

PowerPoint Presentation



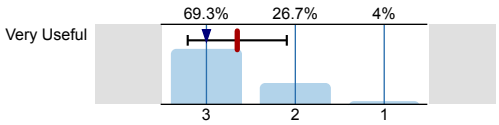
n=78
av.=2.7
md=3
dev.=0.5
ab.=2

Required Textbook



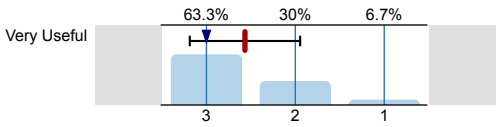
n=60
av.=1.8
md=2
dev.=0.8
ab.=20

Syllabus



n=75
av.=2.7
md=3
dev.=0.6
ab.=4

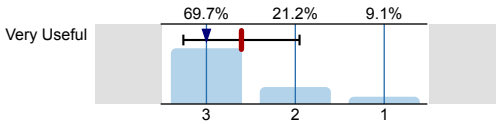
Video Presentation



n=60
av.=2.6
md=3
dev.=0.6
ab.=19

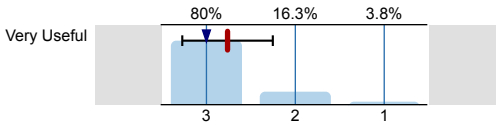
Please rate the usefulness in this course of the following **activities and resources**.

Field Experience



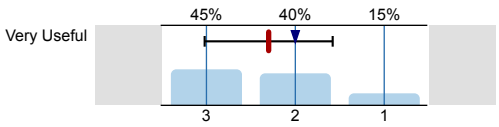
n=66
av.=2.6
md=3
dev.=0.7
ab.=14

Group Projects



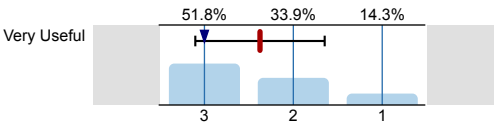
n=80
av.=2.8
md=3
dev.=0.5

Research Projects



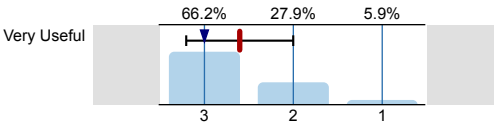
n=60
av.=2.3
md=2
dev.=0.7
ab.=20

Simulation



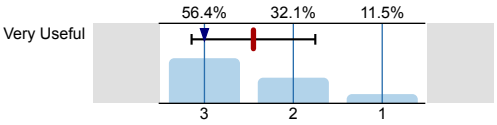
n=56
av.=2.4
md=3
dev.=0.7
ab.=23

Specific Course Software



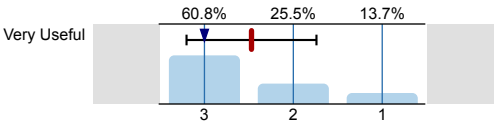
n=68
av.=2.6
md=3
dev.=0.6
ab.=11

Student Presentation



n=78
av.=2.4
md=3
dev.=0.7
ab.=2

Studio Projects



n=51
av.=2.5
md=3
dev.=0.7
ab.=29

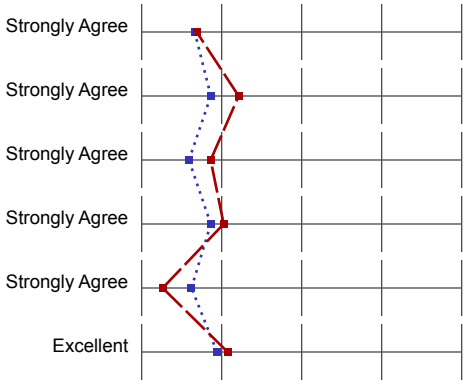
Profile

Subunit: (MCHE) - Mechanical Engineering
Name of the instructor: Joshua E Vaughan
Name of the course: (Name of the survey) MCHE201-001 (23213.201820-1)

Comparative line: College of Engineering - FA17

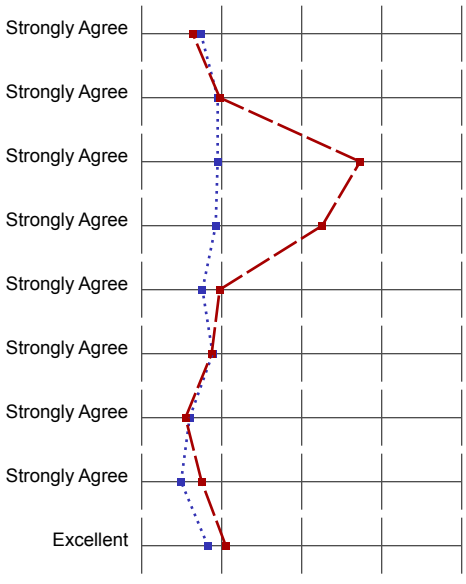
Values used in the profile line: Mean

Thinking about the **overall course** MCHE201-001, please complete the following questions.



