



LUND UNIVERSITY
Faculty of Science

Centre for Mathematical Sciences
Division of Mathematics and Numerical
Analysis

Course Analysis for NUMN21 Advanced course in Numerical Algorithms with Python/SciPy, Autumn 2021

Course Information

Lecturer: Claus Führer, Robert Klöfkorn, Andreas Langer, Viktor Linders

Teaching assistants: None.

Number of students:

12 newly registered and 0 re-registered.

0 students answered the course evaluation. Additionally, a separate survey was made at LTH were 11 (30%) of the students answered.

Examination

Project and oral examination: 11 students passed.

Final grades (pass/fail):

In all, 11 students, including 0 re-registered students, have got their final grade. 11 passed.

Course Evaluation

Summary of student's answers:

For this course with double course code the survey was carried out by LTH (course code FNMM05) and sent out to all students of the course. 11 students answered the survey.

Teachers' comments:

The teaching team thought the course went very well. The attached survey suggests that the students were very happy with the course.

Describe the participation rate on each part and how the examinations were carried out.

Changes from the previous course realization:

The course was given in a hybrid format, where students could participate via zoom, or in the lecture hall.

Suggestions for the next course realization:

No changes are planned.

Course evaluation report - CEQ, FMNN25

Basic facts

Course name	Advanced Course in Numerical Algorithms with Python/SciPy	
Course code	FMNN25	Study hours according the curricula
ECTS credits	7.5 hp	Lectures
Year	202122	Group work
Study period the course was finished	HT_LP1	Laboratories
Programme	all	Time with supervisor
Registrated students	37	Self study time
Number answers and response rate	11 / 30 %	
Number answers from males	9	
Number answers from females	1	

Since less than 20 students have answered the questionnaire no statistical significance tests have been made.

Summary of questionnaires

The CEQ-score span between -100 och +100, there -100 means that "I fully disagree to the statement" and +100 "I fully agree to the statement".

Presence at teaching

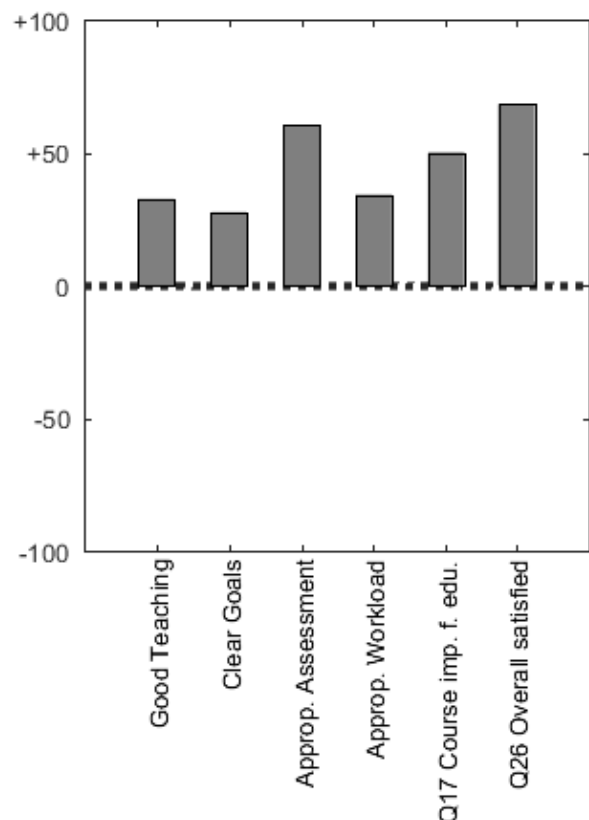
Part of teaching	Number	Share
0 %	0	0 %
20 %	0	0 %
40 %	0	0 %
60 %	0	0 %
80 %	3	27 %
100 %	7	64 %

CEQ-scales & special questions

Scale	CEQ-score	StdDev
Good Teaching	+33	36
Clear Goals and Standards	+28	46
Appropriate Assessment	+60	29
Appropriate Workload	+34	30
Generic Skills	+28	31

