

There were: 178 possible respondents.

	Question Text	N	RR	Interpol. Median	3	6	9	12	15	18	18+	
1	Hours per week spent on course	153	86%	10.7	4	21	41	47	19	9	12	
					<b>0-30</b>	<b>30-50</b>	<b>50-70</b>	<b>70-80</b>	<b>80-90</b>	<b>90-100</b>	<b>N/A</b>	
2	Percentage of classes attended	153	86%	94.6	12	5	7	12	25	69	23	
3	Percentage of homework completed	153	86%	95	1	0	1	1	8	142	0	
					<b>Extremely</b>	<b>Prepared</b>	<b>Neither</b>	<b>Somewhat</b>	<b>Unprepared</b>	<b>N/A</b>		
5	Student preparedness to take subject	152	85%	3.6	30	52	47	13	10	0		
					<b>Except- ional</b>	<b>Great Deal</b>	<b>Modest</b>	<b>Little</b>	<b>Nothing</b>	<b>N/A</b>		
6	Amount learned in course	152	85%	4.4	69	52	27	3	1	0		
					<b>Except- ional</b>	<b>V Good</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>N/A</b>		
7	Assignments measured knowledge	150	84%	4	56	41	27	18	8	0		
					<b>Str Agree</b>	<b>Agree</b>	<b>Neither</b>	<b>Disagree</b>	<b>Str Disagree</b>	<b>N/A</b>		
8	Overall course effectiveness	151	85%	4.3	66	57	13	11	4	0		
					<b>Except- ional</b>	<b>V Good</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>N/A</b>		
11	Instructor Clarity (Van Hentenryck)	149	84%	4.5	74	37	28	7	3	0		
					<b>Str Agree</b>	<b>Agree</b>	<b>Neither</b>	<b>Disagree</b>	<b>Str Disagree</b>	<b>N/A</b>		
12	Instructor: Communicated how to succeed (Van Hentenryck)	150	84%	4.5	77	49	13	8	3	0		
					<b>Except- ional</b>	<b>V Good</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>N/A</b>		
13	Instructor: Respect for students (Van Hentenryck)	150	84%	4.8	103	27	11	5	4	0		
					<b>Extremely</b>	<b>Very</b>	<b>Moder- ately</b>	<b>Slightly</b>	<b>Detached</b>	<b>N/A</b>		
14	Instructor: Enthusiasm (Van Hentenryck)	150	84%	5	137	11	2	0	0	0		
					<b>More Eager</b>	<b>Interested</b>	<b>No Change</b>	<b>Less</b>	<b>Ruined</b>	<b>N/A</b>		
15	Instructor: Stimulates interest (Van Hentenryck)	150	84%	4.6	79	43	22	4	2	0		

					V Access	Access- ible	Neither	Somewhat	Hard to Find	N/A		
16	Instructor: Availability (Van Hentenryck)	150	84%	4.5	73	46	8	10	3	10		
					Extremely	Very	Moder- ately	Slightly	Not	N/A		
17	Instructor: Feedback helpfulness (Van Hentenryck)	150	84%	4	59	23	33	15	11	9		
					Str Agree	Agree	Neither	Disagree	Str Disagree	N/A		
18	Instructor: Inclusive (Van Hentenryck)	149	84%	4.9	125	17	3	1	1	2		
19	Instructor: Overall effectiveness (Van Hentenryck)	150	84%	4.7	89	42	11	6	2	0		
					Mid - 3:00	3:01- 6 a.m	6:01- 9 a.m	9:01- noon	12:01- 3 p.m	3:01- 6 p.m	6:01- 9 p.m	9:01- mid
103	Time of day evaluation completed	155	87%		11	1	0	20	41	31	20	31
					1-3	4-6	7-9	10-12	13-15	16-18	19-21	22+
	Classes this semester	155	87%		42	98	15	0	0	0	0	0

Instructor	Text Responses
	<b>Question: Comments about student effort</b>
	(ISYE 8813) I literally needed to work really hard to complete the assignments. The class made me struggle way more than expected.
	(ISYE 4134) At least 6 hours a week are needed to get through the videos and understand them while trying to apply the learning to assignments.
	(ISYE 4134) The effort required was fair
	(ISYE 4134) Homework assignments took about as much time as I expected. Though I watched all the video lectures, I did not attend the sessions.
	(ISYE 4134) solid amount of effort was required, which was in line with my expectations
	(ISYE 4134) Put in a lot of hours into this class in watching the lectures (and rewatching it many times) to complete the assignments given
	(ISYE 4134) expended more than expected, some of the functions and logic needed wasnt easy to figure out from the lectures and needed a lot of outside help from TAs
	(ISYE 4134) n
	(ISYE 4134) I think this course is too much work for a 3 credit hour class. We had homework due every week that took, on average, 4-5 hours to complete with another 2 hours or so of lecture videos to watch on the content. I was constantly stressed about the assignments and although I got them all done, it was more than I would have expected for a typical 3-hour course.
	(ISYE 8813) I felt I put in more work than expected in the 2nd half of the semester. For assignments, I worked 15 to 20 hours on them, which I did not expect, since most of the assignments are assigned weekly.

(ISYE 4134) It was a lot of effort
(ISYE 4134) This class was very difficult and I spent a lot of time on it. For a 3 credit hour class I feel it was a bit much
(ISYE 4134) A little above what I was expecting. Sometimes the combination of watching lectures, completing assignments, and going to interactive sessions could be a bit much.
(ISYE 4134) Yes
(ISYE 4134) A lot of effort for some of the assignments
(ISYE 4134) Certain assignments could be quite difficult and the effort was unexpected. However, across all assignments, I felt that it was an appropriate level of difficulty for the course.
(ISYE 4134) appropriate
(ISYE 4134) expected effort and expended effort were about the same
(ISYE 4134) I gave a lot of effort throughout this course. More than i thought should have been necessary.
(ISYE 4134) much more effort than expected
(ISYE 4134) No it was not. I dont think we were given enough information about the material, but instead, we were expected to derive our own solutions from material taught via other examples, so I think things stayed very vague in our minds.
(ISYE 8813) I spent reasonable amount of effort for this course.
(ISYE 4134) I thought that the class was very informative and helpful. However, I felt that I was constantly working and never got a break for this class which made it a little tiring.
(ISYE 4134) na
(ISYE 4134) was much more difficult than expected, felt underprepared for many assignments which led to me spending more time than necessary
(ISYE 4134) It was as expected.
(ISYE 4134) Effort was low initially but picked up pretty rapidly
(ISYE 4134) The homeworks were incredibly challenging. I could easily spend 10+ hours a week on a single assignment. It was more effort than I anticipated
(ISYE 4134) Decent amount of effort required.
(ISYE 4134) The workload was appropriate for the most part, but there were a few parts of the semester I felt the workload was very unmanageable. The stretch of the semester during the Podraces assignments and the midterm and the Empire Strikes Back assignments was extremely difficult.
(ISYE 4134) The amount of effort increased significantly the latter part of the semester, which was a little surprising
(ISYE 4134) I put in above and beyond effort for this class. If I didnt at any time I wouldve failed the class. There were no breaks.
(ISYE 4134) Some of the challenges were quite time consuming as it was hard to speed up programs early on because we didnt have much in terms of examples.
(ISYE 4134) This has been the hardest class I have taken at Tech.
(ISYE 4134) I put in a lot of effort into this course, much more than what I expected initially.

