

MODULE REPORT

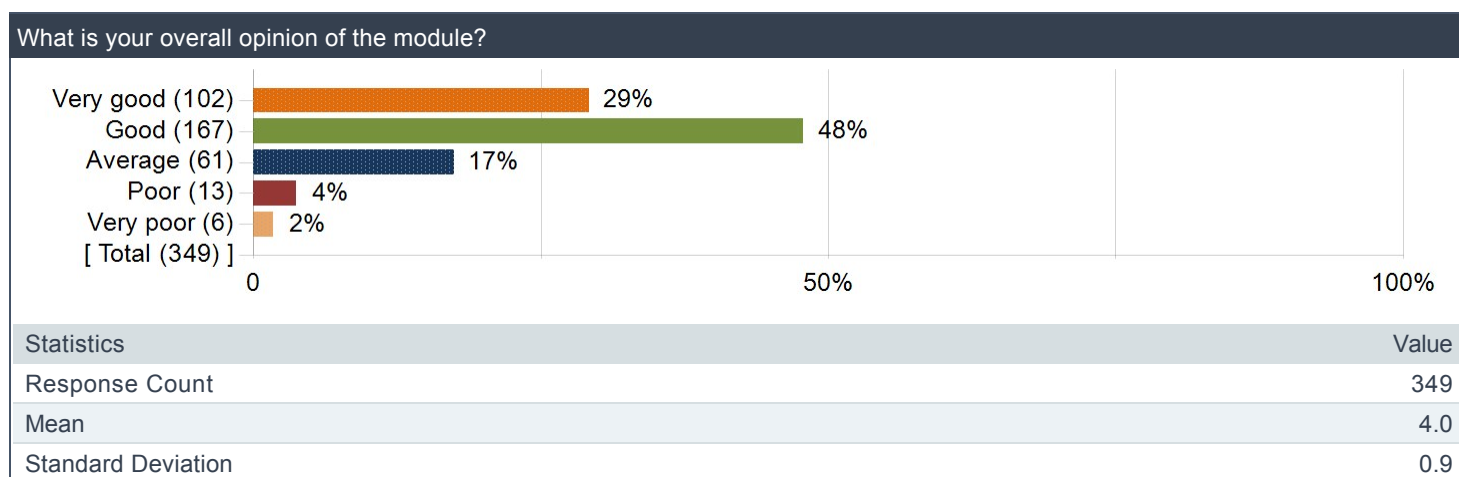
Module	CS1010S - PROGRAMMING METHODOLOGY
Academic Year/Sem	2020/2021 - Sem 1
Department	COMPUTER SCIENCE
Faculty	SCHOOL OF COMPUTING

Note: Class Size = Invited; Response Size = Responded; Response Rate = Response Ratio

