Description of Your Report

Your Course Evaluation Report contains up to four sets of items, represented in up to four sections in your report, described below.

Sets of Items

Institutional Items
These eight items are consistent across the University of Toronto. They are comprised of:

- Five rating-scale items which represent institution-wide teaching and learning priorities.
  - **The institutional composite mean, a mathematical average of these first five items.**
- One rating-scale item on the overall quality of a student's learning experience.
- Two qualitative comment items.

Divisional Items
These items are consistent across your division. They represent division-wide priorities for teaching and learning.

Departmental/Program/Course-Type Items
These items (when applicable) represent further levels of granularity and specificity for teaching and learning priorities within your division (e.g., department, program, course type).

Instructor-Selected Items
These items are optional items which may be selected from the item bank by instructors during the question personalization period.

- **Note that the results from these items are only reported to instructors, as they are primarily intended to function as personal formative feedback.**

Report Sections

The following provide different statistical summaries and representations for your institutional, divisional, and departmental/programmatic items (where appropriate).

Section 1: Course Evaluation Overview
Provides all course evaluation data except instructor-selected items.

Section 2: Response Distributions and Additional Statistics
Provides detailed response distributions.

- The number and relative percentage of respondents providing a given answer is provided, along with a graphical representation.
- This section also reports further statistics for each set of items relative to Section 1.

Section 3: Comparative Data
Provides comparative means for your course as compared to the relevant means across ***all*** *other evaluated courses at a particular level of comparison (e.g. division, program)* for each set of items.

Section 4: Instructor-Selected Items
Provides data for optional items that instructors can select from the item bank during the question personalization period. This section is formatted identically to Section 2.

Statistical Terms Used in this Report

Mean: The mathematical average. This measure is the most sensitive, and can be greatly affected by extreme and/or divergent scores.

Median: The middle value when all responses are ordered. This measure is less affected by extreme and/or divergent scores.

Mode: The most frequently occurring score.

Standard deviation: A measure of the "spread" of the data.

FAS Fall 2018 Undergrad

Course Name: Intro to Topology MAT327H1-F-LEC0101
Division: ARTSC
Session: F
Session Codes: F = First/Fall, S = Second/Winter

Instructor: Dror Bar-Natan
Section: LEC0101
Report Generation Date: January 9, 2019

Raters	Students
Responded	31
Invited	70

Section 1: Course Evaluation Overview

Part A. Core Institutional Items

Scale: 1 - Not At All 2 - Somewhat 3 - Moderately 4 - Mostly 5 - A Great Deal

Question	Summary	
	Mean	Median
I found the course intellectually stimulating.	4.7	5.0
The course provided me with a deeper understanding of the subject matter.	4.7	5.0
The instructor (Dror Bar-Natan) created an atmosphere that was conducive to my learning.	4.6	5.0
Course projects, assignments, tests, and/or exams improved my understanding of the course material.	4.3	4.0
Course projects, assignments, tests and/or exams provided opportunity for me to demonstrate an understanding of the course material.	4.2	4.0
Institutional Composite Mean	4.5	-

Scale: 1 - Poor 2 - Fair 3 - Good 4 - Very Good 5 - Excellent

Question	Summary	
	Mean	Median
Overall, the quality of my learning experience in this course was:	4.4	5.0

7. Please comment on the overall quality of the instruction in this course.

Comments
The lectures were great. I appreciated all of the analogies and visualizations which made understanding theorems much easier.
The instruction was good.
Instruction was easy to follow even though a lot of the material is challenging, my only issue was concerning a slight lack of information that would be needed to help solve questions on the homework, however I was able to learn it from the text, so that is probably just due to time restraints of classes.
I really enjoy the fact that Professor Dror always keeps a bigger picture in mind when discussing concepts in topology that allows us, the students, to have a better grasp on the overall structure of topology.
Instruction was fairly good
Pretty good.
One of the best instructors I have ever met. Instead of simply teaching us theorems, he tries to tell us the motivation of developing the theorems, and this really enhances our understanding of course contents and mathematics.
Dror was the best professor I had this semester! His lectures were a lot of fun and I felt like I understood things (not all the things but I would never expect to do so without thinking in my own time). He seemed to genuinely care about the class and was very enthusiastic. I do think the course was not paced as well as it could have been. The course was too slow at the start and too fast towards the end. Everything with infinite products and coordinate functions in a cube was very confusing when we first saw it. We could have gone through those lectures slower than we did the lectures in the first month and a half. I found Munkres very useful. I don't think it replaced the lectures but was a good supplement. I understood the material more after I read the Munkres sections. It was slightly frustrating when the lectures and the book sections did not align. But I have no problem with the order we did things in during lecture and I never expected the lectures and the book to be the same anyway. Jamal was a really great TA, definitely the best TA I have had this semester by far. He chose good questions from Munkres. I also liked that he would write claims in the middle of proofs and wait for the class to come up with something on their own. The tutorials where we got hints for problem sets 6 and 8 were not my favourite but they weren't bad by any means.
Classes were very interesting, but required a lot of thought. The course is challenging but very well taught.
Professor Bar–Natan is fatalistic at providing intuition for conceptually difficult ideas.
Dr Bar–Natan is an excellent lecturer; the blackboard shots were occasionally useful (mainly for reviewing long proofs). I would have liked to see some more geometric topology. Would prefer if exercises in assignments were given with the section number from the textbook instead of the page number, as different editions of Munkres (e.g. the non–North American edition) have different page numbers.
This comment could be interpreted as inherently biased because I am not one of the good students of the course. And people never really read this so I might just as well write this all out. Coming into the course, I had really high expectation. The instructor is Dror Bar–Natan, one of the students of the legendary mathematical physicist Edward Witten. My first impression of prof. Bar–Natan in some first lectures was that his lecturing style was quite quirky, in the sense that the lecture structure relies on his aesthetic sense and mood of that particular day, rather than an overall coherent skeleton of the structure. I quickly dismiss this as an inspiring characteristic of a competent mathematician. However, despite my effort as coming to his lecture every day, it seems like his style does not change. I could not understand the big picture or any proof lecture by prof. Bar Natan. I thought it was in my own incompetence that I did not understand topology, despite topology being one of the most beautiful subjects of mathematics. However, after going through half the course, I discover books on topology such as Topology by Janich, Willard, Wilansky ... that have a more coherent structure and more comprehensible style of constructing proof than prof. Bar–Natan. I do not blame that the textbook, Topology by Munkres, is incomprehensible. Topology is a hard subject, and some mathematicians write textbooks to satisfy their own egoistic aesthetic sense, rather than for the students to understand. The job of the lecturer (or the teacher) is to fill in the gap in the book to help the students understand. On the second half of the course, after I had a mental image of the big picture of topology, I started to notice the holes in the lecture of prof. Bar–Natan. For the easy proofs of the subject, prof. Bar–Natan only paraphrased the proof in the Munkres book. For harder proofs, the proofs that need more details, more explanation, more instruction from the lecturer, prof. Bar–Natan only used some "chalk – saving lemma", some rough mental image of his, some shortcut or tricks that give no motivation nor insight towards the proof. It made me wonder if I really should come to the lecture or just read the book and teach myself topology with disregard for anything the prof. said. One of the extremely irritating points of the professor is that he always gives analogies by drawing inaccurate images on the board