(ISYE 4134) This course, given that we were coding in a new language and the language is difficult to understand and has very limited online documentation, required a lot more work than I expected. It was very difficult to try to learn the language while also completing difficult homework assignments with very limited office hours too.
(ISYE 4134) Yes
(ISYE 4134) There were probably slightly too many homework assignments, maybe could have fewer (and larger) assignments instead
(ISYE 4134) the last python assignment was not expected
(ISYE 4134) I believe I put in the expected effort towards this course. I watched all the videos every week, attended about a third of the interactive sessions, and completed all of the assignments.
(ISYE 4134) I provided a lot of effort in this course and at the expense of some of my other classes. I do not think the work always matched the material taught.
(ISYE 4134) Lots of effort. This class requires lots of office hours and outside help to be able to complete successfully.
(ISYE 4134) I put in roughly the amount of effort I expected to for this course.
(ISYE 4134) way more than expected
(ISYE 4134) At the beginning of the course the workload was lighted than expected, but then definitely ramped up in difficulty later on, so Id say overall the effort necessary was about what I expected.
(ISYE 8813) Expected. Challenging, but in the best way possible.
(ISYE 4134) I feel that I tried putting in a lot of effort for this course.
(ISYE 4134) I put in more work than expected, but most of the additional effort was learning the new language and debugging syntax errors.
(ISYE 4134) Yes, effort was as expected.
(ISYE 4134) more than I expected
(ISYE 4134) I was able to pace myself through the course, and the course rigor was expected
(ISYE 4134) This is a really challenging class for me since Im not very familiar with coding.
(ISYE 4134) I spent too little time on homeworks.
(ISYE 4134) None of the asynchronous meeting times matched up with my schedule. Wish TAs had individual office hours.
(ISYE 4134) Appropriate Effort
(ISYE 4134) Class with the most effort this semester
(ISYE 4134) Effort expected and expended was appropriate for the course
(ISYE 4134) This class was definitely a lot of work. It was fun, but sometimes felt a bit overwhelming. Overall, I think the structure of the course is great and they provide a lot of resources, but it would be great to have less assignments so that the class is a bit less overwhelming at times
(ISYE 4134) This course took far more effort than I anticipated, but with that said, I still felt that it was appropriate for a 4000/8000 level class.
(ISYE 4134) More than expected.
(ISYE 4134) Effort was reasonable

	(ISYE 8813) appropriate amount
	(ISYE 8813) No, I did not expect the difficulty and expended effort I ended up putting for the course. I think the material is interesting, but I wish I had more examples and such to use for the assignments.
	(ISYE 8813) I put in a tremendous amount of effort in the course. I am extremely glad that the professor had an escalating time requirement for the homework (i.e. the first few homeworks took substantially less effort than subsequent homeworks). This scaling allowed me to spend time at the beginning of the semester focused on reviewing lectures to understand core concepts. As these concepts were solidified, I was able to spend more time just dedicated to applications in the homework.
	(ISYE 8813) This course has a slight effort/reward balance issue, as sometimes I feel the frustration and complexity related to completing an assignment outweighed the reward or satisfaction of finally figuring it out. This is due to a combination of things, which Ill discuss below.
	(ISYE 8813) Expected
	(ISYE 8813) expected and expended effort not appropriate for this course, a little bit too much
	(ISYE 8813) high
	(ISYE 8813) Less than what I expected.
	(ISYE 8813) it needs quality amount time to work on homework
	(ISYE 8813) Put in quite a bit of effort but also learned immensely.
	(ISYE 8813) Effort definitely ramped up towards end of course - but I think it was an appropriate amount
	(ISYE 8813) yes.. learned the opl language from scratch
	(ISYE 8813) The time commitment required for this course is significantly higher than all my other classes combined. This class has been a black hole of time.
	(ISYE 8813) I had to balance a part-time internship which restricted the time I dedicated to the class
	(ISYE 8813) Requires moderate to high effort, Teaching staff is extremely supportive
	<b>Question: Course best aspect</b>
	(ISYE 8813) The class made me do my own research on how to do constraint programming. The assignment was very challenging that it allowed to go next level.
	(ISYE 4134) I loved the interactive sessions with the TAs, and I thought they were super helpful. I also really appreciate how active the Ed Discussions were.
	(ISYE 4134) N/a
	(ISYE 4134) Lectures were insightful and interesting
	(ISYE 4134) The assignments were fun and interesting as well as challenging.
	(ISYE 4134) structure was nice in that it was project based
	(ISYE 4134) The videos were informative and helpful
	(ISYE 4134) Projects were simple and fun. Except Jaku