The course learning outcomes and objectives were made clear at the beginning of the course.	Strongly Agree	Strongly Disagree	n=80 n=2654	av.=4.3 av.=4.3	md=5.0 md=5.0	dev.=0.9 dev.=1.0
Sufficient instructions on assignments, projects, and/or exams were clearly communicated.	Strongly Agree	Strongly Disagree	n=80 n=2637	av.=3.8 av.=4.1	md=4.0 md=5.0	dev.=1.3 dev.=1.2
Assignments, projects, and exams were relevant to the course learning outcomes and objectives.	Strongly Agree	Strongly Disagree	n=80 n=2636	av.=4.1 av.=4.4	md=4.0 md=5.0	dev.=1.1 dev.=0.9
The format/design of this course was conducive to learning.	Strongly Agree	Strongly Disagree	n=80 n=2641	av.=4.0 av.=4.1	md=4.0 md=5.0	dev.=1.1 dev.=1.1
This course was challenging.	Strongly Agree	Strongly Disagree	n=80 n=2633	av.=4.7 av.=4.4	md=5.0 md=5.0	dev.=0.5 dev.=0.9
Overall, I would rate this **course** as:	Excellent	Poor	n=80 n=2638	av.=3.9 av.=4.1	md=4.0 md=4.0	dev.=1.1 dev.=1.1

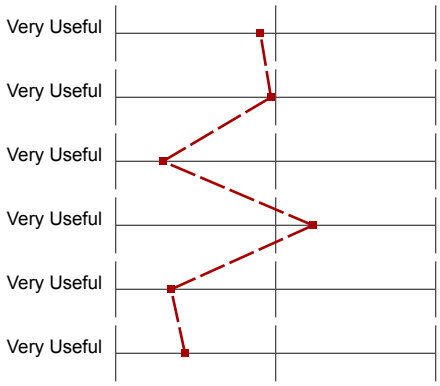
Thinking about the **instructor Joshua E Vaughan,** please complete the following questions.



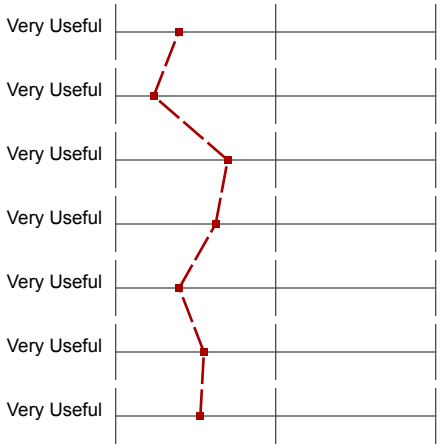
Made appropriate use of illustrations, demonstrations, examples, and/or required materials.	Strongly Agree	Strongly Disagree	n=80 n=2623	av.=4.4 av.=4.3	md=4.0 md=5.0	dev.=0.8 dev.=1.1
Explained subject matter in a way that I could understand.	Strongly Agree	Strongly Disagree	n=80 n=2630	av.=4.0 av.=4.0	md=4.0 md=4.0	dev.=1.0 dev.=1.2
Provided **prompt** feedback on completed projects, assignments, and tests.	Strongly Agree	Strongly Disagree	n=78 n=2611	av.=2.3 av.=4.1	md=2.0 md=4.0	dev.=1.4 dev.=1.2
Provided **helpful** feedback on completed projects, assignments, and tests.	Strongly Agree	Strongly Disagree	n=78 n=2612	av.=2.7 av.=4.1	md=2.5 md=4.0	dev.=1.5 dev.=1.2
Created an atmosphere where ideas could be exchanged freely and easily.	Strongly Agree	Strongly Disagree	n=80 n=2621	av.=4.0 av.=4.2	md=4.0 md=5.0	dev.=1.1 dev.=1.1
Communicated clearly.	Strongly Agree	Strongly Disagree	n=80 n=2635	av.=4.1 av.=4.1	md=4.0 md=5.0	dev.=1.0 dev.=1.2
Was available for scheduled appointments.	Strongly Agree	Strongly Disagree	n=73 n=2408	av.=4.5 av.=4.4	md=5.0 md=5.0	dev.=0.7 dev.=0.9
Was respectful to students.	Strongly Agree	Strongly Disagree	n=80 n=2630	av.=4.3 av.=4.5	md=4.0 md=5.0	dev.=1.0 dev.=0.8
Overall, I rate this **instructor** as:	Excellent	Poor	n=78 n=2635	av.=3.9 av.=4.2	md=4.0 md=5.0	dev.=1.0 dev.=1.2

Please rate the usefulness in this course of the following **instructional activities**.

Lectures	Very Useful	Not Useful	n=80	av.=2.5	md=3.0	dev.=0.7



Please rate the usefulness in this course of the following **activities and resources**.



Comments Report

Thinking about the **overall course** **MCHE201-001**, please complete the following questions.

Please provide any comments about the course in the space below, including ways to improve instruction.