Raters	Student
Responded	349
Invited	621
Response Ratio	56%

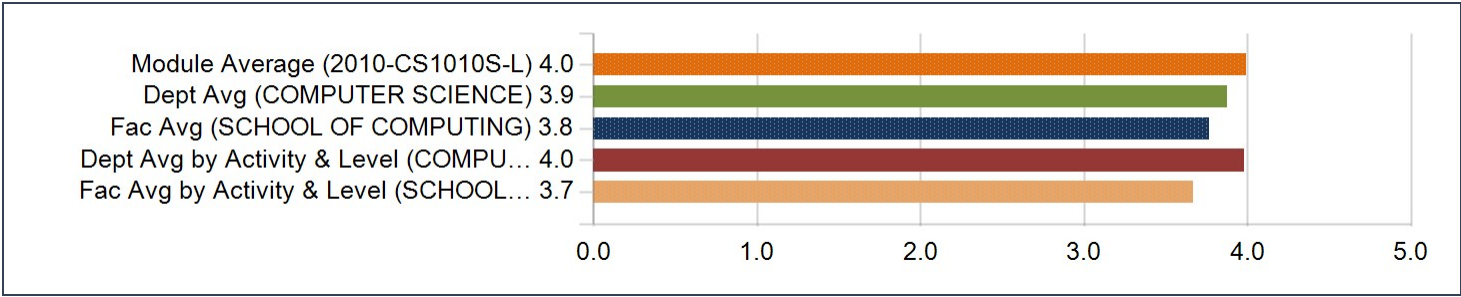
1. Overall opinion of the module

Distribution of Responses



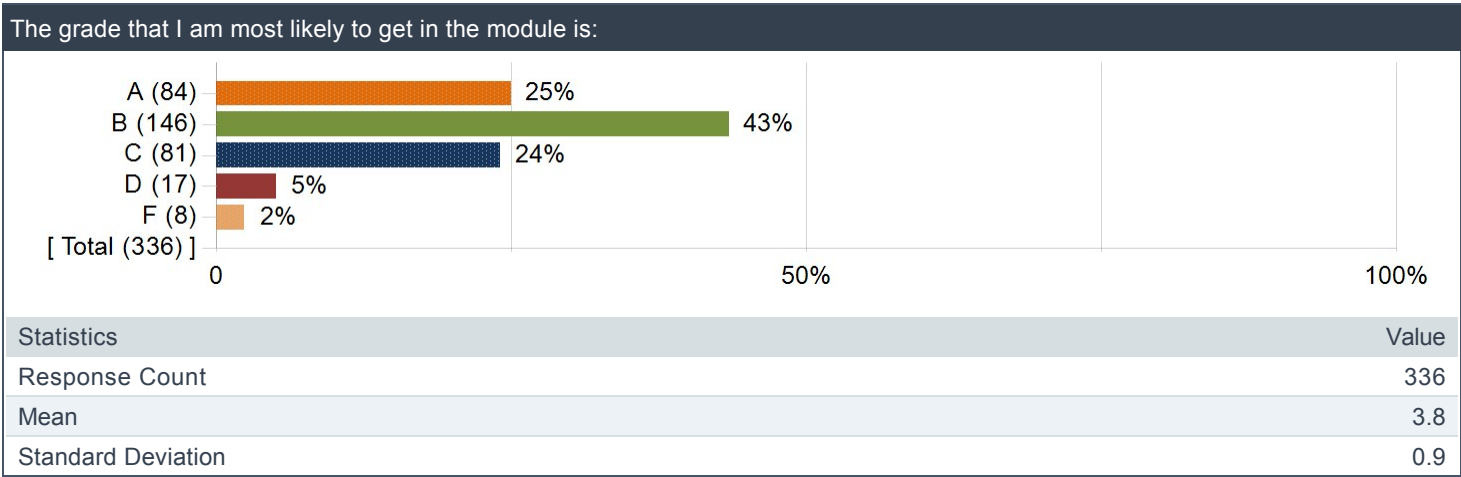
Rating Scores

Question	Module Average (2010-CS1010S-L)		Dept Avg (COMPUTER SCIENCE)		Fac Avg (SCHOOL OF COMPUTING)		Dept Avg by Activity & Level (COMPUTER SCIENCE-LECTURE (Level 1000))		Fac Avg by Activity & Level (SCHOOL OF COMPUTING-LECTURE (Level 1000))	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
What is your overall opinion of the module?	4.0	0.9	3.9	1.0	3.8	1.0	4.0	0.9	3.7	1.2



