

eValuering 2.1 - Sammanställning

SAMMANSTÄLLNING

Utvärdering: Constraint Technology H07
Antal svarande: 16

WELCOME!

Please fill out the survey below to provide the department with feedback. Don't forget to click on "Submit Evaluation" when the form is complete. Your answers are anonymous. You must answer all questions below. Use *not applicable / don't know* if you feel that a specific question is not relevant to you.

Thank you,

Pierre Flener

COURSE OBJECTIVES


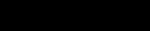
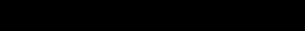
Constraint technology proposes a novel set of techniques and tools for efficiently solving (hard) combinatorial problems. Doing so is crucial in many application domains, such as scheduling, planning, molecular biology, finance, linguistics, and so on. Many companies are successfully deploying constraint technology, making knowledge thereof a marketable asset. This course combines coverage of theoretical foundations with hands-on experience in modelling and solving real-life combinatorial problems.

Constraint technology has been identified by the Association for Computing Machinery (ACM), which is a leading professional body in information technology, as a strategic direction in computing research.

Reminder: [Course webpage](#)

GENERAL ASPECTS




What is your general feeling about the course?

Svarsalternativ	Graf (%)	%	Σ
1 (= bad)		0	0
2		0	0
3		6	1
4		31	5
5 (= good)		63	10

Medelvärde: 4.56

Standardavvikelse: 0.63




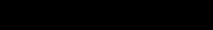
What was the degree of difficulty?

Svarsalternativ	Graf (%)	%	Σ
1 (= low)		0	0
2		0	0
3		25	4
4		44	7
5 (= high)		31	5

Medelvärde: 4.06

Standardavvikelse: 0.77




How did the total amount of work on the course relate to the credits?

Svarsalternativ	Graf (%)	%	Σ
1 (= low)		0	0
2		6	1
3		31	5
4		19	3
5 (= high)		44	7

Medelvärde: 4

Standardavvikelse: 1.03





Is the course relevant to your education?

Svarsalternativ	Graf (%)	%	Σ
1 (= no, not at all)		0	0
2		0	0
3		6	1
4		38	6
5 (= yes, definitely)		56	9

Medelvärde: 4.5

Standardavvikelse: 0.63




Has the course been stimulating and interesting?

Svarsalternativ	Graf (%)	%	Σ
1 (= no, not at all)		0	0
2		6	1
3		6	1
4		13	2
5 (= yes, definitely)		75	12

Medelvärde: 4.56

Standardavvikelse: 0.89




Has the teaching helped you to learn the course content?

Svarsalternativ	Graf (%)	%	Σ
1 (= no, not at all)		0	0
2		0	0
3		6	1
4		50	8
5 (= yes, definitely)		44	7




Medelvärde: 4.38

Standardavvikelse: 0.62

Did the course administration (schedule etc) work?

Svarsalternativ	Graf (%)	%	Σ
1 (= no, not at all)		0	0
2		0	0
3		13	2
4		19	3
5 (= yes, definitely)		69	11
Medelvärde: 4.56			
Standardavvikelse: 0.73			

Did you have enough prerequisites for this course?

Svarsalternativ	Graf (%)	%	Σ
1 (= no, not at all)		0	0
2		0	0
3		6	1
4		31	5
5 (= yes, definitely)		63	10
Medelvärde: 4.56			
Standardavvikelse: 0.63			

What in this course has been particularly good?

- It's an really exciting course. I learn many things from it. ²
- It is an interesting course, everything. ³
- The lectures where really good. The assignments where also good learning experiences but a bit to much work for the credits. ¹⁰
- It's fun and you get to learn about some appliable and powerful tools ¹¹
- The contents are well structured in each lecture reasonably and the sildes really concentrates on the points we need to know. ¹⁵
- It's practicality and the concepts themselves where Interesting. It has been the most practical course among the courses with such a high theoretic level that I have ever taken ¹⁶




What are the most important specific arrangements that would improve the course?