- Dr. Vaughan obviously cares deeply about his students and about how the class is run. He tries to provide us with tools to learn how to become great engineers, which is challenging and frustrating at times. He cares also that the class participate and answer questions. I found the fact that we had assigned seating was less conducive to learning that if we were to choose our own spots. I know that we had the option to select a preference at the beginning of the semester, but I felt like I had no legitimate reason to request sitting in the front. As a result, I found myself assigned to the back of the class. I found myself refraining from discussions sometimes because of my placement in the class because that would involve me shouting out answers. This usually didn't affect me, but sometimes it did. I also found myself more interested in the class as the class moved on and as a result, wanted to participate more, but again found myself not wanting to as often because of my placement in the class. Retrospectively, I obviously would have asked to be placed in the front. Now obviously, this makes it immensely easier to take roll with a class this big, but the same can be achieved with a selective assigned seating process that turns into permanent assigned seating. I feel like this process would concentrate a group of students who usually participate near the front and help facilitate discussion. This would in turn, help with the discussion of harder topics such as code and design decisions. Obviously, this is a small objection to how the class is run, but I feel that it could be an important one. I actually very much enjoyed the class and how it would challenge me to think and I want to see it improve and this is just the first thing that came to mind. Like I said, this is a small qualm with the class, but something that, in my opinion, would help facilitate better and more productive discussions in the class.

- Excellent course, i was able to finally get an instructor that taught me something hands on and taught me how to actually do something in the real world!

- Found that this course was very rushed. Due dates were so close to each other that I found myself, and probably others, would just throw together what we could in order to complete the assignment for the due date, without actually thinking much about what we were doing and looking over our work. I also feel as if the workload was a bit much. I feel as if this course was designed to take by itself, not with 4-5 other classes also. This goes back to it being rushed also; the amount of work we had to do in short periods of time was overwhelming mainly because it is taken with other classes that I also have to study and do work for. I would say the main thing that I learned from taking this class is how to manage my time, and how to work under pressure and under tight timelines. I would also suggest that the components for the robots be given to the teams sooner than a week before they have to have it built and coded for.

- Great course to allow students to interact with other classmates in the engineering department and meet new people. That was the best part of this course. I would also say this course allowed us students to think "outside the box" so to speek and also let students be more hands on. Really think the course should be more credit hours as I spent a lot of time on this course alone

- Group Projects are hell. Let us choose our partners based on the previous mini projects, as by then everyone has people they know and trust. My group left me doing most of the project by myself and the time I had to dedicate and stress it brought upon me took a toll on my other courses. Not your fault, but this class was very frustrating to me.

  I also feel like this class could be broken up into two classes. I don't think anyone will retain the actual design tools you presented as they were too busy worrying about the projects and reports. Just my opinion.

- I believe the course was very difficult due to the fact of how much time it takes to fully understand the final project. The learning curve with the code was steep. I do like how it was challenging, but the fact that the final project is 55 percent makes it very stressful. Now, I also understand that the weighting scale helps people know how important the final project needs to be, but the other projects should count more towards the final grade. It feels like the other projects were not worth putting the effort needed to do the project neatly.
  The extra lab hours were also deeply appreciated. I wish I used them more often.

- I believe this course helps to build a foundation in designing machines in the future, however, I do not believe that it does it well. Some projects like the ARLISS concept are unnecessary when that time could be used for an actual build. Personally I feel that the course could be more beneficial if 2 machines were built, with one being a manual run build like a little times crane with a functioning arm. Then at the end of the semester build a fully autonomous robot. Along with this, being that it is almost a guarantee that no more than 1% of the class has any background in coding or precision electrical equipment that is purchased at the beginning of the semester for $100-$125, more instruction on how to use that equipment would help significantly in improving future final competition builds. I personally believe also that the instructions, while sometimes are very clear can be quite confusing. Such as the first HOQ that was made for the ARLISS concept, the one thing that many students remember being told was "be specific, but dont be that specific".

- I feel that the course could benefit if the final project were given earlier in the course. This way the time constraints for the final project would not be as severe.

- I feel that, as a professor, Dr. Vaughan should work on better communicating his ideas to the students. There were quite a few times I did not understand him and he glossed over my questions when I asked them.

- I got a lot out of the course. I would have gotten more out of the course if I could have gotten feedback on assignments. Being that I did not get feedback on assignments, I don't know what I was doing wrong and how to fix it. I believe this could effect my grade in a negative way.

- I honestly loved the class, couldn't complain except for the fact of crumb group members, which is obviously not Dr. Vaughan's fault.

- I really like that you record the voice from lectures.

- I really liked the idea of this class, but I think the class was way too big to get everything out of it. Dividing the class into two, or even three sections would really improve students' experience in the class, especially when it comes to one on one time and participation with the coding. The amount of resources for the class were great, but even those were hard to follow through without any one on one troubleshooting time with the professor. If you had one hiccup during coding in class, you were on your own really to figure it out from there. Secondly, getting grades back are a must. As of now, aside from design competitions, students have no idea how they are doing in the class. It is especially important to give feedback when doing reports in order to make any improvements on future assignments in the class. Also, the whole semester may have been better spent just coding, making it just a class for autonomous design and having a few smaller projects relevant to code. I think that would help students understand the language more and ultimately get more out of the class. Also, the homework for this class wasn't very beneficial; I think that we could have 5 coding-related homeworks, such as write a code to do _____, or code a motor to do_____. Also, I don't know why we didn't evaluate group members after every assignment all semester long, but I think that its necessary.