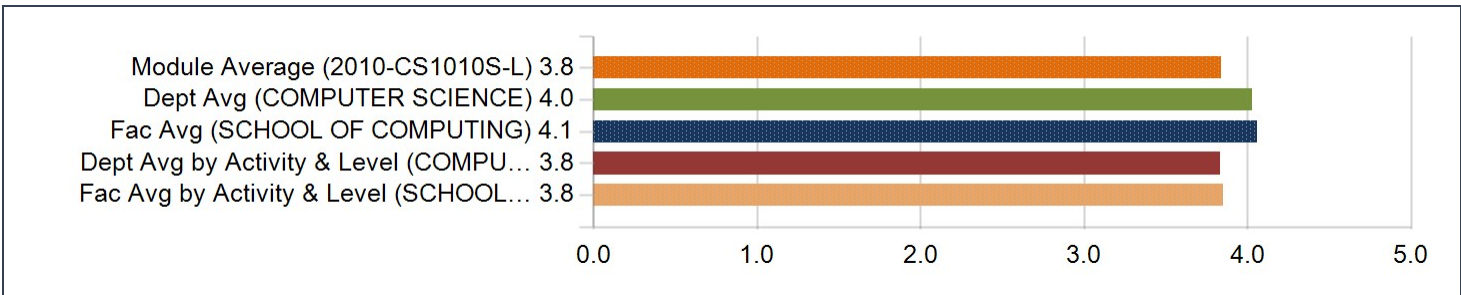
2. Expected Grade

Distribution of Responses



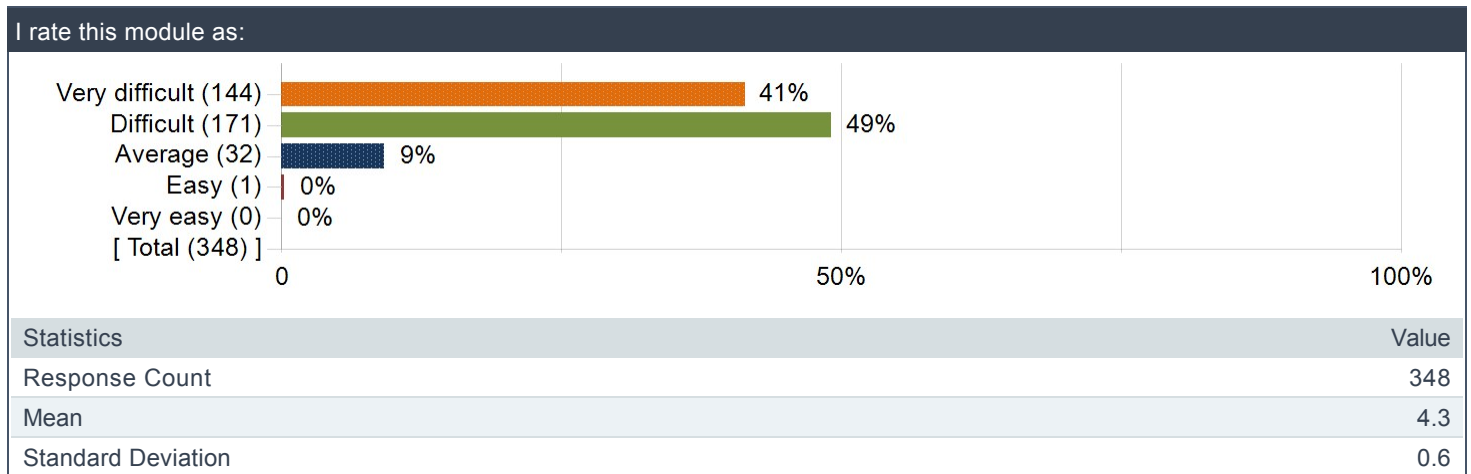
Rating Scores

Question	Module Average (2010-CS1010S-L)		Dept Avg (COMPUTER SCIENCE)		Fac Avg (SCHOOL OF COMPUTING)		Dept Avg by Activity & Level (COMPUTER SCIENCE-LECTURE (Level 1000))		Fac Avg by Activity & Level (SCHOOL OF COMPUTING-LECTURE (Level 1000))	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
The grade that I am most likely to get in the module is:	3.8	0.9	4.0	0.8	4.1	0.8	3.8	0.9	3.8	0.9



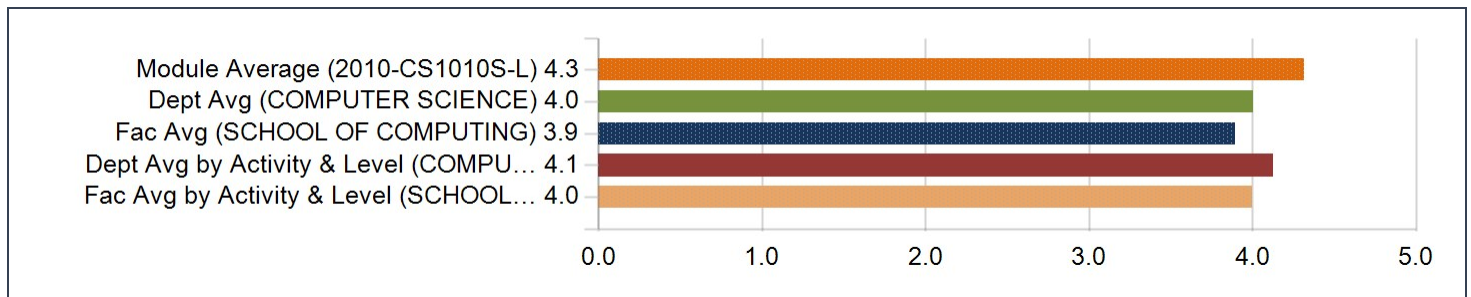
3. Difficulty Level of the module

Distribution of Responses



Rating Scores

Question	Module Average (2010-CS1010S-L)		Dept Avg (COMPUTER SCIENCE)		Fac Avg (SCHOOL OF COMPUTING)		Dept Avg by Activity & Level (COMPUTER SCIENCE-LECTURE (Level 1000))		Fac Avg by Activity & Level (SCHOOL OF COMPUTING-LECTURE (Level 1000))	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
I rate this module as:	4.3	0.6	4.0	0.8	3.9	0.8	4.1	0.8	4.0	0.8