Comments
and say that it's the mental image of the proof of his. This, to me, is extremely aggravating. The image on board is only a representation of a Hausdorff space, while sometimes, in the proof, we need a more rigorous treatment of the object being discussed to understand the property, and more than that, the insight. The drawing on the board obscures the understanding, instead of helping it. I do believe that professor Bar–Natan is a good mathematician, in the sense that he published many papers, has a high citation index, and brings a lot of grant money to the department and the university. However, as a teacher, I think he failed miserably. And this, I think (I could be wrong), not because topology is a hard subject, but because he chooses to prioritize his showmanship and pride over the understanding of his students. But I don't think this comment of mine is ever read, or it will ever change anything. Professor Bar–Natan will probably go on teaching more courses, and this comment will go into oblivion.
The instructor is great and does very well at making it fun and approachable
Lectures were very engaging and always left plenty ideas to digest...
Loved the method of teaching, the prof, the material, and the pace.
Great Instructor, with lots of energy and passion towards his subject
I feel like we started the course a little bit too slowly. Most of the early material (continuous functions, examples, homeomorphisms, bases, closed sets, interiors and closures) is fairly straightforward and could have been done a little bit faster, which would have given us more time to look at examples of some of the trickier parts of the course (infinite products, uniform topology, Tychonoff). Aside from that, the lectures were impeccable. Professor Bar–Natan did not simply "cover material", but he really took the time to make sure it was presented in an intuitive and well–motivated fashion. Problem sets were alright, but I wish that Professor Bar–Natan gave us more of his own questions because these were much more interesting than the textbook ones.
Dror is a great lecturer.
Prof. Bar–Natan is an outstanding professor, and undoubtedly one of the best I've had! His lectures are unforgettable, full of excitement and intrigue. His passion in the classroom is contagious. He sincerely seems to have a desire for his students to thoroughly understand each and every concept in the syllabus. There is a perfect balance between intuition and rigour in all of his lectures.
Love the subject matter and the professor was very good at communicating concepts clearly and explaining thoroughly
Prof. Bar–Natan is indeed an expert on topology. He provides insights in lectures, and some of these insights are not available in lectures provided by some other professors for this same course. Some of the assignment questions are challenging, but trying to involve us to do some heavy thinking. There are several things for improvements. 1. Assignments are somewhat way too hard and too time–costly. Some friends and I all studied specialist math courses before and did quite well, also very well in CS and physics courses. However, every assignment of this course costs us 20 hours to finish. This workload is crazy, not even to mention that most of us need to take 4 to 6 courses in one semester. Plus, many of the materials are hard to digest. This is a 100% proof–oriented course. I'm not sure why the department still give this course a course code MAT327. It should be 35x or 36x kind of thing. MAT357 and MAT354 even have much of computation work to do. Indeed, if we are able to spend this huge amount of time, we are gonna enjoy this course. But while doing other same–level courses at the same time, it's hard to enjoy, and so it loses the interest of learning this course, which is already very abstract and need us to give ourselves a lot of motivation. 2. Lectures are too slow. I'm not sure what Prof. Bar–Natan's mindset is. But he covers too less in lectures, but cover a lot in assignments and assigned readings. Basically, 30% of the course materials we need to learn by ourselves. I think we should have more connection between lectures and assignments. We should cover more in lectures. If making pace too fast in lectures will lead to confusion or less understanding of the course materials, then I think we should just cover less materials for the whole course. My overall feeling about this course is that, the professor wants to cover too much materials for the whole course, but lectures' pace is slow (may be appropriate based on the difficulty), assignments are used to make up for the pace, but later course materials rely heavily on earlier course materials, most of which are learned by ourselves. So probably I wouldn't say this is effective learning. 3. If the professor encourages collaboration for homework, I suggest we should have group assignments. Like, 3 people collectively submit one assignment. Probably over the whole term, some group assignments, some individual assignments. These help people form a study group. Math classes have less people, and people are mostly introverted. I believe setting up a few group assignments will encourage mathematical learning. 4. The weight for final exam is too much, 60%. And the weight for 9 assignments is only 15%, but every week is 20 hours on one assignment. This weight setting does not make sense. We should be compensated more for our hard work on assignments. 5. Only one weekly office hour, but right after homework assignment. If you make the weight for homework so less, then why not

Comments
make office hour earlier, so we could discuss our questions with the professor more. Or we can have two 1–hour office hours on different day. In general, office hours are just too less for math specialist courses. For MAT337, MAT334, MAT237, or other courses of the same level, 2 hour office hours are just the right amount. But it is ridiculous to have only 2 hours office hour for MAT354, 327, 357 or other specialist courses. We should have more prof office hours and we should have TA office hours (which we don't have any right now).
I am an exchange student currently enrolled at the university of Stuttgart, Germany. I attended more than 40 courses over the past 5 years and I can assert that Prof. Bar–Natan is among the best professors one could have. He is a complete professor. Thank you for this delightful experience Mr. Bar–Natan!
Amazing. Professor Bar–Natan made a great job explaining the material. It was easier to go through the reading of the textbook after hearing his explanation.

8. Please comment on any assistance that was available to support your learning in this course.

Comments
Office hours were pretty helpful. It would be nice if the course had a discussion board.
The usual office hours, TA’s ready to help, etc.
Very standard. I did feel like the TAs prepared adequately for our tutorials.
The homework and online resource help a lot.
I was unable to go to office hours because of a different course, but my friend went and seemed to find it useful.
Tutorials were extremely helpful. The TA was very aware of the course content and knew how to answer all the questions, while also helping us with current problem sets.
Office hours were available.
I think the TA (Jamal) is really good at explaining things and giving hints on the problem sets.
Would have appreciated some more support – the one time I ended up going to TA office hours I was told getting an answer to my question (about an already graded assignment problem!) is not worth the time of day because I should just figure it out – clearly, if I am asking, it is because I have spent hours on that problem and still haven't managed to so saying this is really really far from helpful.
Jamal Kawach was very very helpful!
It was helpful to collaborate with classmates
The TA's were somewhat helpful but seemed busy most of the time
Tutorials were very good. The tutorials where Jamal discusses Problem Sets 6 and 8 felt rushed, and I feel like it was a bad idea to try and do that in an hour long session. Other tutorials where Jamal discussed problems from the textbook were very neat though.
N/A
The TAs for this course were excellent. I found that the allocation of time in tutorials was notably conducive to my learning, and the TA's explanations were always very clear. Office hours were always a pleasure to attend, and of great quality.
The tutorials with Mr. Kawach were also a good opportunity to practice and understand the material. Mr. Kawach demonstrated his mastery of the basic concepts of the course.

