



LUND UNIVERSITY
Faculty of Science

Centre for Mathematical Sciences
Division of Mathematics and Numerical Analysis

Course Analysis for MATC61 Optimization Autumn 2023

Course Information

Lecturer: Stefan Diehl

Teaching assistants: Andreas Langer, Jaime Manriquez, Marc Runft

Number of students:

3 newly registered and 3 re-registered.

Of 116 registered students at FMAN61 (Faculty of engineering) and MATC61, 25 students answered the joint course evaluation.

Examination

Programming Assignment: 2 students passed.

Written examination: 2 students passed.

- Ordinary examination 11/1 2024: 0 student participated.
- Resit examination 2/4 2024: 3 students participated and 2 of them passed.

Final grades:

In all, 1 student, including 0 re-registered students, has got their final grade.

0 passed with distinction.

1 passed.

Course Evaluation

Summary of student's answers:

On an average, the students were satisfied with the course and the teaching.

Teachers' comments:

Traditional lectures were given, exercise classes, computer laboratory exercises and a group project. The lectures followed closely a newly written preliminary textbook by the lecturer. Most of the exercises in the book provide full solutions.

Unfortunately, the participation rate was low at the lectures and the exercise sessions. Many students failed the first exam.

Changes from the previous course realisation:

The novelty this year was that a new course book was used.

Suggestions for the next course realisation:

Since most of the students were satisfied with the course, no major changes will be made next year.

Course evaluation report - CEQ, FMAN61

Basic facts

Course name	Optimization		
Course code	FMAN61		Study hours according the curricula
ECTS credits	7.5 hp		Lectures 32 h
Year	202324		Group work 14 h
Study period the course was finished	HT_LP2		Laboratories 4 h
Programme	all (I)		Time with supervisor 2 h
Registrated students	116		Self study time 148 h
Number answers and response rate	25 / 22 %		
Number answers from males	20		
Number answers from females	5		

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

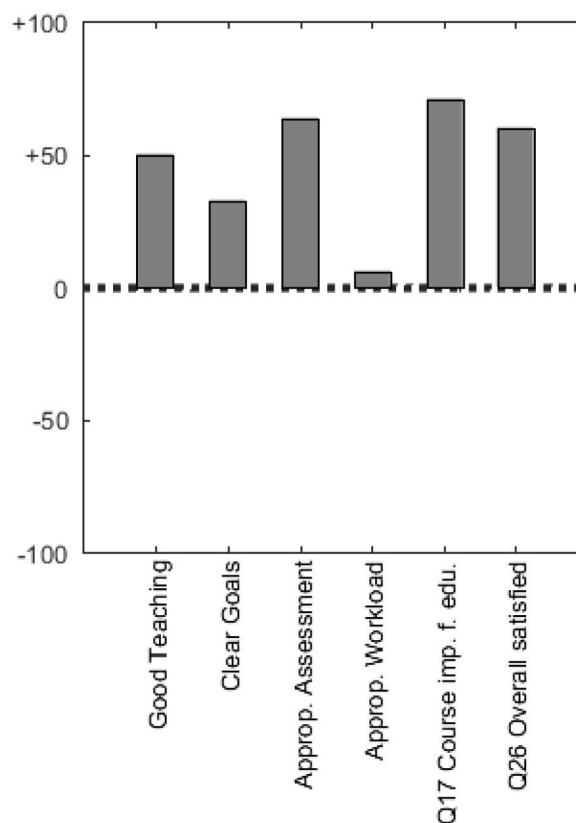
Part of teaching	Number	Share
0 %	0	0 %
20 %	2	8 %
40 %	5	20 %
60 %	3	12 %
80 %	7	28 %
100 %	8	32 %

CEQ-scales & special questions

Scale	CEQ-score	StdDev
Good Teaching	+50	36
Clear Goals and Standards	+33	47
Appropriate Assessment	+64	32
Appropriate Workload	+6	51
Generic Skills	+50	29