WHAT I LIKE / DISLIKE ABOUT THE MODULE

What I liked about the module:

Comments
Teaches the basics of Python and some complex concepts as well.
Gamified learning experience, well designed module
Enhance my thinking ability
It helped to improve my logical thinking and pushed me to my limit
Probably cos the stuff I learn gives me a good glimpse of what programming is all about.
They make our learning like a game with missions and levels

Comments
cs is cool
Extremely useful
Useful
NA
The Mission concept and the AFAST option.
Fun way of learning
Challenging for sure, in a good way. It really exposes you to think differently or from multiple angles to solve a problem, which was really fun for me.
The style of which they taught using coursemology was really interactive and interesting
They gamified the subject so it was more enjoyable when doing assignments and I felt that the teaching team put in effort to make the subject more relatable. Help was also very readily available.
Steep Learning Curve
Nice introduction to computational thinking
I learnt to do programming
The gamification, and the whole structure of the module. This was by far the most enjoyable module I took this semester.
I learnt about python and its uses.
A very good intro mod to students who may not have had prior CS background like myself.
Eye-opening to Computing and programming
Structured in a somewhat interesting and effective manner.
Get to learn programming for the first time and it was a very fun experience
COURSEMOLOGYYYYY
It is rigorous in nature, and challenges my problem solving abilities (i.e to be able to apply the concepts learnt and put it into codes in order to solve a problem)
nothing
the questions are challenging, really enjoy doing the problems
It gave me a glimpse into the world of computer science. I chose to take this because I thought it'd be useful in the future if I learnt some programming right now.
Fun learning method through coursemology
It really gives me the proper understanding of every fundamental concept of programming.
nil
Prepares for the the higher level CS mods
The department definitely put a lot of effort in designing the module. Coursemology was a good platform to learn python through doing practices.
it had a lot of hand-on assignments which other modules often lack. missions are the fun part. The idea of gamifying the learning process is over all fantastic!
quite fun
all
Good introduction to coding
Challenging, sense of satisfaction after solving questions. Coursemology is fun. No bellcurve.
critical thinking and relevant skillsets
it prepares me well with the coding foundation needed and interesting missions
I really appreciate how the mod is made into a "game-like" module to make us more interested in coding.
Coursemology component
Very challenging and rewarding
Really solidifies the foundation in coding, the gamification aspect of the module also increases student interest in the module.
The Coursemology EXP system is awesome, encouraging students to learn at their own pace, and not to be stressed about assignments. Theres this idea that "if i dont get fullmarks I can just do more to make up the EXP" helps the student to not be too discouraged. The amount of extra practices on Coursemology is a great help too, especially the large database of past year papers.

Comments
Good pace
It promotes independent learning and I love CS a lot
The missions and side quests are very enjoyable to do because of the storyline and relevance to how we can apply the language. There are also a lot of past year papers for students to practice.
It is very useful for me. My coding skill improve a lot after this course
I managed to learn a new skill ie Python.
can pak game and code at the same time
encourages us to think a lot
Interesting and thought provoking
It encouraged creative and critical thinking and I think it focused very much on passing on skills to us that would definitely come in very handy in the future. I also felt that this module out of the rest of the module taken this semester, had the most committed and dedicated teaching team, who provided students with real time feedback and took to a very effective approach to supervise our learning
my friends took it with me
fun
Really interesting
Learning about coding for python was fun
Very challenging questions and exercises that are enjoyable.
Very nice introduction to programming. Taught me new ways to think when soling problems.
Almost everything
Assignments were well-suited to the covered content.
get to learn the technical skills
i like how i get to improve my coding skills
It was an accessible introduction to the module that adjusted its difficulty level to suit the student's needs
It was fun to learn and fulfilling to understand
Learnt some new things about programming
Learnt basics of programming
Was a refreshing introduction to basic programming skills with many missions to enhance our learning in a fun way
The homework took a lot of time to prepare and was very fun and creative.
It is hard, thus will have greater sense of satisfaction when done well.
Programming methodology shapes the mind
The difficulty of the mod and just coding in general
problem solving etc
I am interested in coding. I like how it is rigorous and teaches us the fundamentals in programming methodology.
Challenging but fulfilling when I debugged successfully and got my codes to run properly.
There is a lot of support for people new to programming and may be struggling with the content.
challenges me very much
Gamification of the module. Lots of trainings available in the Coursemology (self-paced learning)
The amount of support given by the teaching staff.
made me appreciate the usefulness of python and coding in general
Gaming aspect of tasks, lots of feedback on performance, lots of practice, lots of support (low tutor:student ratio)
Missions have a storyline to them, this made it more fun when doing the work.
It is generally interesting
I liked the mode of assessment the most as it was done on Coursemology which had a levelling system that made learning more fun. I also liked how creative the storylines in the missions were, and it made me feel more inclined to complete the missions.
Coursemology
Challenging coursemology
a very feedback system with the missions and tutors so that I am able to learn quickly