Part B. Divisional Items

Scale: 1 - Not At All 2 - Somewhat 3 - Moderately 4 - Mostly 5 - A Great Deal

Question	Summary	
	Mean	Median
FAS001 The instructor (Dror Bar-Natan) generated enthusiasm for learning in the course.	4.6	5.0

Scale: 1 - Very Light 2 - Light 3 - Average 4 - Heavy 5 - Very Heavy

Question	Summary	
	Mean	Median
FAS002 Compared to other courses, the workload for this course was…	4.0	4.0

Scale: 1 - Not At All 2 - Somewhat 3 - Moderately 4 - Mostly 5 - Strongly

Question	Summary	
	Mean	Median
FAS003 I would recommend this course to other students.	4.1	4.0

Part C: Departmental Items

Scale: 1 - Not At All 2 - Somewhat 3 - Moderately 4 - Mostly 5 - A Great Deal

Question	Summary	
	Mean	Median
The course instructor (Dror Bar-Natan) explained concepts clearly.	4.5	5.0

Scale: 1 - Not At All 2 - Somewhat 3 - Moderately 4 - Mostly 5 - A Great Deal

Question	Summary	
	Mean	Median
The course instructor (Dror Bar-Natan) was approachable.	4.3	5.0

Scale: 1 - Not At All 2 - Somewhat 3 - Moderately 4 - Mostly 5 - A Great Deal

Question	Summary	
	Mean	Median
The course instructor (Dror Bar-Natan) answered questions clearly.	4.3	4.0

Scale: 1 - Poor 2 - Fair 3 - Good 4 - Very Good 5 - Excellent

Question	Summary	
	Mean	Median
UNIT(OQI) Overall, the quality of instruction provided by (Dror Bar-Natan) in this course was:	4.4	5.0

Section 2: Response Distributions and Additional Statistics

This section provides detailed response distributions.

Mean: The mathematical average. This measure is the most sensitive, and can be greatly affected by extreme and/or divergent scores.

Median: The middle value when all responses are ordered. This measure is less affected by extreme and/or divergent scores.

Mode: The most frequently occurring score.

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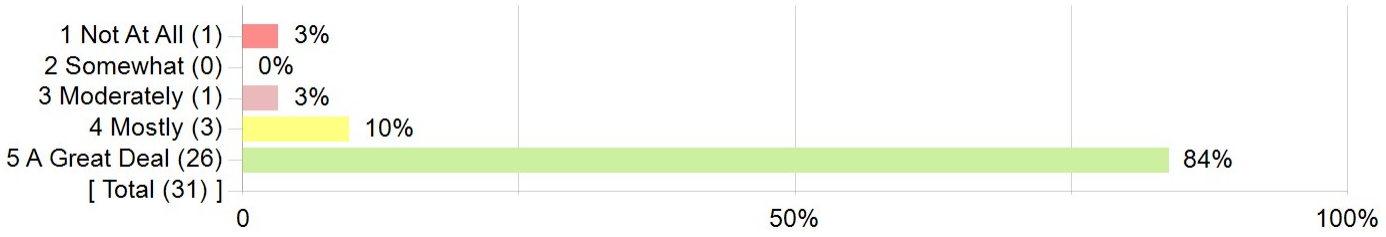
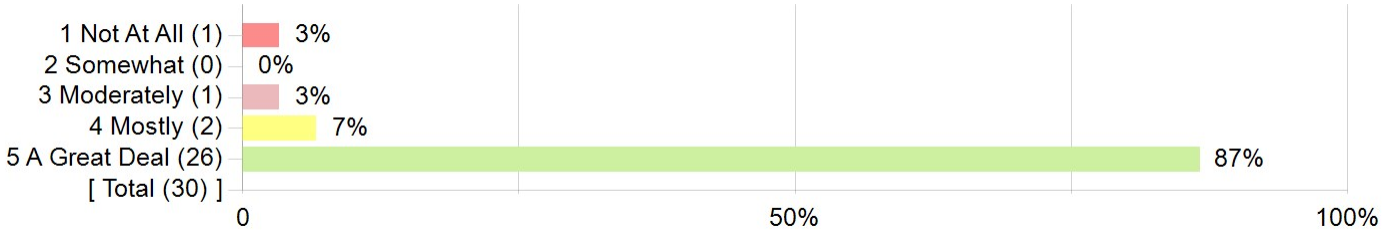
Part A: Core Institutional Items

1. I found the course intellectually stimulating.



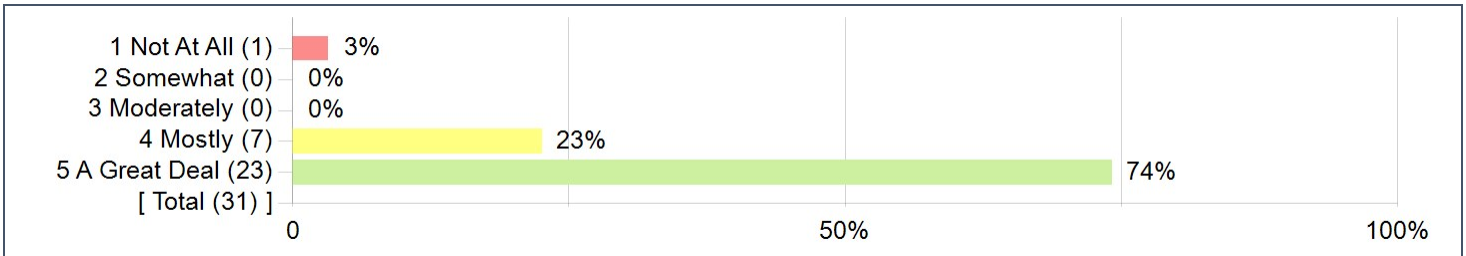
Statistics	Value
Mean	4.7
Median	5.0
Mode	5
Standard Deviation	0.8