- I thing Pierre may change some teaching orders. In the first class, I was confused by some professional words and felt sad. And they are explained in the following courses. It will be better if he explain the words in the first class, or try to use some other simple words instead of them. The content of implementing of propagator should be increased. The most interesting and exciting course is the "distance propagator". ²

- Not all students are scared of theory, but are interested in a general theoretic description of constraint technology, common for all solvers. Not said that it should be a theoretic course only, but this times I had the impression that those parts were hurried past. Further it would be interesting to see examples relating to other solvers than gecode, and which are used in a large scale. ³
- Should it be included in any engineering program (which I think), then it can have less theory. ¹¹
- More hours on modeling and also more hours on Labs (with more support from lecturers and assitants) ¹⁶



EVALUATION AND DEVELOPMENT

Have you been given a scheduled opportunity to give written and anonymous suggestions on how to improve the ongoing course, a so-called mid-course evaluation?



Svarsalternativ	Graf (%)	%	Σ
Yes		6	1
No		50	8
Not applicable/don't know		44	7

OBJECTIVES AND CONTENT

In the beginning of the course, were you informed about the objectives, aims and content of the course?

Svarsalternativ	Graf (%)	%	Σ
Yes		94	15
No		0	0
Not applicable/don't know		6	1

In your opinion, the course objectives were met

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		0	0
2		0	0
3		0	0
4		44	7
5 (= fully agree)		56	9

Medelvärde: 4.56





Standardavvikelse: 0.51

Comments:

- 3

COURSE ADMINISTRATION AND COMMUNICATION





In your opinion, the number of course activities led by teachers in the current schedule is

Svarsalternativ	Graf (%)	%	Σ
1 (= too low)		0	0
2		6	1
3		50	8
4		25	4
5 (= too high)		19	3

Medelvärde: 3.56

Standardavvikelse: 0.89





In your opinion, I was well informed about the aims and objectives of different course activities

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		0	0
2		6	1
3		19	3
4		31	5
5 (= fully agree)		44	7

Medelvärde: 4.13

Standardavvikelse: 0.96

Communication and cooperation between teachers and students worked satisfactorily

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		0	0
2		6	1
3		13	2
4		38	6
5 (= fully agree)		44	7

Medelvärde: 4.19

Standardavvikelse: 0.91



Comments:

- I think there could be more hours on practically designing models. ¹⁶

TEACHER PERFORMANCE

Teacher 1: Pierre Flener (lectures)




The teaching was clear and well structured

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		0	0
2		0	0
3		0	0
4		50	8
5 (= fully agree)		50	8
Not applicable/don't know		0	0

Medelvärde: 4.5

Standardavvikelse: 0.52




The teaching was engaging

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		0	0
2		0	0
3		6	1
4		25	4
5 (= fully agree)		69	11
Not applicable/don't know		0	0

Medelvärde: 4.63

Standardavvikelse: 0.62

The teacher did get across the course content






Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		0	0
2		6	1
3		0	0
4		31	5
5 (= fully agree)		63	10
Not applicable/don't know		0	0

Medelvärde: 4.5

Standardavvikelse: 0.82

Teacher 2: Jonathan Mörndal (labs)





The teaching was clear and well structured

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		0	0
2		6	1
3		6	1
4		38	6
5 (= fully agree)		19	3
Not applicable/don't know		31	5

Medelvärde: 4

Standardavvikelse: 0.89





The teaching was engaging

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		0	0
2		0	0
3		19	3
4		31	5
5 (= fully agree)		19	3
Not applicable/don't know		31	5

Medelvärde: 4

Standardavvikelse: 0.77

The teacher did get across the course content





Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		0	0
2		0	0
3		13	2
4		25	4
5 (= fully agree)		13	2
Not applicable/don't know		50	8

Medelvärde: 4

Standardavvikelse: 0.76

Teacher 3: Magnus Ågren (guest lecture on local search)





The teaching was clear and well structured

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		0	0
2		0	0
3		13	2
4		25	4
5 (= fully agree)		25	4
Not applicable/don't know		38	6

Medelvärde: 4.2

Standardavvikelse: 0.79





The teaching was engaging

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		0	0
2		0	0
3		13	2
4		31	5
5 (= fully agree)		19	3
Not applicable/don't know		38	6

Medelvärde: 4.1

Standardavvikelse: 0.74

The teacher did get across the course content

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		0	0
2		0	0
3		13	2
4		13	2
5 (= fully agree)		38	6
Not applicable/don't know		38	6

Medelvärde: 4.4

Standardavvikelse: 0.84

What did the teachers do particularly well in this course?

- Pierre was really helpful during the project. ⁵

- The general presentation of the material was very good. In particular I liked Pierre's methodology of first showing how to solve problems in a naive way and then improving the techniques successively. ¹⁰
- They were able to teach hard theoretical topics in an easy to understand manner. Great!!! ¹⁶



What should be improved?