Comments
U learn alot of things
nil
Learnt key concepts of programming in interesting methods
Both content and the way the workflow is strutured (story plot + exp) is interesting
The computational thinking development process.
Coursemology, own time own target
very interesting
coursemology
The missions were interesting to do
every staff that teaches this module is very kind and nice, and although I might not be in their recitation classes, they are still willing to help (@ TA kenghwee)
Very good introduction to programming
Small tutorial class size and my TA was very nice and helpful.
quite fulfilling to have green ticks when submitting on coursemology
NIL
It triggers my critical thinking.
very well-planned for students new at programming
Professor Ben Leong teaching is amazing
Stimulates thinking a lot and forces student to overcome the challenges
interesting subject matter
Coding was made fun through stories
A very rigorous module which allows me to think as a general programmer, allowing me to venture to other languages as well. The sufficient amount and variety of practice ensure that I am able to learn new things by doing more.
interesting content very fun to practice and discover new ways of thinking
It guides us step by step through the fundamentals of programming, which was helpful for me since I did not have any programming experience.
Intuition
Nothing much
It is challenging and greatly increase my programming knowledge and enhances my the way to think and write optimal solutions.
A lot of practice and glad to have learnt python through this mod
the coursemology experience was rather fun
Very interesting module. Python was very cool and I actually developed critical thinking skills
There is a lot of practices that allowed me to practice with. It is definitely effective as the more practices I did, the better I understood the concepts that were being taught. CS1010S has really one of the most dedicated teaching staff and they are always willing to share their knowledge and the environment that is being built to learn in is really good. Having no bell curve and also a forum really promotes the habit of sharing rather than worrying that the assistance you render to others could cause the bell curve to go up. Really enjoyed the module.
The content
Missions
teaching useful materials
The gamification process of CS1010S really adds to its appeal and excites me to do more.
Able to learn something new despite previous background
The problem solving and learning of practical skills.
I learnt a lot about programming methodology and how to write programs in a concise and efficient manner
Introduction to python
The module taught us new ways of computational thinking, and provides sufficient exercises for practice and exam preparation.
The new concepts were interesting to learn