2. The course provided me with a deeper understanding of the subject matter.



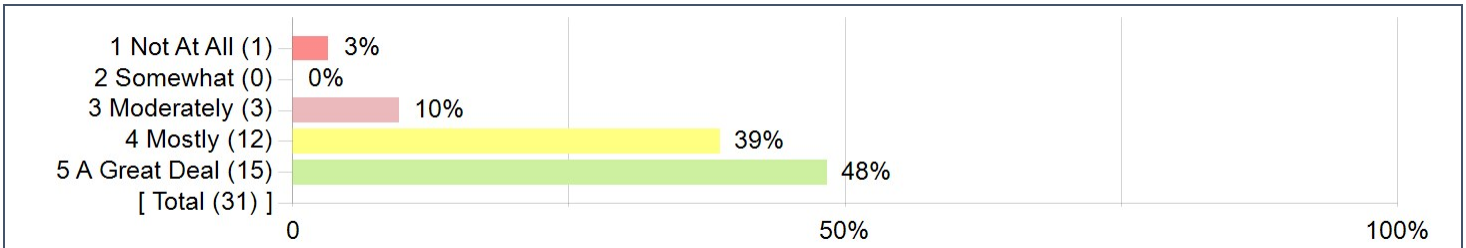
Statistics	Value
Mean	4.7
Median	5.0
Mode	5
Standard Deviation	0.8

3. The instructor (Dror Bar-Natan) created a course atmosphere that was conducive to my learning.



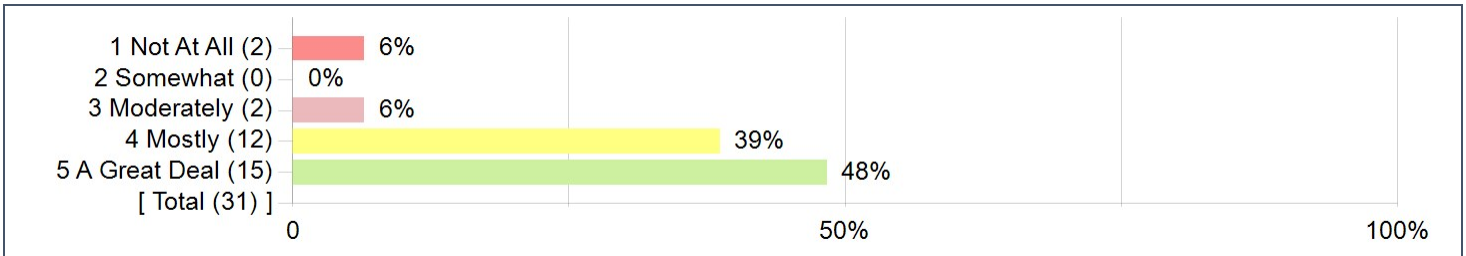
Statistics	Value
Mean	4.6
Median	5.0
Mode	5
Standard Deviation	0.8

4. Course projects, assignments, tests and/or exams improved my understanding of the course material.



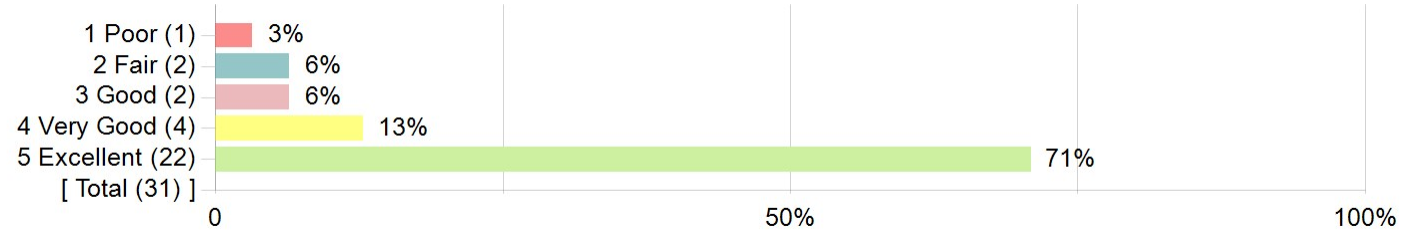
Statistics	Value
Mean	4.3
Median	4.0
Mode	5
Standard Deviation	0.9

5. Course projects, assignments, tests and/or exams provided opportunity for me to demonstrate an understanding of the course material.



Statistics	Value
Mean	4.2
Median	4.0
Mode	5
Standard Deviation	1.1

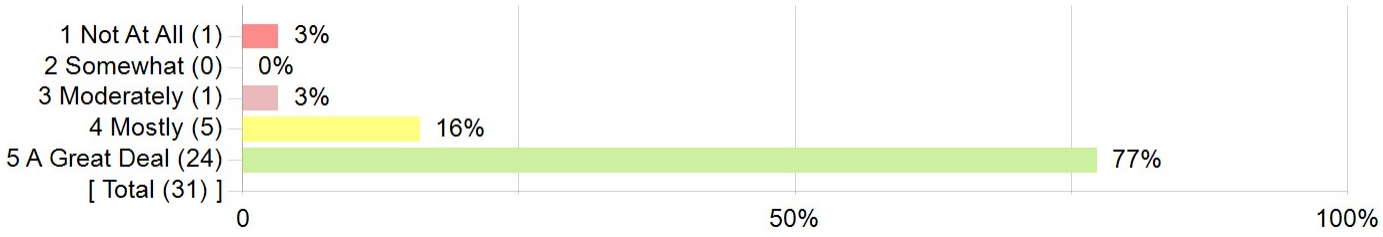
6. Overall, the quality of my learning experience in this course was….



Statistics	Value
Mean	4.4
Median	5.0
Mode	5
Standard Deviation	1.1

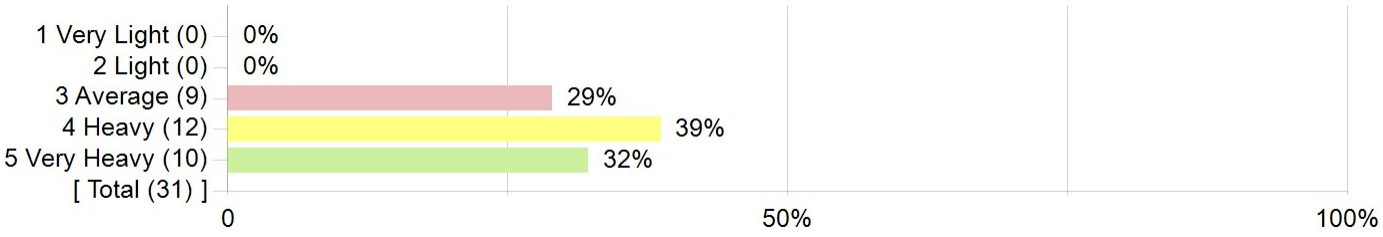
Part B. Divisional Items

The instructor (Dror Bar-Natan) generated enthusiasm for learning in the course.