- It would be nice with an overhaul of the slide material so they all use the same terminology, structure and avoid repetitions. But the slides were not bad so if an overhaul is made keeping the old slides as reference material would be good (one can never have too much material). ¹⁰
- I think the most important thing is that there should be more hours for this course. Although Pierre went through this material perfectly in a way that we can understand. But I think there should be more time for the teacher to slow down there should be tiny gaps between topics he teaches in the class so students have time to think about the parts that they didn't fully understand. It was a hard course and I had a problem understanding what was said instantly and before I could understand and calculate everything for myself I was faced with another challenge. It made me lose the track sometimes. Another thing is that there should be more communication, question and answer, group work, in and outside the class. It is a real good course but unfortunately there is a shortage in time. I scored 3 for engagement factor of teaching for Pierre's classes. That's not because his teaching is not engaging (he is perfect) but there should be more time so he can interact with students and let them discuss in groups their problems and each group asks its problems from the teacher. ¹⁶






TEACHING FORMS

During the course different types of course activities were used. Evaluate how valuable each type of activity was to your learning.





Lectures

Svarsalternativ	Graf (%)	%	Σ
1 (= not valuable at all)		0	0
2		0	0
3		0	0
4		50	8
5 (= very valuable)		50	8
Medelvärde: 4.5			
Standardavvikelse: 0.52			




Laboratory work

Svarsalternativ	Graf (%)	%	Σ
1 (= not valuable at all)		13	2
2		13	2
3		31	5
4		25	4
5 (= very valuable)		19	3
Medelvärde: 3.25			
Standardavvikelse: 1.29			

Assignments

Svarsalternativ	Graf (%)	%	Σ
1 (= not valuable at all)		0	0
2		6	1
3		13	2
4		31	5
5 (= very valuable)		50	8
Medelvärde: 4.25			
Standardavvikelse: 0.93			

Project

Svarsalternativ	Graf (%)	%	Σ
1 (= not valuable at all)		0	0
2		0	0
3		31	5
4		25	4
5 (= very valuable)		44	7

Medelvärde: 4.13

Standardavvikelse: 0.89







Comments:

- The courses and assignments should include some knowledge of how to do constraint programming without Gecode/J. ²
- Haven't done the project yet so I cant rate it. ¹⁰

LITERATURE

Below you will find some questions concerning the course literature. Please note that the questions only concern those parts of the literature that were relevant to the course.





Krzysztof R. Apt, Principles of Constraint Programming, CUP, 2003

Svarsalternativ	Graf (%)	%	Σ
1 (= bad)		6	1
2		13	2
3		19	3
4		13	2
5 (= good)		19	3
Not applicable/don't know		31	5

Medelvärde: 3.36

Standardavvikelse: 1.36

Christian Schulte, Course Notes: Constraint Programming, KTH, 2007

Svarsalternativ	Graf (%)	%	Σ
1 (= bad)		0	0
2		0	0
3		13	2
4		19	3
5 (= good)		38	6
Not applicable/don't know		31	5




Medelvärde: 4.36

Standardavvikelse: 0.81

Comments:

- The course notes are excellent. They explain the ideas very clearly. ²
- Used the MIT press and Springer-Verlag books. ³
- Just read Apt's book briefly in the beginning of the course, but it seemed to quite rigorous and it was hard to understand definitions. ¹¹
- Course book lacks some parts and there are too much emphasize in parts that are not thought in the course ¹⁶





ASSIGNMENTS AND PROJECT*How were the the written instructions?*

Svarsalternativ	Graf (%)	%	Σ
1 (= bad)		0	0
2		0	0
3		31	5
4		25	4
5 (= good)		44	7

Medelvärde: 4.13

Standardavvikelse: 0.89




How was the support from the instructors, including during the labs?

Svarsalternativ	Graf (%)	%	Σ
1 (= bad)		0	0
2		6	1
3		19	3
4		44	7
5 (= good)		31	5

Medelvärde: 4

Standardavvikelse: 0.89

Was the content relevant for the course?

Svarsalternativ	Graf (%)	%	Σ
1 (= no, not at all)		0	0
2		0	0
3		13	2
4		6	1
5 (= yes, definitely)		81	13

Medelvärde: 4.69

Standardavvikelse: 0.7

What was particularly good?