Comments
Depth of content
The Coursemology platform allows me to feel accomplished everytime my EXP level increases. I also like the story building in missions and exams to make coding fun.
Missions were fun, especially because they were contextualised and gamified. Helps us to see the applications of programming as well as enjoy the process of learning.
It helped me with my basics in coding efficiently and effectively. whereas when i learnt the same basics from outside courses, it was not as well explained and taught.
critical thinking
Learning about programming was quite interesting
Resources such as video recordings, practises, tutorials, additional workbin for exam prep
has AFAST program
Challenges me every day
Gamified learning is challenging but effective
most students are able to at least get 25% solely from completing assignments
The module is really excellent with attracted level up system at the same time useful practice.
Can really boost your ability in using Python very much
Course material and exercises were interesting and engaging, while being effective as lessons for students.
The missions were fun to do. I liked the structure of the module. There are recitations and tutorials to further sharpen our concepts.
Able to learn a coding language, its a skill
I like how the module is presented as a gaming kind of stuff where part of our grades are graded through this coursemology thing where we do missions(homework) to get experience to level up and this game setting makes it very fun and it kind of serves as a motivation to do the work as well although sometime the homework takes a bit too much time to do.
–
good teaching team including the students TAs as well. overall the module is fun and fresh
the critical thinking and problem solving part
Useful programming techniques and basics taught
Coding was enjoyable at times
Very well planned module. Very easy access to resources and help.
Challenging even for some adequately experienced programmers like myself, a lot of time and effort is needed to get through the module. The gamification of this module and the passionate attitudes of the lecturers, TAs, and student tutors have proven to be extremely effective in my learning – please do keep this for future batches to come.
Very useful, and the efforts taken by the teaching staff to allow us to solve problems in many different contexts (patterns with shapes, programming for games, programming with images, programming for physics, biology, etc etc) is very cool
Coursemology
Good way of teaching the subject
Relevant topics were tested as Python Language is very broad so the basics and some frequently used concepts were taught in the short span of time of 1 semester.
The whole gaming concept was quite interesting. Missions were made fun.
Learnt the basics to programming and Python. Concepts on programming that were taught are extremely applicable to daily life as well as towards problem solving.
Coding is fun :p
coding is fun
Really engaging! I love the competitiveness of it.
It is interesting and the module introduced many concepts that are very applicable in real-life setting.
the missions were interesting
provide good foundation in programming, interesting (and challenging) missions, best TA and teaching team!
I believe the module provides good foundational knowledge about programming. The last lecture on data visualisation is personally very helpful, both for my major and personal interests. I especially like that the module teaches how to read data from files.

Comments
Good introduction to programming language
Sense of satisfaction whenever I code successfully.
A good illustration of techniques needed in programming.
–

What I did not like about the module:

Comments
Quite challenging for beginners
Difficult and fast
The workload is little too heavy. It takes up a bulk of my time as the assignments are very difficult. Also, there are many lessons and lectures to attend and there are multiple separate homework assignments to complete.
I mean what more can be said. INTENSE WORKLOAD
Nil
too heavy workloads
Alot of time taken
None
Too difficult
Very heavy workload
NIL
–NIL–
It was very difficult
Nothing I did not like
Heavy workload
The solutions for the courseology missions were never released, so even if my answer was right, I don't know if there was a better method I could've used.
really hard to understand, go very fast
The learning curve is too steep. I did not have any prior experience in learning python and taking this module (along with 4 others) is very difficult. The rigour of this module is too fast and I find myself struggling to cope with the assignments that I have to complete.
Takes up lots of time away from my other core mods, especially with the missions and trainings to do every week. While I enjoyed doing them, I cannot deny that they were time-consuming.
NA
Pace and learning curve is far too difficult to cope for beginners in coding. As id almost in a way that we do not have other modules to manage too.
Nil
There is nothing much that I dislike about this module.
lecture is too fast
too many missions le
The steep learning curve is definitely one of my biggest challenges in the module. Within the second week I felt like I was thrown into the deep end of the pool.
Very high workload
I feel that this module has a lot of restrictions in terms of using some programming features. It feels like you have to use some features that you don't really like due to its complexity.
with no prior coding knowledge, having to compete with people who has is really quite distressing and i am not able to devote so much time to master coding because there are still other mods to focus on
Heavy commitment
I think the nature of CS assessments is that some questions are designed more so to "trick" you than to test how well you can code, which might be fair, but for students not in SoC it might be a little stressful to have to try to understand everything (especially the somewhat more unusual parts of how python works)