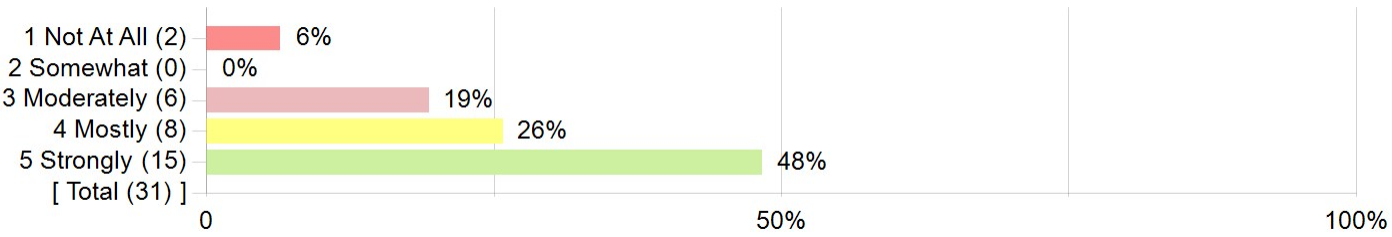
Statistics	Value
Mean	4.6
Median	5.0
Mode	5
Standard Deviation	0.8

Compared to other courses, the workload for this course was...



Statistics	Value
Mean	4.0
Median	4.0
Mode	4
Standard Deviation	0.8

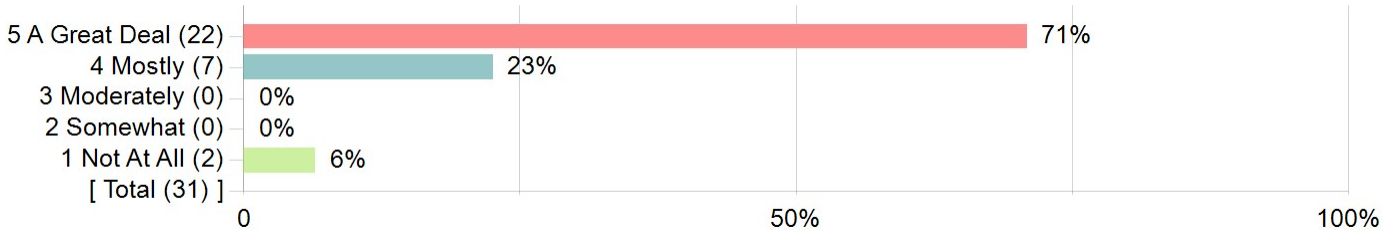
I would recommend this course to other students.



Statistics	Value
Mean	4.1
Median	4.0
Mode	5
Standard Deviation	1.1

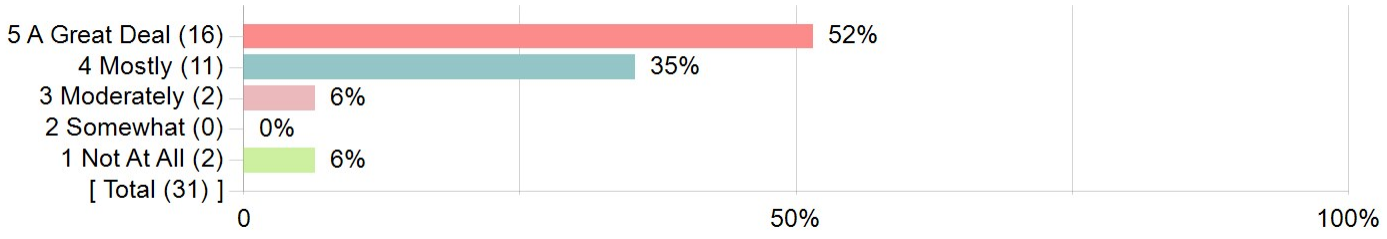
Part C. Departmental Items

The course instructor (Dror Bar-Natan) explained concepts clearly.



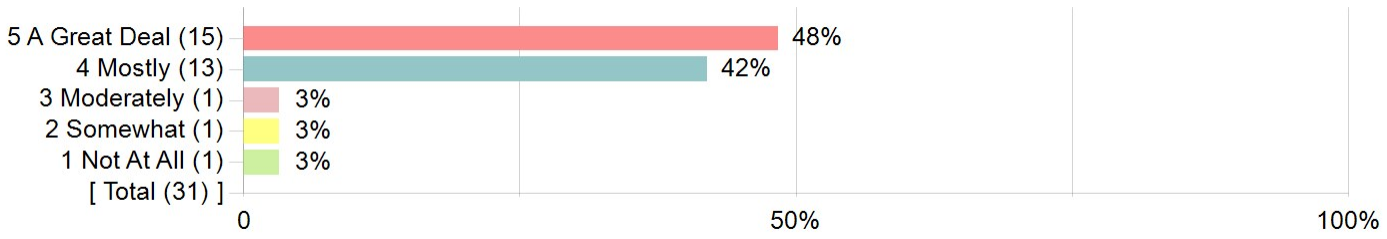
Statistics	Value
Mean	4.5
Median	5.0
Mode	5
Standard Deviation	1.0

The course instructor (Dror Bar-Natan) was approachable.



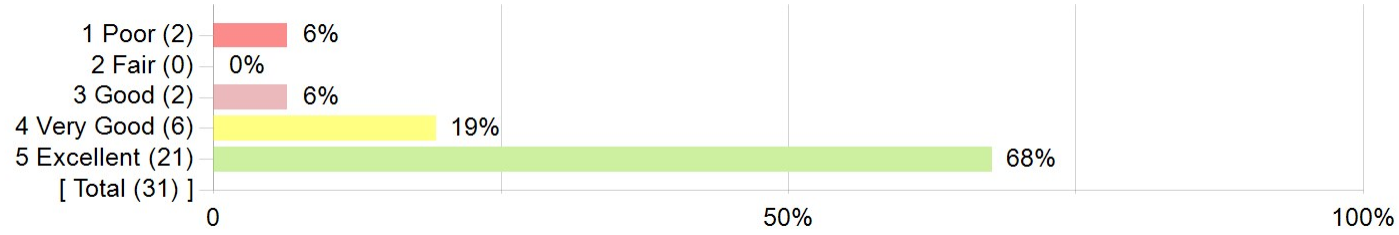
Statistics	Value
Mean	4.3
Median	5.0
Mode	5
Standard Deviation	1.1

The course instructor (Dror Bar-Natan) answered questions clearly.



