Course Evaluation - Spring 2020
General Course Information

Course Evaluation: Discrete Mathematics

Course Instructor	Waqar Saleem
Program	CS
Course Code	CS- 113
Type	Lecture
Section	L1
Class Size	25
Response Rate (%)	96%
Most Expected Grade	A- Grade
Course Rating	3.6
Instructor Rating	4.3
Course Rating of Program	3.9
Instructor Rating of Program	4.2
Course Rating of School	4.0
Instructor Rating of School	4.3

	Less than 1 Hour	1-3 Hours	4-6 Hours	7-9 Hours	10 or More Hours
The average number of hours per week I spent on this course	4.2%	4.2%	29.2%	50.0%	12.5%

	Online	Face to face	Mix or blended
What mode of course delivery would be preferable to you?	12.5%	45.8%	41.7%

	Yes	No
Would you recommend the course to your peers?	91.7%	8.3%

Course Evaluation - Spring 2020
Course Evaluation Report (Tables)

1. Given the unusual circumstances and a sudden switch in mode of teaching, how would you rate the following aspects of course structure, remote teaching and logistics arrangements:

Sr. No	Aspect of Course	Ratings		
		High	Adequate	Needs Improvement
	Technology			
1.	Technology platform used for course delivery (Microsoft Teams)	41.7%	58.3%	0.0%
2.	Level of ongoing support provided to you for using MS Teams by the institution	50.0%	45.8%	4.2%
3.	Expectation of the instructor for using specific design and other software/ tool during remote learning phase	50.0%	50.0%	0.0%
4.	Overall time spent on computer for attending all courses and working on assignments	75.0%	20.8%	4.2%
	Communication			
5.	Initial communication about online sessions, assignments, timelines, etc.	58.3%	37.5%	4.2%
6.	Ongoing communication about changes in courses, assessments, grading policy etc.	50.0%	45.8%	4.2%
	Teaching & Learning Process			
7.	Duration of online sessions	54.2%	41.7%	4.2%
8.	Regularity of the sessions	66.7%	29.2%	4.2%
9.	Student active participation in online sessions	66.7%	33.3%	0.0%
10.	Adjustments made by the instructor in the course content and assessment after its online transition	50.0%	41.7%	8.3%
11.	Availability of recorded lessons	75.0%	20.8%	4.2%
12.	Teaching methods used by the faculty in online learning phase	66.7%	25.0%	8.3%
	Assessment and Feedback			
13.	Number of assignments given/ assessments taken during remote teaching (March-April, 2020)	45.8%	50.0%	4.2%
14.	Suitability of assignments/ assessment to remote teaching	37.5%	50.0%	12.5%
15.	Frequency of feedback received	45.8%	33.3%	20.8%
16.	Suitability of time/ juncture at which the feedback was received (in relation to course progression)	37.5%	50.0%	12.5%
17.	Quality of feedback received	41.7%	41.7%	16.7%
	Office Hours			
18.	Availability of faculty for online Office hours	54.2%	45.8%	0.0%
19.	Extent to which office hours were utilized	25.0%	66.7%	8.3%
20.	Usefulness of office hours	33.3%	58.3%	8.3%

2. How often following teaching/ learning strategies were used during the remote learning phase?

Sr. No	Strategy	Ratings			
		Always	Most of the time	Sometimes	Never
1.	Verbal lecture /explanation	62.5%	33.3%	4.2%	0.0%
2.	Use of power point presentation to support lectures/explanation	70.8%	20.8%	8.3%	0.0%
3.	Whole class discussion	58.3%	29.2%	8.3%	4.2%
4.	Questioning	58.3%	33.3%	8.3%	0.0%
5.	Student presentation	8.3%	25.0%	8.3%	58.3%
6.	Use of discussion boards	29.2%	8.3%	45.8%	16.7%
7.	Use of multimedia (video clips, animations, photos, etc.)	20.8%	16.7%	25.0%	37.5%
8.	Demonstrations by the faculty	29.2%	33.3%	33.3%	4.2%
9.	Others	50.0%	16.7%	0.0%	33.3%

Course Evaluation - Spring 2020
Course Evaluation Report (Comments)

1. Comment on course structure, remote teaching and logistical arrangements

- It was a good course
- Everything was well settled.
- They were adequate
- It was decent. Faculty tried its best to adapt to this online transition in these unusual and sudden change. And they did so very efficiently.
- Sir Waqar didn't made us feel that we actually have transitioned to remote learning. That was his best part.
- The pace of the course was initially slow as we were getting used to the environment but were able to catch up a little bit of pace later on.
- Assignements and assesments should either be lessened or removed.
- I really appreciate the efforts put forth by the faculty and the institute and making remote learning a possibility. But the whole experience was quite overwhelming for me. I had a hard time connecting with the content and class sessions due to the lack of a suitable environment for learning and constant distractions. Moreover, the recurring connectivity issues made learning very hard for me. I faced difficulty in keeping track of all the assignments and
- Great course
- Everything was perfectly addressed.

2. What was your understanding of the course objectives? Were those objectives achieved during the semester? Were the objectives compromised in any way due to remote learning? Please elaborate with examples.