- It was interesting assignment. ⁶
- The assignments were very good learning experiences in general. They had a good mix of theory and implementation. ¹⁰
- the assignment questions were designed well. ¹⁶

What should be improved?

- 3
- The assignments were a bit too time consuming. I spent more than 30 hours on the first assignment alone, which is way too much for a course with 2 assignments plus a project and an exam. So cutting a bit in the assignments by removing redundant questions would be an improvement, but I would rather have them to be time consuming than make them too easy as you learned a lot of the things you needed for the exam by doing them. Note: the time given below for assignments and project is a guesstimate as I'm not finished with the project yet. The number 100 was reached by taking an estimate of the time I have spent on the assignments and doubling it with the reasoning $1 * \text{project} * \text{time} = 2 * \text{assignment} * \text{time}$ ¹⁰
- Labs are not well organized and could be circumvented, lack of time to discuss questions

during the lab. They were not serious! ¹⁶

*Estimate how many hours you spent on the assignments and project altogether. Give one number (estimation). **Intervals are not valid.***

Medelvärde: 57.67

Standardavvikelse: 34.77

Antal svarande: 9





EXAMINATION

During the course you have encountered examination in the form of assignment & project reports as well as a written exam. If you have any comments or suggestions regarding the examination, feel free to write them below.

- The exam was good, however not knowing the propagation algorithm (covered in the course) gave a loss of 30 points, or 30 % of the total points. I don't mean that it was a bad exercise, but too much points bound to a small piece of information. ³
- During the exam having more than 50% of the points gathered into 2 (out of 5) questions seemed a bit harsh, especially when you could misinterpret one of them. ⁵
- No really useful comments here just a feeling that the exam also was a bit too big as all students I have spoken to about it ran out of time or at least felt they didn't have enough. In particular tricky modeling questions hard to estimate how long they will take to solve as they as Pierre put it are as much an art as a science. ¹⁰

PERSONAL PERFORMANCE






I participated actively in the course

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		0	0
2		13	2
3		25	4
4		25	4
5 (= fully agree)		38	6

Medelvärde: 3.88

Standardavvikelse: 1.09

I am satisfied with my own efforts on the course.

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		6	1
2		13	2
3		19	3
4		44	7
5 (= fully agree)		19	3

Medelvärde: 3.56

Standardavvikelse: 1.15

In total I spent the following hours per week on course work (including scheduled as well as non-scheduled hours):

*Give **one** number. **Intervals are not valid.***







Medelvärde: 15.22

Standardavvikelse: 8.83

Antal svarande: 9

Apart from knowledge in the specific subject of the course, university level education should enhance skills in communication, critical thinking, and problem solving.







In my opinion, the course contributed to the improvement of my ability to communicate in writing

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		13	2
2		6	1
3		38	6
4		19	3
5 (= fully agree)		13	2
Not applicable/don't know		13	2

Medelvärde: 3.14

Standardavvikelse: 1.23







In my opinion, the course contributed to my ability to cooperate and collaborate

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		6	1
2		19	3
3		19	3
4		31	5
5 (= fully agree)		13	2
Not applicable/don't know		13	2

Medelvärde: 3.29

Standardavvikelse: 1.2






In my opinion, the course contributed to my ability to think critically

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		6	1
2		13	2
3		6	1
4		38	6
5 (= fully agree)		25	4
Not applicable/don't know		13	2

Medelvärde: 3.71

Standardavvikelse: 1.27

In my opinion, the course contributed to my problem solving ability

Svarsalternativ	Graf (%)	%	Σ
1 (= don't agree at all)		6	1
2		6	1
3		6	1
4		25	4
5 (= fully agree)		56	9
Not applicable/don't know		0	0

Medelvärde: 4.19

Standardavvikelse: 1.22

Comments:

- I don't know about all the communication improvements but the core technique was a new way of tackling combinatorial problems so it added another wrench to my toolbox and there

by improved my problem solving abilities. ¹⁰

GENERAL COMMENTS

What in this course was particularly good?

(Inga svar.)

What in this course can be improved?

- more hours, more group work and interaction between teacher and students. better and more serious laboratory work. ¹⁶

MISCELLANEOUS

If you have any other comments about the course, feel free to append them here.

- Very interesting course, I'm surprised that not more students are taking it. Maybe it needs some propaganda. ⁵
- I think Uppsala university should put more budget for this course aside. It is a really interesting course. I couldn't find any more advanced level for this course on the list of courses. This is very unfortunate! ¹⁶

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