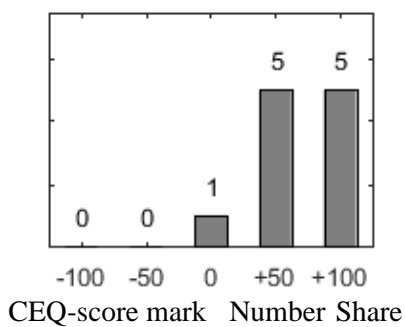
Special questions

The course seems important for my edu.	+50	45
Overall, I am satisfied with this course	+68	34



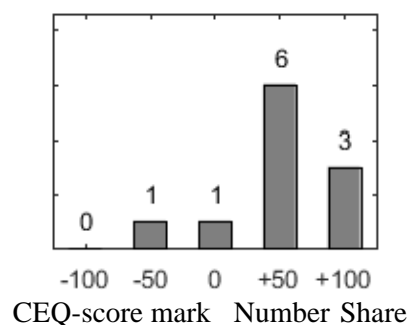
Distribution of the answers from question 26: "Overall, I am satisfied with this course"

Distribution of the answers from question 17: "The course seems important for my education"



Dissatisfied (<0)	0	0 %
Neutral (0)	1	9 %
Satisfied (>0)	10	91 %
No answer	0	0 %

Mean of CEQ-score	+68
Standard deviation (StdDev)	34



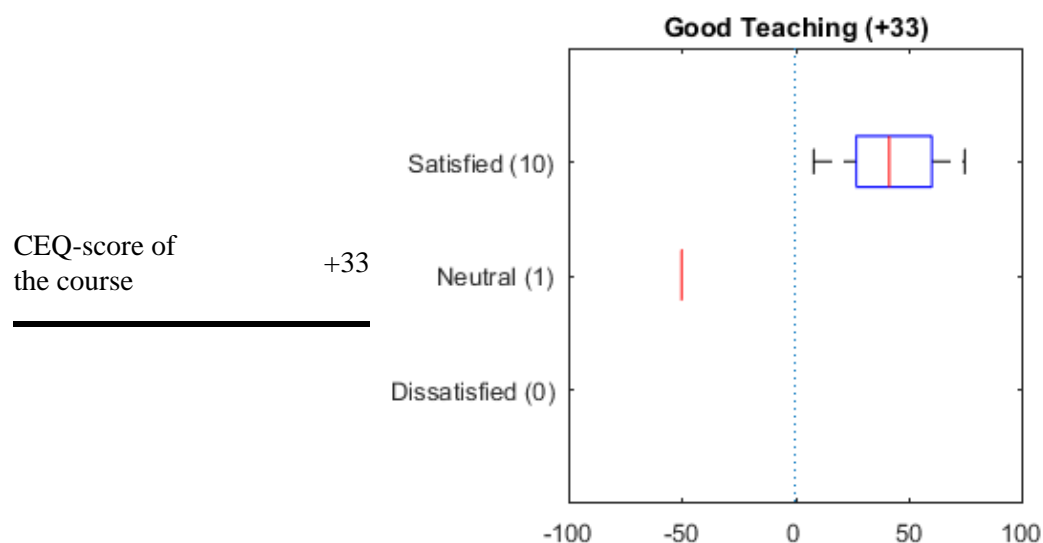
-100	0	0 %
-50	1	9 %
+0	1	9 %
+50	6	55 %
+100	3	27 %