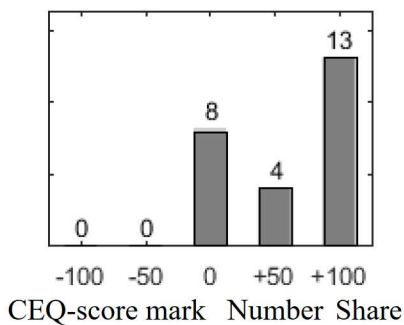
Special questions

The course seems important for my edu.	+71	39
Overall, I am satisfied with this course	+60	46



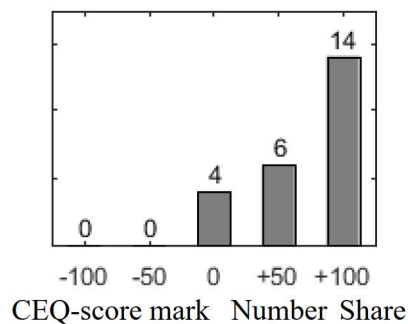
Distribution of the answers from question 26: "Overall, I am satisfied with this course"

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



Dissatisfied (<0)	0	0 %
Neutral (0)	8	32 %
Satisfied (>0)	17	68 %
No answer	0	0 %

Mean of CEQ-score	+60
Standard deviation (StdDev)	46
Males	+60
Females	+60



-100	0	0 %
-50	0	0 %
+0	4	16 %
+50	6	24 %
+100	14	56 %

Mean of CEQ-score	+71
Standard deviation (StdDev)	39
Males	+68
Females	+80

Summary scales divided on satisfaction

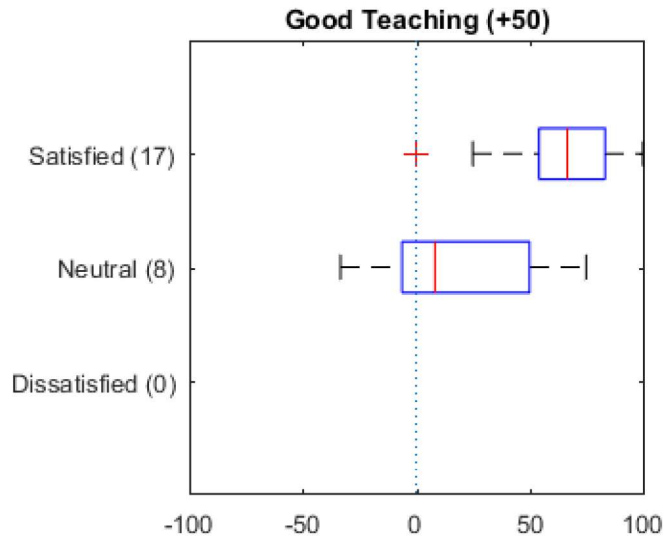
Statistical examination between dissatisfied and neutrals has not been done due to at least one of the groups consist of less than five students

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

CEQ-score of the course **+50**

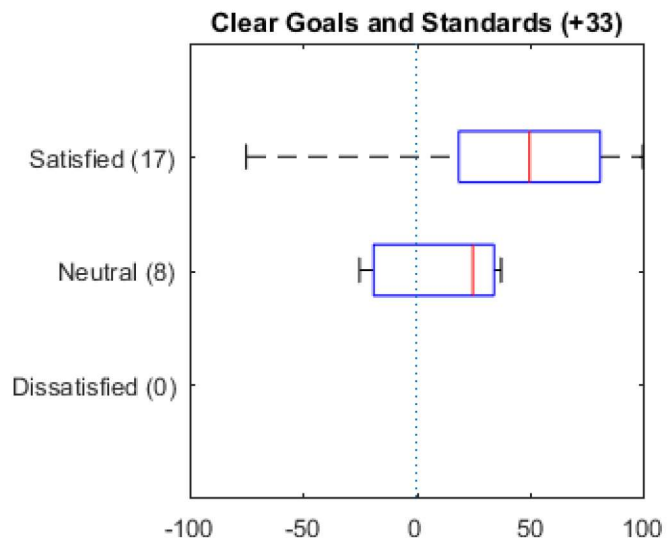
 Statistical significant distinction between neutrals and satisfied