Comments
Too much to digest
The teaching was not linear and there were big knowledge gaps from lecture to lecture and from mission to mission. I think providing self-learning material like textbook can allow students to bridge the gap themselves during non-lesson time.
a lot of work and tedious
A bit hard to pick up at the start
really really really not friendly to people with absolutely zero background and no time (really cant help)
-
-
quite alot of workload, sometimes the deadline are too close so need to rush, but the workload does help me to code alot better than before
The workload is very heavy. Especially if you want to keep up with the missions, sidequest, doing tutorials before the actual tutorial, doing recitation before actual recitation.. Everything is pretty shaggy.
Workload can be very heavy
Pace is too fast!
Pace of teaching is too fast at times.
None
-
It is really difficult sometimes
The workload is too high, if i did not choose 2 GE mods to take along with CS, i would have failed CS plus the 2 mods.
NIL
nothing
It is extremely difficult. :(
time sapper and impossible to meet deadline
takes up a lot of time compared to other mods if student is weaker in coding
The workload is insane
super difficult. take up too much time.
tough
Challenging, high workload
The exam questions are not discussed anywhere in the module.
A bit more time consuming than other modules
nil
Some missions are too hard
For an introductory module which was open to the general population of the Science students, this module was too difficult to understand and score in. This was worsened by the Computing students making up a sizeable population of the students, which tended to push the mean scores higher to the disadvantage of the less capable students. This could have been alleviated by splitting the Computing students to a separate module and keeping this module solely to students not in School of Computing as a purely introductory module which is easier and lesser in content.
Too much time commitment for the module. Personal average was about 15 – 20 hours per week (due to the module having tutorials, recitations and assignments "Lecture Trainings & Missions" all due every week.
Midterm CA test was too difficult to score, and did not give enough time for all the questions(this was made even harder via Exemplify as there was no possibility to annotate on the question paper)
Too much content for this module. As a result, lectures were usually rushed through.
Conducting the Practical Exam remotely and involving the use of screen recording and proctoring was too troublesome and prone to technical errors. Even the software recommended is simply a free open-source software that was difficult to use and configure. Should have suggested an easy-to-use software or maybe even gotten a paid and licensed software.
very very high workload
assignments are very difficult and time consuming

Comments
Too heavy workload
too much hwmk
Some missions were really time consuming
there were big gaps in the teaching and testing; lectures went over basic concepts while even the trainings (which are not worth doing because of the insanely low exp gain) required more knowledge. alot of time was spent googling for syntax/implementation stuff (not how to solve the question but just how to use basic syntax stuff) when the explanation from tutors could have covered it in 10% of the time but they only give very vague hints which do not help at all – need to clarify that i'm not asking them to give me answers but when we just learnt something in lectures (e.g. classes) and there's confusion in the implementation (e.g. <code>__init__</code> and <code>__super().__</code>), if there were more guidance in the trainings, less time would be needed to review lecture slides + stackoverflow just trying to understand how to *implement* it.
A lot of practice is needed. When this sem first started, I spend most of my first few weeks on CS1010S, slightly neglecting other modules. I had to reduce my weekly CS1010S workload in order to cope with my other modules.
Too much work since we have to do a mission, tutorial, prepare for recitation and do trainings all within one week. That being said, it was probably beneficial since it forced us to practice more and helped us pick up programming faster.
I'm new to it so it is tough to grasp a lot of concepts
Too time consuming
It has lots of missions and sometimes takes a long time to figure out the solution.
workload is a little heavy at times
This module is very challenging and time consuming for a student who has no python background. The amount of time and effort spent on this module took a huge portion of my time in sem1.
NIL
So mush homework
Workload
some topics seem to be a bit difficult
CS1010S is too heavy a module, in terms of workload. Most people spend upwards of 20–30 hours a week doing all the assignments and tasks associated with it. Most weeks, we have to do 2 assignments, 1 tutorial, 1 recitation, 1 post–lecture quiz, as well as 2 optional assignments. This adds on tremendously to the workload, and as a result, I neglected the rest of my studies for CS1010S. This needs to be worked on, either by assigning CS1010S a heavier weightage, or by reducing the number of tasks.
Too much content squeezed into a semester for someone who have absolute no programming background. Lectures being rushed/taught through quickly every week is slightly overwhelming.
Stress
The excessive number of missions
The lecture notes were not very relevant to the missions and tutorials. Things taught in the lecture were easy but when it comes to mission and tutorial it was extremely difficult. Would prefer the lecture to be more relevant to missions and tutorial.
All practices are graded (such that EXP is required for 25% of the grade). It results in students rushing as they need to complete all the required exercises rather than primarily trying to learn the content.
hard to write code on exemplify
Lack of summaries
You tend to lose track of the amount of time you spent on trying to get the code to work.
More percentage could be put into the daily work, and less into exams, as exam stress can lead to students not doing well as they expected themselves to. for example add an addition 5–10% into coursemology work, and for the difficult examples in REC and LEC, there could be dedicated videos to explain these so that weaker students can bridge their misunderstandings.
Pace of teaching too fast
Assignments were a bit challenging and the workload was quite high
Exams are significantly different from past years. Missions are so abstract its almost impossible to relate to real–world scenario, especially with close to no hints other than forums and half the time I'm just figuring out what the question wants from me.
too much content
Gives me a headache everyday
mid term was too difficult and the time given for it is too short. why bother saying that this module is to teach how to think and problem solving skills when you don't even give students time to think in examinations.