Mean of CEQ-score	+50
Standard deviation (StdDev)	45

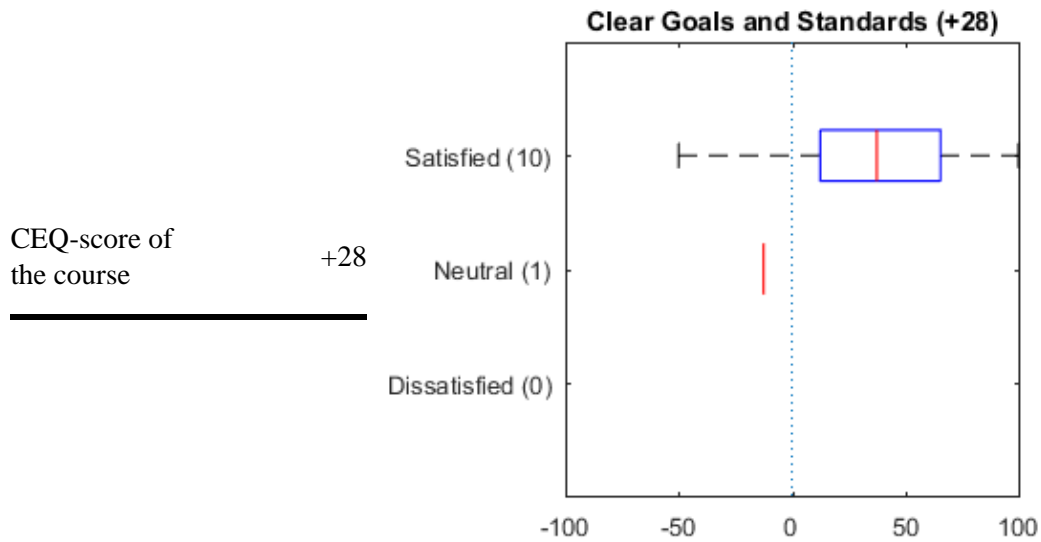
Summary scales divided on satisfaction

Statistical examination has not been done due to at least two groups consist of less than five students