Statistics	Value
Mean	4.3
Median	4.0
Mode	5
Standard Deviation	0.9

Overall, the quality of instruction provided by (Dror Bar-Natan) in this course was:



Statistics	Value
Mean	4.4
Median	5.0
Mode	5
Standard Deviation	1.1

Section 3. Comparative Data

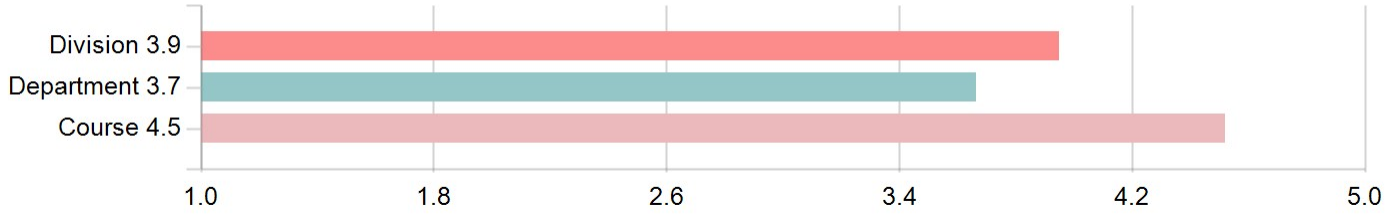
This section provides overall means for given comparators (e.g., division, department) alongside the mean values for a given course. Note that the comparators are calculated by pooling together all individual student survey responses (e.g., student responses for all of the courses in a department are pooled together and the departmental mean responses calculated from that). The provided comparators are thus a measure of the 'average' student experience for a unit or division; they are not a measure of the 'average' course in a unit or division. This calculation has the effect of giving large courses more 'weight' in the calculation of the comparator means. The effect of this on the calculator comparator varies depending on the relative proportion of large or small courses within a unit or division. As such, the departmental and divisional comparative mean values provided on course evaluations should not be regarded as an absolute and definitive benchmark.

For example, if a department offered only two courses, one with 1000 students who all answered 3.5 and the other with 10 students who all answered 4.5 (so that the means would be 3.5 and 4.5 respectively), then the departmental mean provided on the course evaluations would be 3.51 since the calculation would be [(3.5x1000)+(4.5x10)]/1010]=3.51 ***and not*** *(3.5+4.5)/2=4.*

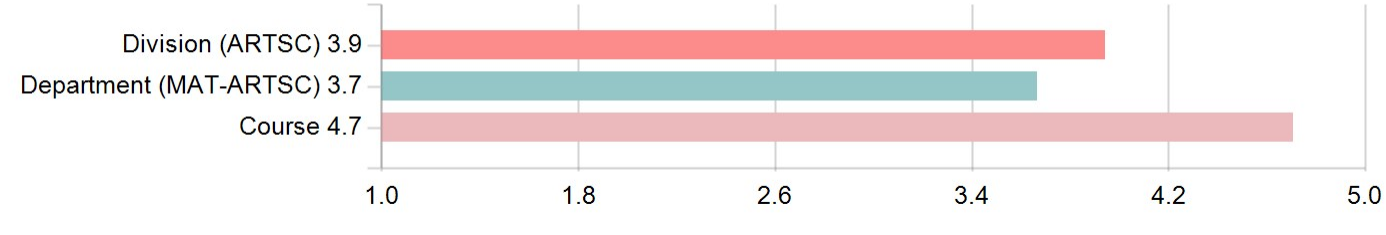
Part A. Core Institutional Items

Scale: 1 - Not At All 2 - Somewhat 3 - Moderately 4 - Mostly 5 - A Great Deal

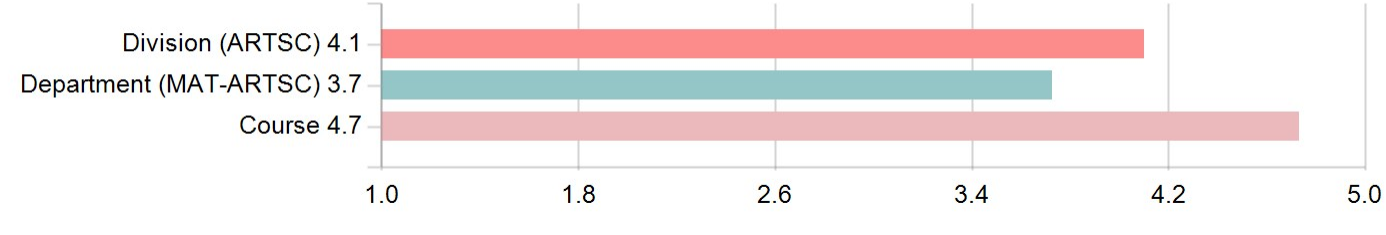
Institutional Composite Mean



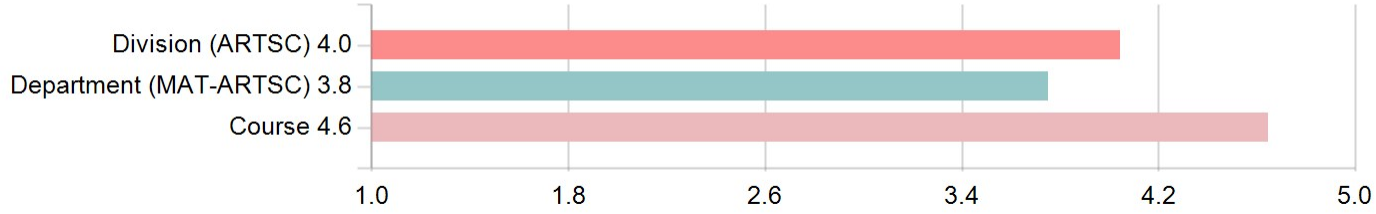
1. I found the course intellectually stimulating.



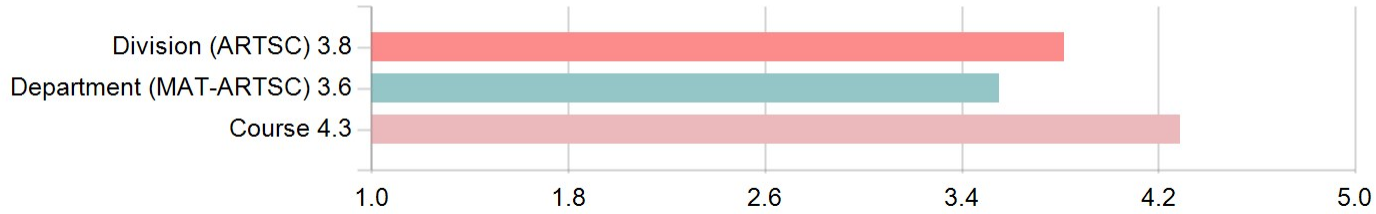
2. The course provided me with a deeper understanding of the subject matter.