(ISYE 4134) I loved the assignments, it was like solving puzzles. The the professor tried to make the lectures as fun and intuitive as possible, which was nice.
(ISYE 4134) interactive sessions
(ISYE 4134) n
(ISYE 4134) Even though I spent a lot of time on the assignments, I liked having them weekly as it helped to keep up with the topics and apply my knowledge.
(ISYE 4134) The availability of consultation for help was the best thing about this course
(ISYE 4134) the theme was cool
(ISYE 4134) The best feature was the breakout rooms and quick response time on EdDiscussion
(ISYE 8813) The fact that many assignments included a good bit of self-discovery was good.
(ISYE 4134) Assignments, although there were a lot.
(ISYE 4134) I liked the wordle game and midterm guessing assignment
(ISYE 4134) The interactive sessions and office hours were helpful for properly understanding assignments and course concepts.
(ISYE 4134) The best feature were the TAs 100%!!
(ISYE 4134) Loved the real world applications of Constraint Programming and how fun the assignments were!
(ISYE 4134) Ed discussion and live sessions/frequent office hours
(ISYE 4134) I liked how the course was very hands-on.
(ISYE 4134) Learning a new coding language and problem solving techniques/ways of thinking.
(ISYE 8813) The reverse lecture system is brilliant, I wish I could see this in more classes. The assignment model is much better than having exams.
(ISYE 4134) recitations/touchpoints
(ISYE 4134) Assignments
(ISYE 4134) I enjoyed the lectures-- they were interesting and taught the information well-- as well as the assignments that were normally interesting problems to solve, and doing the homework was actually pretty fun a lot of the time.
(ISYE 4134) Once I understood the assignments, they were engaging and a lot of fun to solve.
(ISYE 4134) The interactive sessions for sure!
(ISYE 4134) The resources (Ed Discussion) and help from the TAs were great. The examples the professor showed in class were mostly effective too. The theme was fun as well and kept the course exciting.
(ISYE 4134) Really unique assignments that made students think outside the box
(ISYE 4134) I actually liked having homework because I liked solving puzzles by myself.
(ISYE 8813) Projects are fun and do help to understand the concepts and methods from lectures.
(ISYE 4134) The breakout rooms were the most helpful
(ISYE 4134) Lectures were clear at understanding

(ISYE 4134) I found that the lectures were very consumable and provided enough background into subjects to accomplish most assignments.
(ISYE 4134) Lectures were short fun and interesting and assignments were also very interesting
(ISYE 4134) Star Wars themed lectures was legendary
(ISYE 4134) lectures were well done
(ISYE 4134) This course was well organized
(ISYE 4134) I like the structure of this class and the assignments, also the flexibility was nice.
(ISYE 4134) The larger assignments.
(ISYE 4134) The best features were some of the beginning assignments, which more directly corresponds to what we learned.
(ISYE 4134) Fast responses on Ed Discussion
(ISYE 4134) The assignments were challenging, which was good for learning (in some aspects)
(ISYE 4134) na
(ISYE 4134) I really liked the lectures and the interactive sessions.
(ISYE 4134) The Star Wars theme and the lectures that the professor puts out, especially when he dresses up as Yoda.
(ISYE 4134) Office hours and getting one-on-one time with the TAs was really helpful
(ISYE 4134) The OPL coding assignments were very good.
(ISYE 4134) The homeworks were by far the best part
(ISYE 4134) Pascals lectures were very engaging. I love the creativity
(ISYE 4134) Assignments were fun to complete and provided a good measure of how well we learned the material
(ISYE 4134) TA availability
(ISYE 4134) Lecture
(ISYE 4134) TAs were immense in responding on Ed discussion in a timely and helpful fashion
(ISYE 8813) Focus on modeling instead of proving stuff
(ISYE 4134) Cool lecture and class theme. Assignments were related to class material
(ISYE 4134) Homework Assignments
(ISYE 4134) The lectures are very organized, interactive session is also helpful, and the assignments are challenging but interesting!
(ISYE 4134) The assignments were well written and later ones were challenging
(ISYE 4134) The sessions and the Ed Discussion are very helpful
(ISYE 4134) Assignments.
(ISYE 4134) Wish there were more resources online of example problems and the OPL syntax used
(ISYE 4134) Interactive session were very useful
(ISYE 4134) I liked that it was async and I could learn things in my own time.

	(ISYE 4134) Relevant projects to the types of problems that use constraint programming
	(ISYE 4134) The videos were great, they were captivating and informational and the professor was really passionate about the subject. So, the videos in combination with some of the assignments were great.
	(ISYE 4134) Structure and assignments were effective to practice material, Star Wars theme of course made material more fun
	(ISYE 4134) Assignments, but sometimes they were harder than expected but the interactive sessions helped a lot.
	(ISYE 4134) The interactive sessions and ed discussion
	(ISYE 8813) Pascals lecture
	(ISYE 8813) Professor and Teaching Assistants
	(ISYE 8813) Pascal is a great lecturer!
	(ISYE 8813) The video presentations were well done.
	(ISYE 8813) The lectures, the professor, and the assignments.
	(ISYE 8813) The assignments where challenging but rewarding to complete.
	(ISYE 8813) Great lecture videos, and many assignments were directly connected to lectures that were challenging applications that made you think. Also structure of flipped classroom worked very well for this class, as working one-on-one with TAs was helpful for debugging specific elements in code. My improvement section is very long but its mainly because I think this is one of the most engaging courses Ive taken at Georgia Tech, and I have thoughts on improving it to be a perfect learning experience.
	(ISYE 8813) The homework assignments. I thought that they were excellent at applying the lessons learned. They were also instrumental in allowing us to learn how to use the OPL coding software. A huge sustain is the professors energy. I absolutely enjoyed attending each of the lectures.
	(ISYE 8813) All assignments and exams, and especially the interactive sessions.
	(ISYE 8813) The interactive session.
	(ISYE 8813) lectures
	(ISYE 8813) interactives with professor
	<b>Question: Course improvements</b>
	(ISYE 4134) The assignments for this course and its overall structure are poor. Assignments that are meant to "start out easy" early in the semester are actually quite difficult because students are expected to learn a new programming language while learning a new mathematical modelling paradigm. Starting out in a language familiar to students would be an improvement. Also collaboration seems frowned upon in this course to the point where my classmates and I felt worried to help each other. Longer timelines on assignments would also be a great improvement for depth of learning.
	(ISYE 8813) I generally liked the contents that I learned but the intensity of the assignments did not reflect what we learned. Also, the fact that the class decided to change the programming environment from ILOG CPLEX to Python in the last two weeks of the semester frustrates me the most. You should at least give 4 weeks worth of lectures for the students to get used to using docplex packages in Python. Each assignment is released after one assignment is done. Even after I start from the release date, I was struggling till the last minute of the submission. I really hated this class. The class made me struggle way more than expected.
	(ISYE 4134) Sometimes in the interactive sessions, the TAs are rushing to explain concepts, and its overwhelming. I think it would be helpful to have some time dedicated to recapping the key concepts. Theres always a long wait time before you see a TA, and I think that it would be helpful if one TA stays behind to answer more general questions.