Clear Goals and Standards

CEQ-score of the course **+33**

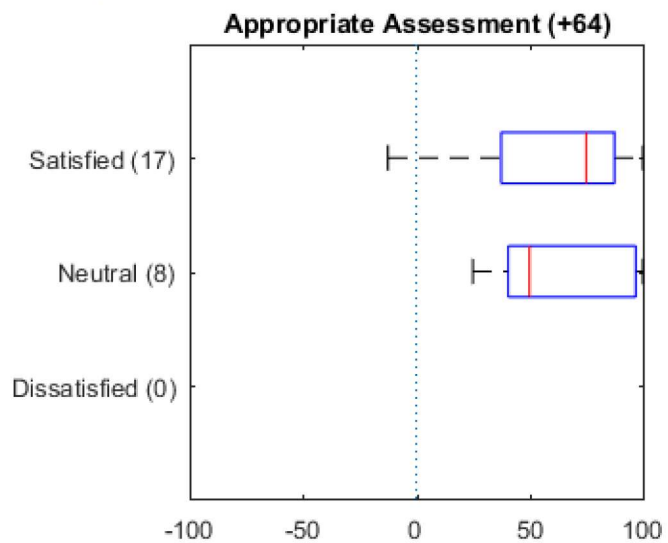
 No statistical significant distinction



Appropriate Assessment

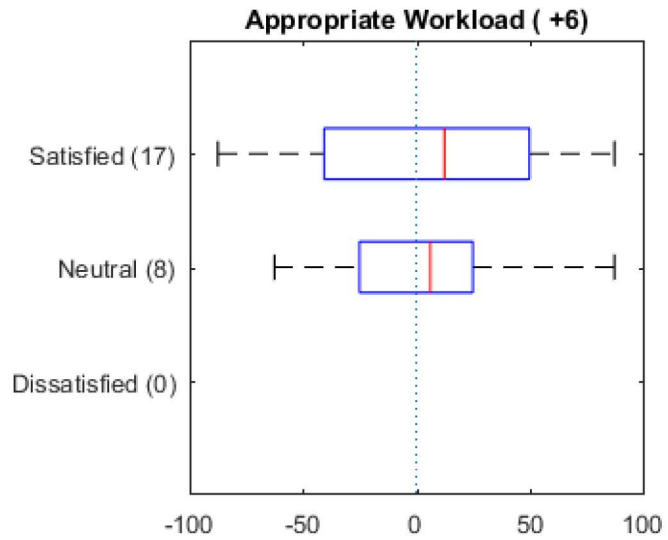
CEQ-score of the course **+64**

 No statistical significant distinction



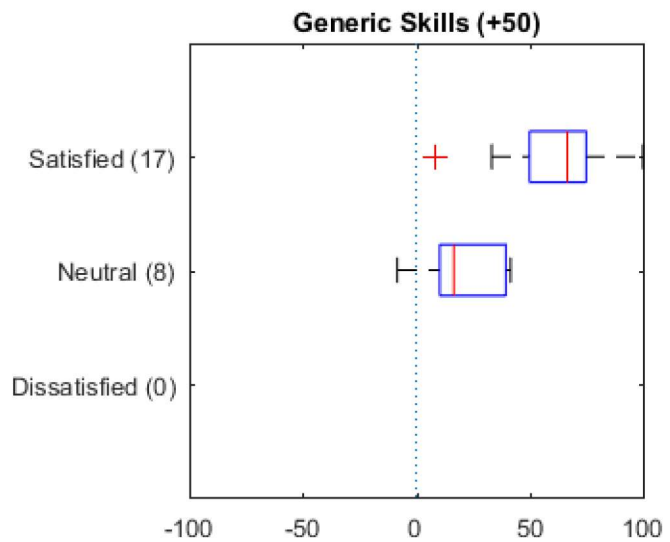
Appropriate Workload

CEQ-score of the course +6
 No statistical significant distinction



Generic Skills

CEQ-score of the course +50
 Statistical significant distinction between neutrals and satisfied