- I think the biggest problem in the course is around the final project. Though for personal reasons, I really wish that we would have had more time put into the final project (I know we had a good bit of time). Maybe being able to use Some school supplies (Mitre Saws, band saws, etc.)

- I think the class lecture time should provide more hours for groups to meet and work on projects within the class setting. This class requires a lot of group meeting time for building and compiling reports and i think it would be very beneficial for all students to provide more in class time to work on report and designing devices.

- I think the course served its purpose efficiently

- I thouroughly enjoyed this course this semester. It challenged us as students and held us to a very high standard that I believe we were able to achieve through the great effort and instruction put forth by Dr. Vaughn and Mrs. Hodge. I hope to see this course continue on with more resources available to the students so they can continue get the most out of this learning experience. Some wishes I had that I believe would help with this is access to more fabrication tools and equipment. I who live in an apartment because I am from out of town and at a slight disadvantage from someone who lives here and has access to tools. Overall a great course that I am glad I was able to take

- I wish the class was structured around the final project that way each student could learn more about coding and could have a better understanding of the material needed for the project.

- I would start teaching coding earlier so we could have time to work on it and ask more questions.

- Maybe a lecture on interpersonal communication or a longer lecture on micropython.

- More coding practice, perhaps make an individual project for students to code something. Grading more timely.

- More instruction should be provided on what goes into the projects, especially the final project. Its hard to go from coding lights on a pyboard to full motor function.

- Most lectures were very informative, but others seemed to drag on a little long. Once we started more hands-on material during class, the long class times became more tolerable. This is a good course as it really shows design processes, and how to understand the process. My only real upset was not having any feedback on assignments, therefore, did not know if I was meeting expectations on the reports.

- Overall this is a very difficult class that requires an abnormal amount of work out of the class room. I found it extremely difficult to keep up with the work load for this class while keeping up in all of my other classes as well. Since this class has a lab section maybe that time should be put towards working on projects in class while the lecture section should be for lectures. Also I found the lectures to be very little help. The only ones that helped were the ones on coding.

- Provide more feedback for reports/ presentations to ensure improvement

- The Mini-projects are for helping students with problem understanding and concept evaluation, but we could have used more time for the final project. We also had a project due every week except the three weeks of just making a couple comments on videos. I think if there was just one less mini project, it would give students much needed time to work on their final project.

- The class is great i learned a lot but communication was extremely lacking.

- The class provides a lot of useful information. I just think the information given would be more beneficial in a senior level or senior project class. At that point in our career, this information would be more valuable. I think the robot project is fun and amazing. However, I would have much preferred to have all of our previous projects build up to building the whole robot that completes multiple task verses building a mediocre robot in a months time. I feel that the robot could be so much more advanced if we had been working on this since the beginning of the semester. The robot project holds more value and relevance than the others do.

- The class was a lot of fun. I enjoyed going each day. Even though we didn't take test on the lectured material, it was still interesting to learn about. It was great to get away from the books for a bit and to actually do something hands on.

- The class was interesting, the mini projects could be a little more hands on as well as more time to complete the final project.

- The course should allow more time for the final project so that an optimal outcome can be achieved while taking other rigorous courses.

- The course takes too much of your time, I would recommend doing less Mini projects and start the final earlier.

- The course was definitely challenging. It was very difficult to complete all work for this class and try to take another 13 hours of college courses. I was forced to choose with class I would neglect each week in order to finished all the work assigned by this class. The first half of the course was fine as far as work load but as soon as the final project was assigned, it was too much. Dead lines for contests were too close and my team worked until 2 in the morning for an entire week and more and still wasn't prepared for the first two contests. If this class was some kind of summer camp, I would find it very fun and educational; however, everyone in the class also has to teach themselves thermo 2 at the same time so it just gets to be a frustrating hassle.

  All that being said, I think everything that I did in this class was educational and necessary. Students will never achieve great things if they're never asked to. If I was the teacher, I wouldn't lighten the load.

- The issue with answering "the format/design of this course was conducive to learning" question, was that the time an individual had to allot to this course was extremely high compared to any other courses that were being taken, along with the other courses effecting my future semester weighing heavy on my mind, it was super stressful to balance which made the course a lot less conducive to learning.

- There are far too many things demanded of students.There was far too little time given to complete them to the standard that was demanded. I am one of many, many students that felt this way.

  Had the student body been allotted more time to complete the final competition design and not been bogged down by the projects from the first half of the semester, its likely that the process of completing the project would have been a much different experience. It seems as if the first several reports (Spaghetti Tower, ARLISS, Mechanical Dissection) were completely unrelated to the enormously difficult process of building a robot. This lack of consistent structure to the class led to huge difficulties later down the line. My group felt as if we had been completely wasting our time by writing reports unrelated to the final project in the former half of the class.