(ISYE 4134) Just giving more opportunity to have a 10/10 on an assignment instead of a 6/10. I put in a lot of effort and time into this course, but not to receive a C or D. I obviously understand that blatant answers cant be given out, but better preparation from videos would be helpful. I know students would rather put in a lot of time and at least get a 8/10 instead of 6/10, maybe change the grading for some projects as well.

(ISYE 4134) Make interactive sessions in-person. Having a fully remote class is not engaging at all.

(ISYE 4134) This is a great course and highly recommend. Could be improved by delivering the homework in the same format each week rather than it being different. Made it hard to follow as I never knew what to expect for the homework and what was given.

(ISYE 4134) In person or live lectures would be very helpful to be able to ask questions as they arise. Additionally, office hours could be structured more effectively - there were multiple sessions where I was unable to get one-on-one time with a TA.

(ISYE 4134) Some of the assignments leave students out to dry especially as they are learning opl also making the final in python instead of the language weve been using all year was frustrating

(ISYE 4134) More clarifications could be added to assignments.

(ISYE 4134) At times, certain topics need to be covered in more depth (such as the search phases).

(ISYE 4134) deadlines more spread out, more frequent interactive sessions

(ISYE 4134) to be honest Im not sure. I never got this class. There was always a small gap in my knowledge that made it impossible to comprehend some of these problems. I saw the grades that everyone else in this class got versus me, and Im probably the lowest grade even though I spent more time than those i talk to and started earlier on assignments. Theres something I want to hold against this class, but it might just be me looking back on it, but its not due to a lack of effort which sucks. Very interesting class overall though.

(ISYE 4134) The assignments were very challenging but definitely helped me to learn a lot throughout this course. I think there should a summary sheet for syntax of Constraint Programming and examples of it for this class. The manuals online are not very well-prepared/hard to find and understand. Besides that I think majority the lectures prepared student well to complete the assignments.

(ISYE 4134) Lots of the assignments included aspects of the programming that we were not taught in the provided lectures, and we depended on the TAs to give us extra help in order to complete them. The documentation for this programming language is not comprehensive and it is difficult to find helpful examples outside of the class material we are provided with.

(ISYE 4134) why is this class flipped? way too few coding examples

(ISYE 4134) Tweak the assignments to make them slightly less difficult and provide a better understanding of the OPL IDE at the beginning of the course

(ISYE 8813) One thing I do want to learn more is how exactly the cp problems are being solved by OPL behind the screen. I know there are quite some videos on it but I thought if we had a hw where we implemented the basic logic of cp with python or something may be nice.

(ISYE 8813) Including more non-coding assignments can reinforce conceptual understanding of the material and encourage us to think more creatively. Sometimes, assignments reflected more of my coding finesse than the understanding and application of concepts.

(ISYE 4134) If interactive session recordings could be posted earlier.

(ISYE 4134) More coding in python and documentation PLEASE lower the volume of the star wars intro in the videos. Its incredibly loud compared to the lecture volume and is disorienting

(ISYE 4134) Maybe a slower pace in terms of lecture videos being released. Maybe only once a week instead of twice a week.

(ISYE 4134) We need to be taught the programming language, OPL, much better. The language syntax is very confusing for someone who has never worked with something like this and there are basically 0 resources online to learn it. Learning a new coding language is always difficult so we need more support in that aspect. We also need more office hours. A lot of coding-oriented classes offer a lot of office hours every single day but in this class, there's only 1 hour of office hours on Monday and Wednesday and Friday (after a student asked for this day to be added) and since everyone is trying to get into office hours on these days, sometimes I don't even get chosen to be helped.
(ISYE 4134) To host the interactive sessions to explain concepts, why code works the way it does, and help with syntax. The videos were either too vague or too complex to not even formulate questions. The TAs were the only bright spot of this class.
(ISYE 4134) Making a less complicated midterm
(ISYE 4134) Handouts in addition to the slides and OPL manual that focus on helping students with FAQs and important syntax information to use with assignments.
(ISYE 4134) I feel that there could be potentially less assignments or maybe more examples of problems. I feel that I was lost at times with the syntax which made the assignments a lot harder.
(ISYE 4134) N/A
(ISYE 4134) more individual and specific help on homeworks, like guides and key concepts to use for the assignments. As they are now, they simply force students to dig information out of TAs
(ISYE 4134) The class is set up good as it is in my opinion.
(ISYE 4134) For some of the longer/more difficult assignment, it would be great to have a bit more time to complete them and have them released earlier. Other than that I thought that the course was very good.
(ISYE 4134) Teach more syntax and not just theory/concepts.
(ISYE 4134) Assignment instructions could be clearer and less ambiguous; to the best of my recollection,
(ISYE 4134) I think that more opportunities to meet with course staff like CS 1301 or CS 2316 should be offered.
(ISYE 4134) It would help if the examples shown in the lecture videos were coded live line by line in CPLEX by the professor instead of simply showing a screenshot of the code. This would help students understand the code and process the steps rather than just looking at it once. Additionally, more examples in the videos that would align more with the homeworks would help tremendously. Often times, the logical leaps required for the projects were too hard based on the examples provided in lecture. The first few weeks of this class set us well for the assignments, but everything past the midterm was extremely difficult given the resources. Every time an assignment was completed, another one was already released and it felt as if you were already behind as soon as you caught up.
(ISYE 4134) spend more time on python, or don't make the final project all python
(ISYE 4134) As was said earlier, fewer homework assignments that are perhaps larger would help - the numerous assignments tended to be difficult to manage
(ISYE 4134) I just think the way they were given/the support we got from Ed was pretty bad. I don't think we were prepared to do some of the homework on our own, and we were sometimes never given clear instructions on some things such as using search to reduce runtime. I sometimes felt like new course content was not being created just because the videos were published a while ago, and there were no modifications
(ISYE 4134) I just think the way they were given/the support we got from Ed was pretty bad. I don't think we were prepared to do some of the homework on our own, and we were sometimes never given clear instructions on some things such as using search to reduce runtime. I sometimes felt like new course content was not being created just because the videos were published a while ago, and there were no modifications