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

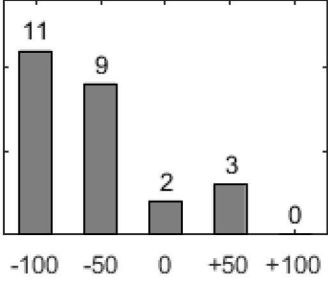
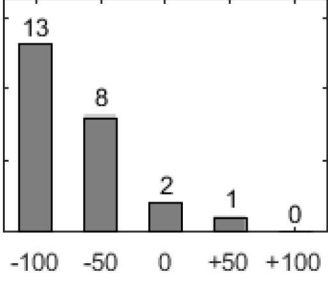
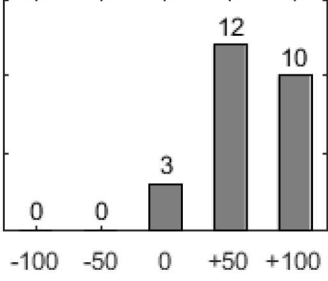
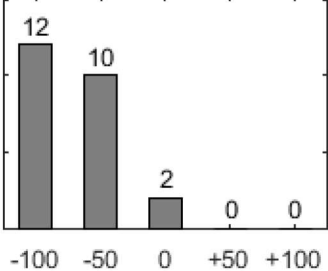
Good Teaching (+50)

Question	CEQ-score	Histogram												
3. The teaching has motivated me to do my best	+56	<table border="1"> <caption>Data for Histogram 3</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>4</td></tr> <tr><td>0</td><td>1</td></tr> <tr><td>+50</td><td>8</td></tr> <tr><td>+100</td><td>12</td></tr> </tbody> </table>	Score	Frequency	-100	0	-50	4	0	1	+50	8	+100	12
Score	Frequency													
-100	0													
-50	4													
0	1													
+50	8													
+100	12													
7. During the course I have received many valuable comments on my achievements	+26	<table border="1"> <caption>Data for Histogram 7</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>3</td></tr> <tr><td>0</td><td>5</td></tr> <tr><td>+50</td><td>11</td></tr> <tr><td>+100</td><td>3</td></tr> </tbody> </table>	Score	Frequency	-100	1	-50	3	0	5	+50	11	+100	3
Score	Frequency													
-100	1													
-50	3													
0	5													
+50	11													
+100	3													
15. The teachers made a real effort to understand the problems and difficulties one might be having in this course	+50	<table border="1"> <caption>Data for Histogram 15</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>6</td></tr> <tr><td>+50</td><td>10</td></tr> <tr><td>+100</td><td>8</td></tr> </tbody> </table>	Score	Frequency	-100	0	-50	1	0	6	+50	10	+100	8
Score	Frequency													
-100	0													
-50	1													
0	6													
+50	10													
+100	8													
18. The teaching staff normally gave me helpful feedback on the progress of my work	+32	<table border="1"> <caption>Data for Histogram 18</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>5</td></tr> <tr><td>+50</td><td>14</td></tr> <tr><td>+100</td><td>3</td></tr> </tbody> </table>	Score	Frequency	-100	1	-50	2	0	5	+50	14	+100	3
Score	Frequency													
-100	1													
-50	2													
0	5													
+50	14													
+100	3													
19. My lecturers were extremely good at explaining things	+58	<table border="1"> <caption>Data for Histogram 19</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>7</td></tr> <tr><td>+50</td><td>7</td></tr> <tr><td>+100</td><td>11</td></tr> </tbody> </table>	Score	Frequency	-100	0	-50	0	0	7	+50	7	+100	11
Score	Frequency													
-100	0													
-50	0													
0	7													
+50	7													
+100	11													
21. The teachers on the course worked hard to make the subject interesting	+70	<table border="1"> <caption>Data for Histogram 21</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>3</td></tr> <tr><td>+50</td><td>9</td></tr> <tr><td>+100</td><td>13</td></tr> </tbody> </table>	Score	Frequency	-100	0	-50	0	0	3	+50	9	+100	13
Score	Frequency													
-100	0													
-50	0													
0	3													
+50	9													
+100	13													