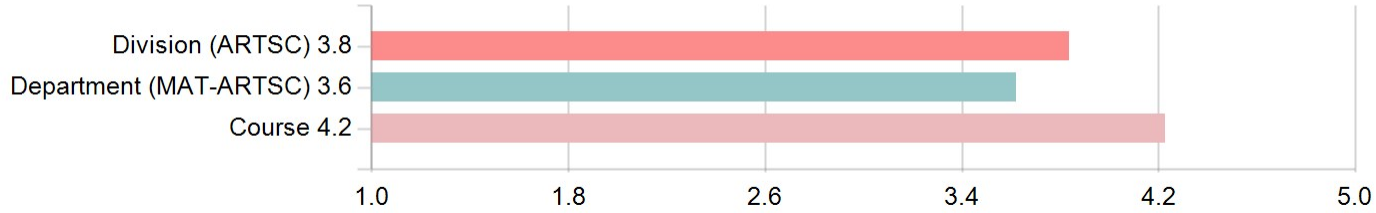
3. The instructor (**Dror Bar-Natan**) created an atmosphere that was conducive to my learning.



4. Course projects, assignments, tests, and/or exams improved my understanding of the course material.

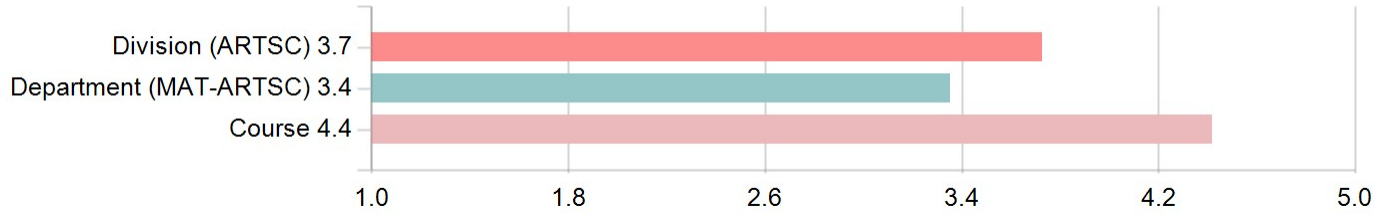


5. Course projects, assignments, tests and/or exams provided opportunity for me to demonstrate an understanding of the course material.



Scale: 1 - Poor 2 - Fair 3 - Good 4 - Very Good 5 - Excellent

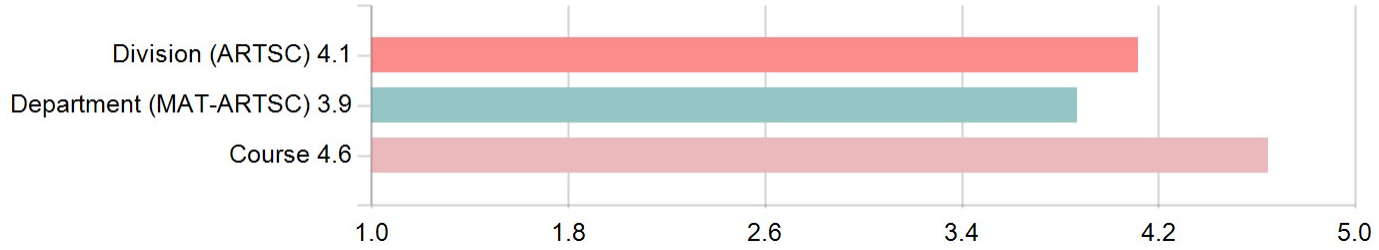
6. Overall, the quality of my learning experience in this course was:



Part B. Divisional Items

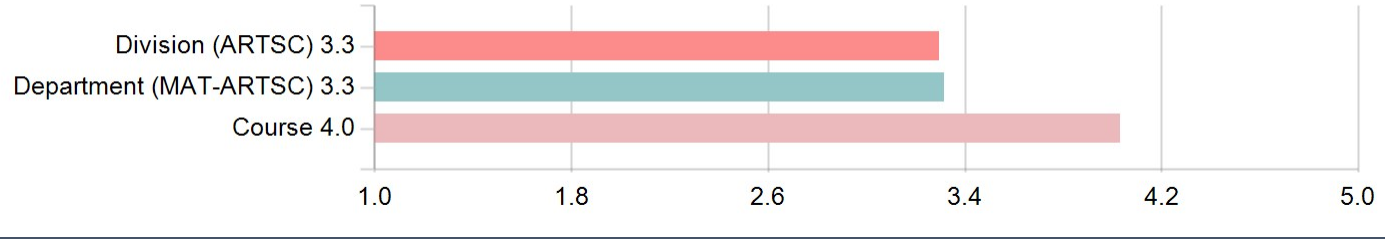
Scale: 1 - Not At All 2 - Somewhat 3 - Moderately 4 - Mostly 5 - A Great Deal

9. The instructor generated enthusiasm for learning in the course.



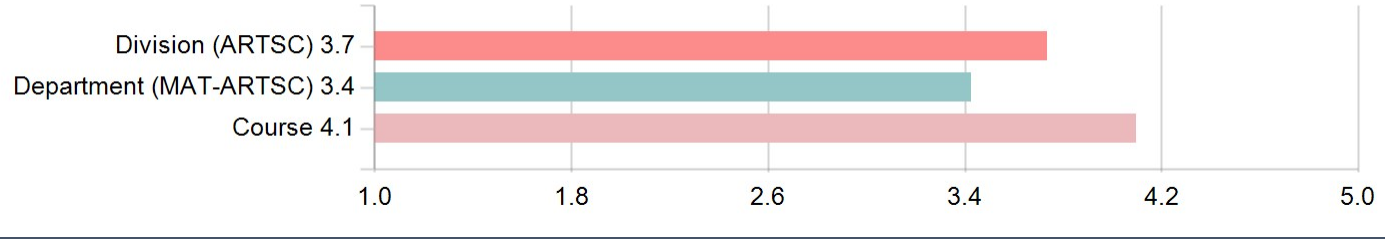
Scale: 1 - Very Light 2 - Light 3 - Average 4 - Heavy 5 - Very Heavy