(ISYE 8813) NA
(ISYE 4134) I felt like the assignments focused more on how creative can they be to find the solution and less about do they understand the software. I think there needs to be more levels to the unit. A basic this is how you use this method, then a more in depth one, and then an extremely difficult/creative one if that is the goal. We probably should have more of lead discussion on how to think about the problems the way they wanted.
(ISYE 4134) The midterm problem did not reflect what we were learning in the course and the concepts were very different from what was expected for the homework assignments
(ISYE 4134) N/A
(ISYE 4134) prepare students to work with OPL syntax, many times we were limited by syntax knowledge. Also, some assignments are way too hard to do ourselves. For those assignments there should be more preparation
(ISYE 4134) not asynchronous- i had a class during the interactive sessions and could not attend. more time to do the assignments.
(ISYE 4134) Some of the labs are very difficult but i did find grading to be forgiving
(ISYE 4134) I would appreciate more time for some of the harder assignments towards the second half of the semester. I also thought the midterm was a bit difficult, it was the type of thing where you either get it or dont, so it was hard to show what weve learned.
(ISYE 4134) I understand the need to not share solutions to the assignments, but sometimes it would have been a bit helpful! Also, I believe in the past the course has blocked off the interactive sessions, but this semester it was presented as strictly asynch, so I worked every interactive session and feel as though I missed out on a lot of content that would have alleviated confusion.
(ISYE 4134) The lecture videos were helpful in completing assignments in the beginning of the semester, but assignment difficulty significantly increased and the lecture videos did not help much with completing the assignments. This course can be improved by making the assignments easier or providing more helpful lecture videos. Also, it was difficult to get TA help, as the lines were really long at the interactive sessions. I would wait sometimes an hour to get help. I would get caught up in trying to complete all of the assignments as opposed to get a good grasp of the content.
(ISYE 4134) There is no break in this class. Please consider removing a couple assignments to give students more time to work on the bigger homework problems. This class was just a constant pressure and made me resent this class and its staff.
(ISYE 4134) Less videos, more written lecture notes we can read before starting assignments
(ISYE 4134) Stop the video lectures. There were way too many and impossible to keep up with while working on assignments
(ISYE 4134) The test did not give much of a chance to show how much you really understood if you didnt figure it out. Also on assignments, it would have helped me learn a lot to see what a better solution would look like.
(ISYE 4134) na
(ISYE 4134) I thought the homework became a lot and it became difficult to keep up.
(ISYE 4134) More videos with Yoda in it. The beginning of the course was fun, but towards the end of the course the Yoda didnt show up:( But! It was still a great course!

(ISYE 4134) This was probably the hardest course Ive taken at Tech thus far. And while a big part of that was simply due to the challenging nature of constraint programming, I think the class lacked enough resources to support all students and their learning styles. Firstly, I do not think this should be an online only course. While I appreciated the flexibility that having pre-recorded videos gave, I found myself lacking support throughout the course that having in-person, regular lectures would give. Not only this, for a course of almost 200 students, I believe more TAs are needed. Only having 6 TAs meant that during interactive sessions/office hours, I almost always had to wait over an hour to get helped. By increasing the number of TAs by even just one or two could really speed things up. Classes of similar sizes I have taken (especially in the CS department at Tech) often have drop-in hours at times throughout the week, besides just in the evening, and this works at spreading out the demand. I think having class at 5-6:15 is not the best time for most students, especially since this timing was not made known until Phase II of registration (since the class appeared as fully online during Phase I of registration), so by offering more office hours throughout the week, that would be really helpful (similar to how the Friday 1-2pm office hours were added). Finally, I would highly suggest providing more videos on Python. We were only given one video on implementing CP in Python, yet our final project dealing with Python was worth more points than any before it. We were expected to use functions that werent covered in the videos. For quite a few assignments I felt like the accompanying videos did not help me that much. I think they could be better aligned with the actual content in the assignments.

(ISYE 4134) Maybe show the power of CP optimizer by providing a MIP/having to write a MIP in assignment and compare.

(ISYE 4134) I feel like providing more space between homeworks would be helpful

(ISYE 4134) Lectures could be more tailored to helping solve homeworks

(ISYE 4134) Somehow addressing office hour queues (often 1+ hours of waiting)

(ISYE 4134) better preparation for assignments and more clear instruction

(ISYE 4134) more examples during the videos instead of only concepts, the breakout sessions should include a recap of the weeks video in the beginning of them

(ISYE 4134) n/a

(ISYE 4134) Provide more code examples for certain topics, especially "search phrases"

(ISYE 8813) suggest to adjust the symmetry model forward, so students are able to learn about solutions of running speed increase

(ISYE 8813) - Provide solutions to homework and exams (I cannot improve my coding and modelling if I dont see other approaches) - Better slides - Using Python and/or minicp from the beginning - More time between release date of video and discussion section. One day is not enough

(ISYE 4134) Better organized office hours that are fair (see what CS 2316 does)

(ISYE 4134) n/a

(ISYE 4134) Maybe add more TA so they can help the students more (no long line for OH)

(ISYE 4134) Some assignments required extra techniques/hints discussed on EdStem or interactive sessions that would have been better included in the assignment description or lecture slides. The pace of the course should be faster and include more difficult assignments so that more time could be spent on the interval variable concepts. A good amount of techniques taught in lecture were used in many homeworks and others in no homeworks.

(ISYE 4134) I would hope for the assignments to not have a due date, but I do understand the design.

(ISYE 4134) No timed assignments (midterm) I dont think it was reasonable

(ISYE 4134) Needs a LOT more office hours opportunities since code can often be hard to debug! But the TAs are so so helpful even on Ed.

(ISYE 4134) Possibly more examples in the beginning or more examples in general with syntax. I struggled a lot when starting OPL and felt that the documentation available online is quite bad (all the examples use one or two letter variable names without context that make it difficult to understand the example), so more examples could be helpful. Some more structure in the interactive sessions would also be useful.

(ISYE 4134) Perhaps either less assignments, or some group assignments.

(ISYE 4134) Add additional time for the midterm, I had trouble understanding how the game worked for the midterm and could have used another hour to think and understand

(ISYE 4134) Maybe hosted more interactive sessions.

(ISYE 8813) I did not expect the difficulty of this class, and I likely would not recommend this course to other students due to the sheer amount of time I spent trying to do the assignments. To improve the course, I would recommend either providing more examples that are similar to the assignments, especially because there are concepts on the assignments not learned/barely touched on in lecture videos. The other idea is to have more available TA breakout rooms, possibly every day, although I feel that is more infeasible. It might also be a different experience having class in-person, so that might be another path forward.