Clear Goals and Standards (+33)

Question	CEQ-score	Histogram												
1. It was easy to know the standard of work expected	+38	<table border="1"> <caption>Histogram Data for Question 1</caption> <thead> <tr> <th>Score Bin</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>-100 to -50</td> <td>0</td> </tr> <tr> <td>-50 to 0</td> <td>4</td> </tr> <tr> <td>0 to 50</td> <td>6</td> </tr> <tr> <td>50 to 100</td> <td>7</td> </tr> <tr> <td>100 to 150</td> <td>8</td> </tr> </tbody> </table>	Score Bin	Frequency	-100 to -50	0	-50 to 0	4	0 to 50	6	50 to 100	7	100 to 150	8
Score Bin	Frequency													
-100 to -50	0													
-50 to 0	4													
0 to 50	6													
50 to 100	7													
100 to 150	8													
6. I usually had a clear idea of where I was going and what was expected of me in this course	+36	<table border="1"> <caption>Histogram Data for Question 6</caption> <thead> <tr> <th>Score Bin</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>-100 to -50</td> <td>1</td> </tr> <tr> <td>-50 to 0</td> <td>3</td> </tr> <tr> <td>0 to 50</td> <td>7</td> </tr> <tr> <td>50 to 100</td> <td>5</td> </tr> <tr> <td>100 to 150</td> <td>9</td> </tr> </tbody> </table>	Score Bin	Frequency	-100 to -50	1	-50 to 0	3	0 to 50	7	50 to 100	5	100 to 150	9
Score Bin	Frequency													
-100 to -50	1													
-50 to 0	3													
0 to 50	7													
50 to 100	5													
100 to 150	9													
13. It was often hard to discover what was expected of me in this course	-30	<table border="1"> <caption>Histogram Data for Question 13</caption> <thead> <tr> <th>Score Bin</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>-100 to -50</td> <td>6</td> </tr> <tr> <td>-50 to 0</td> <td>8</td> </tr> <tr> <td>0 to 50</td> <td>7</td> </tr> <tr> <td>50 to 100</td> <td>3</td> </tr> <tr> <td>100 to 150</td> <td>1</td> </tr> </tbody> </table>	Score Bin	Frequency	-100 to -50	6	-50 to 0	8	0 to 50	7	50 to 100	3	100 to 150	1
Score Bin	Frequency													
-100 to -50	6													
-50 to 0	8													
0 to 50	7													
50 to 100	3													
100 to 150	1													
25. The teachers made it clear right from the start what they expected from the students	+22	<table border="1"> <caption>Histogram Data for Question 25</caption> <thead> <tr> <th>Score Bin</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>-100 to -50</td> <td>1</td> </tr> <tr> <td>-50 to 0</td> <td>3</td> </tr> <tr> <td>0 to 50</td> <td>7</td> </tr> <tr> <td>50 to 100</td> <td>9</td> </tr> <tr> <td>100 to 150</td> <td>3</td> </tr> </tbody> </table>	Score Bin	Frequency	-100 to -50	1	-50 to 0	3	0 to 50	7	50 to 100	9	100 to 150	3
Score Bin	Frequency													
-100 to -50	1													
-50 to 0	3													
0 to 50	7													
50 to 100	9													
100 to 150	3													