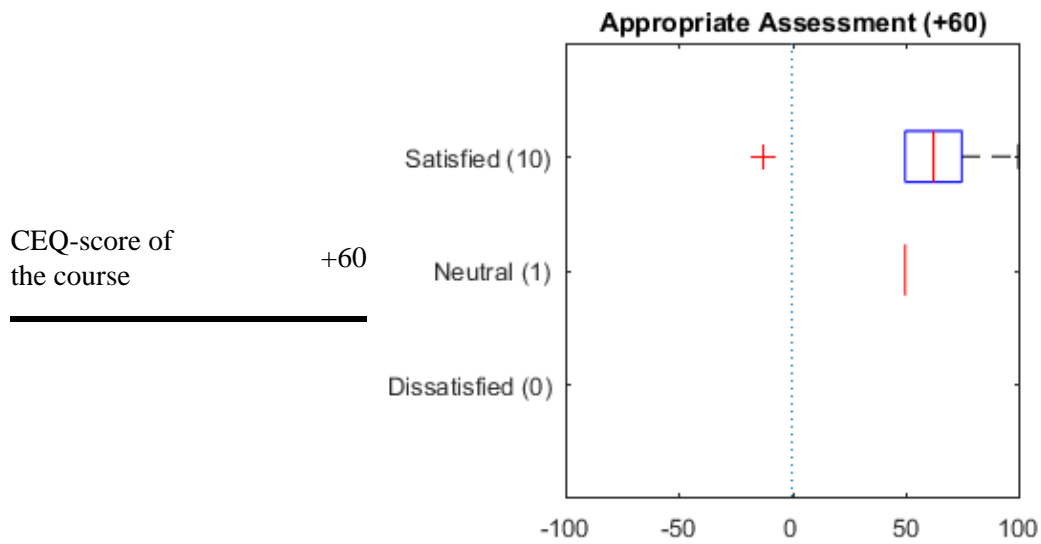
Good Teaching



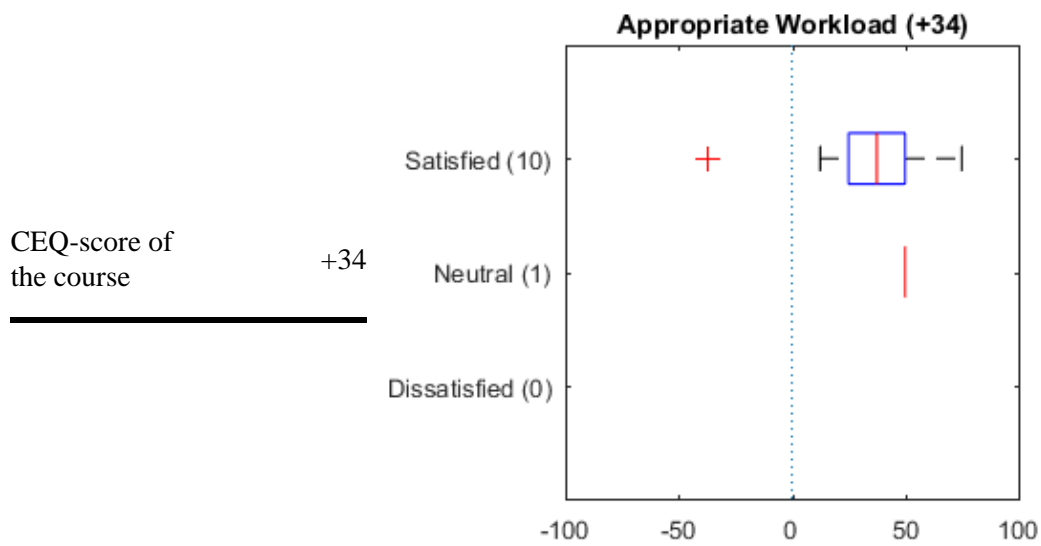
Clear Goals and Standards



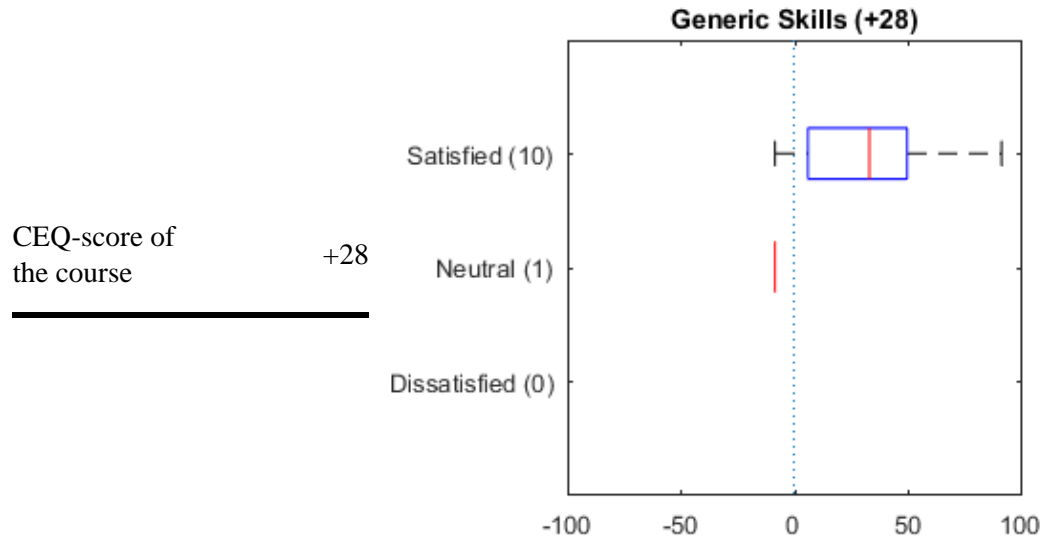
Appropriate Assessment



Appropriate Workload



Generic Skills



Answers to each question

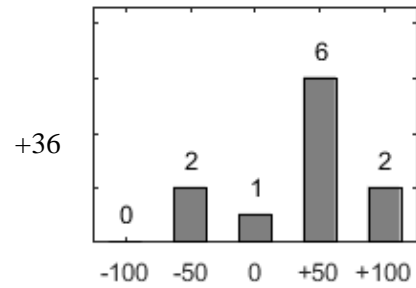
The questions in bold are reverse positive.

Statistical examination between dissatisfied and satisfied has not been done due to at least one of the groups consist of less than five students

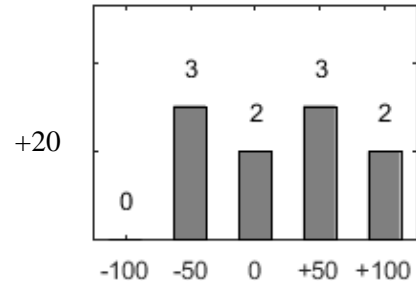
Good Teaching (+33)

Question	CEQ-score	Histogram												
3. The teaching has motivated me to do my best	+41	<table border="1"> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr><td>-100</td><td>0</td></tr> <tr><td>-50</td><td>1</td></tr> <tr><td>0</td><td>3</td></tr> <tr><td>+50</td><td>4</td></tr> <tr><td>+100</td><td>3</td></tr> </tbody> </table>	Score	Frequency	-100	0	-50	1	0	3	+50	4	+100	3
Score	Frequency													
-100	0													
-50	1													
0	3													
+50	4													
+100	3													
7. During the course I have received many valuable comments on my achievements	+27	<table border="1"> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr><td>-100</td><td>1</td></tr> <tr><td>-50</td><td>2</td></tr> <tr><td>0</td><td>1</td></tr> <tr><td>+50</td><td>4</td></tr> <tr><td>+100</td><td>3</td></tr> </tbody> </table>	Score	Frequency	-100	1	-50	2	0	1	+50	4	+100	3
Score	Frequency													
-100	1													
-50	2													
0	1													
+50	4													
+100	3													
15. The teachers made a real effort to understand the problems and difficulties one might be having in this course	+41	<table border="1"> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr><td>-100</td><td>0</td></tr> <tr><td>-50</td><td>1</td></tr> <tr><td>0</td><td>2</td></tr> <tr><td>+50</td><td>6</td></tr> <tr><td>+100</td><td>2</td></tr> </tbody> </table>	Score	Frequency	-100	0	-50	1	0	2	+50	6	+100	2
Score	Frequency													
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+100	2													

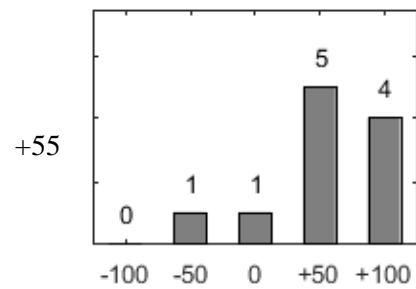
18. The teaching staff normally gave me helpful feedback on the progress of my work



19. My lecturers were extremely good at explaining things



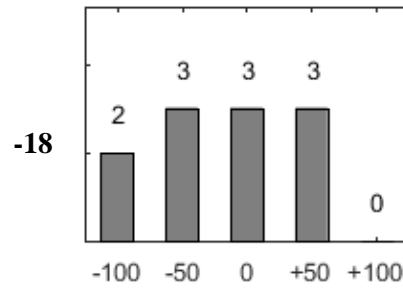
21. The teachers on the course worked hard to make the subject interesting



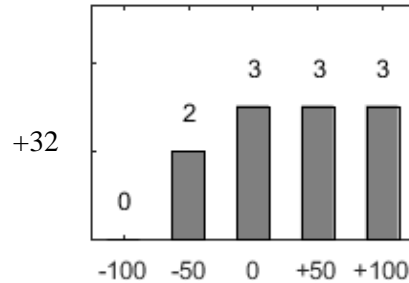
Clear Goals and Standards (+28)

Question	CEQ-score	Histogram												
1. It was easy to know the standard of work expected	+32	<table border="1"> <thead> <tr> <th>Score</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>-100</td> <td>0</td> </tr> <tr> <td>-50</td> <td>2</td> </tr> <tr> <td>0</td> <td>1</td> </tr> <tr> <td>+50</td> <td>7</td> </tr> <tr> <td>+100</td> <td>1</td> </tr> </tbody> </table>	Score	Count	-100	0	-50	2	0	1	+50	7	+100	1
Score	Count													
-100	0													
-50	2													
0	1													
+50	7													
+100	1													
6. I usually had a clear idea of where I was going and what was expected of me in this course	+40	<table border="1"> <thead> <tr> <th>Score</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>-100</td> <td>0</td> </tr> <tr> <td>-50</td> <td>2</td> </tr> <tr> <td>0</td> <td>1</td> </tr> <tr> <td>+50</td> <td>4</td> </tr> <tr> <td>+100</td> <td>3</td> </tr> </tbody> </table>	Score	Count	-100	0	-50	2	0	1	+50	4	+100	3
Score	Count													
-100	0													
-50	2													
0	1													
+50	4													
+100	3													

13. It was often hard to discover what was expected of me in this course



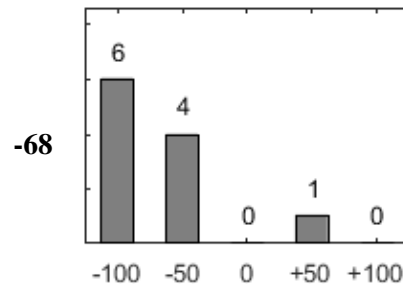
25. The teachers made it clear right from the start what they expected from the students



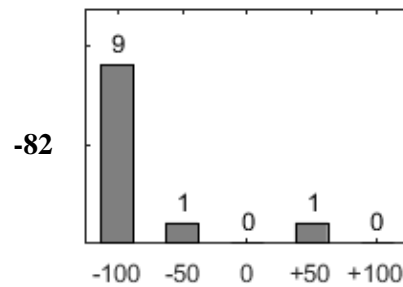
Appropriate Assessment (+60)

Question	CEQ-score	Histogram
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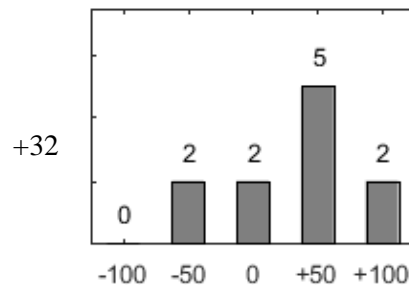
8. To do well in this course all you really needed was a good memory



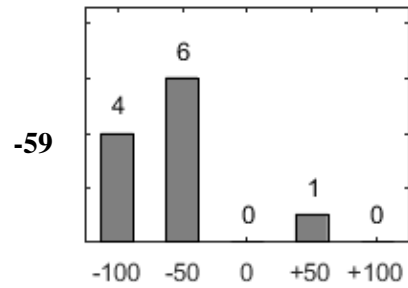
12. The teachers seemed more interested in testing what I had memorised than what I had understood



16. The assessment methods employed in this course required an in-depth understanding of the course content



20. Too much of the assessment was just about facts



Appropriate Workload (+34)

Question	CEQ-score	Histogram												
4. The workload has been much too heavy	-5	<table border="1"> <thead> <tr> <th>Score</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>-100</td> <td>0</td> </tr> <tr> <td>-50</td> <td>3</td> </tr> <tr> <td>0</td> <td>6</td> </tr> <tr> <td>+50</td> <td>2</td> </tr> <tr> <td>+100</td> <td>0</td> </tr> </tbody> </table>	Score	Count	-100	0	-50	3	0	6	+50	2	+100	0
Score	Count													
-100	0													
-50	3													
0	6													
+50	2													
+100	0													
14. I was generally given enough time to understand the things I had to learn	+55	<table border="1"> <thead> <tr> <th>Score</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>-100</td> <td>0</td> </tr> <tr> <td>-50</td> <td>0</td> </tr> <tr> <td>0</td> <td>2</td> </tr> <tr> <td>+50</td> <td>6</td> </tr> <tr> <td>+100</td> <td>3</td> </tr> </tbody> </table>	Score	Count	-100	0	-50	0	0	2	+50	6	+100	3
Score	Count													
-100	0													
-50	0													
0	2													
+50	6													
+100	3													
22. There was a lot of pressure on me as a student in this course	-27	<table border="1"> <thead> <tr> <th>Score</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>-100</td> <td>0</td> </tr> <tr> <td>-50</td> <td>8</td> </tr> <tr> <td>0</td> <td>2</td> </tr> <tr> <td>+50</td> <td>0</td> </tr> <tr> <td>+100</td> <td>1</td> </tr> </tbody> </table>	Score	Count	-100	0	-50	8	0	2	+50	0	+100	1
Score	Count													
-100	0													
-50	8													
0	2													
+50	0													
+100	1													
24. The sheer volume of work in this course made it impossible to comprehend everything thoroughly	-50	<table border="1"> <thead> <tr> <th>Score</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>-100</td> <td>4</td> </tr> <tr> <td>-50</td> <td>4</td> </tr> <tr> <td>0</td> <td>2</td> </tr> <tr> <td>+50</td> <td>1</td> </tr> <tr> <td>+100</td> <td>0</td> </tr> </tbody> </table>	Score	Count	-100	4	-50	4	0	2	+50	1	+100	0
Score	Count													
-100	4													
-50	4													
0	2													
+50	1													
+100	0													

Generic Skills (+28)

Question	CEQ-score	Histogram												
2. The course has developed my problem-solving skills	+65	<table border="1"> <caption>Data for Histogram 2</caption> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr><td>-100</td><td>0</td></tr> <tr><td>-50</td><td>0</td></tr> <tr><td>0</td><td>1</td></tr> <tr><td>+50</td><td>5</td></tr> <tr><td>+100</td><td>4</td></tr> </tbody> </table>	Score	Frequency	-100	0	-50	0	0	1	+50	5	+100	4
Score	Frequency													
-100	0													
-50	0													
0	1													
+50	5													
+100	4													
5. The course has sharpened my analytic skills	+25	<table border="1"> <caption>Data for Histogram 5</caption> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr><td>-100</td><td>0</td></tr> <tr><td>-50</td><td>1</td></tr> <tr><td>0</td><td>3</td></tr> <tr><td>+50</td><td>6</td></tr> <tr><td>+100</td><td>0</td></tr> </tbody> </table>	Score	Frequency	-100	0	-50	1	0	3	+50	6	+100	0
Score	Frequency													
-100	0													
-50	1													
0	3													
+50	6													
+100	0													
9. The course helped me develop my ability to work in a group	+64	<table border="1"> <caption>Data for Histogram 9</caption> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr><td>-100</td><td>0</td></tr> <tr><td>-50</td><td>0</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>+50</td><td>8</td></tr> <tr><td>+100</td><td>3</td></tr> </tbody> </table>	Score	Frequency	-100	0	-50	0	0	0	+50	8	+100	3
Score	Frequency													
-100	0													
-50	0													
0	0													
+50	8													
+100	3													
10. The course has made me feel more confident about tackling new and unfamiliar problems	+45	<table border="1"> <caption>Data for Histogram 10</caption> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr><td>-100</td><td>0</td></tr> <tr><td>-50</td><td>0</td></tr> <tr><td>0</td><td>2</td></tr> <tr><td>+50</td><td>7</td></tr> <tr><td>+100</td><td>1</td></tr> </tbody> </table>	Score	Frequency	-100	0	-50	0	0	2	+50	7	+100	1
Score	Frequency													
-100	0													
-50	0													
0	2													
+50	7													
+100	1													
11. The course has improved my skills in written communication	-50	<table border="1"> <caption>Data for Histogram 11</caption> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr><td>-100</td><td>6</td></tr> <tr><td>-50</td><td>2</td></tr> <tr><td>0</td><td>1</td></tr> <tr><td>+50</td><td>1</td></tr> <tr><td>+100</td><td>1</td></tr> </tbody> </table>	Score	Frequency	-100	6	-50	2	0	1	+50	1	+100	1
Score	Frequency													
-100	6													
-50	2													
0	1													
+50	1													
+100	1													
23. The course has helped me to develop the ability to plan my work	+15	<table border="1"> <caption>Data for Histogram 23</caption> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr><td>-100</td><td>1</td></tr> <tr><td>-50</td><td>2</td></tr> <tr><td>0</td><td>2</td></tr> <tr><td>+50</td><td>3</td></tr> <tr><td>+100</td><td>2</td></tr> </tbody> </table>	Score	Frequency	-100	1	-50	2	0	2	+50	3	+100	2
Score	Frequency													
-100	1													
-50	2													
0	2													
+50	3													
+100	2													

Free text answers

The free text answers are pre-reviewed by the students' representatives.

What were the best aspects of the course

Satisfied students

Grupparbetet och mötena. Labbarna var roliga och vår grupp hade väldigt olika bakgrunder vilket gjorde att man fick en bred bas på kunskapen

Engagerade lärare som man lätt kunde få kontakt med och villiga att hjälpa. Roliga projekt med.

Att få en inblick i ett väldigt användbart och för mig nytt programmeringsspråk.

Rolig och lärorik.

Neutral students

Dissatisfied students

What aspects of the course are most in need of improvement?

Satisfied students

Det mesta har tagits upp med läraren under sista labbtillfället, men det är mest hur det definitivt behövs ett GIT-intro på kursen när man jobbar i grupp.

Hade varit bra att få några testfall/bilder för att kunna verifiera sin lösning. Förutom det första projektet var det väldigt oklart hur lösningen skulle se ut.

Tydligare kommunikation kring vad man förväntas lära sig under kursens gång.

Neutral students

Dissatisfied students