(ISYE 8813) I felt like there was always two gaps between the video presentations/slide decks and what was required in the assignments. There was always something completely missing that you had to figure out without any examples or materials to guide you there. It would be helpful if there were more relevant examples to help make those connections.

(ISYE 8813) I hope a little more assistance was given to understand CPLEX better.

(ISYE 8813) It is hard to grasp the syntax and all the functionalities of CPLEX. Much of the time is spent trying to understand how to make the concept work in the development environment, which is frustrating.

(ISYE 8813) As mentioned above, I think there's a balance issue with the effort and frustration to reward and satisfaction ratio. Frustration in this course comes from the nature of figuring out this new coding language, but also comes from lack of information, documentation, examples, applications. Also frustration comes from instruction being a little too secretive when it comes to hints/"starting points" in the more challenging assignments. I felt like some of the more challenging assignments asked for more OPL engineering brain than I had developed at that point in the course, and so just getting past the starting point was challenging. Obviously that skill is something people who use this in their careers will have to have to operate on their own, I just felt like the complexity was a little unbalanced. Finally, I think there should be some way of sharing what the optimal/recommended version of a model looks like after an assignment is due. One of my regrets in this course is that I feel like several of my models, while passable, could still be better, but never got to look at a "better" model, which I feel I could learn a lot from. Assignments where I didn't get 100% had feedback just as "wrong objective value" or "doesn't work for x many racers," which doesn't give me any idea on how to improve. The pace of the course and the demand for TA attention and time kind of makes it impossible to look back on improving models on past assignments. Also, for one assignment this semester, I just kind of gave up due to general academic fatigue, and while I know I didn't put in the work to try to figure out how to model a problem, I do think I'm still entitled to that information in an academic setting. The classroom doesn't encourage failure, but it should provide an opportunity to reflect upon/learn from a student's failures, but I felt like I either got a 100% or I didn't, with no legitimate way of analyzing or learning from those failures. I understand that sharing optimal models with the class after an assignment is an invitation for sharing with students in future sections of the course to cheat, but I don't know if that's a good enough reason to deny the whole class an opportunity to see an optimal version. I can only think of the many niche tricks, different loop structures or dvar choices, or global variable implementations that I didn't think of that would have made my codes better than I missed out on, even on assignments where I earned 100%. With a program with as little documentation as OPL, I really would have appreciated more quantity. But not to just be critical and not offer solutions, I think that maybe a version of the code could be published after the assignment is due that would provide dvars, along with commented out constraint hints, like // Reified constraint that prevents any two dvars from equaling each other. That doesn't give away code directly? I know that still could be used by future students, but it isn't giving everything away? Also maybe these new versions could be submitted for, like, 1 extra credit point back on assignments, so all students would have motivation to go back and make their models as efficient as possible? Bottom line is that this course is greatly lacking in feedback and opportunity to learn from failure. The frustration and challenge may have made me a better OPL engineer, but it also kind of prohibited me from learning all the secrets of the force I can't help but feel are just beyond my grasp.

	(ISYE 8813) My only critique is the mid-term exam. I felt the time requirement was very compressed. I think that maybe having a day or two would be advisable rather than a 2 hour window. It was just difficult learning how to complete this assignment in such a time constrained environment when we never really had this type of practice during the semester. I also dont know if this type of short time requirement is realistic in the work force. I feel a day or two makes a lot of sense from both an academic and practical stand point.
	(ISYE 8813) Make some parts in person.
	(ISYE 8813) more online sessions about the assignments
	(ISYE 8813) the best, no need to improve : )!!!!
	(ISYE 8813) Maybe more spread-out assignments would drive home the concepts more clearly in certain instances.
	<b>Question: Instructor greatest strength</b>
Van Hentenryck	(ISYE 8813) I liked that he tried to implement the Star Wars theme to approach the students in a more friendly way. It was funny. He had much enthusiasm in the lectures. He tried to help the students as much as he could in the interactive sessions. He was also lenient in giving extensions on assignment.
Van Hentenryck	(ISYE 4134) Enthusiasm for the class.
Van Hentenryck	(ISYE 4134) Pascal is a funny person and very insightful person. It takes a lot of energy to speak with Pascal since you really need to know the materials to be on the same page as him
Van Hentenryck	(ISYE 4134) Entertaining and very knowledgeable
Van Hentenryck	(ISYE 4134) Enthusiasm about subject matter
Van Hentenryck	(ISYE 4134) The class had a lot more character than any other by far.
Van Hentenryck	(ISYE 4134) The professor is very passionate about the material and is able to make students interested in it (and is very effective at teaching it).
Van Hentenryck	(ISYE 4134) He took time to look over my assignment that was not running correctly!
Van Hentenryck	(ISYE 4134) enthusiasm
Van Hentenryck	(ISYE 4134) eh
Van Hentenryck	(ISYE 4134) Professor was always very cheerful during class and very dedicated to helping students learn! Thanks so much professor!
Van Hentenryck	(ISYE 4134) I loved having Pascal as my professor. He is very enthusiastic about CP which made me very excited as well. He is really good at teaching the topic through examples. Overall, he is a great professor!
Van Hentenryck	(ISYE 4134) He is very enthusiastic about this course and seems like he genuinely wishes for everyone to succeed in it. He also always listened when we voiced that we were struggling and was accommodating for whatever we needed.
Van Hentenryck	(ISYE 4134) Enthusiasm during the MW class Zoom meetings