Comments
Too many assignments
Tests were far more difficult than any practice a student would have interacted with. Without prior knowledge it is near impossible for a student to achieve good results on the mid terms. The mid term exam did not measure how much a student understood the material taught so far, but instead filtered people who were already able to code well. If such a difficult test is to be given, appropriate build up towards that difficulty level is necessary. Practices and exercises can be tuned to slowly approach the difficulty of the assessments, so that students are not shocked when they are assessed, and are able to put out their best performance.
This module takes up a lot of time.
The plagiarism standards. If you don't want people copying maybe you should allow people to submit the mission even if its not completed? (instead of people turning to copying in order to just submit) Right now, for people that are slow, missions open later for them. This should be the reverse. Missions should open earlier for people who are slow. This is because when missions open later, they have the same deadline anyway, and then the slow people have less time to complete the mission as compared to the smarter people, becoming a self-fulfilling prophecy. (they cannot complete in time, or they have to copy just to submit on time). I think the department should have more support when it comes to missions and things like that. Without copying, it can be very hard to make the logic leap. While you can be supported by forums and asking TA and friends, I found this pretty ineffectual. Towards the later weeks, my TA became too busy to help me, my friends didnt know how to do either and thus couldnt help me, and the forums would give pretty bad advice because you cannot post code and thus had to just vaguely describe the problem, leading to pretty ineffectual advice from everyone. As one of the slower students who went for remedial, I would say the support given is very inadequate. It all depends on if you have enough friends to help you, or if you personally know other TAs to help you when your own TA is too busy. I also would like to question the decision of removing a few helper functions for some missions as compared to cos1101 or cs1010x? what was the point? if everyone is continually complaining this module has too high workload, its too hard, then maybe something should be done, instead of continually pointing out to students that its already been made easier for them. While I do appreciate the professors and TAs help to me personally, I would say this module is set up for people to either fail or copy.
It's difficult
Extreme workload, not beginner friendly although its supposed to be an introductory module. The sheer amount of workload can be way too overwhelming for a beginner in programming, and the tight deadlines adds on to the overall stress of the student. I was initially quite excited to learn programming, but this mod significantly diminished my motivation to do well for the mod and is making me feel negatively about programming, which i don't intend to feel negatively towards about since my course would be quite heavily dependent on programming knowledge and skills too. This module affected my mental health quite negatively, overly stress over deadlines and frequent breakdowns because of the amount of time needed to spend on the assignments, and even more when you are not familiar with the programming language. Time is sacrificed for the other modules as well, which affects my performance in the other modules. Effort does not translate to result for this module.
very challenging
the workload
really hard to grasp and take a lot of time to understand
Very heavy workload
Very fast-paced teaching, high workload
Some of the assignment contexts were rather irrelevant to industries that students are pursuing, although it was intended so that everyone is on equal footing. Perhaps introduce certain assignments in the context of the students' majors, like what was done with the brand new Mission 11: DNA Translation. Introduce missions like data processing for BzA students, calculus for Math students etc. and allow students to have opportunities to learn programming methodologies in the context of different industries.
It just takes up far TOO much time if you don't already go in with good prior experience. It just isn't worth neglecting every single other mod one has in order to do well for this mod. It feels like 6-8 MCs, with each individual piece of homework (tutorials, missions, etc) taking anywhere from 2 hours to 18 hours for my friends and I, who have no prior experience.
I guess it's just our fault for not studying ahead in advance, but the situation pretty much leaves us with the choice of either staying ahead in CS1010S at the expense of all our remaining mods, or aiming to S/U CS1010S.
Lack of structure as mission deadlines are not regular
Sometimes hard to understand what the question is asking for, so n idea to answer. Also, if not strong in pattern recognition, hard to score
NA
The workload is rather immense and hard to keep up with
NA
The workload really a bit too much
the difficulty level is a bit high

Comments

Extremely difficult HAHA, but I guess it has that reputation already. Extremely time consuming but I reckon that is necessary to get good at computing.

The workload is heavy and the use of Exemplify for assessment is inconvenient as the user interface of Exemplify is not user friendly

The module teaches how to import and process data, but I would like to learn how to export this data back into csv files as well. I believe that would make the learning process more complete.

Some missions take an extra long time which sometimes eats into time needed for other modules

Missions.

Too much workload

Missions are of a bit too much workload.

—