Appropriate Assessment (+64)

Question	CEQ-score	Histogram												
8. To do well in this course all you really needed was a good memory	-56	 <table border="1"> <caption>Data for Histogram 8</caption> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>-100</td> <td>11</td> </tr> <tr> <td>-50</td> <td>9</td> </tr> <tr> <td>0</td> <td>2</td> </tr> <tr> <td>+50</td> <td>3</td> </tr> <tr> <td>+100</td> <td>0</td> </tr> </tbody> </table>	Score	Frequency	-100	11	-50	9	0	2	+50	3	+100	0
Score	Frequency													
-100	11													
-50	9													
0	2													
+50	3													
+100	0													
12. The teachers seemed more interested in testing what I had memorised than what I had understood	-69	 <table border="1"> <caption>Data for Histogram 12</caption> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>-100</td> <td>13</td> </tr> <tr> <td>-50</td> <td>8</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	Frequency	-100	13	-50	8	0	2	+50	1	+100	0
Score	Frequency													
-100	13													
-50	8													
0	2													
+50	1													
+100	0													
16. The assessment methods employed in this course required an in-depth understanding of the course content	+64	 <table border="1"> <caption>Data for Histogram 16</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>3</td> </tr> <tr> <td>+50</td> <td>12</td> </tr> <tr> <td>+100</td> <td>10</td> </tr> </tbody> </table>	Score	Frequency	-100	0	-50	0	0	3	+50	12	+100	10
Score	Frequency													
-100	0													
-50	0													
0	3													
+50	12													
+100	10													
20. Too much of the assessment was just about facts	-71	 <table border="1"> <caption>Data for Histogram 20</caption> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>-100</td> <td>12</td> </tr> <tr> <td>-50</td> <td>10</td> </tr> <tr> <td>0</td> <td>2</td> </tr> <tr> <td>+50</td> <td>0</td> </tr> <tr> <td>+100</td> <td>0</td> </tr> </tbody> </table>	Score	Frequency	-100	12	-50	10	0	2	+50	0	+100	0
Score	Frequency													
-100	12													
-50	10													
0	2													
+50	0													
+100	0													

Appropriate Workload (+6)

Question	CEQ-score	Histogram												
4. The workload has been much too heavy	-8	<table border="1"> <caption>Histogram Data for Question 4</caption> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>-100</td> <td>3</td> </tr> <tr> <td>-50</td> <td>7</td> </tr> <tr> <td>0</td> <td>7</td> </tr> <tr> <td>+50</td> <td>7</td> </tr> <tr> <td>+100</td> <td>1</td> </tr> </tbody> </table>	Score	Frequency	-100	3	-50	7	0	7	+50	7	+100	1
Score	Frequency													
-100	3													
-50	7													
0	7													
+50	7													
+100	1													
14. I was generally given enough time to understand the things I had to learn	+38	<table border="1"> <caption>Histogram Data for Question 14</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>3</td> </tr> <tr> <td>0</td> <td>6</td> </tr> <tr> <td>+50</td> <td>10</td> </tr> <tr> <td>+100</td> <td>6</td> </tr> </tbody> </table>	Score	Frequency	-100	0	-50	3	0	6	+50	10	+100	6
Score	Frequency													
-100	0													
-50	3													
0	6													
+50	10													
+100	6													
22. There was a lot of pressure on me as a student in this course	+16	<table border="1"> <caption>Histogram Data for Question 22</caption> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>-100</td> <td>3</td> </tr> <tr> <td>-50</td> <td>4</td> </tr> <tr> <td>0</td> <td>5</td> </tr> <tr> <td>+50</td> <td>8</td> </tr> <tr> <td>+100</td> <td>5</td> </tr> </tbody> </table>	Score	Frequency	-100	3	-50	4	0	5	+50	8	+100	5
Score	Frequency													
-100	3													
-50	4													
0	5													
+50	8													
+100	5													
24. The sheer volume of work in this course made it impossible to comprehend everything thoroughly	+6	<table border="1"> <caption>Histogram Data for Question 24</caption> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>-100</td> <td>3</td> </tr> <tr> <td>-50</td> <td>6</td> </tr> <tr> <td>0</td> <td>6</td> </tr> <tr> <td>+50</td> <td>5</td> </tr> <tr> <td>+100</td> <td>5</td> </tr> </tbody> </table>	Score	Frequency	-100	3	-50	6	0	6	+50	5	+100	5
Score	Frequency													
-100	3													
-50	6													
0	6													
+50	5													
+100	5													

Generic Skills (+50)

Question	CEQ-score	Histogram												
2. The course has developed my problem-solving skills	+78	<table border="1"> <caption>Histogram Data for Question 2</caption> <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>7</td></tr> <tr><td>+100</td><td>16</td></tr> </tbody> </table>	Score	Count	-100	0	-50	0	0	2	+50	7	+100	16
Score	Count													
-100	0													
-50	0													
0	2													
+50	7													
+100	16													
5. The course has sharpened my analytic skills	+60	<table border="1"> <caption>Histogram Data for Question 5</caption> <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>6</td></tr> <tr><td>+50</td><td>8</td></tr> <tr><td>+100</td><td>11</td></tr> </tbody> </table>	Score	Count	-100	0	-50	0	0	6	+50	8	+100	11
Score	Count													
-100	0													
-50	0													
0	6													
+50	8													
+100	11													
9. The course helped me develop my ability to work in a group	+34	<table border="1"> <caption>Histogram Data for Question 9</caption> <thead> <tr> <th>Score</th> <th>Count</th> </tr> </thead> <tbody> <tr><td>-100</td><td>1</td></tr> <tr><td>-50</td><td>1</td></tr> <tr><td>0</td><td>8</td></tr> <tr><td>+50</td><td>10</td></tr> <tr><td>+100</td><td>5</td></tr> </tbody> </table>	Score	Count	-100	1	-50	1	0	8	+50	10	+100	5
Score	Count													
-100	1													
-50	1													
0	8													
+50	10													
+100	5													
10. The course has made me feel more confident about tackling new and unfamiliar problems	+62	<table border="1"> <caption>Histogram Data for Question 10</caption> <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>4</td></tr> <tr><td>+50</td><td>11</td></tr> <tr><td>+100</td><td>10</td></tr> </tbody> </table>	Score	Count	-100	0	-50	0	0	4	+50	11	+100	10
Score	Count													
-100	0													
-50	0													
0	4													
+50	11													
+100	10													
11. The course has improved my skills in written communication	+25	<table border="1"> <caption>Histogram Data for Question 11</caption> <thead> <tr> <th>Score</th> <th>Count</th> </tr> </thead> <tbody> <tr><td>-100</td><td>0</td></tr> <tr><td>-50</td><td>5</td></tr> <tr><td>0</td><td>5</td></tr> <tr><td>+50</td><td>11</td></tr> <tr><td>+100</td><td>3</td></tr> </tbody> </table>	Score	Count	-100	0	-50	5	0	5	+50	11	+100	3
Score	Count													
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+50	11													
+100	3													
23. The course has helped me to develop the ability to plan my work	+29	<table border="1"> <caption>Histogram Data for Question 23</caption> <thead> <tr> <th>Score</th> <th>Count</th> </tr> </thead> <tbody> <tr><td>-100</td><td>1</td></tr> <tr><td>-50</td><td>1</td></tr> <tr><td>0</td><td>9</td></tr> <tr><td>+50</td><td>9</td></tr> <tr><td>+100</td><td>4</td></tr> </tbody> </table>	Score	Count	-100	1	-50	1	0	9	+50	9	+100	4
Score	Count													
-100	1													
-50	1													
0	9													
+50	9													
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