  I feel as if it would be a much more productive use of class time to introduce the final project on the first day of the semester. This would allow the students to build upon the design process throughout the entire semester, instead of cramming it all into the last 5 weeks of class. I believe that this approach would produce far better performance on the part of the students, and also much more inventive and ingenious designs in the final competition. In my opinion, the increased quality of the projects would make for a far better competition aesthetic, and would also attract more of a crowd.

  I believe changing certain things about the class would not only enhance the quality of the learning, but also cause the students to have a greater respect for the instructor as well.

- This class did a great job teaching us team and project skills. It was explained to us what was required, and he's website was always very useful reference. For the format of the reports, it was clear on what was expected. As for the actual content of the paper, I'd prefer more instruction on what is wanted. I would have preferred self- assigned seating. I think I would have been more vocal during lectures.

- This class was a very stressful one. Too much to do in a short time!!

- This course challenged students with immediately putting to use the engineering skills we have obtained. Completing this course will pay dividends in future courses such as senior projects.

  Ways to improve would be to assign final groups in the beginning of the semester so students can begin communicating with their group members and putting work into the final design early on.

- This course had a ton of work and was very time consuming. Especially for someone who works 25+ hours a week and 18 credit hours.

- This course takes up a too much time. It is next to impossible to keep up with other classes while in this class.

- This course was absolutely unsuccessful in the desired goals. A complete lack of feedback and unreasonable deadlines and expectations did not create a conducive learning environment. I feel as though several months of sleepless nights, anxiety attacks, and hard work were completely for naught. Unreasonable workloads pushed 4.0 students into failure in other classes; classes that are far more pertinent to engineering fundamentals. I do not feel as though I got anything out of this class and, as of writing this, I am still unsure as to what exactly the point of this class was. This class single-handedly destroyed the passion for engineering that I've held so strongly for several years.

  The randomly assigned groups created an unfair distribution of work and placed excessive stress on students that actually put forth effort and rewarded those who didn't. This displayed a complete lack of regard for student well-being and mental health, especially regarding the final project worth 55% of the total class grade (which is also incredibly unreasonable). In regards to this final project, a skewed grading scale (pitting students against each other for points rather than grading an INDIVIDUAL'S performance, determining grades via a COIN TOSS, etc.) completely disregarded hours upon hours of hard work. The project was a complete nightmare that taught nothing. Please take a step back and realize that you are asking students to build a functional robot in less than a month. A robot that accounts for 15% of our grade. We were handed a bag of parts, told to copy and paste code until it worked, and hoped for the best. This is NOT the way education should be approached. You can not teach programming in two weeks, and we cannot teach programming to ourselves in two weeks. Many of us have no prior programming experience, no production experience, and little access to tools and hardware. This again created an unfair skew across the class, siding more towards those with such experience and resources.

  This class needs a major overhaul. You are not our only class. We are engineering students taking 300-level engineering courses. This was a ridiculous and mentally-destructive experience. The concept is inviting; the execution is unsuccessful. I got more out of ripping apart a toothbrush than I did building a robot; that should speak loudly.

- Very organized. Lecture slides and audio posted after each class.

  As of November 15th, we have yet to receive a grade or feedback on any of the turned in reports. This leads to not knowing what you need to change in your reports, nor what he expects from you in the reports. You also have no idea what your grade is in the class.

- Very vague on what exactly he wants and grades from the reports. Not a single report was graded before the semester was over. This made it very virtually impossible to learn how to make improvements. I respect that he expects nothing short of professionalism for presentations and competitions. He has a very hard job compared to other engineering teachers.
- no feedback on our reports, can't really improve on something that we haven't been criticized about.
- the class wasn't necessarily difficult but it was very time consuming. For a class that is about writing reports the students spent most of their time teaching themselves programing, construction, and C.A.D. Even in a group of three working on one report/robot I spent more time on this than I did on my other three classes. This is mostly due to the gap between the expected skills the students were assumed to have V.S. what we really have. Example, not many students had any experience with CAD design at all yet all drawings had to be CAD, so now you have to teach yourself that. Many students don't work with their hands and just don't know how to build so they end up outsourcing construction out of desperation. the same thing happens when it comes to programming. A suggestion would be to identify the snags that trap students and eliminate them in each of the problem topics. The resources for programming is a good example of this concept, there was a place I could go to reference or copy lines of code to help move progress along. A system like this for CAD and construction is needed. I don't know how to do this for CAD, but for robot construction the most common problem I saw was how to attach anything to the motors. the parts kit should really come with a coupler or pulley or something. I saw many teams fail due to this problem and the more time spent on this the less time is spent on anything else.
- the course is challenging but everyone had the materials to pass the course.
- this class would be a lot better with speedy feedback. The workload should be lighter in order to focus more on each individual assignment. I think having assignments due in portions helped keep me up with my work. Itd be nice to have more time for the final assignment.
- this class would be much more beneficial if the time designated for the lab was actually lab time. the lack of instruction of how to code was the biggest problem i found in the class. many nights i would run into a problem and i had to waste a lot of time because you weren't able to help. I also found you made the class more about coding and you didn't teach it enough. I taught myself more than i learned from you. i think you focused on material that wasnt really important. such as the lecture about patents. that time could of been used to explain better about what the code means and how to use the tools to write code better and jsut a overall better and more efficient way to write code. this class was a class i looked forward to and i just felt like i was not prepared enough in class to accomplish the final project.