10. Compared to other courses, the workload for this course was:



Scale: 1 - Not At All 2 - Somewhat 3 - Moderately 4 - Mostly 5 - Strongly

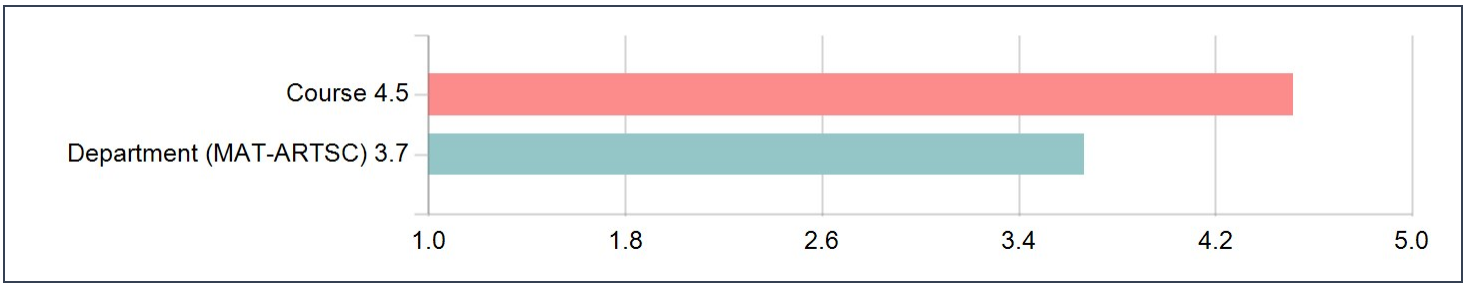
11. I would recommend this course to other students.



Part C: Departmental Items

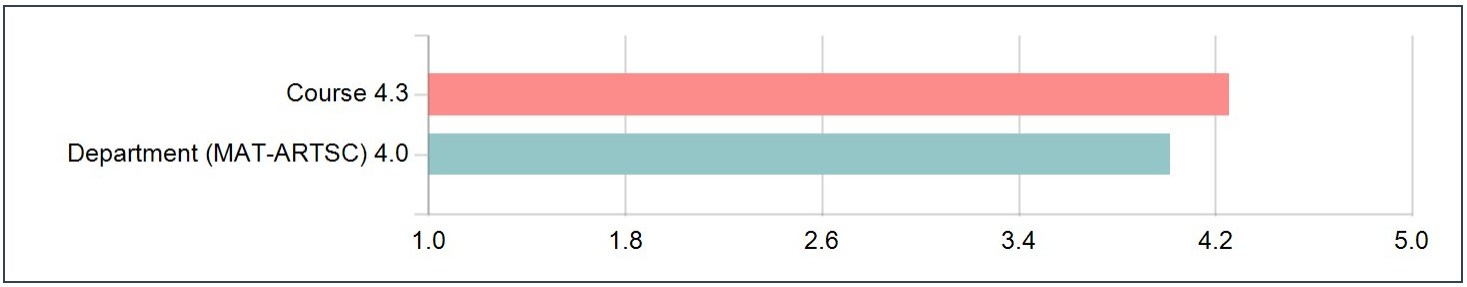
The course instructor (Dror Bar-Natan) explained concepts clearly.

Scale: 1 - Not At All 2 - Somewhat 3 - Moderately 4 - Mostly 5 - A Great Deal



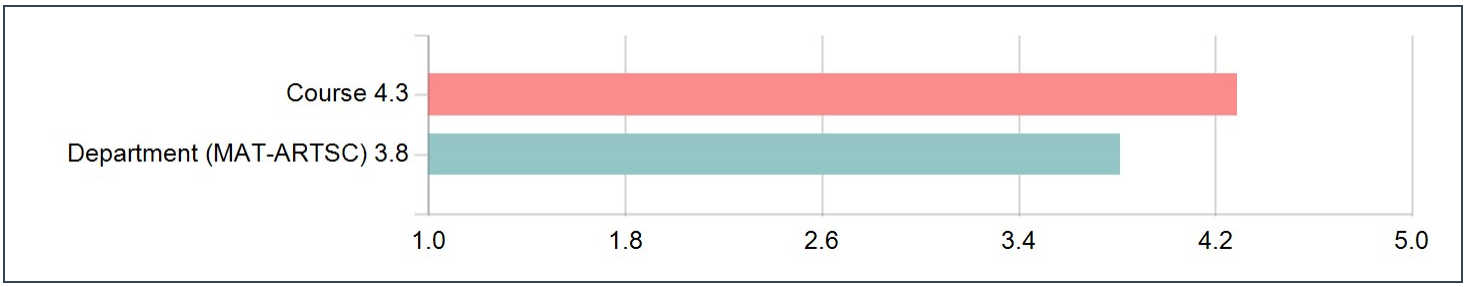
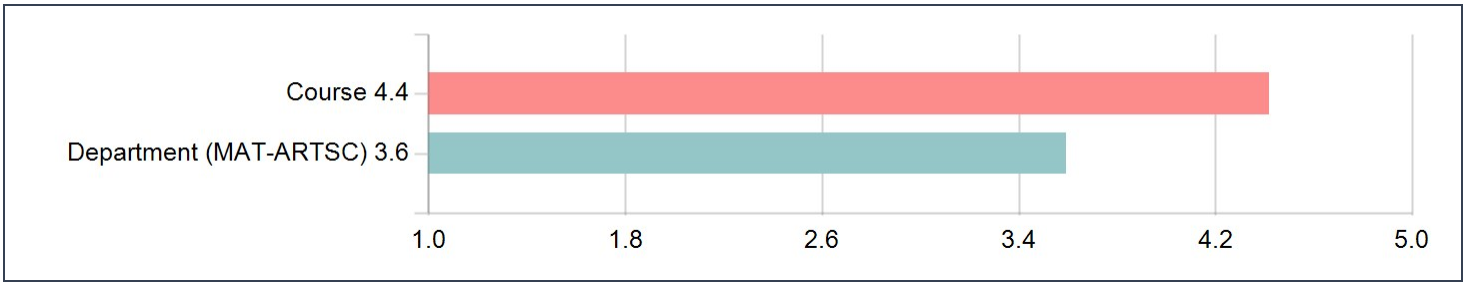
The course instructor (Dror Bar-Natan) was approachable.

Scale: 1 - Not At All 2 - Somewhat 3 - Moderately 4 - Mostly 5 - A Great Deal



The course instructor (Dror Bar-Natan) answered questions clearly.

Scale: 1 - Not At All 2 - Somewhat 3 - Moderately 4 - Mostly 5 - A Great Deal



Overall, the quality of instruction provided by (Dror Bar-Natan) in this course was: