



## SAMMANSTÄLLNING AV COURSE EVALUATION FOR COMBINATORIAL OPTIMISATION AND CONSTRAINT PROGRAMMING 1DL442 11009 HT2022 (1DL442 11009)

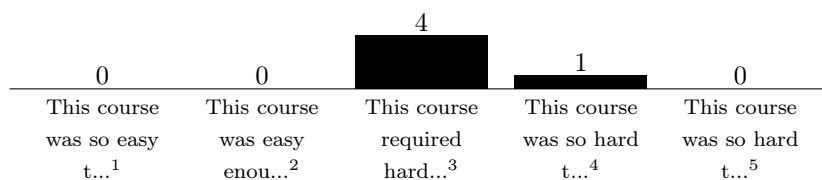
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|---------------|---|
| Sammanställd  | 5 av 16 (svarsfrekvens 31 %)  |
| Antal svar    | 2023-01-01 – 2023-01-22   |
| Tillgänglig   | Yasmin Sjöholm (it-kansli@it.uu.se), verksam vid IT   |
| Kontaktperson | Kansliet/Student Office   |
| Kurs          | Combinatorial Optimisation and Constraint Programming<br>1DL442 11009 HT2022 (1DL442 11009) |

### INFORMATION ABOUT SWEDISH TRANSLATION / INFORMATION PÅ SVENSKA OM FRÅGORNA

Om du behöver hjälp med översättning av dessa frågor till Svenska kan du klicka här.

### START OF QUESTIONS

1. How would you rate the course's degree of difficulty? Description: Here, you are asked how difficult you think the course was, taking its requirements and level into consideration. Please comment on your answer.



<sup>1</sup> This course was so easy that I did not have to work to pass

<sup>2</sup> This course was easy enough that I didn't have to work hard to pass

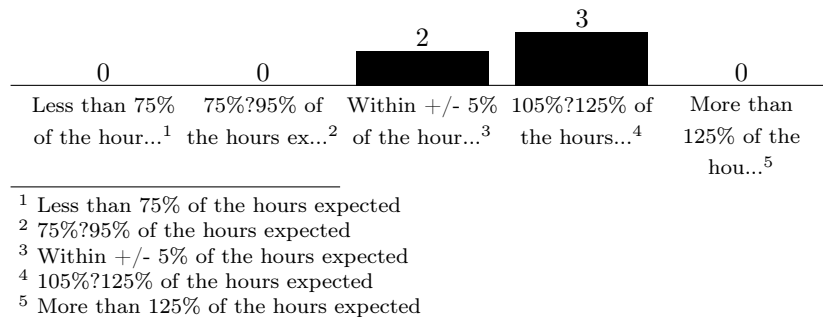
<sup>3</sup> This course required hard work to pass

<sup>4</sup> This course was so hard that I struggled to pass

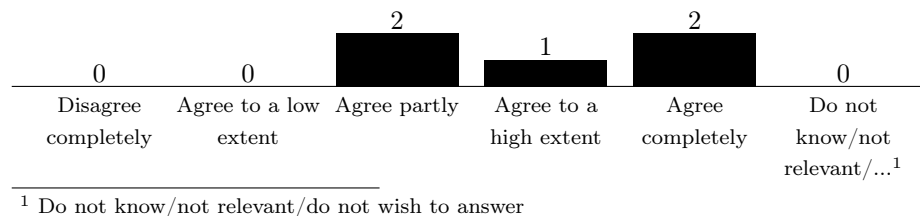
<sup>5</sup> This course was so hard that it felt impossible to pass

### COMMENTS:

- Probably the most demanding course I've ever taken on. This should not be regarded as a bad thing, more courses should be more like this (in this regard).
2. How did you perceive the course's workload in relation to its size (number of credits)? Description: Here, you are asked how you perceived the workload, i.e. how much total time you invested in relation to full-time. Baseline: a 5-credit course given in a period of 10 weeks is expected to correspond to 1/3 of full-time, or 13.3 hours per week. Please comment on your answer.



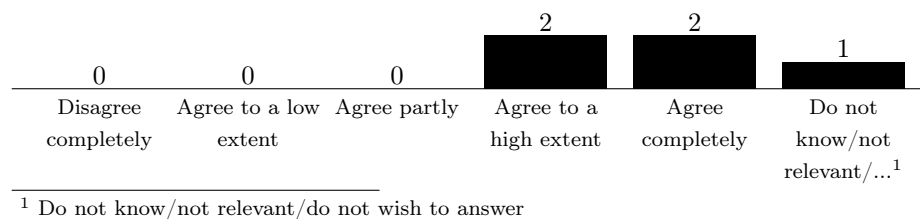
3. I took a great deal of responsibility for my own learning during the course. Description: Here, we want to know to what extent you took responsibility for your own learning, or if you e.g. relied more on the efforts of others. Please comment on your answer. (*Medel* = 4,0, *SD* = 0,9) (1 = *Disagree completely*, 5 = *Agree completely*)



COMMENTS:

- I think the second-half of the course requires more self-learning than the first-half. Attending lectures helps me solving assignment questions, but only to some extent. [4]

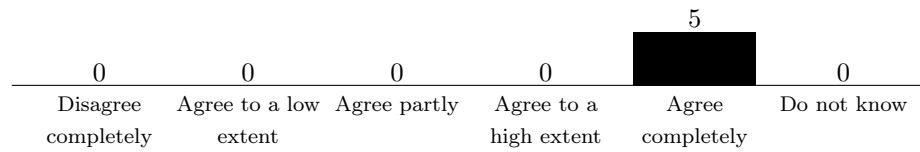
4. I contributed to other students' learning during the course. Description: Here, we want to know to what extent you took responsibility for the learning of others. Have you, for example, taken an active role when studying with others, doing lab work with others, etc.? Please comment on your answer. (*Medel* = 4,5, *SD* = 0,5) (1 = *Disagree completely*, 5 = *Agree completely*)



COMMENTS:

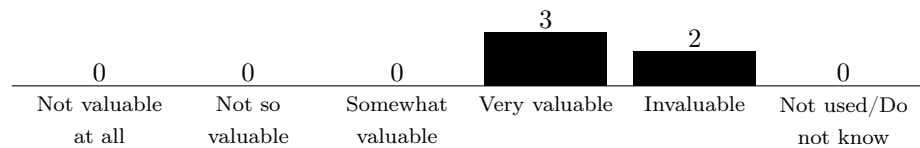
- My teammate and I both learned a lot from each other and through teaching each other. [4]
- Working on assignments was a great experience [4]
- Pairing up students in teams is a terrific idea. [5]

5. I feel that the treatment of students in the course has been good (e.g. regarding equal treatment or program affiliation) and that no one has been disadvantaged by the organization, content or execution of the teaching. (Note: If you feel that you have experienced or witnessed harassment or sexual harassment, please fill in the form at <https://doit.medfarm.uu.se/bin/kurt3/kurt/26328>. You can do so anonymously. For more information see [https://www.it.uu.se/about\\_us/harassment\\_information](https://www.it.uu.se/about_us/harassment_information)) (*Medel* = 5,0, *SD* = 0,0) (1 = *Disagree completely*, 5 = *Agree completely*)

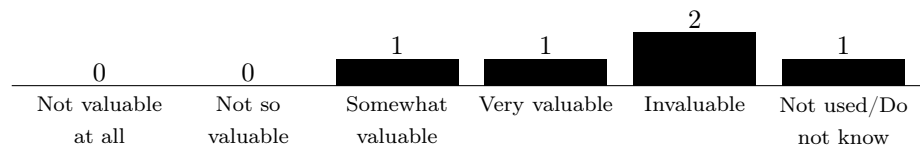


6. How valuable were the different activities in the course for your learning? (*1 = Not valuable at all, 5 = Invaluable*)

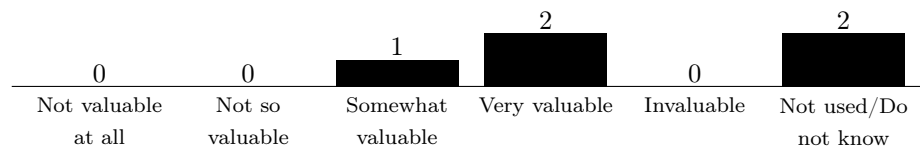
a. Lectures (*Medel = 4,4, SD = 0,5*)



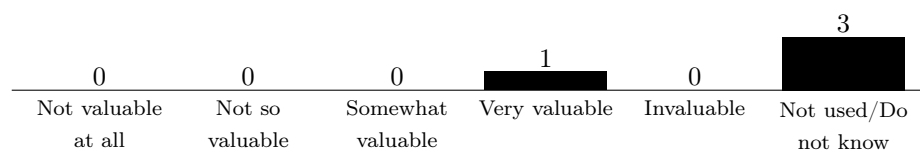
b. Lab sessions (*Medel = 4,3, SD = 0,8*)



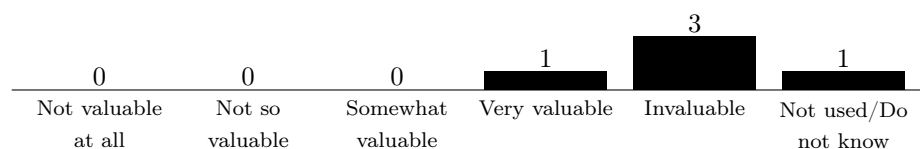
c. Problem solving sessions (*Medel = 3,7, SD = 0,5*)



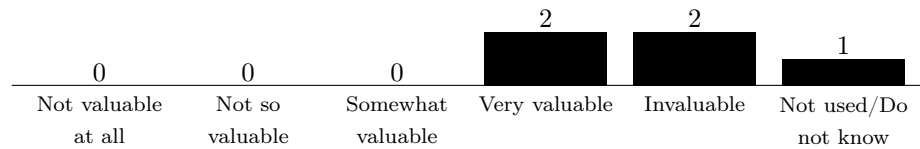
d. Seminars (*Medel = 4,0, SD = 0,0*)



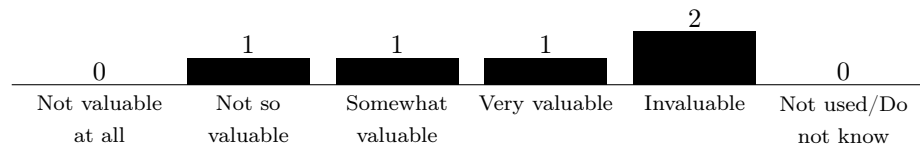
e. Discussions with fellow students (*Medel = 4,8, SD = 0,4*)



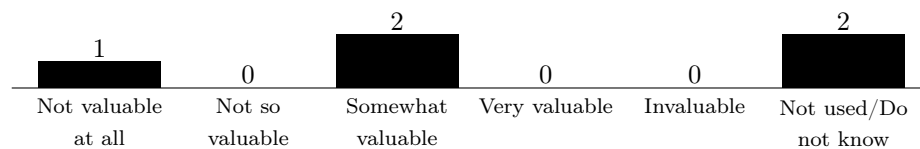
f. Discussions with members of the teaching staff (*Medel = 4,5, SD = 0,5*)



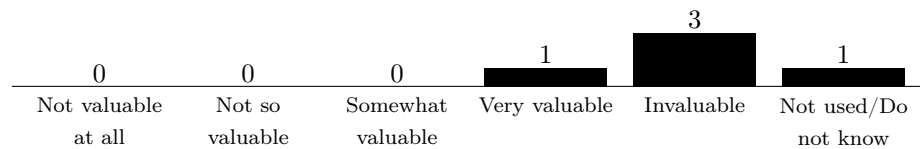
g. The course literature and other resources provided by the course ( $Medel = 3,8$ ,  $SD = 1,2$ )



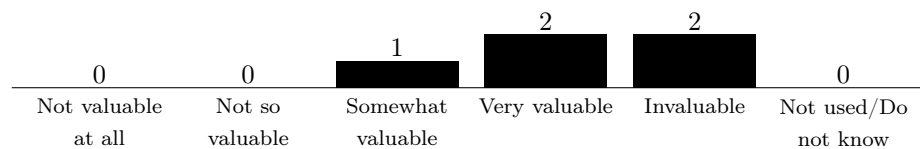
h. External material (web pages, youtube videos etc.) that were NOT provided by the course ( $Medel = 2,3$ ,  $SD = 0,9$ )



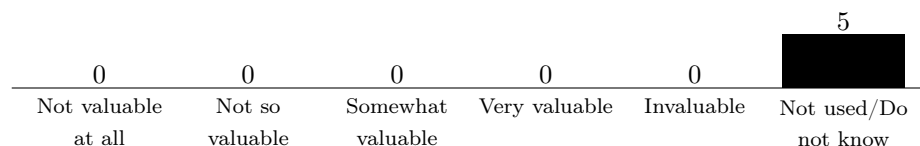
i. Project work / group work ( $Medel = 4,8$ ,  $SD = 0,4$ )



j. Self-studies or assignment work at home ( $Medel = 4,2$ ,  $SD = 0,7$ )



k. Studying for the exam

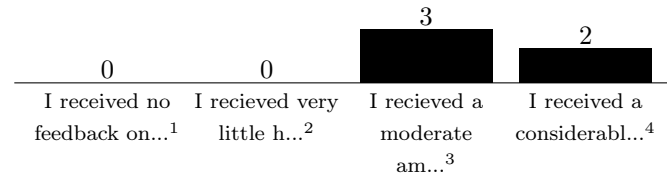


COMMENTS:

- The assignments seem to be so delicately chosen. They are hard put once they've been conquered—looking back on them—they don't appear to be so anymore. [a: 5, b: 5, c: Not used/Do not know, d: Not used/Do not know, e: 5, f: 5, g: 5, h: 3, i: 5, j: 5, k: Not used/Do not know]



7. Disregarding grading, the teaching staff gave me helpful feedback on my work and suggested improvements



<sup>1</sup> I received no feedback on my work

<sup>2</sup> I recieved very little helpful feedback on my work

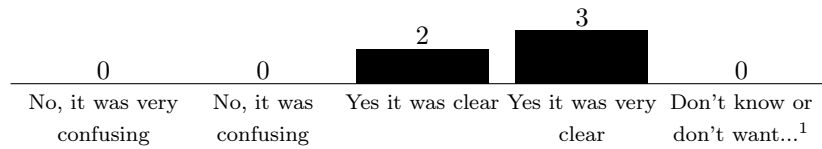
<sup>3</sup> I recieved a moderate amount of helpful feedback on my work

<sup>4</sup> I received a considerable amount of helpful feedback on my work

COMMENTS:

- [The teacher] and the TAs always provided us with helpful feedback whenever we asked.

8. It was easy to understand the standard of work expected for a particular grade (*Medel* = 3,6, *SD* = 0,5) (*1* = No, it was very confusing, *4* = Yes it was very clear)

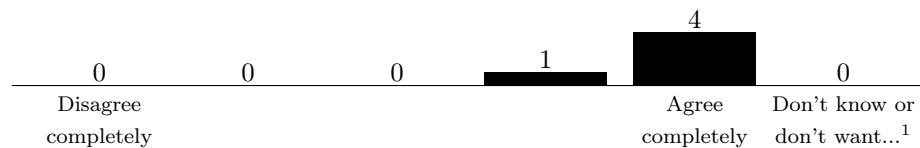


<sup>1</sup> Don't know or don't want to answer

COMMENTS:

*Inga kommentarer givna*

9. The assessment methods used in this course made sure that only students with an in-depth understanding received high grades (*Medel* = 4,8, *SD* = 0,4) (*1* = Disagree completely, *5* = Agree completely)

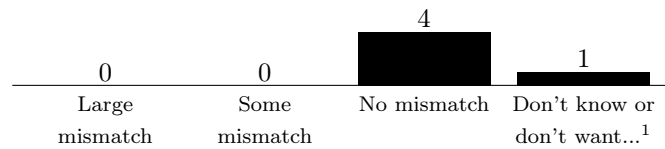


<sup>1</sup> Don't know or don't want to answer

COMMENTS:

- For the second half of the course, some prior experience with Java seem to give one an advantage. It's not unreasonable to expect this to be the case (as experience in general usually gives one a head start), however. Nevertheless, it was very doable to get up to speed in this regard (provided that one put in the work). The posted prerequisites are appropriate. [5]

10. Did you experience a mismatch between the prerequisites of this course and what you have learned from previous courses? (*Medel* = 3,0, *SD* = 0,0) (*1* = Large mismatch, *3* = No mismatch)