Van Hentenryck	(ISYE 8813) Absolutely his passion and brilliance. I have so much respect for him and the work he has produced.
Van Hentenryck	(ISYE 4134) Enthusiastic
Van Hentenryck	(ISYE 4134) Genuinely cares about students
Van Hentenryck	(ISYE 4134) Passionate about what he was teaching.
Van Hentenryck	(ISYE 4134) Enthusiam
Van Hentenryck	(ISYE 4134) That he chose great TAs
Van Hentenryck	(ISYE 4134) How passionate he is about what he teaches!
Van Hentenryck	(ISYE 4134) I like the theme of the class! Instructor did a great job of making the content different and exciting by using the Star Wars theme.
Van Hentenryck	(ISYE 4134) Enthusiasm and availability
Van Hentenryck	(ISYE 4134) Pascal is a very high energy and knowledgeable professor, making for a fun and knowledge-packed experience.
Van Hentenryck	(ISYE 8813) Pascal is extremely enthusiastic and cares a lot about students.
Van Hentenryck	(ISYE 4134) asynchronous instruction
Van Hentenryck	(ISYE 4134) The professor has very good pre recorded lectures for each topic.
Van Hentenryck	(ISYE 4134) His enthusiasm and interest in the material
Van Hentenryck	(ISYE 4134) Enthusiasm and theming the class around Star Wars
Van Hentenryck	(ISYE 4134) The professor was very passionate about the topic and tried to evoke participation of students at the interactive sessions. He was extremely knowledgeable about the course matter, and could often answer students questions. However, sometimes it felt as if his knowledge was too advanced for students who have never taken a constraint programming class before.
Van Hentenryck	(ISYE 4134) Passion, enthusiasm, and knowledge about Constraint Programming
Van Hentenryck	(ISYE 4134) He is very enthusiastic, and he was pretty available during interactive sessions
Van Hentenryck	(ISYE 8813) Lectures are engaging.

Van Hentenryck	(ISYE 4134) Enthusiasm for course and making the course interesting using a theme and real world problems
Van Hentenryck	(ISYE 4134) Dr. Pascal obviously cares a great deal for the subject material/students and made the lectures and online sessions very enjoyable and approachable.
Van Hentenryck	(ISYE 4134) His excitement for the class! I love that its star wars themed and that hes so funny. Its such a good way to keep us in the loop.
Van Hentenryck	(ISYE 4134) Energy
Van Hentenryck	(ISYE 4134) very excited and engaged
Van Hentenryck	(ISYE 4134) Enthusiasm
Van Hentenryck	(ISYE 4134) He was very smart
Van Hentenryck	(ISYE 4134) enthusiasm
Van Hentenryck	(ISYE 4134) He was fairly accommodating; he would provide extensions when we requested them.
Van Hentenryck	(ISYE 4134) Enthusiastic
Van Hentenryck	(ISYE 4134) This class was basically taught by the head TA. Instructor was not helpful and never helped de-bug students code. All he did was re-use lectures from years ago and then let the TAs handle everything else from there.
Van Hentenryck	(ISYE 4134) Enthusiasm
Van Hentenryck	(ISYE 4134) na
Van Hentenryck	(ISYE 4134) I thought that the professor was really helpful and engaging!
Van Hentenryck	(ISYE 4134) His passion for OPL and Star Wars.
Van Hentenryck	(ISYE 4134) The Grand Master, He is.
Van Hentenryck	(ISYE 4134) Pascal was extremely passionate about constraint programming and it is clear how much effort he puts into making the videos for the course.
Van Hentenryck	(ISYE 4134) Extremely passionate and genuinely wants us to learn and understand the material
Van Hentenryck	(ISYE 4134) Very passionate, which made it much easier to learn in the videos



Van Hentenryck	(ISYE 4134) His passion for the course is contagious
Van Hentenryck	(ISYE 4134) enthusiasm
Van Hentenryck	(ISYE 4134) Interesting contents
Van Hentenryck	(ISYE 8813) Hiring a bunch of good TAs
Van Hentenryck	(ISYE 4134) Very knowledgeable, enthusiastic, passionate.
Van Hentenryck	(ISYE 4134) good sense of humor, interesting projects and very passionate
Van Hentenryck	(ISYE 4134) Humour.
Van Hentenryck	(ISYE 4134) Very positive and welcoming
Van Hentenryck	(ISYE 4134) Very enthusiastic
Van Hentenryck	(ISYE 4134) enthusiasm for the material and effective explanation of concepts in constraint programming
Van Hentenryck	(ISYE 4134) He was extremely passionate about the subject.
Van Hentenryck	(ISYE 4134) Enthusiasm, humor
Van Hentenryck	(ISYE 4134) He teaches the material with a lot of excitement. This makes the class more interesting and entertaining even though the lectures are recorded.
Van Hentenryck	(ISYE 8813) Engaging
Van Hentenryck	(ISYE 8813) Very engaging and enthusiastic
Van Hentenryck	(ISYE 8813) His Enthusiasm and effort to make the course interesting
Van Hentenryck	(ISYE 8813) His enthusiasm for constraint programming.
Van Hentenryck	(ISYE 8813) I liked the way the instructor made the videos interesting and fun to learn!
Van Hentenryck	(ISYE 8813) His knowledge and willingness to engage with the students

Van Hentenryck	(ISYE 8813) Passionate to the extreme! Pascal wants students engaged and curious, and achieves that by being eccentric and outgoing. Well organized lectures that build on each other, clear units/module breaks. Also, the theming of star wars was fun and unique, it brought a playfulness to a class that could easily be boring logistic scenarios
Van Hentenryck	(ISYE 8813) I can praise this instructor enough. He was excellent. Very enthusiastic, extremely knowledgeable, willing to work with students, always encouraging, and made it fun to learn. Really one of the best instructors I have had at GT if not the best.
Van Hentenryck	(ISYE 8813) Knowledge, enthusiasm, and accessibility
Van Hentenryck	(ISYE 8813) Care about students questions.
Van Hentenryck	(ISYE 8813) Has great passion
Van Hentenryck	(ISYE 8813) interactive with students!!
Van Hentenryck	(ISYE 8813) His enthusiasm, the way he actually takes time to know students and the creativity and passion he pours in each and every aspect of this course. Probably the best teacher Ive had at Tech, hands down.
<b>Question: Instructor improvements</b>	
Van Hentenryck	(ISYE 4134) More hands on activities to practice the material outside of graded work.
Van Hentenryck	(ISYE 8813) I think the lectures need more advanced examples of how to implement the concepts more effectively. That would help the students to do the assignments more easily. Also, the instructions for the assignments were mostly not very clear and many students had to go to Ed Discussions to ask many questions for clarification. The instructions should be clear so that we can get started right away since a week or a week and a half is not enough for us to finish the hard assignments. The difficulty of each assignment should be more lenient.
Van Hentenryck	(ISYE 4134) Grading, preparing students for the assignments and getting good grades not below average.
Van Hentenryck	(ISYE 4134) Have more in-person class, smaller class size, more student-faculty interactions. The class currently feels very out of touch and hard to reach.
Van Hentenryck	(ISYE 4134) Discuss more about topics as we got further into the semester as much as he did at the beginning.
Van Hentenryck	(ISYE 4134) live lectures
Van Hentenryck	(ISYE 4134) Certain topics need to be fleshed out (helps with certain assignments).
Van Hentenryck	(ISYE 4134) n/a
Van Hentenryck	(ISYE 4134) eh
Van Hentenryck	(ISYE 4134) Provide more resources for the class

Van Hentenryck	(ISYE 4134) Quicker email reply time
Van Hentenryck	(ISYE 8813) Sometimes, the code in examples are not thoroughly explained, and I cannot quite grasp it after replaying the video numerous times. It also did not really help that there is minimal documentation for this content.
Van Hentenryck	(ISYE 4134) Better method for office hours
Van Hentenryck	(ISYE 4134) Slower pace in lectures
Van Hentenryck	(ISYE 4134) Release HW solutions after the deadline so I can learn from my mistakes before the exam. Also, there isnt much information about OPL outside of class, the videos were helpful but I wish there was like a weekly "Summary" or information packet that gave everything in a concise way as a supplement to the videos so I dont have to rewatch them all the time when im trying to find a something specific.
Van Hentenryck	(ISYE 4134) The instruction can be improved IMMENSELY. I felt dismissed when I asked questions and when students came with concerns it was waved off. The exam was hard and even though I went to office hours, I still felt lost. Also there were not enough lectures on syntax. Half of the interaction sessions were focused on people not having their cameras on. People were forced to ask questions even though they had individual questions which prolonged the interactive sessions. You made us scared to collaborate with other people.
Van Hentenryck	(ISYE 4134) Release videos with homework solutions so we can learn from our mistakes and make better choices in subsequent assignments.
Van Hentenryck	(ISYE 4134) I do wish there more opportunities to understand syntax like mentioned above.
Van Hentenryck	(ISYE 4134) N/A
Van Hentenryck	(ISYE 4134) more room for questions and elaboration between the lectures and the homework
Van Hentenryck	(ISYE 4134) N/A
Van Hentenryck	(ISYE 4134) Overall there isnt really much I would recommend.
Van Hentenryck	(ISYE 4134) Clearer assignment instructions.
Van Hentenryck	(ISYE 4134) More coding examples for homework assignments, more availability for questions aside from the breakout sessions (would often take 30+ mins to see a TA)
Van Hentenryck	(ISYE 4134) Certain aspects were loosely/vaguely taught, such as how to reduce solving time
Van Hentenryck	(ISYE 4134) More examples of syntax
Van Hentenryck	(ISYE 4134) He can teach syntax/language of specific methods instead of using examples only to explain CPLEX. There were moments when we were expected to use a method, but I had no idea how it could be used for a specific use case. I just wish we had clearer instructions with certain methods
Van Hentenryck	(ISYE 8813) NA

Van Hentenryck	(ISYE 4134) The hardest part of the course was figuring out the syntax for OPL, and its extremely difficult to look up syntax online that is relevant to our homework assignments. More lectures/slides on OPL syntax relevant to our homework assignments would be helpful.
Van Hentenryck	(ISYE 4134) Occasionally, I was confused on expectations due to the phrasing of instructions.
Van Hentenryck	(ISYE 4134) More OPL syntax at the beginning and more preparation for the harder assignments and midterm
Van Hentenryck	(ISYE 4134) N/A
Van Hentenryck	(ISYE 4134) please be less creepy in class. It made me uncomfortable so I never came.
Van Hentenryck	(ISYE 4134) There were way too many assignments in the course and the lecture videos did not help much in completing them. Instruction should relate more to the assignments.
Van Hentenryck	(ISYE 4134) This format simply doesnt work that well. Far too difficult to be asynchronous.
Van Hentenryck	(ISYE 4134) If he was more involved. Needed to be present at EVERY interactive session. Several times he missed it and thats the only time we see him in person. He needed to answer questions on Ed Discussion if he continues to keep these video lectures
Van Hentenryck	(ISYE 4134) More review of past assignments
Van Hentenryck	(ISYE 4134) At the beginning, when the class assignments suddently got super harder, I wish there was more correlation between notes and the assignments. Also, I liked how in the beginning of the course, the interactive sessions had presentations about the assignment and helped me frame the scenario better. But after a while, you stopped presenting them, and those were the ones that were super hard because there was so much confusion in terminology in the given .mod file. In the end of the semester, when you presented them, it was nice that you did that.
Van Hentenryck	(ISYE 4134) na
Van Hentenryck	(ISYE 4134) Hes perfect the way he is.
Van Hentenryck	(ISYE 4134) I would prefer in-class interactive sessions.
Van Hentenryck	(ISYE 4134) Literally nothing, hes great
Van Hentenryck	(ISYE 4134) N/A
Van Hentenryck	(ISYE 4134) Could be better tailored to the homework assignments
Van Hentenryck	(ISYE 4134) more examples
Van Hentenryck	(ISYE 4134) n/a

Van Hentenryck	(ISYE 8813) Improving the slab stick model presentation and the car sequencing presentation. To this day, I still dont understand the model because I dont understand the problem setting
Van Hentenryck	(ISYE 4134) n/a
Van Hentenryck	(ISYE 4134) TAs should be more explicit with where students went wrong in assignments-- almost didnt do well on Podraces II because TA completely did not specify where I went wrong in Podraces I
Van Hentenryck	(ISYE 4134) More examples
Van Hentenryck	(ISYE 4134) Videos sometimes confusing/concepts not explained thoroughly, especially at first.
Van Hentenryck	(ISYE 4134) Just making it a bit less assignment heavy.
Van Hentenryck	(ISYE 4134) Some introduction or question to initiate discussions during the live sessions; it may also help if these were in person
Van Hentenryck	(ISYE 8813) more examples
Van Hentenryck	(ISYE 8813) More help with CPLEX could be provided.
Van Hentenryck	(ISYE 8813) N/A
Van Hentenryck	(ISYE 8813) More feedback and potentially more examples. Also wish there was a way for me to have these lectures in the future, because theres no textbook for me to buy, and if I forget a concept Ill have to struggle to figure it out again.
Van Hentenryck	(ISYE 8813) I have no improvements other than the aforementioned change to the mid-term.
Van Hentenryck	(ISYE 8813) Strengthen the relationships between modules.
Van Hentenryck	(ISYE 8813) the best!!