- My understanding of the objectives was very clear and I think those objectives were achieved as well.
- The objectives were not compromised. I faced a few problems due to remote connection but it was fine.
- Course objectives were achieved, though recitations were more intimate on campus and were not the same online
- The course objective were tried best by the instructor and the RA to be executed in swift and elegant manner. Although the sudden online transition affected every individual and the whole process of learning but I think the instructor did their best to make sure the objectives of the course are fulfilled. Online examination was however didn't went as swiftly as predicted by most instructors primarily due to reasons like power outage, internet dis connectivity, communication problems and performing exam within an household setting.

- For me, the course objective were to understand the basic concepts of logic and reasoning and how they become helpful in your pathways of Computer Science. Since, it was a theoretical course with less practical knowledge, so the objectives were completed till now. Remote learning never did become a hurdle, especially when Sir Waqar provided a frame of learning exactly the same as we were having in physical classes.
- The objective of this course was to show how mathematics is linked to computer science and how it helps to structure it. Objectives were met surely and there was no hindrance because Dr. Waqar used the powerpoint and latex to explain all the topics, so was it in online experience
- To solve problems logically and that took time but eventually due to the class lecture understanding and book reading got us in the right track.
- Course objectives were clear and delivered perfectly even in remote learning.
- Its objective was to enhance the logical thinking and problem solving which it was able to achieve quite to an extent.
- Well actually online learning helped me in this course as I could watch the lectures again to better my understanding

- Most of the course content was understandable, but few aspects were hard to grasp sometimes because of connectivity issues and sometimes due to lack of face to face discussions.
- Objectives have been reached, they were compromised due to the slow pace of classes online and the inability for most people to get through a class undisturbed, due to internet issues or other reasons.
- Great course
- Due to the global pandemic, it was hard to regain the lost motivation and dedication but the efforts of our instructors on moving to online classes adjusted everything in an extremely good manner. The objectives were not compromised in any way.
- I understood. Yes. No
- Develop an understanding of logic, set theory, functions and relations.
  The objectives as I understand were compromised in a manner such that the course was impacted by the delays and thus, somewhat knocked off schedule.

3. Do you want to share any other feedback on engagement and participation levels in the course?

- It was a great course
- Sir Waqar did focus a lot on participation levels of students though there is no class participation grade in this course. Indeed, his set of ideas on letting students participate eventually worked for everyone.
- Dr. Waqar kep the lecture session interactive using the MS Teams chat option.
- Participation which was before has now decreased slightly but sir waqar tries his best to engage everyone and make sure the lecture becomes fun too.
- Great course
- It was overall a good experience on moving the course online.
- High on both counts.

4. Describe three major challenges you faced during remote learning phase

- Assignment Submission, Class participation, Assessments, etc
- 1-) Internet issues. 2-) Power out break issues. 3-) Focusing with full dedication during the ongoing global pandemic.
- Maintaining focus, peer discussions not being possible and connectivity issues
- 1. Lack of focus and concentration due to this sudden transition.
  2. Performing examination from home.
  3. Internet and power outage.
- There wasn't any major challenge I faced for this course.
- Internet issues occasionally.
- Power cut Internet issue Disturbance
- Power breakdown Internet connectivity Distraction
- Assesment became to stressful.
  Assignments were hectic to complete within deadline
  It was a new experience so took a while to adjust
- The online connection that only sometimes
- 1.connectivity issues
  2.lack of a suitable environment for learning.
  3.keeping track of assignments and assessments.

- Uninterrupted classes.
  Finding time to do insanely long homework assignment.
  Keeping up with course content at home.
- Great course
- Internet issue Out of power
- Being screen bound for long periods
- 1. Attending class amidst the activities going on at home. 2. Focusing in class. 3. Getting effective help from TAs.
- Focusing with dedication in this global pandemic. Internet connectivity issues. Power outbreaks.
- Connectivity
- Network, listening problems

5. List your suggestions to improve remote learning experience in future

- I think it as best as it can get, I don't think any changes are required.
- Everything was well settled.
- More time should be given on topics as compared to the time given on campus to the same thing
- There isn't much that can be done about dis-connectivity issues. Exams however can be improved in a way that the time window are extended with gradual spread of questions over that long window of time.
- A plan for every class could be given out before hand, may be, at night, so that everyone may have an idea of what we could expect. I want this only for remote learning, since there is already so much uncertainty due to lack of physical experience.
- I think recording the lectures beforehand and releasing them during the class session, then having a discussion related to the topic with small groups of students would create a more interactive learning environment and help us to clear our queries.
- Reduce the workload, change the assignments, reduce the stress given to students during a global pandemic, even if course content is the kept the same, it should not be so insanely stressful right now
- Great course
- Pre recorded lessons ,aand shorter discursive classes that follow
- It can improve by the having recorded lectures