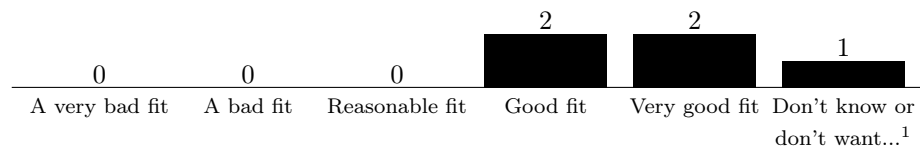


<sup>1</sup> Don't know or don't want to answer

COMMENTS:

*Inga kommentarer givna*

11. How well does this course fit in your degree program – did it help you obtain knowledge you expect from your degree program? (*Medel = 4,5, SD = 0,5*) (*1 = A very bad fit, 5 = Very good fit*)



<sup>1</sup> Don't know or don't want to answer

COMMENTS:

*Inga kommentarer givna*

12. What do you think were the best thing(s) about this course? Description: Here, you can highlight efforts, characteristics or parts of the course you thought were good.

- [The teacher] and the TAs are passionate about the subject matter. The course is organized well. The concepts taught have a nice coverage and depth. To me, taking this course was an unforgettable experience.
- The fresh view that is provided on the concept of Constraint Modeling and Programming, in terms of both using a declarative modeling language and actually programming a solver in Java. Additionally, the study of various algorithms and recent solving techniques were truly valuable.
- I liked [the teacher]'s approach during lectures. As a programmer who hated math, he gave me confidence and spiked my interest about math notations.
- - The concepts are relatively easy to grasp, but this is traded for difficulty of the assignments. - The assignments are interesting. - It's concepts are very neatly interwoven, nothing is superfluous. - The TAs were super helpful in explaining and guiding! - The lecturer is very clear and precise in his presentation. - The list goes on, it's a close-to-perfect course (I'd say).
- The teacher and TAs are very good.

13. Please provide constructive suggestions for course development. Description: With your help, the course can be made better, and something that is already good can be made even more prominent/effective.

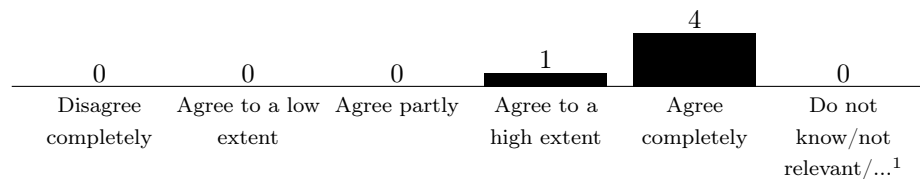
- It's not [the teacher] or the TAs' fault. My comments are more towards the minicp teaching framework and website. I think many unit tests need improvement. They are too easy to pass. The loopholes are large. Our group never intentionally tried to cheat unit tests, yet many of our propagators passed the tests but were conceptually wrong in multiple places. When those propagators were used for models later, it became very



difficult to debug. In my opinion, it is better to make unit tests harder to pass, so that if a propagator can pass them, it is more likely to be correct and can be safely used later on. The debugging information provided by the tests and solver can also be improved. There are hidden pitfalls in multiple places where we understood the concepts, and our faults are almost trivial, yet we had to ask TAs for help. Lots of time can be saved if the documentation provides a clearer explanation. I'm willing to elaborate more about how I would try to improve them, but I know those might not be the things [the teacher] can change.

- I can not think of a significant suggestion to the make the course better. However, it would probably be nice to guide the students in developing their own smaller version of a solver.
- Second part of the course is a bit too detailed. If we are learning algorithms that were published 2015+, it's a bit too much for a master's course perhaps. Just learning the basics in the second part could have been better. Also we shouldnt have needed to answer all theoretical questions correctly, that part is a bit too strict.

14. Overall, I am satisfied with this course. Description: Here you are asked how well you think the course worked in relation to everything from teacher, content, forms of instruction, and examination to scheduling. Please comment on your answer. (*Medel = 4,8, SD = 0,4*) (*1 = Disagree completely, 5 = Agree completely*)



<sup>1</sup> Do not know/not relevant/do not wish to answer

#### COMMENTS:

- Great course, a great asset for a computer scientist. [5]
- It's been a ride, a real eye-opener (in terms of report writing, coding, interaction between maths and CS, expected effort of student, teamwork, grit)!! Much has been learned. [5]