Thinking about the **instructor Joshua E Vaughan,** please complete the following questions.

Please provide any comments about the instructor in the space below, including ways to improve instruction.

- Definitely it would help to have feedback on our projects as the course progresses. I do believe that was the only thing that would have needed to be done. Dr. Vanghan did an exceptional job with his availability and his explanation.
- Dr. Vaughan has been one of my favorite professors. His courses are challenging, yet fair. He seems to genuinely care about our education and wants to bring excellence to the MCHE department.
- Dr. Vaughan is an amazing professor and incredible smart. However, I don't feel he is given the tools he needs to make this class as useful as it should be. I also feel he final project is too rushed. Overall, I like the class and the project involved in it. I just wish I was given more time to understand the material, such as coding better.
- Dr. Vaughan made sure we left the class with a new mindset. Best design teacher I've had so far.
- Great professor, is very open to feedback, comments, and questions in class. Explains things in a very easy-to-understand way and is thorough with his instruction, recapping things from past classes. Also provided plenty of online sources for help with projects and encouraged lab hours for him to help students out.
- Great teacher and a good guy. Wish we could have gotten grades back at some point in the semester for the reports though. Also, one other concern here is I wish he were more friendly and seemed willing to help. He definitely helped out but it always seemed we were bothering him.
- Hands down one of the best professors in everything that follows: being on time, organized, having everything plus some together on what was being talked about/presented, having standards as to how stuff is to be turned in, having knowledge of what is being talked about/ presented and not just reading off a power point slide, presenting the information in the most clear way possible that students can understand, keeping students engaged and interested.

  Only thing I can complain about is the grading, but as you stated in class, i know that you are disappointed about the timeline that we've gotten grades back.
- He would've been excellent if he graded our assignments and handed them back to us.
- His clear, straight forward powerpoints seemed to always drag on with his try monition voice at times, but when the lecture was particularly something that he admired or had interest in, it was easy for a 2 hour lecture to fly by. The enthusiasm and guidance that he brought to the final project made it a great learning experience and easy to move forward.
- His research activities caused him to miss a few classes, because he had to go out of town. I realize he probably sees his research as more important than teaching class, however, the course is still his responsibility.
- I believe Dr. Vaughan is headed in the right direction, but his priorities are not in the right areas. I appreciated the effort put forth with

lectures, such as recording lectures and promptly posting lecture notes. However, less time needs spent updating your website and Flickr album, and more time spent engaging with students and providing feedback. As of writing this (11/28/17), we have yet to receive ANY feedback which is an absolute outrage considering the iterative nature of the course.

Course lectures were also unengaging and most students left wondering what the point of going to class was when we had reports to be writing.

I also wish you would show more respect towards your students and actually listen to what we have to say. Our questions were often shot down and not much help was provided regarding assignments that we were not provided feedback on. I also believe more assistance should have been provided regarding assignments. This is all new to most of us, especially the programming and building involved on the final project, and we were often told to simply figure it out, or we left with our questions unanswered.

I think you are biting off more than you can chew and need to figure out where your priorities are.

- I do not like how we went the whole semester without knowing our grades. That is not fair to the students.
- I felt like I could have learned so much from Professor Vaughan and I was excited about that. But then I started drowning in assignments and wasn't able to learn, just did everything possible to try to pass.
- I have a lot of respect for Dr. Vaughn.

  After listening to his accomplishments, I felt that he was almost overqualified to teach this course. He has got to be the most organized man I have ever seen in real life. From his teaching style, it's obvious that he knows the material that he's covering very well. It is very frustrating when an instructor doesn't. If an instructor can't tell you how they got that answer forwards and backwards, they don't understand it enough to be teaching it. When a student had a question that deserved some thought before answering, it was like Dr. Vaughn had anticipated the question and had prepared an answer before coming to class. Sometimes, Dr. Vaughn would have to repeat something he had already said because a student missed it the first time and he would just about always repeat it with the same amount of enthusiasm as the first time. It was obvious to me that he was consciously making an effort to sound interesting. I appreciated that. He was also very good at making sure no one had any questions during his lectures.
  I'm really not the best student ever. I'll probably make a B or C in his class. But I can still appreciate when an instructor is very good at their job.
- I know that in past years, it's been requested to receive more coding in-class examples, but I am going to ask for even more. It would really help to see the instructor type it out and connect to the REPL and actually do it in front of us instead of showing steps in a PowerPoint. More time practicing in class would be great, and also a smaller class as mentioned above. When it came to troubleshooting, even in class it was almost impossible to get help. Feedback on assignments is also essential. I think we were supposed to have graders for this course, but that didn't work, so they should definitely be graded throughout the semester by the instructor to give relevant feedback. That would be very helpful. If coursework is going to be expected to improve at all throughout the semester, feedback is essential. The scheduled meeting for review of the final report is a great idea, and I am looking forward to getting one on one instruction and suggestions. Also, after final competition rounds, students often left without knowing exactly why they got disqualified, so feedback after each round, maybe even including suggestions, would really elevate the course and prepare students for the final round. I also suggested another way to get homework grades in the previous section.
- I think Dr. Vaughan did a great job teaching and explaining to us what we're going to be faced with in the engineering world. He presented us with real problems we might face on projects but also explained helpful solutions to those problems. I've never had a teacher raise the amount of money and put forth so much effort into a course to provide us with quality tools and resources as he has. I am concerned with his sleep schedule though; I'm pretty sure it's nonexistent (&should be looked into). Overall, he has a lot of passion as an engineer and teacher, and he wants his students to be successful, well- respected engineers as well.
- I think Dr. Vaughn excexutes his instruction very well. Clear and consice, and very willing to answer questions so that the whole class is able to take from it.
- I think that Dr. Vaughan was one of the best professors that I have ever had. I think he cared about challenging his students in a way that I haven't seen before. I think the reason he gets so much push back and a bad name is because he is demanding, but that is what engineering does to you, so I don't really understand that critique. The only, and obvious, improvement I could see is the amount of time it takes to receive feedback from assignments. Obviously this is a daunting task, so there is some forgiveness there, but I did not know my grade with three weeks left in the semester, which added anxiety to an already stressful semester. However, he did compensate for this by being understanding in this regard. He understood that this was the case and provided fair grading given the circumstances. With all this being said, UL is pretty lucky to have a professor this dedicated to his students. He easily provided more time to students whether it be through open-lab hours or office hours than any other teacher I have ever had or ever heard of. Really enjoyed the class, however stressful it was.
- Lectures could be more interactive with the students. Since there are no tests in this course, people tend to zone out and work on reports or material for other classes. Possibly incorporating more small quizzes or small activities to test in class.
- Needs to give feedback on old work.
- Nice guy, needs more work explaining to students on how to code, lot of fellow students had troubles.
- Not trying to be mean, but there is no way that you can expect a student to build and code a robot in one week. The class was pretty ridiculous and I hope to actually learn something after each semester but I feel like the money I paid the university this semester was a complete waste. I probably could have gotten a better education at Remington College.

- Of Course getting feedback on the reports would have been nice, and would have allowed us to fix those mistakes, however you allowed us to sneak past that, and admitted that you would've liked to give it out sooner. However I do believe the student body can come to a consensus that you're very busy and are doing a lot of work with students whether it be people you are currently teaching, grad students, or students you have taught. especially with doing things such as the ARLISS.

- Overall very good, nothing to report.

- Really seemed to give vague instructions about the design and writing processes and allowed us to fail repeatedly without offering any feedback. Some resources on robot building would have been nice. Instead, we collectively spent $100 on a robot that worked very poorly despite our best efforts. It felt more like we were set up to fail than to succeed.

  The duplicate final track was also incorrectly sized. Our robot performed completely differently than the one that we tested on.

- Some of the lecture would get lengthy. I ranked the feedback scores low, but from the comments in lecture, it is clear that this issue is known. I do really like how everything(crawlab class website) is clearly organized.

- Spends long hours working on additional examples for his students. Willing to answer as many questions as students are willing to ask. Shapes the class around giving students the necessary knowledge and examples to complete projects and solve design based problems.

- The class is difficult due to the work load not the material.

- The lack of feedback on grades and some things he wanted was unclear until last minute, but overall a good experience

- The reports were not graded in a reasonable amount of time.

- Think Vaughan means well when it comes to learning I just believe some of his teaching methods aren't realistic. I also think he should be more understanding of group projects as some groups I had weren't helpful and made me do majority of the work because my grade relied on our "teams" report. I wasn't a fan ofnot getting our reports back till the end of the semester. As we have deadlines to turn them in I also believe there should be deadlines on grading to help students make improvements from one report to another. Vaughan's feedback on his reports could have helped me in my other class where I had to write reports also. Overall he's teaching to help the students learn and I understand that and like that about him just think he should be a little more reasonable. I 100% respect him for putting in the hard long 3 hours every day of the week for the last half of the semester. I know some students didn't utilize the lab hours but for you to do that for us and be away from your family I respect and appreciate. Good semester and best of luck

- Very smart man and good teacher but could improve on communication and the grading.

- While seemingly very knowledgeable on the subject matter, Dr Vaughan seemed, at times, almost unapproachable. Asking questions one on one, where most professors are free to elaborate on things, Dr Vaughan is less helpful. No grades put in until the final paper is almost due. I would feel, personally, that having a grad student TA instead of a second professor (or a professor who knows how to code) would be more beneficial as a helper to Dr Vaughan. While Mrs. Carla was helpful in the management of class (I assume) having a second source of knowledge on coding would have been more beneficial to the students, while still being able to help Dr Vaughan with attendance, etc.

- You can be very sarcastic and short tempered. Work on being more Patient when students need assistance.

- although i did not agree with the teaching style or the class curriculum, Dr. Vaughan was a pretty good professor. He genuinely cared about the class and the material, and i think that's worth something. I think if he takes evaluations into consideration, he should be a great teach. Keep caring so much, get some sleep, and good luck next semester.

- dr. vaughan should be more understanding with students and help them learn ways instead of telling us to figure it out.

- give better illustrations and maybe even have videos or in class presentations on how some of the equipment that we purchase, can be used in application.

- he teaches well, but dances around the core of the subject in an attempt to prompt the students to teach themselves. The results are the students are left with a vague impression as to what they are suppose to do. In real life, an impression is often all you have to work with but the classroom isn't real life and never will be. also, Vaughan often doesn't wear socks and that creeps me out. I would never have noticed but he likes those pants that end three inches before the ankle. as a blue collar worker, the no socks and no cursing is a mortal sin but hey, if that's how engineers are then I will change.

- less coding in final project, getting grades on previous reports faster

- this class would be much more beneficial if the time designated for the lab was actually lab time. the lack of instruction of how to code was the biggest problem i found in the class. many nights i would run into a problem and i had to waste a lot of time because you weren't able to help. I also found you made the class more about coding and you didn't teach it enough. I taught myself more than i learned from you. i think you focused on material that wasnt really important. such as the lecture about patents. that time could of been used to explain better about what the code means and how to use the tools to write code better and jsut a overall better and more efficient way to write code. this class was a class i looked forward to and i just felt like i was not prepared enough in class to accomplish the final project.

Please rate the usefulness in this course of the following **instructional activities**.

Please list any other **instructional activities** used in this course. Indicate each instructional activity as: Very Useful, Somewhat Useful, or Not Useful.

- All of the information was extremely useful. However, it is not useful at this point in my college career. I would have much rather have these lectures in a senior level class.
- GitHub
  Python Code for final project
  Classroom Website
- He records each lecture, which can be very useful.
- He used his own website. It was very useful.
- Lab Hours : Very Usefull
- Moodle was not used, but his class website did an even better job. It had a plethora of different resources always available for us to use (even when moodle crashed). The class website and class GitHub was constantly updated to better assist us.
- Really only used the powerpoints for reference during report writing. Everything else seemed like it might have been useful had I had time to read it instead of writing reports.
- The C.R.A.W lab website has been the most valuable tool pertinent to this course. It is easily accessible and has ample resources to aid students.
- The lectures were well prepared. He knew what would pop up next on the slide without looking and how to verbally transition between slides very smoothly. I have no idea what's on his syllabus but I'm sure it was well prepared too.
- Without the class site provided my Vaughan this class would be impossible. He gives the students plenty of tools to use to have a good outcome of the course.
- Your website was great.
- all the programing resources were helpful. we spent a lot of time on programing and it was enough for at least one person in each team to understand. The crawlab site was loaded with information and templets that was essential for this class.
- lab time was useful
- links to coding practice- very useful
- open lab-somewhat useful

Please rate the usefulness in this course of the following **activities and resources**.

Please list any other **activities and resources** used in this course. Indicate each as: Very Useful, Somewhat Useful, or Not Useful.

- Class website was very useful and well laid out.
- I don't really understand the question. I was forced to meet new people and work with different groups and I liked that. Dr. Vaughn suggested many different types of software we could use for this course.
- I feel overall this is a great class. But when you get stuck with a bad group it’s hard to really care about the class.
- I personally feel that the constant changes in groups causes too much unnecessary stress on the students and their performance with projects. I feel as though groups should be set at the beginning of the semester, even if set at random as they are currently, and students can decide if they can perform to the best of their ability in that group. Ie, if you have 3 students who all work 40 hour weeks and take 12+ hours of class, performance for the group will suffer, but if the group will remain constant for the semester, the students can either request a transfer to another group or they can form their schedules around the projects. With constant groups comes stronger relationships and boosts moral for each team. Of course this may not be true for all groups as maybe 3 slackers will be put together, this can force members of the group to either sink or swim. They can try and therefore improve themselves, instead of currently where a group of slackers could do poorly on one project and then all 3 slackers get lucky the rest of the semester and end up being put in groups where the other members do all the work for them, which is extremely un-benefical to all members of the groups.

  Overall I think this is a great course and can be very beneficial to those who apply themselves and get placed with proper groups where the team members can mutually benefit from one another. However, I also believe that this is not an easy goal to achieve as each group poses new difficulties. So instead of growing as a team like in the real world, it is like you are a drifter going from job to job and trying to relearn your coworkers every time

- Programming- somewhat useful
- The group projects are incredible useful and teach you lessons that you will not be able to pick your coworkers once you get in the field. However, I wish the fact that some people slack on their parts in the projects are not affected. I have had groups where I have done majority of the work. I know its harder to monitor this. I just wish it was factored in a little more.
- The group system in this class needs to be overhauled. Your excuse of "you won't be able to pick your coworkers in the real world" is a poor and feeble excuse. Our "coworkers" in this class were freeloaders that did not care about engineering or assistance in group work. Let the underachievers mingle and fail together, and let those that care work together.
- This was definitely the most hands on, project based course I've taken, and I'm taking a lot away from it.
- know how to work with power tools to build your final design!!!
- lab hours did help with the 201 project, although we weren't given a smooth board