6. Reasons for preferable mode of course delivery

- I think its best to have a variety of ways of communication.
- It is much more easy to communicate and develop the sense of understanding.
- More questions and answers on campus were really helpful in strengthening the concepts
- A classroom environment face to face is more interactive for both the student and the teacher and communication is much more swift in such environment.
- I feel that it would be quite good to use online learning when the course is just left with some theoretical explanations which could be done online. So that way, we can save the time, preparing stuff, getting ready for a physical class and indeed, getting occupied in something which could distract your focus on what's important.
- To get a proper environment to study and to be able to focus on every concept taught in the lecture
- I believe the study of this course should be mixed as it is solving logical problems which need alot of practice to understand a certain problem.
- To cover the syllabus more deeply, time is required.
- A better experience
- Made it easier for me to catch up in the course and better my understanding
- As much as I liked the flexibility offered by online sessions, I still felt out of place with no face to face interaction with the instructors. That's why I would prefer a mixture of both modes.
- To keep attention, no point of online if theres an option for face to face because we take notes, if not, we can refer to books.
- Great course
- Will ease the technological issues faced continuously and the physical strain of being screen bound for long periods
- recordings were helpful
- Online classes are comfortable but getting help for assignments is much more effective in person.
- Face to Face discussions are extremely fruitful for better understanding of the desired topic.
- Both modes are same
- Course style suits online teaching.

7. Please give reasons for your selected course rating

- It was a great course.
- Its a bit mind boggling course but too good to generate the logical understanding.
- The online classes made it really paced and harder to grasp the topics
- The course introduced many fundamental concept of computer science domain. It built strong concepts on logic, proofs, relations and function, all of which are primary tools in mathematics and computer science. Due to this reason, I would want my peers to take this course as well.
- The course could be very much struggling. People could possibly fail this course on the first place if they aren't good at Maths.
- This course really requires you to think and is not that easy. On the other hand, also helps you to know that how the different flieds like mathematics and computer science are linked to each other.
- He was clear on his concepts.
- I don't enjoy this course, it is difficult and depressing.
- It is a good but a challenging course
- It's an excellent course that helps improve our problem-solving abilities.
- Course was quite fun once I started to understand it
- Discrete Mathematics helped me learn how to write proves and understand the logic, it helped me in breaking the everyday problems into smaller parts and understand them, it even improved my arguing skills which are very helpful to me
- Classes are difficult to sit through because it is very boring, but I guess it is the content itself which is like that. Atleast online has been immensely difficult to manage at home. Teachers should be more open about what is happening. Are the homeworks we spent countless hours on even going to be graded? Why are we being stressed with this long homework if they won't even bother checking it? Right now, at least, it is more important to tell us than to let us struggle for whatever reasons.
- Great course
- Because of its difficulty level
- Very heavy workload Too many forums and modes of communication related to this
- The course was interesting, as were the assignments. Perhaps it was lacking in the latter parts where the history of proofs and such concepts stopped being brought up. Relevance of the subject to our lives is always important.
- This course is a requirement for other important courses in this major so yes I would recommend it to others.
- content
- Since this course is mandatory for CS Majors, we have to take it anyhow. The course itself is extremely good but at times it gets too much confusing. Furthermore, Assignments on LaTeX were not less than a hassle. But after all, it is done for the betterment of students since what I heard is that LaTeX is used in above semester courses as well.
- It helped develop logic.
- It is very interesting and somewhat useful and applicable in real life.
- Because it is interesting and the way it is delivered by the instructor is very interesting and convincing

8. Please give reasons for your selected instructor rating

- He is a great Teacher.
- The instructor taught this course very well.
- The instructor has an in-depth knowledge of the course and had a very articulate way of delivering the lecture
- Sir Waqar Saleem make sure that every individual in class is on the same page. He frequently ask students if they are following, takes time to help student if they are struggling. And he delivers the concepts in very effective and swift manner.
- Sir Waqar is a very talented professor. I feel that he's a perfectionist, and that's why, he makes his class bound to some specific set of rules and plan which enable a guaranteed success for the course.
- Dr. Waqar is accomodating and helps to create a healthy learning environment for everyone.
- Sir teaches with enthusiasm and tries to take everyone on the same track.
- He has a good grip on his subject.
- Sir gives alot of hw and quizzes are difficult due to which gaining marks is very difficult.
- He cleared the concepts very well
- The instructor had an excellent grasp on the course material and was able to teach very, very well.
- An amazing teacher always well-prepped before lecture any helped a lot in understanding the subject
- I wanted to have this course with sir Waqar quite desperately, and it was worth it. If it was not for him, understanding this course would be very hard. His way of teaching is very engaging and fun.

- He is a good teacher, one of the best I've heard, but I feel like we all have too much going on and the classes are certainly not very interesting. During face to face, however, it was a much better experience.
- Great course
- He teaches good
- Well versed Good place with lecture delivery Assignment designs are good
- Timely, experienced and efficient. Not much more one can add on to the qualities present.
- Our instructor has handled the transition to online teaching very smoothly made the transition easier for us as well. We are thankful for the efforts put into making the class as close to an in-person class as possible, and appreciate that
- He is strict
- Mr. Waqar Saleem explained each n everything topic clearly and concisely. I am truly satisfied by his teaching style.
- He's very co-operative.
- The professor has a distinct method of teaching which is very thorough and comprehensive.
- It gives attention to everyone and give all of us the opportunity to participate in class